Findings from the National Literacy Panel on Language Minority Children and Youth and Implications for Classroom Practice

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Improving communication through better understanding of language and culture

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Educational Achievement and Teaching
of English Language Learners

Welcome and Housekeeping

▸ Discussion/Interactive Format

- Quick Polling

- Type messages into chat area

- Break for responding to chat questions/comments

- Those on just the teleconference can email questions to: eventquestion@wested.org

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Support for the Panel

▶ Institute of Education Sciences, US Department of Education

▶ With additional support from National Institute of Child Health and Human Development and the Office of English Language Acquisition, US Department of Education

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Overview of Presentation

▸ Background information about the National Literacy Panel on Language Minority Children and Youth

▸ Highlights of the Panel report
- Development of literacy (Lesaux & Geva)
- Relationship between English oral proficiency and English literacy (Lesaux & Geva)
- Relationship between first language literacy and second language literacy (Dressler with Kamil)
- Instructional Approaches and Professional Development (Shanahan & Beck; Francis, Lesaux & August)

Quick Poll: Who is Online?

Your primary profession:

▸ elementary school teacher

▸ secondary school teacher

▸ school, district, or state administrator

▸ curriculum coordinator

▸ staff development specialist/trainer

▸ post-secondary educator or administrator

▸ researcher

▸ other

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Purpose of the National Panel

▸ Develop an objective research review methodology

▸ Identify the research literature on the development of literacy in language minority students

▸ Analyze the research literature

▸ Develop a final report with recommendations for research and suggestions for practice

Panelists and Staff

Panelists

Diane August, Principal Investigator

Timothy Shanahan, Chair

Fred Genesee

Esther Geva

Michael Kamil

Isabelle Beck

Linda Siegel

Keiko Koda

David Francis

Claude Goldenberg

Robert Rueda

Margarita Calderon

Gail McKoon

Georgia Garcia

Senior Research Associates

Cheryl Dressler

Nonie LeSaux

Senior Advisors

Donna Christian

Catherine Snow

Frederick Erickson

Process

- US Department of Education constitutes the panel

- Five panel meetings, several subgroup meetings, and numerous, ongoing conference calls over four years

- Five working groups each focused on a different domain

- Seven electronic searches and hand searches of key journals

- Criteria established for inclusion

- Coding of all studies in a File Maker database

- Writing

- One internal round of review and 2 external rounds of review

- Extensive editing and revisions

- Report published in July by Lawrence Erlbaum Associates

- Developing Reading and Writing in Second-language Learners will be published in August, 2007 by LEA and IRA

Parameters for the Research Synthesis

▸ Language minority children

▸ Ages 3-18

▸ Acquisition of literacy in their first language and the societal language

▸ Empirical research

▸ Peer-reviewed journals, dissertations, technical reports

▸ Research published between 1980 and 2002
  − For studies focused on instruction, this presentation also cites studies published between 2003 and 2006

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Research Domains

❖ Development of literacy in second-language learners

❖ Cross-linguistic relationships in second-language learners

▶ The socio-cultural contexts and literacy development

❖ Instructional approaches and professional development

▶ Student assessment

Development of Literacy

‣ The word-level literacy skills of language-minority students (e.g. decoding, spelling) are much more likely to be at levels equal to monolingual English speakers.

‣ However, this is not the case for text level skills (e.g., reading comprehension, writing). These skills rarely reach levels equal to monolingual English speakers.

‣ A crucial area of investigation is how to build the English proficiency skills of second-language learners because the ability to develop text-level skills depends on strong English proficiency.

‣ There are similar proportions of second-language learners and monolingual speakers classified as poor readers.

Relationship between Second Language Oral Proficiency and Second Language Literacy

▶ Measures of oral language proficiency in English correlate positively with word and pseudo-word reading skills in English, but are not strong predictors of these skills. In contrast, various measures of phonological processing skills in English (e.g., phonological awareness) are much more robust predictors of word and pseudo-word reading skills.

