Creating a Positive Trajectory Toward Biliteracy

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Literacy Squared® Project

Today's Presentation
- Part I - An Overview of Literacy Squared
- Part II - Applying Literacy Squared in Writing
  - Dictados
  - Así se dice
- Part III - Applying Literacy Squared in Reading

Partners
- Midland ISD, Texas
- Fort Bend ISD, Texas
- Boulder Valley Schools, Colorado
- Denver Public Schools, Colorado
- Jefferson County Schools, Colorado
- St. Vrain Valley Schools, Colorado
Our Situation with ELLs

- Historical disabling trajectory (Figueroa & Váldes, 2004)
- Monolingual English Theories Predominate (Bernhardt, 2003; Grant & Wong, 2002)
- Exacerbated by High Stakes Tests (August & Hakuta, 1997)

Need for New Theories

- Bernhardt (2003), Grant & Wong (2003), Halcón, 2001
  Researchers call for new L2 reading theory.
- Genesee & Riches (2006)
  U.S. teachers need to learn to make more explicit and direct cross-language transfers for English Language Learners especially for those languages that share common orthographic systems.
  Second language literacy greatly enhanced if learners are literate in L1.
- Vernon & Feirerro (1999)
  Phonological awareness in Spanish is best taught through writing. Phonics as defined in English has NO equivalent in Spanish.
- Smith, Jimenez, Martinez-Leon (2003)
  Cannot wholesale import methods from one country and apply them entirely in the new country. Adaptations, however, are possible (e.g. the ‘cuaderno’)

We Need

- A new theory about how to teach reading AND writing to L2 children
- Bilingual NOT monolingual lenses to understand Emerging Bilinguals
- Strategies and methods to implement our new theories
- Overall, we need new paradigms

Transfer: Paradigm Shifts

- Transition in a job is a task or a set of skills
- Result is an ongoing process that takes place in early as PK

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Accelerated growth in Spanish reading and writing includes accelerated growth in English reading and writing. Bidirectional Transfer = Trajectory to Biliteracy = + Literacy Instruction in Spanish and English

Literacy Squared® Components
- Research
  - Exploratory Year
  - Pilot Year
- Professional Development
  - Leadership
  - Teachers
- Assessment in Two Languages (Biliterate Trajectories)
- Instructional Components
  - Spanish Literacy
  - Literacy Based ESL
  - Oral ESL (Oracy)
  - Cross-language Connections

Scaffold to Biliteracy

**Exercise: How would you group these students for literacy?**

<table>
<thead>
<tr>
<th>STUDENT</th>
<th>EDL</th>
<th>DRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Susie</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Tomás</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Felicia</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Andrina</td>
<td>28</td>
<td>4</td>
</tr>
<tr>
<td>Sabrina</td>
<td>26</td>
<td>14</td>
</tr>
<tr>
<td>Lucía</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Juan</td>
<td>28</td>
<td>6</td>
</tr>
<tr>
<td>Martín</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>Sandra</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>Ricardo</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Daniel</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>Miguel</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>Mario</td>
<td>23</td>
<td>4</td>
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<tr>
<td>Roberto</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>Tamara</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>Catarina</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Mayte</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Juan Luis</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>Lola</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scaffold to Biliteracy</th>
<th>EDL</th>
<th>DRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-2</td>
<td>3-6</td>
<td>A-2</td>
</tr>
<tr>
<td>8-10</td>
<td>3-6</td>
<td>8-10</td>
</tr>
<tr>
<td>12-16</td>
<td>8-10</td>
<td>12-16</td>
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<td>18-28</td>
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<td></td>
</tr>
<tr>
<td>35-40</td>
<td>30-40</td>
<td></td>
</tr>
</tbody>
</table>
What have we learned?

- What gains in Spanish and English reading achievement were made by students in study schools as measured by informal Spanish (EDL) and English (DRA) reading measures across 3 years?
- Is there a relationship between Spanish reading achievement and English reading achievement for students in schools in the study?
- Are students on a trajectory toward biliteracy?

<table>
<thead>
<tr>
<th>Cohort (n)</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(grades 1-3; 121)</td>
<td>EDL - 16.8</td>
<td>DRA - 6.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EDL - 24.9</td>
<td>DRA -14.4</td>
<td>EDL - 34</td>
</tr>
<tr>
<td>Cohort 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(grades 2-4; 114)</td>
<td>EDL - 23</td>
<td>DRA - 8.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EDL - 29.4</td>
<td>DRA -16.3</td>
<td>EDL - 38</td>
</tr>
<tr>
<td>Cohort 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(grades 3-5; 27)</td>
<td>EDL - 27.4</td>
<td>DRA - 16.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EDL - 36.6</td>
<td>DRA -27.1</td>
<td>EDL - 45</td>
</tr>
</tbody>
</table>

Cohort 1: Grades 1-3

Average Reading Level

- EDL (Spanish)
- DRA (English)

2006 2007 2008

Year

Cohort 2: Grades 2-4

Average Reading Level

- EDL (Spanish)
- DRA (English)

2006 2007 2008

Year

Cohort 3: Grades 3-5

Average Reading Level

- EDL (Spanish)
- DRA (English)

