Examining Differences Among Program Types for English Language Learners: A Longitudinal Randomized Study

Brain, Cognitive Sciences, and Education
Interdisciplinary Seminar Series
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Project ELLA: English Language and Literacy Acquisition
Dr. Rafael Lara-Alecio, Texas A&M University
Dr. Beverly Irby, Sam Houston State University
Dr. Fuhui Tong, Texas A&M University
Dr. Linda Rodriguez, Aldine ISD
Cindy Guerrero, M.Ed., Texas A&M/Aldine ISD
Polly Trevino, M. Ed., Texas A&M University
Agenda

- Overview of Project ELLA
- Intervention Components
- Findings
- Practical Applications
Goals for Project ELLA

- To determine which instructional delivery model is most effective in promoting English language acquisition and literacy.
- To study under what circumstances certain students respond more favorably to a specific model.
- Follow children from kindergarten through grade 3.
Research Questions

- How effective are the structured English immersion and transitional bilingual education programs in developing English proficiency and reading achievement for English-language learners whose first language is Spanish?

- Is there a difference in the effectiveness of each model type when instruction is enhanced to reflect best practice in language and literacy instruction as compared to instruction typically provided within each program type?
Research Questions

- Are there student, teacher, or school characteristics that predict success in English proficiency and reading achievement for English-language learners whose first language is Spanish?

- Do student characteristics interact with program type (enhanced or typical), and/or teacher or school characteristics to predict success in English proficiency and reading achievement for English-language learners whose first language is Spanish?
## Research Design

<table>
<thead>
<tr>
<th>Enhanced</th>
<th>Structured English Immersion</th>
<th>Transitional Bilingual Education</th>
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<td>Typical</td>
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|          | 100% English full day         | 60% (Spanish) / 40% (English)    |
|          | 75 minutes structured ESL     | 75 minutes structured ESL        |
|          | intervention (K)             | intervention (K)                 |
|          | 90 minutes structured ESL     | 90 minutes structured ESL        |
|          | intervention (1-3)           | intervention (1-3)               |

|          | 100% English full day         | 80% (Spanish) / 20% (English)    |
|          | 45 minutes ESL                | 45 minutes ESL                   |


Context of the Study

Aldine ISD is a Learning First Alliance District and a Two-time Broad Finalist
Aldine ISD Demographics

- 62.28% Hispanic
- 31.38% African American
- 1.98% Asian
- 4.26% White
- 0.09% Native American
Aldine ISD Demographics

- 82.03% Economically Disadvantaged
- 26.83% ELL
- 9.26% Special Education
- 23.82% Mobility Rate
ELLA Model

Structured ESL for Program Types

Four Dimensional Bilingual Pedagogical Theory

Altered Transitional Experimental to One-Way Dual Language

Parent Involvement

Ongoing Staff Development, Reflection, and Feedback

Two Levels/Three Tiered Approach

Trained Paraprofessionals

District/University Leadership & Support
Two Levels, Three Tiers

Level I
Staff Development

Level II
Student Instructional Intervention

Tier 1
District Language Arts (Spanish and/or English)

Tier 2
Structured ESL Intervention

Tier 3
Tutorials for struggling students
Level I:

Staff Development

- Systematic and structured training, monitoring, mentoring, feedback, and self-assessment through reflection via professional portfolio

- Teachers attend bimonthly training sessions on:
  - program intervention components,
  - selected ESL strategies,
  - second language acquisition theory,
  - portfolio development, and
  - student assessments

- Bilingual paraprofessionals attend monthly training sessions on:
  - Selected ESL strategies,
  - Small group instruction,
  - Interpersonal skills, and
  - Testing and data collection
Two Levels, Three Tiers

Level I
Staff Development

Level II
Student Instructional Intervention

Tier I
District Language Arts (Spanish and/or English)

Tier 2
Structured ESL Intervention

Tier 3
Tutorials for struggling students
District Curriculum

Instructional Management System

Scope and Sequence
Show the scope and sequence for a specific district course.

Instruction Level:
PK K 1 2 3 4 5 6 7 8 9 M S H T

Grade: PK
Subject: English Language Arts and Reading
Mathematics
Social Studies
Language Other Than English

Course:
English Language Arts and Reading, Kindergarten
Reading, Kindergarten

Search For Text:
Find

Legend:
- Taught
- Scheduled
- Not Taught

Include:
- Vertical and Horizontal Alignments
- Archived Standards

Show details:
- Strands
- Objectives
- Student Expectations
- Focus

Icon Legend:
- Lesson Plans
- Resources
- Assessment Items

Order by
- District Sequence

English Language Arts and Reading, Kindergarten
Resources for English Language Arts and Reading, Kindergarten

These resources are applicable for the entire course.

