Current Research on Dual Language Programs

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What does the Research Evidence say?

- **DUAL LANGUAGE EDUCATION PROGRAM**: Is dual language really successful? Is there a “bilingualism advantage”?

- **STUDENTS**: Who really benefits?

- **IMPLEMENTATION**
  - How does the model work?
  - Is more English better?
  - What are the characteristics of successful dual language programs?
Basics & Building Blocks

Before we can understand the research, we need to have a clear understanding of the dual language model and how it works.
Additive model that involves some form of dual language instruction, where Spanish is used for at least 50% of the instructional day throughout elementary school.

Periods of instruction during which only one language is used.

Fairly balanced percentage of EO & ELL students in program and EO & ELL students are integrated for most content instruction.

Goals are bilingualism, biliteracy, achievement at or above grade level, and multicultural competence.
Basics & Building Blocks: Theory and Key Features

The model is based on research, theory, and best practices in:

- Effective schools, Effective bilingual & foreign language instruction
  - Integrating content and language
  - Assessment & program evaluation
- Curriculum & Instruction
  - Standards-based curriculum
  - Effective teaching strategies
  - Multicultural education
- Staff qualifications & professional development
- Parent involvement
Basics & Building Blocks: Instructional Design 90:10

- **GRADES K-1**
  - 90% Language Arts/Reading
  - 10% Language Arts
    - Mathematics
    - Science
    - Social Studies

- **GRADES 2-3**
  - 80% Language Arts/Reading
  - 20% Language Arts
    - Mathematics
    - Science
    - Social Studies

English

Spanish
Basics & Building Blocks: Instructional Design 90:10 & 50:50

90:10 Grades 4-6

50% Language
50% Arts/Reading
50% Mathematics
50% Science
50% Social Studies

50:50 All grades

50% Language
50% Arts/Reading
50% Mathematics
50% Science
50% Social Studies

Similar
### Basics & Building Blocks:
Literacy Instruction in 90:10 vs. 50:50

<table>
<thead>
<tr>
<th>90:10 Programs</th>
<th>50:50 Programs</th>
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<tbody>
<tr>
<td>Begin reading in Spanish language first and add English later (3rd grade)</td>
<td><strong>50:50 Successive</strong>: Begin reading in primary language first and add the second language later (2nd or 3rd grade)</td>
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<td><strong>50:50 Simultaneous</strong>: Begin reading in both languages simultaneously</td>
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How Does the Model Work?
Underlying Assumptions

- Knowledge learned through one language paves the way for knowledge acquisition in the second language.
- Students who learn math in L1 can demonstrate knowledge in L2 once they acquire academic language skills in L2.
Una ecuación cuadrática es una ecuación polinómica de segundo grado, de la forma \( ax^2 + bx + c = 0 \).
Research Evidence: HOPE OR HYPE?

- Examine research on native English speakers in language education programs.
- Examine research syntheses on English language learners in various types of educational programs.
20 years of program evaluations & research in the US and Canada are consistent in demonstrating that results for English speakers are similar in 1-way & 2-way immersion/dual language:

◆ English speakers develop proficiency in 2 languages.
◆ English speakers score as well as or better than their English-speaking non-dual language peers in English-only instruction on standardized tests of math & language arts in English.
◆ English speakers develop positive sense of self & multicultural competencies.
Research Evidence: English Language Learners

- Synthesis of the research on the education of English language learners funded by US Department of Education
  - National panel of experts on education of ELLs
  - Focus of synthesis
    - Oral language development, literacy development, and academic achievement
    - Used scientific methodology for selecting & reviewing studies
Research Evidence:

English Language Learners

• 40 years of scientifically-based research and evaluation studies are consistent in showing that:
  ▪ ELLs who received instruction through L1 were able to catch up to or surpass the achievement levels of ELL peers and English-only peers who were educated in English-only mainstream classrooms.
    ▪ These results were found regardless of the student outcomes--standardized achievement tests, course grades, school attendance & dropout, student attitudes
  ▪ ELLs who participated in programs that provided extended instruction through students’ L1 (i.e., through 6th grade) like dual language programs outperformed students who received short-term instruction through their L1 (i.e., 1-2 years of primary language support).
• This research:
  • includes large-scale studies of several thousand to several hundred thousand students in a variety of geographic areas, as well as smaller studies carried out in one or two schools in a single location;
  • comprises students from various regions of the US, with a greater representation in the southwest, especially Texas and California;
  • has been largely conducted with Spanish speaking students from lower socio-economic backgrounds;
  • includes border, rural, small town, urban, and inner city schools.
Comparing ALL 6th Graders at SITE #1
Sites within District -- Demographically Similar

Dual Language has HIGHER achievement than ALL other comparison groups.