2006 2007 2008

Year

Correlations Spanish and English Reading

<table>
<thead>
<tr>
<th>Grade</th>
<th>Cohort I</th>
<th>Cohort II</th>
<th>Cohort III</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td>.45</td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>Third</td>
<td>.52</td>
<td>.44</td>
<td>.42</td>
</tr>
<tr>
<td>Fourth</td>
<td>.64</td>
<td>.48</td>
<td>.69</td>
</tr>
<tr>
<td>Fifth</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Reading Results

- Emerging biliterate children overall are on a positive trajectory toward biliteracy at every grade level and are making steady progress in BOTH languages.
- There is a positive correlation between Spanish and English literacy outcomes.
- Each year greater numbers and percentages of children are in the zone toward biliteracy in reading.
- Need to create biliteracy benchmarks in our informal reading assessments.

Research Questions: Writing

- What gains in Spanish and English writing achievement were made by students in study schools as measured by informal Spanish and English writing assessment across 3 years?
- Is there a relationship between Spanish writing achievement and English writing achievement for students in schools in the study?
- Are students on a trajectory toward biliteracy in writing?

<table>
<thead>
<tr>
<th>Cohort (n)</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort 1 (grades 1-3)</td>
<td>Span.- 8.8</td>
<td>Eng. - 5.9</td>
<td>Span.- 8.8</td>
</tr>
<tr>
<td>Cohort 2 (grades 2-4)</td>
<td>Span.- 8.5</td>
<td>Eng. - 5.9</td>
<td>Span.- 8.9</td>
</tr>
</tbody>
</table>

Cohort 1: Grades 1-3

Cohort 2: Grades 2-4
Cohort 3: Grades 3-5

<table>
<thead>
<tr>
<th>Year</th>
<th>Overall Writing Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>0</td>
</tr>
<tr>
<td>2007</td>
<td>2</td>
</tr>
<tr>
<td>2008</td>
<td>4</td>
</tr>
</tbody>
</table>

Correlations between Spanish and English Writing

<table>
<thead>
<tr>
<th>Grade</th>
<th>Cohort I</th>
<th>Cohort II</th>
<th>Cohort III</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td>.56</td>
<td>.64</td>
<td></td>
</tr>
<tr>
<td>Third</td>
<td>.73</td>
<td>.60</td>
<td>.38</td>
</tr>
<tr>
<td>Fourth</td>
<td>.72</td>
<td>.56</td>
<td>.56</td>
</tr>
<tr>
<td>Fifth</td>
<td></td>
<td>.93</td>
<td></td>
</tr>
</tbody>
</table>

Writing Trait Correlation (Spanish to English)

- Content/Ideas: .65
- Punctuation: .55
- Spelling: .35
- Overall: .67

Writing Outcomes

- Students in both cohort groups grew in writing across time.
- Across time the mean (overall) writing results between Spanish and English for both cohort groups get closer and closer again indicating a positive trajectory toward biliteracy.
- Correlation coefficients indicate a stronger relationship in writing than reading.

Qualitative Analysis of Writing

- My feibret buck
  - My feibret buck is the thrie letle bers.
  - Do you hab e feibret buck? Well I do.
  - My feibret buck starts wet a litle groal and shi went to de wuds

Need for bilingual interpretation of bilingual behaviors particularly in writing

- Developing biliterate children use multiple strategies when learning to write in Spanish and English.
- Monolingual rubrics developed in English and adapted in Spanish do not acknowledge the use of multiple strategies and may therefore underestimate children’s emerging skills as writers.
- We must look at developing bilingual writers vis a vis both of their languages.
My febret buck

Common to Grade
- Little and various spellings of little
- Bers and various spellings of bears
- Wet for with
- Wuds for woods

L1 influenced
- E = A (Spanish)
- Shi = I for E
- B for V = Felbret
- B for V = hab for have

The tree piks

- My story is about of tree piks and 1 lobo feroz. The lobo tiro dawn the house of paja. Den the little pik goring to the huse of jis brotter a sai guat japen to the house.

Multiple Strategies - within stories
- Spanish Phonics
- Piks for pigs
- Jis for his
- Guat for what
- The house of paja - The straw house
- Lobo for wolf
- Paja for straw
- Feroz for ferocious

Multiple Strategies - Within words
- Read this word: Llinyourbredman
- Llin - Spanish
- Your - high frequency English
- Bred - English approximation
- Man - High frequency English

Research Summary
- What children know in one language directly and positively transfers to a second language.
- Simultaneous literacy instruction is positively impacting literacy achievement in both languages.
- Spanish is a scaffold to English, not a barrier or source of interference.
- Students who are better readers and writers in Spanish tend to be better readers and writers in English.
- The longer students remain in the study, the stronger their trajectory toward biliteracy.
- Students benefit from direct, explicit instruction in how to draw upon the reciprocal relationship between Spanish and English.

Three New Working Theories
- Beyond Spanish + English toward a Trajectory Toward Biliteracy
- Need for Assessments to be Oriented to Bilingualism and NOT parallel monolingualism
- Need for bilinguals to interpret bilingual behaviors