Lesson Plan Units for English Language Arts and Reading, Kindergarten
All available lesson plan units.

My lesson plan units.

1st Six Weeks

The student listens attentively and engages actively in a variety of oral language experiences.

KG.1A Determine the purpose(s) for listening such as to get information, to solve problems, and to enjoy and appreciate.
S1 Comprehension - 1

1. Use Think Aloud strategies to define purposes for listening.

KG.1B Respond appropriately and courteously to directions and questions.
S1 Comprehension - 1

1. Introduce following one-step directions (Simon Says).
2. Answering questions appropriately.

KG.1D Listen critically to interpret and evaluate.
S1 Comprehension - 1

1. In daily routine ask who, what, where, when, why, and how questions.

KG.1E Listen responsively to stories and other texts read aloud, including selections from classic and contemporary works.
S1 Comprehension - 1

1. Give opportunities for students to respond to texts.

Resources: Kindergarten Teacher Reading Academy Teacher’s Guide

The student listens and speaks to gain knowledge of his/her own culture, the culture of others, and the common elements of cultures.

KG.2A Connect experiences and ideas with those of others through speaking and listening.
S1 Comprehension

1. Students share comments about daily message(s).
2. Listen to others as they share.

KG.1C Stimulate students' background knowledge, so that students verbalize personal experiences.

Align w/K.13A

Resources: Kindergarten Teacher Reading Academy Teacher’s Guide

The student speaks appropriately to different audiences for different purposes and occasions.

Two Levels, Three Tiers

Level I
Staff Development

Level II
Student Instructional Intervention

Tier 1
District Language Arts (Spanish and/or English)

Tier 2
Structured ESL Intervention

Tier 3
Tutorials for struggling students
ELLA Model

- Integrates developmental model by incorporating curriculum that focuses on increasing student achievement in both language and academic content
  - Kindergarten and first grade emphasized oral language development
  - Second grade focused on direct teaching of reading fluency and comprehension
  - Third grade featured content area reading through science
Kindergarten

- ELLA enhanced ESL intervention: 75 minutes
- Curriculum components:
  - 10 min. Academic Oral Language [AOL]: Question of the Day (Lakeshore)
  - 20 min. Storytelling and Retelling for English Language and Literacy Acquisition [STELLA] (Irby, Lara-Alecio, Mathes, Rodriguez, Quiros, & Durodola, 2004)
  - 45 min. Santillana Intensive English (Ventriglia & Gonzalez, 2000)
First Grade

- ELLA enhanced ESL intervention: 90 minutes
- Curriculum components:
  - 10 min. Academic Oral Language in Science [AOLS]
  - 20 min. Storytelling and Retelling for English Language and Literacy Acquisition [STELLA] (Irby, Lara-Alecio, Quiros, Mathes, & Rodriguez, 2004)
  - 60 min. Santillana Intensive English (Ventrigliia & Gonzalez, 2000)
Second Grade

- ELLA enhanced ESL intervention: 90 minutes
- Curriculum components:
  - 10 min. Academic Oral and Written Language in Science [AOWLS]
  - 35 min. Storytelling and Retelling for English Language and Literacy Acquisition [STELLA] (Irby, Lara-Alecio, Quiros, Mathes, & Rodriguez, 2004)
  - 45 min. Early Interventions in Reading Level II (Mathes & Torgeson, 2005)
Third Grade

- ELLA enhanced ESL intervention: 90 minutes
- Curriculum components:
  - 55 min. Content Reading Integrating Science for English Language and Literacy Acquisition [CRISELLA] (Irby, Lara-Alecio, Rodriguez, & Guerrero, 2007)
  - 35 min. Storytelling and Retelling for English Language and Literacy Acquisition [STELLA] (Irby, Lara-Alecio, Quiros, Mathes, & Rodriguez, 2004)
Intervention Components
Academic Oral Language (K-3)

- Targets academic vocabulary
- Provides sentence using words in context
- Asks a daily question using the target word
- Presents visual aids for comprehension
- In first grade, this component became Academic Oral Language in Science [AOLS], integrating science vocabulary
- In second grade, this component became Academic Oral and Written Language in Science [AOWLS], integrating writing
- In third grade AOWLS was integrated into the science curriculum
How would you move a large mass of dirt?

wagon  bucket  box
Why do we change with a magnifying glass?
**Life in a Tree**

*Instructions:* Write about each creature on the blanks beside the picture.