▶ In contrast, well developed oral proficiency in English is associated with well-developed reading comprehension skills and writing skills in English.

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Relationship between First Language Literacy and Second Language Literacy

▶ First language literacy is related in important ways to second language literacy:

  − First language word and pseudo-word reading, vocabulary (cognates), reading strategies, reading comprehension, spelling, and writing are related to these skills in a second language.

▶ Thus, language-minority children who are literate in their first language are likely to be advantaged in English.

▶ Important to take 'transfer' into consideration when planning instruction.

Instructional Approaches and Professional Development

❖ Effective literacy teaching
  ❖ Components
  ❖ Less targeted approaches

❖ Language of instruction

▶ Qualitative studies of classroom and school practices

▶ Literacy instruction for students in special education settings

▶ Teacher beliefs and professional development

Context for Literacy Development

▶ A large proportion of English-language learners in the US are from poor families:

- In 2000, 68% of ELLs in pre-k though 5th grade were poor; 60% of ELLs in grades 6-12 were poor which is twice the rate for English proficient students in these grade levels (Capps, et al., 2005).

▶ SES has a large impact on oral proficiency which is implicated in text-level literacy skills

- On average, scores for middle and high SES language-minority children are 7.2 points or nearly ½ standard deviation higher than scores for low SES language-minority children in oral language, measured by picture vocabulary, verbal analogies, and oral vocabulary (Cobo-Lewis et al., 2002).

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Results of Teaching the Components

Phonics/PA	4	.54 (.36)	n=446	5 mos.
Fluency	2	n/a	n=167	12 weeks
Vocabulary	2	1.20	n=105	13 weeks
Reading comp	2	.11	n=153	1 year
Writing	4	.54	n=238	1 year

Effective Literacy Teaching: Teaching the Components

Methodological Challenges:

▸ The group of experimental studies focused on the elements of literacy is heterogeneous, creating a challenge to summarize research results across these studies.

▸ Classroom-level factors associated with outcomes for language-minority students have received less attention than have other areas of research.
  − The National Reading Panel (NRP) located about 450 studies that examined development of the five components of literacy.
  − NLP located 17 such studies.

▸ Few studies examine the development of literacy or effective literacy practices for non-Spanish background English-language learners.

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Phonemic Awareness and Phonics: Research

- ‣ Findings are consistent with the very solid L1 research findings-- both phonemic awareness and phonics instruction confer clear benefits on children's reading development.
    - − Stuart, 1999; Larsen, 1996; Giambo & McKinney, 2004; Gunn, Biglan, Smolkowski, & Ary, 2000; Gunn, Smolkowski, Biglan, & Black, 2002; Gunn, Smolkowski, Biglan, Black, & Blair, 2005; Troia, 2004; Swanson, Hodson & Schommer-Aikins, 2005
    - − Most studies took place in small group pull-out sessions and don't shed much light on how to deal with different levels of reading ability in the same classroom.

- ‣ There is no evidence that phonemic awareness and phonics instruction in English needs to be delayed until a certain threshold of English oral language proficiency is attained.
    - − Important to keep in mind issues raised in previous slide

Phonemic Awareness and Phonics: Research

▶ If children have phonological awareness in Spanish, they do not need PA training in English.

▶ Helping students hear English sounds that don't exist or are not salient in their home language is beneficial (Kramer, Schell, & Rubison, 1983)
  – Examples include minimal pairs such as the initial consonant blends in cheat and sheet.

How often do you build children's oral language proficiency in the context of literacy instruction ?
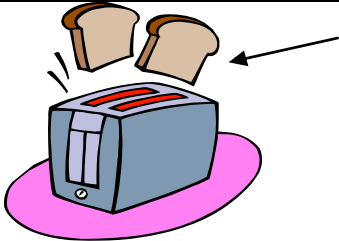
- ▸ Rarely
- ▸ Often
- ▸ Very Often
- ▸ N/A

Phonemic Awareness and Phonics

Our work in K-3 classrooms:

▸ In testing phonological awareness, directions and practice are given in both languages.