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<thead>
<tr>
<th></th>
<th>0%</th>
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<th>60%</th>
<th>80%</th>
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- Proficient/Advanced:
  - 9010 - Dual: 41
  - Sch 1 comp: 32
  - Sch 2 comp: 30
  - Sch 3 comp: 11
  - Sch 4 comp: 30
  - Sch 5 comp: 18
  - District: 39
  - State: 41

- Basic:
  - 9010 - Dual: 41
  - Sch 1 comp: 40
  - Sch 2 comp: 39
  - Sch 3 comp: 48
  - Sch 4 comp: 42
  - Sch 5 comp: 34
  - District: 32
  - State: 31

- (Far) Below Basic:
  - 9010 - Dual: 18
  - Sch 1 comp: 27
  - Sch 2 comp: 32
  - Sch 3 comp: 40
  - Sch 4 comp: 27
  - Sch 5 comp: 48
  - District: 29
  - State: 27
English Language Arts - CST
Comparing ALL 6th Graders at SITE #2
Sites within District -- Demographically Similar

Dual Language -- HIGHER achievement than ALL other comparison groups except CA.

<table>
<thead>
<tr>
<th></th>
<th>9010 - Dual</th>
<th>Sch 1 comp</th>
<th>Sch 2 comp</th>
<th>Sch 3 comp</th>
<th>District</th>
<th>State</th>
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</thead>
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<td>23</td>
<td>27</td>
<td>31</td>
<td>46</td>
<td>31</td>
<td>27</td>
</tr>
</tbody>
</table>
English Language Arts - CST
Comparing ALL 6th Graders at SITE #3
Sites within District -- Demographically Similar

Dual Language -- HIGHER achievement than other comparison groups except district.

<table>
<thead>
<tr>
<th></th>
<th>5050 - Dual</th>
<th>Sch 1 comp</th>
<th>Sch 2 comp</th>
<th>District</th>
<th>State</th>
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</thead>
<tbody>
<tr>
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<td><strong>Basic</strong></td>
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<td>33</td>
<td>20</td>
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<tr>
<td><strong>(Far) Below Basic</strong></td>
<td>14</td>
<td>28</td>
<td>39</td>
<td>12</td>
<td>27</td>
</tr>
</tbody>
</table>
### English Language Arts - CST

**Grades 3-7 --- Previous ELLs**

90:10 Dual Language

#### Across the grades
- Fewer FBB/BB, more Bas, Prof/Adv
- By grade 6, previous ELLs ≥ ALL dist & CA.
- By grade 7, ELLs surpass average for EO students in District & State

#### Start reading English

<table>
<thead>
<tr>
<th>Grade</th>
<th>Proficient &amp; Advanced</th>
<th>Basic</th>
<th>(Far) Below Basic</th>
</tr>
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<tbody>
<tr>
<td>3rd</td>
<td>0</td>
<td>11</td>
<td>89</td>
</tr>
<tr>
<td>4th</td>
<td>19</td>
<td>42</td>
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<tr>
<td>5th</td>
<td>22</td>
<td>33</td>
<td>45</td>
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<td>6th</td>
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<td>7th</td>
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<tr>
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<td>45</td>
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<td>30</td>
</tr>
<tr>
<td>State All 7th</td>
<td>52</td>
<td>26</td>
<td>21</td>
</tr>
</tbody>
</table>
English Reading Achievement (CAT6/SAT9) By English Language Arts Category of CST Longitudinal Analysis for Grades 4-8

- VERY significant difference between ELLs & RFEPs in English reading at ELA proficiency levels.
- Over time, each proficiency group increases except Far/Below Basic

* RFEP=Redesignated Fluent English Proficient
Bilingualism: Is it an advantage or disadvantage?