- **Caterpillar**
  - **Caterpillar** eat leaves
  - They turn into butterfly
  - They hatched near leaves
  - They have a lifecycle

- **Bird**
  - They make their nest in the tree branches. The branches are high off the ground and that makes them safe.

- **Owl**
  - They make noise hoo hoo. They had close to grab mice.
  - They sleep in the day and come out in the nite.

- **Squirrel**
  - Squirrels eat acorns
  - They live in the trunk of the tree. They climb trees by the trunk.
A raccoon lives in the tree. They make a nose.

They hunt there for food. They live over a tree!

Writing Assignment:
If you could be an animal that lives in a tree, what animal would you be? Why? What would your life be like?

Write your answer in your notebook. Use your notes to help you remember how the different animals live.
Life in a Tree

Instructions: Write about each creature on the blanks beside the picture.

Caterpillar

Caterpillar is helpful to trees. They eat leaves.

Bird

Branches can camouflage the nest.

Owl

Owls use their claws to hold on to tree branches. They

Squirrel

Squirrels run fast. They like to eat nuts and acorns.
The Raccoon lives in a hole at the trunk of the tree.

A fox digs a whole under the tree. Foxes like to eat small animals.

Writing Assignment:
If you could be an animal that lives in a tree, what animal would you be? Why? What would your life be like?

Write your answer in your notebook. Use your notes to help you remember how the different animals live.
Storytelling and Retelling for English Language and Literacy Acquisition

STELLA (K-3)

- Uses authentic children’s literature
- Utilizes Bloom’s Taxonomy for questioning
- Integrates science concepts & vocabulary
- L1 clarifications (paraprofessional)
- 5-Day scripted lesson (1 book/week)
STELLA

- **Day 1**
  - Introduce vocabulary
  - Introduce book
  - Make connections to previous lessons & activates prior knowledge
  - Topic Web

- **Day 2:**
  - Review vocabulary
  - Introduce new words and main characters
  - Read story
  - Leveled questions

- **Day 3:**
  - Review vocabulary
  - Introduce new words
  - Story review
  - Cont. Day 3
  - Story critique
  - Story mapping
  - Closure – Word Wall

- **Day 4:**
  - Review vocabulary Introduce new words
  - Interactive group retelling
  - Story Circle
  - Vocabulary Mapping Chart
  - Closure – Word Wall

- **Day 5:**
  - Reread story
  - Science activity
  - Writing activity
Project ELLA
STELLA
Story-retell Time for English Literacy and Language Acquisition

Little Rabbit’s Journey
By: Beverly J. Irby/ Rafael Lara Alecio
Illustrated by Eva Vaggetti Cockrille

Materials:
- Little Rabbit’s Journey
- Picture Word Cards
- Chart Paper for Rabbit Topic Web
- Story Mapping Chart
- Story Map/Dry Erase Marker
- Vocabulary graphic organizer
- Picture of a rabbit or a stuffed rabbit

ESL Strategy: Interactive Read Aloud, Visual Scaffolding, Preview/ Review, Advance Organizer

Science: Chemistry – Earth Science/Landform

Language Arts:
- **Objective 1:** Writing/purposes. The student writes for a variety of audiences and purposes and in a variety of forms.
- **Objective 2:** To develop student’s comprehension through the use of higher order questioning and thinking strategies.
- **Objective 3:** To expand student’s vocabulary, listening and speaking skills.

Vocabulary:
- boulder
- wisest
- sigh
- steep
- stream
- journey

Day 1
Introduce Vocabulary
(Point to the title.)
Say This book was read to you while you were in Kindergarten last year.
Say Who remembers the title of the book?
• Say Yes the title of our story is Little Rabbit’s Journey.
(Point to the author’s name.)
Say The authors of the book are Beverly J. Irby and Rafael Lara-Alegio. Say Does anyone remember another story written by Beverly J. Irby and Rafael Lara-Alegio? (The Cowboy Mouse)

Say Let's pretend you are authors, what would you write about?

Say Now, the title of the story is Little Rabbit's Journey.

Say Do you know what a journey is?

L1 Clarification: ¿Saben ustedes lo que es salir de viaje?
(Wait for students to respond.)

Say Looking at the cover of the book and by the title of the story, who can tell me one word we are going to learn? (Journey) (Wait for students to respond)

Talk about any personal journey you enjoyed and ask the students about their experiences during any particular journey.

Say Today we are going to go over three words. One of them you learned in Kindergarten. Let's see if you remember which one.

(Show the picture card stream.)

Say This is our first vocabulary word for the story.