▸ For students who have been instructed in their first language (in our work, Spanish), we use a transition curriculum where sounds that are different/don't exist in the first language are emphasized.

▸ We provide additional practice with high frequency words.

▸ We read aloud the basal reading selections to ensure students comprehend the text before they read it (discussed in the section on comprehension).

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Glossary of High Frequency Words

Picture	Word	Sentence
	bread _____	**I heat my <u>bread</u> in the toaster.**
	farm _____	**The cow lives on a <u>farm</u>.** **What other animals would you find on a farm?**
	car _____	**The <u>car</u> is on the street.**

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Fluency: Research

▶ There are too few studies of teaching oral reading fluency with language-minority students to draw firm conclusions.

- Denton, 2000; De la Colina, Parker, Hasbrouck, & Lara-Alecio, 2001; Gunn, Biglan, Smolkowski, & Ary, 2000; Gunn, Smolkowski, Biglan, & Black, 2002; Gunn, Smolkowski, Biglan, Black & Blair, 2005

▶ Fluency training similarly benefits language-minority students and English-speaking students.

- Existing studies have used good English models and paired language-minority students with proficient English readers.
- Existing studies ensure students understand the text before they read it.
- With good instruction, language-minority students make significant progress.

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Fluency: Practice

Our work in K-3 classrooms:

▸ We provide many opportunities for reading connected text: after explicit instruction in letter-sound relationships, students engage in echo reading, whisper reading, cloze reading, and partner reading.

▸ We ensure students are practicing on text that is at the proper reading level and calibrated so the passages build on each other in difficulty.

Example of Echo Reading

Page 103

 "Just keep trying," Grandfather shouts from the truck. Papa and Antonio count the cows and calves. They check their ear tags to make sure all of the cows belong to us. They inspect them to see if they are healthy.

The Roundup at Rio Ranch

written by Angela Shelf Medearis

Illustrated by Karen Chandler

Question and Answer Break

▶ **Question and Answer Break**

Vocabulary: Research

▶ Incidental learning improves vocabulary when the oral discourse is aligned with the visual images. However, students with more English proficiency learn more (Neuman & Koskinen, 1992).

▶ Intentional learning improves vocabulary:
  − Teach words (Perez, 1991; Carlo et al., 2004; Biemiller & Boote, 2006)
  − Teach strategies (Carlo et al., 2004)
  − Build word consciousness (Carlo et al, 2004)
  − Immerse students in a language rich environment (Collins, 2005; Carlo et al. 2004)

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Vocabulary: Practice

Our work in K-3 Classrooms:

▶ Select vocabulary from rich children's literature
- Pre-teach academic vocabulary
- Teach vocabulary in context by supplying synonyms
- Teach basic words related to the story's theme
- Teach 'other words and phrases' such as cohesion markers, idioms, adverbs, and adjectives

Would

Teacher Talk

2. Would

In English, you use would when you are saying what someone might do if they had the chance.

En español, usamos el verbo en el tiempo condicional para hablar de algo que podría ocurrir, pero de lo que no estamos seguros. En inglés se usa la palabra "would" seguida del verbo.

This picture demonstrates the word "would." This kitten [point to the kitten in the picture] would get the fish [point to the fish in the tank] if he could get into the fish tank.

Partner Talk

Let's think about what the word "would" means.

Imagine that you wanted to roll a ball down a ramp. Would you choose a steep ramp or a flat one? Why? Try to use "would" in your answer.

Ask one or two pairs for their response.
[Anticipated response: A steep one because a ball will not roll down a flat ramp.]

Call on One Child

What would you do in these situations?