- Research on bilingualism shows that students with high levels of bilingual proficiency exhibit elevated levels of academic & cognitive functioning in comparison to students with monolingual or low bilingual skills.
- In synthesis studies, Hispanic and Asian students who were the most bilingual were more successful than their monolingual English-dominant peers.
Bilingualism: Is it an advantage or disadvantage?

- High bilingual students feel most comfortable interacting with students of other backgrounds and demonstrate more positive attitudes toward school than medium or low bilinguals.

- In dual language programs & in synthesis research, there are significant positive correlations in achievement across the 2 languages: students who achieve at the highest levels in English are the ones who achieve at the highest levels in Spanish.
**Spanish Reading Achievement Scores**
*(Aprenda in Percentiles) by English Language Arts/Reading Proficiency Categories (California Standards Test)*

- Significant correlation between reading achievement in Spanish & English for all groups
  - ELL: $r = .63$
  - RFEP: $r = .55$
  - EP: $r = .68$

- Highest readers in English are best readers in Spanish.
BILINGUALISM

SER BILINGÜE

...me hace sentir muy, muy, muy, muy feliz!
I love being bilingual

Es genial
It is awesome!!
Super awesome!
Cool

Maravilloso
Magnífico

Es un privilegio

Es demasiado importante

Yo me siento orgullosa

It feels good
Students: Weighing the Advantages & Disadvantages

Advantages:
- Can communicate with more/different people
- Can talk to grandparents, other family
- Have a better social life, more friends
- Can help others
- Improve the world
- Can translate for others
- Have more knowledge, intelligence
- Better future
- Better job
- More clients (lawyers, doctors)
- Make MORE MONEY!!!!
- Understand other cultures
- Easier to learn other languages
- Can help in emergencies/save a life
- Watch movies in another language
- Read books in more languages
- “Secret” language
- Impress others

Disadvantages:
- More (double) homework
- Have to translate for parents or others
- Hard work, tough
- Time consuming
“I am also (I think) a lot smarter than all my friends that know only one language. I can read in one language and understand it in the other.”

“Knowing two languages can be an advantage because if you don’t know what something means in English, you can try to figure it out in Spanish and translate to English.”

“Also any other academic things that you do will be easier for you once you are bilingual, because another part of your brain is now functioning.”

“One more advantage is that knowing another language exercises your brain, which helps you learn in school better.”
Considerable evidence demonstrates the success of dual language programs for students of different backgrounds.

Research shows that bilingualism does provide some cognitive and academic advantage for students, including ELL and EP students.

The consistency of the research across different geographic regions with different types of dual language models and different populations of students lends further scientific credibility to these results.
Students: Who Really Benefits?

- Special populations
  - Ethnicity
  - Socio-economic status
  - Special education
Disadvantaged (Free lunch) 7th grade students in dual language programs achieve at much higher levels than their peers at the district and state levels.

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<tr>
<th></th>
<th>DL Disad</th>
<th>Dist Disad</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Proficient &amp; Advanced</td>
<td>46</td>
<td>30</td>
<td>28</td>
</tr>
<tr>
<td>Basic</td>
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<td>31</td>
<td>33</td>
</tr>
<tr>
<td>(Far) Below Basic</td>
<td>8</td>
<td>40</td>
<td>39</td>
</tr>
</tbody>
</table>
Latino 7th grade students in dual language programs achieve at much higher levels than their peers at the district and state levels.

<table>
<thead>
<tr>
<th></th>
<th>DL Latino</th>
<th>Dist Latino</th>
<th>State Latino</th>
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</thead>
<tbody>
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<td>29</td>
<td>28</td>
</tr>
<tr>
<td>Basic</td>
<td>50</td>
<td>32</td>
<td>34</td>
</tr>
<tr>
<td>(Far) Below Basic</td>
<td>6</td>
<td>38</td>
<td>38</td>
</tr>
</tbody>
</table>
Research on African American students in dual language programs shows that these students achieve at much higher levels than their non-dual language peers in achievement measured in English.
Students identified as Special Education scored very low.

- No difference in English reading scores between ELL and EP Special Ed students.