Say This is the picture for stream.
(Read the sentence on the back of the card.)

Say A stream is a body of running water that is smaller than a river.

L1 Clarification: “Stream” es como un arroyo, una corriente de agua. Una corriente de agua que no es tan grande como un río.

(Model answer using the following stem I could find _________ in a stream.) found on the back of the card. Wait for students to respond with their own sentences using the stem. Students should answer in a complete sentence. If students do not answer in a complete sentence, you need to model for them and ask them to repeat after you.

Say I could find ... I could find... many pebbles in a stream.
Say What else can you find in a stream? Your turn, I could find...

(Show the picture card for boulder.)

Say Who can tell me what this is?
(Wait for students to respond)

Say This is a picture of a boulder. This is not really a new word for you, but I want to see how many of you remember what a boulder is.

L1 Clarification: Esta es la lámina de una roca.
(Read the sentence on the back of the card.)

Say A boulder is a large rock.
L1 Clarification. Una roca es como una piedra grande en un riachuelo.

Say Have you seen a boulder before? Where?
Definition:
A journey is when you travel from one place to another.

Stem:
I would like to go on a journey to...,
Write a sentence using the new word.

...
**Snakes**

**Description**

The snake is yellow and poisonous. The snake is an invertebrate because the snake doesn't have a back bone. And they are reptiles.

**Habitat**

The snakes live kind of everywhere and

**Usefulness**


Santillana Intensive English (K-1)

- Promotes oral language development
- Models syntax and sentence structure to encourage students to speak in complete sentences
- Helps students build social and academic language
- Integrates content-based instruction
- Incorporates small group/pair activities
- Supports phonemic awareness
Teach

You may wish to review previous vocabulary using the Lesson Cards, Vocabulary Cards, and student Word Banks. **WORD BANK**

- **Vocabulary Cards** Introduce Personal Vocabulary Cards 186-190. Pass the cards around the group and ask *Are you hungry? Are you thirsty? Are you hot? Are you cold? Are you tired? Are you dizzy?* Have each student take turns choosing the card that describes the response he or she would like to give and respond by saying *I’m _______.* Have students trace the letters and color the pictures on Personal Vocabulary Cards 186-190.

- Help students relate personal past events. Ask each student *What did you do yesterday?* Elicit varied responses. Then ask *What are you doing today?* and *What are you going to do tomorrow?* Have students offer ideas for the **timeline** by noting what the class did yesterday, is doing today, and will do tomorrow.

<table>
<thead>
<tr>
<th>Yesterday</th>
<th>Today</th>
<th>Tomorrow</th>
</tr>
</thead>
</table>

- Review Vocabulary Cards 17-18 and 62-63. Ask students *How do people change over time? How have cars changed over time? How have clothes changed over time? How do places change over time?*

- **Lesson Card 1.59** Introduce the Lesson Card by explaining that ancestors include grandparents or great-grandparents. Review with students what they have learned about change over time. Then say *Houses have changed. Your grandparents and great-grandparents (the mothers and fathers of your grandparents) had a different house than you have today. Look at the house. Does it look like your house? This is what houses looked like long ago. Have you ever seen a house like this one?* Say *Look and listen.* Then read the story.

- **My ancestors** had to cook their food every day. They had no refrigerator to store it away. My ancestors had to wash their clothes by hand and hang them to dry. No washing machine could they buy.

- **My ancestors** had to go to the bathroom outside. They had no indoor plumbing inside. My ancestors had no electric lights. They had only a candle to light at night.

- **My ancestors** had no phone. They had no way to call their friends when they were home alone.

- **Homes long ago** were very different from the homes today, in almost every way.

- Ask listening comprehension questions, such as *What are ancestors? Where did Sara’s ancestors live? What’s a log cabin? How did Sara’s ancestors warm their feet? Did they have a heater? Why not? Did Sara’s ancestors have bathrooms inside the house? (Explain outhouses.) Did Sara’s ancestors have electric lights? What did they use for light? What is the story mainly about?

Practice and Apply

- **Paired/Collaborative Activity** Have students work with a partner to make a chart of three things that have happened in their lives. (You might wish to give examples to guide them as shown below.) Ask each pair to dictate their events and write them as sentences on the board.

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<table>
<thead>
<tr>
<th>When I was</th>
<th>When I was</th>
<th>When I was</th>
</tr>
</thead>
<tbody>
<tr>
<td>a baby, I</td>
<td>little, I</td>
<td>in kindergarten,</td>
</tr>
<tr>
<td>cried.</td>
<td>learned to</td>
<td>I learned</td>
</tr>
<tr>
<td></td>
<td>walk.</td>
<td>to read.</td>
</tr>
</tbody>
</table>
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- Review the meaning of *ancestors* and make a word map with the word “ancestors” in the center.