1. If you lost a tooth today, what would you do with it?
2. If you were really hungry right now, what would you eat?
3. If it were your best friend's birthday, what would you do?

Teacher Talk

Repeat after me: Would, would, would.

Page 17.

Explanation

Sometimes things are really hard to pick up, or lift. Then we have to use a machine for help.

How do people move really heavy things?
They use machines. This worker is using a
forklift. This machine lifts heavy bags onto
a truck.

Call on One Child

What does the man have to do to get the forklift to work?

[Anticipated response: The man has to drive the forklift over to the things that need to be lifted. Then he has to pull a lever so the platform will raise the bags.]

The forklift uses a lot of force to
lift the heavy load.

Explanation

So the forklift makes it easier to move a big load, or group of things that need to be moved.

The truck driver will take the bags to a
building site. Big machines, like forklifts
and trucks, are used to move things when
a lot of force is needed.

Call on One Child

How does a truck help move things?

[People load things into the truck and then the truck driver takes the things to where they need to go.]

Our Work in Sixth Grade Science Classrooms:

‣ Identify academic words (cognates and non-cognates) and discipline-specific words

‣ Use glossaries and reinforcement activities to build word knowledge

‣ Provide definitions and examples in students' first language

‣ Use graphic organizers

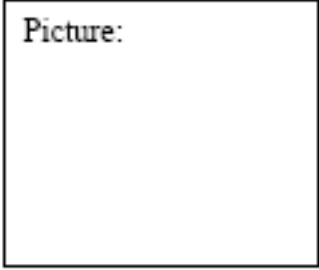‣ Teach word-learning strategies (use of cognates, word roots, base words)
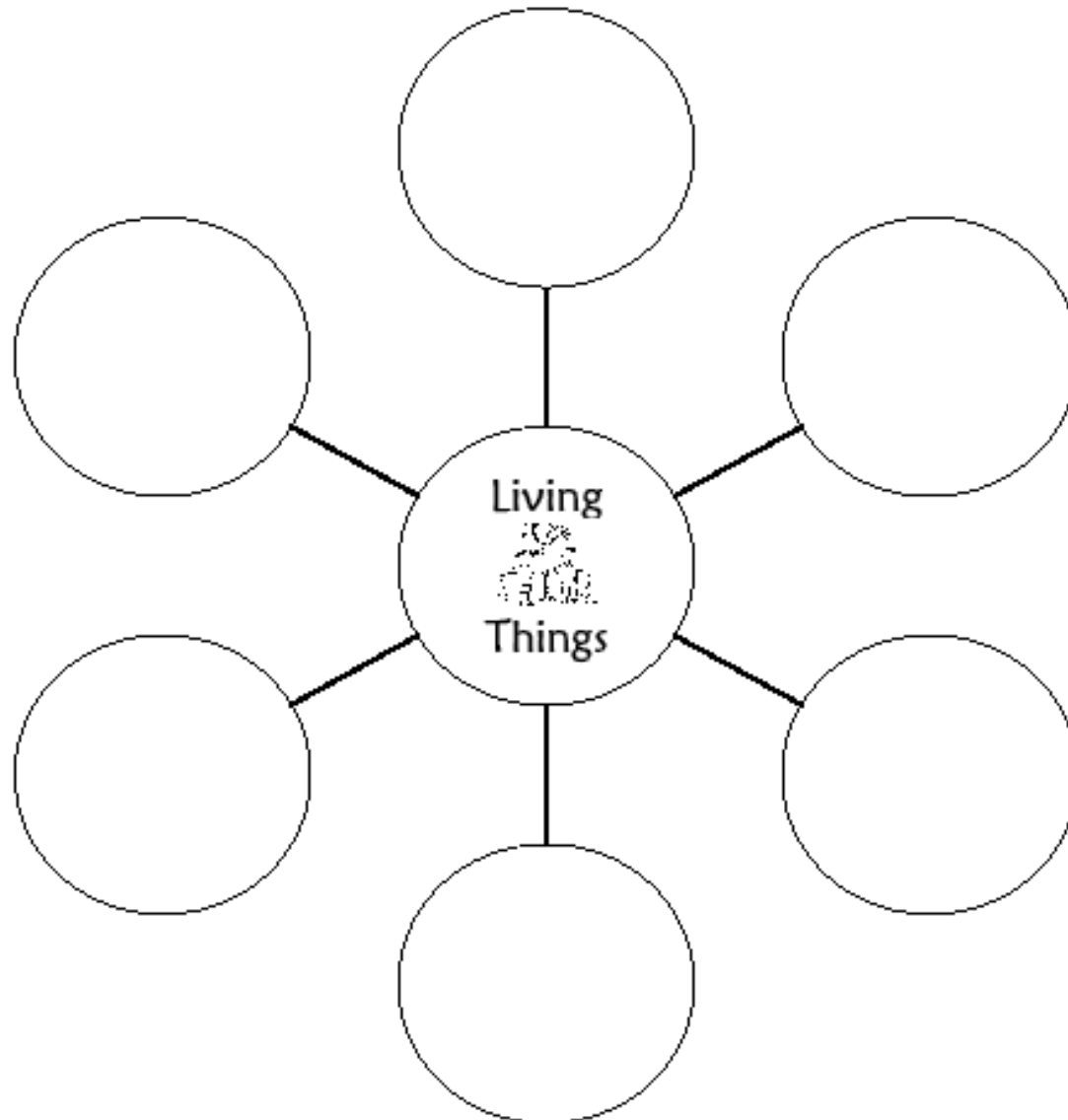
Example of Academic Words Glossary