- No difference between DL Special Ed students and California average for students with disabilities, despite the greater exposure to English instruction in California state sample.

- Major difference is the DL students are bilingual.
Implementation

- What are the characteristics of successful programs?
- Is more English better? How much English is sufficient?
Implementation
Characteristics of Effective Programs

- Guiding Principles for Dual Language Programs
- Research Based
- Funded by the Office of English Language Acquisition (OELA) through the National Clearinghouse of English Language Acquisition (NCELA). Center for Applied Linguistics  http://www.cal.org/twi/guidingprinciples.htm

- Program Structure
- Curriculum
- Instruction
- Family and Community
- Staff Quality and Professional Development
- Support & Resources
- Assessment and Accountability
High quality schools--research base:

**Cohesive school-wide shared vision and set of goals**
- Commitment & instructional focus -- bilingualism, biliteracy.
- High expectations for all students.

**Equity -- district, school, and classroom**
- All students at school experience high quality program with equitable set of resources

**Effective leadership is CRITICAL!**
- Program advocacy and liaison
- Oversight of model development, planning, coordination
- Staff cohesion/professional development.

**Process for ongoing, continuous planning**
Is more English better?

Question 1: Do ELL students in 50:50 programs (more English) achieve at higher levels than students in 90:10 programs (less English)?

Question 2: Do ELL students in dual language programs achieve at higher/lower levels than students in English mainstream programs?

Time on Task argument would argue that more English in the instructional day will lead to higher outcomes in English.
Both ELL and RFEP students make significant growth in English proficiency, regardless of amount of instruction through English -- less (50:50) or more (90:10) English.

More English does NOT lead to higher proficiency in English.
There is no difference in the reading and math achievement in English of ELL and RFEP students according to the amount of English in their instructional day.

- More English does NOT lead to higher achievement in English.
DL RFEPs show HIGHER achievement than all other groups, including EOs, and non-disadvantaged EOs.
Is more English better?

- Dual language research: More English in the instructional day does not lead to higher outcomes in English.
- Synthesis: ELL students in English only programs had the lowest proficiency in English, the lowest achievement in English, and the highest school dropout.
- However, more Spanish in the instructional day leads to higher achievement in Spanish and higher levels of bilingualism—and students who are more bilingual achieve at higher levels in English.
Dual Language Model: Implications for Literacy

◆ Literacy model
  ▪ **Successive** (read first through L1, add on L2 in 2nd or 3rd grade)
  ▪ **Simultaneous** (learn to read in both languages)

◆ Research on bilingual programs (including late-exit and dual) shows:
  ▪ Successive literacy approaches are more beneficial for ELL students who begin school with less developed L1 and who are from low-income homes in which parents have lower levels of education (less literacy in the home)
What Research Suggests for High Quality Program Structure

◆ Considerations:
  - Need sufficient model speakers of each group to enable students to practice language. The ideal is 50:50, but can have as few as 1/3 of either group.
  - Some schools have 1/3 ELL, 1/3 EO, 1/3 Latino EO.
  - EO models must be proficient in English, not just dominant in English to count as English model.
  - Need to consider transiency and movement out of program. In kinder, 3-4 two-way classrooms is ideal, 2 classrooms is an absolute minimum.
  - Special ed students do not need to exit program.
In high quality language programs, the curriculum:

- Aligns with standards and assessment.
- Is academically challenging and integrates higher-order thinking.
- Integrates technology.
- Is thematically integrated & meaningful.
- Is enriched, not remedial.
- Aligns with the vision and goals of bilingualism, biliteracy, and multiculturalism,
- Includes language & literature across the curriculum.
- Reflects & values students’ cultures.
2. Planning related to curriculum:
   - Horizontal & vertical alignment.
   - Large variety & types of materials.
   - Meets vision and goals of bilingualism, biliteracy, and multiculturalism.

Planning is partly based on curriculum, but is somewhat independent. Publishers and textbooks will change over the years, but the students’ needs will not.
The language of content instruction is not a significant variable. The major issue is to develop the concepts and enable students to develop specialized vocabulary in each language.