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Extend

- **Thinking** Compare and contrast homes today with homes long ago. Make a list of things that homes long ago didn’t have, such as electric lights, washing machines, and TV.

- **Writing** Have students draw a picture and write or dictate sentences describing a home long ago.

Bridge to Reading

- **Phonemic Awareness** Practice oral blending of initial consonants. Say /b/ or—*what’s the word?* Continue with the following words: bat, bank, boot, box, boat, head, Bob, bird.

- **Phonemic Awareness** Practice listening for long vowel sounds. Say *I am going to say some words. You say the word and tell me which long vowel sound you hear: bake, beat, bone, boat, bike, bean.*

- **Phonics** Review the /b/ sound using Personal Vocabulary Card 204. Say *Bobby is bouncing the ball.* Have students identify other words they know that start with /b/. Using Personal Vocabulary Cards 4, 27, and 39-40, review the /b/ sound. Say *I am going to say some words. You hold up the picture of the word I say.* Then review all Personal Vocabulary Cards that start with “b.” Have students write the “b” words and underline the /b/ sound in
Early Interventions in Reading Level II (1-2)

- Daily, explicit, and systematic instruction
- Designed for small Groups of 3-5 students,
  - Author helped us modify curriculum for whole group instruction
- 45 minute sessions
- 5 days a week
Content Reading in Science for English Language and Literacy Acquisition

Full science curriculum, Scott Foresman ©2006 series:

- Interesting pictures and visuals
- Vocabulary introduction, cards, and extensions
- How to Read Science
- ELL support
- Checkpoint questions
- Differentiated instruction
- Scaffolded inquiry activities
How to Read Science

- Teach target reading skill
- Practice skill with science article
- Apply skill using graphic organizer
- Practice skill four times in each chapter
Lesson 1
How can the oceans be described?

Quick Activity

1. Introduce

Quick Activity

Transparency 26
Plug one end of a straw with a lump of modeling clay to make a hydrometer. Using a mm ruler with raised markings, transfer the markings to a piece of masking tape by rubbing a crayon over the tape on the ruler. Put the masking tape on the hydrometer so that students can compare how the hydrometer floats in fresh water with how it floats in very salty water. Chart student observations on the board.

Access Prior Knowledge

Encourage students to list three things that are common to both oceans and inland lakes, and then discuss the lists. (Examples: Fish, waves, used for transportation, used for recreation)

Set Purpose

Tell students that they are going to learn about the Earth's oceans. Help them set a purpose for reading, such as to discover differences in salinity, temperature, and resources between oceans.

2. Teach

Quick Summary

- All the waters of Earth form the hydrosphere.
- The hydrosphere covers about three-fourths of the Earth's surface.

Have students read pages 198-199.

Guide students to use the Internet to understand that all oceans are connected, and refer to a map or globe to demonstrate.

Assign Quick Study pp. 48-49 to students who need help with lesson content.

Lesson 1 Resources

Audio Text

Use the audio version of the Student Edition to support emerging readers, auditory learners, and students with limited English proficiency.

Workbook, p. 66

ELL Levelled Support

I See the Sea

Beginning
Say the word ocean as you point to the four oceans shown on pages 200-201. Have students repeat each name after you. Say: In English, an ocean is also a sea. Sea can also mean little ocean. Point to a classroom map and identify seas marked on it such as the Mediterranean Sea and the North Sea. Students may have questions because words for sea end ocean are not interchangeable in all languages.

Intermediate
Build on the above. Help students fill in the cloze sentence: I see the sea and it is _____________. (Possible answers: beautiful, blue, sparkling, gray) Have students enter the adjectives into Word Collection Books.

Advanced
Build on the above. Explain: Sea is a synonym for ocean. A synonym is a word that sounds different but means the same thing. Ask students to name other synonym pairs. Then say: Sea is a homonym for sea. A homonym is a word that sounds the same but is spelled differently and has a different meaning. Ask students to name other homonym pairs.

Scaffold Questions

1. Recall: What fraction of Earth's water is not ocean water?

2. Deduce: Approximately what percent of Earth is not covered by oceans? About 25 percent of the Earth is not covered by the hydrosphere.

3. Predict: Describe what Earth would be like if the hydrosphere covered 25 percent of its surface. It would probably have large deserts and not enough water for all living things.