adequate *adecuado*	Adequate means good enough. This man is shivering because he is not wearing adequate clothing for the cold weather. *Adecuado significa apropriado para las condiciones o circunstancias. Algo que es suficiente.* Your sentence: _____ _____	
concentrated *concentrado*	Concentrated means brought together in one place. Most of the tall buildings are concentrated in the downtown area of the city. *Concentrado significa reunido en un mismo lugar.* Your sentence: _____ _____	

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Example of Technical Words Glossary

QUEST: Week Six Technical Words
Student Glossary

_____	**Diffusion** is a process in which molecules move from an area of high concentration (a lot of molecules) to an area of low concentration (not a lot of molecules). When you put cream in coffee it diffuses through the coffee. *__Difusión__ es el método principal por el cual pequeñas moléculas se mueven dentro y fuera de las células. Durante la __difusión__, las moléculas se mueven de un área de mayor concentración (muchas moléculas) a un área de menor concentración (menos moléculas).*
_____ Picture:	**Molecules** are particles that are made of two or more atoms bonded together. Water **molecules** have 2 hydrogen atoms combined with one oxygen atom. *Las __moléculas__ son partículas que están hechas/ formadas de dos o mas átomos unidos. Las __moléculas__ de agua tienen 2 átomos de hidrógeno combinados con un átomo de oxígeno.*

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Example of Graphic Organizer for Vocabulary

Cognate Hunt

There are 11 cognates in this paragraph. One is a false cognate.
Find them and circle them.

On their way to the moon, Apollo 8 astronauts looked back and saw a bright blue globe. At that moment, they became the first people ever to see earth as a planet. Their photographs demonstrate something we know, but is hard to believe. We are all moving through space. Our spaceship is the earth; it moves around the sun at 67,000 miles an hour.

Letter Differences

Read the Spanish words in the list below. Next to each Spanish word, write its English cognate from the passage.

Spanish Cognates   **English Cognates**

1. astronautas   _____

2. momento   _____

3. planeta   _____

Example of a Word Learning Strategy, Part 3

Sound Differences

Some cognates sound more alike than others. Circle the number for each pair to identify how alike the sets of cognates sound.