Consider specific reasons for having content instruction through a particular language (e.g., specialized vocabulary, assessment requirements, proficiencies of teachers for specials--library, PE). In California, 4th grade social studies makes sense to teach in Spanish because of content - Spanish missions. 8th grade history does not make sense to teach in Spanish because it focuses on US history and important government documents in English.
Dual Language Model Considerations
Time and Language Considerations
Alternate Day/Week Instruction

- Despite its seeming popularity, alternate day or alternate week instruction is not advised. There is no research to support its success. Rather, there is research to argue against its use.
  - In research on learning a second language and new material, students learn more effectively when they practice the material each day than when the material is presented less frequently but in larger chunks of time (research on massed vs. distributed practice).
Language Arts/literacy instruction in dual language programs differs from English only programs.

- Like instruction in English, Spanish reading/language arts is based on English Language Arts standards, but
- Unlike English reading instruction, we do not start over with beginning reading instruction in English; rather, we build on what knowledge and skills students have already acquired in Spanish.
- Many ELA skills can be taught during instruction in Spanish.
  - ELA Standard Grade K: Describe people, places, things (e.g., size, color, shape), locations, actions
  - This language arts/literacy skill can be taught through Spanish—understanding how to describe people, things, locations, actions
Biliteracy Issues

Use Research: What does research say about developing biliteracy (Mora, Genesee):

- There is positive transfer between L1 and L2 in phonemic awareness, reading phonics, word recognition, word strategies, use of cognates, monitoring comprehension.
  - Some students need direct instruction before they can utilize the similarities.
- Biggest obstacle is lack of vocabulary in L2
- Background knowledge for specific texts is essential to comprehension
- Some reading strategies are common to both languages, others are specific to the phonetic and grapheme systems between English and Spanish. Explicit instruction in these contrasts is helpful.
Strand 3: Instruction

- Structured tasks & unstructured opportunities for students to use language
- Language policy to encourage students to use Spanish
- Monolingual lesson delivery
- Needs of all students are balanced
- Students are integrated for the majority of the instruction
Effective strategies & techniques include:

- Language input that:
  - Uses sheltering strategies to promote comprehension
  - Uses visual aids and modeling instruction, allowing students to negotiate meaning
  - Is interesting, relevant, of sufficient quantity
  - Is challenging to promote high levels of language proficiency and critical thinking
Strand 4: Family and Community

- The program has a responsive infrastructure for positive, active, and ongoing relations with students’ families and the community.
- The program has parent education and support services reflective of the bilingual and multicultural goals of the program.
- The program views and involves parents and community members as strategic partners.
Strand 5: Staff Quality and Professional Development

- The program recruits and retains high quality dual language staff (e.g., subject matter & language competence).
- The program has a quality professional development plan and includes administrators & teachers.
  - Dual language education model
  - 2nd language development
  - Integrate language into content
  - Biliteracy instruction, GLAD
  - Assessment
  - Educational equity
Strand 6: Support and Resources

- The program is supported by all program and school staff.
- The program is supported by families and the community.
- The program is adequately funded.
- The program advocates for support.
- Resources are distributed equitably within the program, school, and district.
Strand 7: Assessment and Accountability

Research on effective schools, including schools with immersion programs, demonstrates that **assessment plays an important role**. In these schools, assessment is:

- Consistent and systematic (longitudinal)
- Used to shape & monitor program effectiveness
- Aligned with appropriate state curricular standards and with vision and goals of bilingualism, biliteracy, and multiculturalism
- Carried out with multiple measures in both languages
- Interpreted accurately (data are disaggregated)
- Disseminated to appropriate constituents
- Included in professional development.
Conclusions
From the Research

- Considerable evidence demonstrates the success of dual language programs for students of different backgrounds.

- More English in the instructional day does NOT lead to higher levels of English proficiency or achievement.
Conclusions From the Research

◆ A number of characteristics are associated with high quality dual language programs. Knowledgeable leadership & teachers, standards-based curriculum that is grounded in theories of bilingualism and biliteracy development, considerable program planning and articulation, instructional strategies that promote comprehensible language and content, and equitable and supportive relationships with families and students.

◆ Poorly conceived programs lead to poor outcomes. Just adopting the name without the careful attention to program planning and implementation will not result in student success.