Extend Vocabulary

- Write the word hydrosphere on the board, separating the prefix hydro- and root water sphere.
- Discuss that hydro refers to water, and ask students to define sphere ("round, solid figure," here referring to Earth).
- Ask students to think of and define other words containing sphere. (Examples: atmosphere, stratosphere)

Diagnostic Check

If... students have difficulty understanding how three-fourths of Earth is covered by water, then...

- have them trace the land areas on a globe, and then separately trace the ocean areas. Have them cut up the land areas and fit them inside the ocean areas.

1. Checkpoint: About 75 percent, which is the same as \(\frac{3}{4}\) or \(\frac{3}{4}\)

2. Math in Science: Two times as deep; \(5,500 \text{ m} \times \frac{1}{2} = 11,000 \text{ m}\)
Science Objective

- The student uses simple strategies to determine meaning and increase vocabulary for reading, including the use of prefixes, suffixes, root words, multiple meanings, antonyms, synonyms, and word relationships.

Chapter 7 Vocabulary Words

- salinity, p. 200
- aquifer, p. 203
- water table, p. 203
- reservoir, p. 204
- condensation, p. 209
- evaporation, p. 209
- precipitation, p. 209
- sublimation, p. 210
- sleet, p. 214

Introduce the Concept

- Ask students this chapter’s essential question, *How does water move through the environment?* Encourage students to revisit this question as they progress through the chapter.
- Ask students to name the nearest bodies of water. Remind them by discussing places they may have visited or heard about from family or friends. List their responses on the board. Then classify the bodies of water they named as fresh water or salt water.
- Many science vocabulary words are abstract. Use the pictures and labels on this page to help you open a discussion about science concepts and build academic language.
- Use questions such as the following to help students clarify their understanding of the vocabulary terms.
  - What would happen if water did not continuously move through the environment? Life could not exist.
  - How are the vocabulary terms aquifer and water table related? The water table is the top level of groundwater in an aquifer.
  - What is sublimation? Sublimation is the changing of water vapor without a liquid stage.

Science Misconceptions

When introduced to the words groundwater and aquifer, students may be confused.

- Many students may assume that groundwater is found in huge lakes and rivers beneath the ground, or that an aquifer is a giant submerged lake. Actually, groundwater is trapped in porous rocks beneath the ground, and can be drawn from that porous rock using wells. An aquifer is the layer of rock and soil that groundwater occupies.
- Students may think that groundwater is static beneath the Earth, when in fact it flows slowly through porous rock in the same way a river flows on the surface of the Earth.
- Students may envision large aquifers as being associated with areas of heavy rainfall, where seepage from the surface replenishes the aquifer. This can be true, but one of the world’s largest aquifers, the Great Artesian Basin of Australia, is located beneath a series of very large deserts.

Introduce Vocabulary

Use the Three-Column Chart provided on Pearsonsuccessnet.com or Graphic Organizer Transparency 3.

<table>
<thead>
<tr>
<th>Term</th>
<th>Prediction</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>salinity</td>
<td></td>
<td></td>
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<tr>
<td>aquifer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>water table</td>
<td></td>
<td></td>
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<tr>
<td>reservoir</td>
<td></td>
<td></td>
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<tr>
<td>condensation</td>
<td></td>
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<td>evaporation</td>
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<tr>
<td>precipitation</td>
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<td>sublimation</td>
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<tr>
<td>sleet</td>
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</tbody>
</table>

- Label the columns Term, Prediction, and Definition.
- Have students pronounce each vocabulary term as you list it on the chart.
- Ask a volunteer to read a sentence from the chapter that includes the vocabulary term. Point to pictures that give clues about the meaning of the term.
- Using these contextual clues, have students predict the meaning of the term and record it in the Prediction column of their chart.
- Repeat the process for each vocabulary term.
- As students read through the chapter, have them confirm or revise the meaning of each vocabulary term. They should return to the chart to record its definition.

Practice

Vocabulary Strategy: Word Endings

Tell students that one way to understand unfamiliar words is to look at the endings, or suffixes, that are part of the word. The suffix -ion always indicates a noun—a word that names a person, place, or thing. Ask: What is the same about the words evaporation, condensation, precipitation, and sublimation? Every word ends in -ion, and every word names a process.