4 = Sound exactly alike   **3** = Sound slightly different
2 = Sound similar   **1**= Sound very different

Astronaut / Astronauta			
Sounds completely different	Sounds slightly different	Sounds similar	Sounds exactly alike
1	2	3	4
Moment / Momento			
Sounds completely different	Sounds slightly different	Sounds similar	Sounds exactly alike
1	2	3	4

Comprehension: Research

▸ Very few empirical studies focus exclusively on comprehension and language-minority students.
  – Simplify text by omitting trivial elements (Bean, 1982)
  – Reciprocal teaching on alternate days using L1 first (Fung, Wilkinson, & Moore, 2003)

▸ Unlike first language research, strategy instruction did not always help reading comprehension.
  – Shames, 1998
  – Swicegood, 1990

Comprehension: Practice

Our work in elementary school classrooms:

▸ **Identify and clarify difficult words**
  − Pre-teach vocabulary
  − Teach vocabulary in context

▸ **Paraphrase text and incorporate background information**

▸ **Use questions to build meaning**
  − Ask lots of questions that focus on meaning of the passage
  − Ask different levels of questions

▸ **Provide lots of opportunities for students to demonstrate comprehension**
  − Responses to questions (as individuals and with partners)
  − Story retellings
  − Written responses

▸ **Respond to students in ways that build oral proficiency and comprehension**

Comprehension: Practice

Our work in middle school classrooms:

▸ Same strategies as with read-alouds
▸ In addition
  – For science, a lot of hands-on activities prior to reading
  – Use graphic organizers
  – Ask guiding questions
  – Have students take notes as they respond to questions

A cell membrane is usually <u>permeable</u> to substances such as oxygen, water, and carbon dioxide. On the other hand, the cell membrane is usually not <u>permeable</u> to some large <u>molecules</u> and salts. Substances that can move into and out of a cell do so by one of three methods: <u>diffusion</u>, <u>osmosis</u>, or active <u>transport</u>.

A 3: Name some things that can easily permeate the cell membrane.
(<u>Oxygen</u>, water, and carbon dioxide can **permeate** the cell membrane.)

O: Name some things that cannot easily permeate the cell membrane.
(Large molecules and salts cannot permeate the cell membrane.)

Have students answer Key Question #1 in their student charts.

Key Question 1: How does the structure of the cell membrane relate to its function?
(The cell membrane is structured so that substances can only move into and out of a cell by either diffusion, osmosis, or active transport. The cell membrane's structure does not allow all substances to pass through it.)

A 3. Name some things that can easily permeate the cell membrane.
_____, water, and carbon dioxide can _____ the cell membrane.

Key Question 1: How does the structure of the cell membrane relate to its function?
_____
_____
_____

Question and Answer Break

▸ **Question and Answer Break**

Writing: Research

- Access to English proficient peers
  - Students may improve less with a self-selected partner (Franken & Haslett, 1999) than with a group of peers who could provide support because they are English proficient (Prater & Bermúdez, 1993)

- The use of resourced writing
  - The degree of textual support, domain specificity, and experience with a specific genre (Franken & Haslett, 1999)

- Direct teacher instruction, modeling, and teacher feedback

- Explicit attention to correcting form
  - Important in helping students produce high quality written work (Gomez et al., 1996; Franken & Haslett, 1999; Sengupta, 2000)

- Professional development that focuses on both attention to developing content and academic English (Echevarria & Short, 2006)

Our Work in Sixth Grade Science Classrooms:

▸ For older students, teaching writing in the context of teaching content

  – Compare/contrast paragraphs (cellular structure of plants and animals)

  – Persuasive writing (pet ownership based on the needs of living things)

Summary: Teaching the Components

▸ Studies suggest that the types of instruction that help monolingual English-speaking students are advantageous for second-language learners as well

▸ Effect sizes are lower

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Summary: Teaching the Components

