Comparing two-way bilingual instruction programs: Is it best to teach reading in both languages at the same time or in sequence?
Melody S. Berens1, Ioulia Kovelman2, & Laura Ann Petitto1

1University of Toronto, 2Massachusetts Institute of Technology
Petitto Funding: NH 5R01HD45822 (USA), NIH 5R21HD05558 (USA), Canadian Foundation for Innovation (Canada), Ontario Research Fund (Canada)

INTRODUCTION

Instruction Type For decades, debates have raged over whether children should be taught one language before another language (Sequential or 90/10) or both languages at the same time (Simultaneous or 50/50).6

NEW QUESTION Is Sequential or Simultaneous bilingual language schooling most optimal for teaching young bilinguals to read in early grades? Language Proficiency Research with monolingual English children shows that language proficiency affects reading development6–8

NEW QUESTION Does the age of first bilingual exposure affect language and reading proficiency in young bilinguals? 2,6–8

HYPOTHESES

Simultaneous bilinguals will perform better on English tasks and Sequential bilinguals will perform better on Spanish tasks. Bilingual schooling may afford reading advantages6 even to children from monolingual English-speaking homes.

METHODS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Age of English Exposure</th>
<th>Age of Spanish Exposure</th>
<th>Languages at Home</th>
<th>Reading at Home</th>
<th>Reading in Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Bilinguals(a)</td>
<td>38</td>
<td>birth-3</td>
<td>birth-3</td>
<td>English &amp; Spanish</td>
<td>English &amp; Spanish</td>
<td>English &amp; Spanish</td>
</tr>
<tr>
<td>Late Bilinguals(b)</td>
<td>67</td>
<td>3-6</td>
<td>birth-3</td>
<td>English Only</td>
<td>English Only</td>
<td>English Only</td>
</tr>
<tr>
<td>English Only Bilinguals(c)</td>
<td>18</td>
<td>birth</td>
<td>3-6</td>
<td>English Only</td>
<td>English Only</td>
<td>English Only</td>
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<tr>
<td>Monolinguals</td>
<td>48</td>
<td>birth</td>
<td>NA</td>
<td>English Only</td>
<td>English Only</td>
<td>English Only</td>
</tr>
</tbody>
</table>

6 Schools using WHOLE-WORD reading instruction approach

2 Instruction Type for Bilinguals

Simultaneous (n=62): Spanish (50%) and English (50%) from Kindergarten
Sequential (n=61): Transitional Spanish and English from Kindergarten

2 Languages

Spanish – a language with “shallow” orthography
English – a language with “deep” orthography

2 Classroom Types

Bilingual (Spanish-English, n = 163); Monolingual (English, n = 48)

2 Grades

2nd & 3rd grades (N=211 children, ages 7-9)

TASKS

Standardized Tasks both in Spanish and in English

• Language Competence & Proficiency
• Reading Decoding - Non-Words, Regular Words
• Phonological Awareness - Initial & Final Phoneme Deletion, Phoneme Segmentation
• Irregular Words
• Passage Comprehension

RESULTS

ENGLISH

On Language-Specific tasks (Irregular Words p < .005) Simultaneous bilinguals outperformed Sequential bilinguals

On Language-General tasks (Phonological p < .001 & Reading Decoding p < .035) Sequential bilinguals outperformed Simultaneous bilinguals

SPANISH

Bilinguals in Sequential programs, who are taught primarily in Spanish, outperformed bilinguals in Simultaneous programs across Spanish tasks p < .001

DISCUSSION

Reading Instruction Type Young bilinguals educated in Simultaneous Bilingual programs performed best on English Language-Specific tasks. Young bilinguals educated in Sequential Bilingual programs performed best on English Language-General tasks. As predicted, bilinguals educated in Sequential Bilingual programs performed best on all Spanish tasks

Age of Exposure In young bilinguals, high language proficiency was related to high reading proficiency. Age of first bilingual exposure does impact both language and reading proficiency in bilinguals. Birth Bilinguals performed optimally, and better than Late Bilinguals on both language and reading tasks in English

Schooling Type Remarkably, young children raised in monolingual English-speaking households and educated in Simultaneous Bilingual schools performed better than all other children raised in English monolingual homes, even those educated in a monolingual English school (c)

CONCLUSIONS

Both Simultaneous and Sequential reading instruction impact reading acquisition and reading success, but in different ways:

Simultaneous schooling is most advantageous for mastering language and reading skills in both languages, and further facilitates analysis of underlying grammatical class/structure

Sequential schooling facilitates analysis of surface phonological regularity

REFERENCES

6 Berens, Kovelman, & Petitto (submitted).
8 Wolf & Kate Cohen (2001). Reading Fluency and its Interventions.

CORRESPONDING AUTHOR

Petitto@utsc.utoronto.ca
http://www.utsc.utoronto.ca/~petitto/lab/index.html
Society for Research in Child Development 2009