In class discussion, help students see that each process can be understood by removing the suffix from the word and defining the root word (evaporate, condense, precipitate, sublimate).
Vocabulary Cards

condensation

the changing of a gas into a liquid

Grade 5 Chapter 7
Differentiated Instruction

- Content leveled readers teach same science concepts, vocabulary, and reading skills
Scaffolded Inquiry

- Directed and guided inquiry activities in each chapter
- Full inquiry activity per unit

**Lab zone Directed Inquiry**

**Explore** How can you make layers of water float on each other?

**Materials**
- graduated cylinder (or measuring cup)
- very cold water, room-temperature water, very warm water
- 3 small cups
- spoon and cup with salt
- red and blue food coloring
- dropper and metric ruler

**What to Do**
1. Add the materials to the cups. Stir.
   - The dropper should be very close to the water.
2. Use a dropper to gently add drops of the blue water to the cup with clear water. Stop when you have a blue layer about 4 mm tall. Then add red water to make a 4 mm layer.

**Process Skills**
Based on what you observe, you can make an inference about the weights of equal volumes of the water from each layer.

**Explain Your Results**
1. **Infer** Suppose you weigh a spoonful of water from each layer. Which would be the heaviest? the lightest?
2. You observed the effect of salt and temperature together. How could you change the procedure to test only 1 variable, salt or temperature?
CRISSELLA

- Enhances textbook to provide:
  - Scripted lesson plans with L1 clarifications
  - Additional ESL and reading strategies
    - Partner reading
    - Word reading instruction
    - Visuals
    - Graphic organizers
    - Vocabulary extensions
**RISELLA: Chapter 13 Energy**

**Reading Objectives:**
- The student understands explicit ideas and information in third-grade or higher texts (for example, main idea, implied message, relevant supporting details and facts, chronological order of events).
- The student uses simple strategies to determine meaning and increase vocabulary for reading, including the use of prefixes, suffixes, root words, multiple meanings, antonyms, synonyms, and word relationships.
- The student reads and organizes information (for example, in story maps, graphs, charts) for different purposes (for example, being informed, following directions, making a report, conducting interviews, taking a test, performing a task).

**ESL Strategies:** Academic Language Scaffolding, Advanced Organizers, Cooperative Learning, Leveled Questions, Predictable Routines and Signals, Manipulative and Realia Strategies, Modeled Talk, Think Aloud, Visual Scaffolding

**Target Reading Skill:** Main Idea and Details

**Science Objectives:**
- The student recognizes various forms of energy (e.g., heat, light, and electricity).
- The student knows that most things that emit light also emit heat.
- The student knows the many ways in which energy can be transformed from one type to another.
- The student knows that various forms of energy (e.g., mechanical, chemical, electrical, magnetic, nuclear, and radiant) can be measured in ways that make it possible to determine the amount of energy transformed.
- The student knows ways that heat can move from one object to another.

**NSES:** A, Science as Inquiry  
B, Physical Science

**TEKS:**

Science: 3.1A  3.2A-E  3.7A

**Target Vocabulary:** electric charge, electric current, electric circuit, thermal energy, refract, absorb, potential energy, kinetic energy, reflect

**Materials:** Everyday have Pronunciation Guide and Error Correction Techniques

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ch 13 KWL (placed in each student's science journals), ELMO display copy, student editions, Ch 13 vocabulary cards, &quot;Using Synonyms&quot; activity sheet ELMO copy.</td>
<td>Ch. 13 Lesson 1 Sound Preview and Word Knowledge, student editions, Ch 13 Lesson 1 Vocabulary Extension sheets p. 1-4 (cresc. through)</td>
<td>Ch. 13 Lesson 2 &quot;Energy Changes Form&quot; flowchart, ELMO display copy, student editions, Ch 13 Lesson 2 Vocabulary Extension sheets p. 1-4 (cresc. through)</td>
<td>Ch. 13 Lesson 3 Vocabulary Extension sheets p. 1-3 (thermal energy), student editions, Ch 13 Lesson 3 Vocabulary Extension sheets p. 1-3</td>
<td>Ch. 13 Lesson 4 Vocabulary Knowledge Ch 13 Lesson 4 ELMO display copy, teacher will need to prepare a flashlight, mirror, two balloons, and a piece of paper</td>
</tr>
</tbody>
</table>
Day 1: Introduce Ch 13
Modified KWL (12 minutes)

What I Already Know (activating prior knowledge)
Individual copies of Ch. 13 KWL chart should be trimmed and placed in each student’s science journal. Make sure students are grouped into pairs. SEs should be open to p. 353, and say: “In Chapter 13 we learn about energy. Energy is the ability to do work or to cause change. En capítulo 13 aprendemos de la energía. Energía es la capacidad de hacer trabajo o hacer cambios. Let’s read the title together.” (Tap to signal class to read in unison). Chapter 13, Energy.”