▶ **Adjustments are needed, but these were rarely described in detail**

- Emphasizing phonemes not available in home language
- Building on students' first language strengths
- Making word meaning clear through a variety of techniques
- Identifying and clarifying difficult passages
- Providing opportunities for students to practice oral language aligned with the curriculum
- Providing extra practice reading words, sentences and stories

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Summary: Teaching the Components

▸ **Levels of English proficiency and student capability influence how well a particular intervention works, thus the need for differentiated instruction**

  − Some students do not benefit from instruction because they have learning difficulties or social problems

  − Second-language learners below a certain level of proficiency are less able to take advantage of some of the interventions (e.g., collaborative strategic teaching)

Schooling: Less Targeted Approaches

▸ Encouraging reading and writing (6)

▸ Reading to children (3)

▸ Tutoring and remediation (2)

▸ Success for All (3)

▸ Instructional conversations (2)

▸ Cooperative grouping (1)

▸ Mastery learning (1)

▸ Captioned TV (1)

▸ Parent involvement (1)

▸ Other (2)

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Schooling: Results of Less Targeted Approaches

▸ Results were generally positive—meaning that it is clear that we can improve the literacy teaching of second language learners

▸ 20 studies had English language literacy measures and 12 of those 20 showed significant positive effects

▸ Across those 20 studies the average effect was .46

▸ Larger impacts tended to be on decoding measures and smaller impacts on comprehension

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Which group of children do you think do better in English reading:

▸ A. those instructed only in English?

▸ B. those instructed in English and their native language?

Schooling: Language of Instruction

▸ 20 = total studies reviewed (96 were identified)

▸ 16 = studies with language minority students (14 elementary and 2 secondary; 15 in meta-analysis)

▸ 5 = studies with language minority students used random assignment

▸ 26 = total number of independent study samples in meta-analysis
  – (Total N = 4,567; BE = 2,665; EO = 1,902)

▸ 71 = total number of effect sizes on English literacy outcomes (study samples by measures)

Schooling: Language of Instruction

▸ From the analyses conducted, it seems safe to conclude that bilingual education has a positive effect on children's literacy in English.

▸ The magnitude of this effect is small to moderate in size, but is apparent both in the complete collection of studies, and in the subset of studies that involved random assignment.

▸ There is substantial variability in the magnitude of the effect size across different studies, and within subsets of studies, including the subset of randomized studies.

Schooling: Overall Conclusions

▸ Teaching the literacy components to second-language learners is a good idea

▸ Efforts to improve second language literacy in more complex ways are helpful, too

▸ Instructional innovations have smaller impacts on ELL learning (need to do these things and more)

▸ Need more experimental research on how to improve the literacy of second language learners

▸ Need new research-reporting that provides explicit details about how reading instruction was adjusted

▸ Bilingual schooling has a positive effect on literacy development compared with English-only instruction

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Additional Information

‣ Center for Applied Linguistics www.cal.org

‣ National Literacy Panel

‣ Acquiring Literacy in English

‣ Center for Research on the Educational Achievement and Teaching of English Language Learners (CREATE)

‣ Optimizing Outcomes for English Language Learners: Project SAILL

‣ Testing and Assessment: Diagnostic Assessment of Reading Comprehension (DARC)

‣ References

‣ August, D. & Shanahan, T. (2007). *Developing literacy in second-language learners*. Mahway, NJ: Lawrence Erlbaum Associates.

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Thank You!

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▸ www.cal.org/projects/create.html

▸ Join our listserv. Send an email to create@cal.org. Write "list" in the subject line. Include name, organization and email address.

▸ www.tlc2.uh.edu/times/Research/Active/National_Research_and_Development_Center_for_English_Language_Learners

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Question and Answer Break

▶ **Question and Answer Break**

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Next Steps: Archive and Feedback

▸ http://www.schoolsmovingup.net/events/literacypanel

▸ http://www.schoolsmovingup.net/events/literacypanel/survey.htm