- “Today we will work together to complete our KWL charts.” Display the Ch. 13 KWL chart on ELMO. Point to the ’K’ portion of the chart and say “We will begin our KWL chart by finding out what you already know about energy.”
- Say: “OK, now I will set the timer for 1 minute while you discuss energy with your partner.”
- After the timer goes off, say, “Now I want you to write some things you already know about energy on the ’K’ part of your KWL chart.” Give students 2 minutes to write on the ’K’ section their individual KWL charts.
- Call on a few students to share what they already know about energy, “What do you already know, or think you know about how energy?”

What I Want to Know (setting purpose for reading)
- “Now let’s work on the next part of our KWL chart. The ’W’ stands for what we Want to learn. But it can also mean what we predict we will learn. Take a few minutes to look through Chapter 13. Look at the headings, pictures, and charts and predict what you think we might learn about energy.” Set the timer for 2 minutes as the students ‘walk’ through the pages of Chapter 13 and get an idea of what they might learn. The teacher should be modeling looking through the chapter and noticing the headings, pictures, and captions.
- After the timer goes off, say “Now I want you to write some things you predict you will learn about how matter changes.” Give the students 2 minutes to write on the ’W’ section of their individual KWL charts.
- What are some things you predict you will learn in this chapter?” Select a few students to predict what they think they will learn.

What I Learned
Point to the the ’L’ part of the KWL chart say, “After you finish reading the chapter, you will come back and complete the ’L’ part and record what you actually learned.”
Word Reading Instruction

Sound Preview and Word Knowledge
Chapter 7, Lesson 1

hydrosphere

“All the waters of Earth make up the hydrosphere. The surface waters of the earth and water vapor in the atmosphere make up the hydrosphere.”

dissolve

“Dissolve means to mix thoroughly with a liquid. For example, salt dissolves in water.”

salinity

“Salinity is the measure of how salty water is. Ocean water is more salty in some places than in other places. Places where rivers pour fresh water into the ocean have low salinity.”
Chapter 10: Matter and Its Properties

Topic: Web

**Properties of matter**

1. **States of matter:**
   - 1. _______
   - 2. _______
   - 3. _______

2. **How to measure properties of matter:**
   - We can measure mass using a __________.
   - The amount of space that an object takes up. We can measure mass using a __________.
   - We can measure the size of an object with a __________.
   - We can measure length, width, and height.

3. **Parts of matter:**
   - The smallest particle of an element is an __________.
   - Matter made of only one kind of atom is called an __________.

**Scientist organize elements in a __________.**
“In science the word **crest** means the top part of something. The top part of a mountain is called a crest. The top part of an ocean wave is also called a crest.”

- **crest of a mountain**
- **crest of an ocean wave**
Vocabulary Extension: Multiple Meanings

“Many words have more than one meaning. If you look up the word solution in a dictionary you might find many different definitions, like this:”

**solution**  *noun*  1. A special kind of mixture formed by dissolving a substance in a liquid: *I gargled with a solution of salt in water.*  2. The act or process of solving a problem: *Use your books to help find the solution for the hard questions.*  3. The answer to a problem: *Help me, but don’t tell me the solution.*  **so-lu-tion**

“When you read a word, and you are not sure which definition to use, look at the surrounding words and sentences to help you decide which meaning is being used. Let’s read the sentence below together:”

*When one or more substances dissolve in another, a solution forms.*

“When meaning of solution is used in the sentence? It is ‘an answer to a problem’ or ‘a special kind of mixture’?” Allow student response and give feedback.
Vocabulary Extension: Synonyms/Antonyms

Vocabulary Strategy: Using Synonyms

“Remember that a synonym is a word that means about the same thing as another word. When you read an unfamiliar word, you may sometimes find a synonym nearby. See if you can find a synonym for the word refract in this sentence:”

**The droplets **refract, or bend, the light.**

“What is a synonym for refract?” Allow student response and give feedback. “Yes, the word bend means the same thing as refract. Finding a synonym can help you better understand the meaning of a word. What is a synonym for the word absorb in this sentence?”

When light hits objects, they **absorb**, or take in, some of the light.

“Yes, to take in means the same thing as absorb. What is a synonym for the word vibration in this sentence?”

A back-and-forth movement, or shaking, is called a **vibration**.

Allow student response and give feedback. “Yes, the word shaking means the same thing as vibration. Remember that when you read an unfamiliar word, you may sometimes find a synonym nearby.”
Partner Reading
Two Levels, Three Tiers

Level I
Staff Development

Level II
Student Instructional Intervention

Tier 1
District Language Arts (Spanish and/or English)

Tier 2
Structured ESL Intervention

Tier 3
Tutorials for struggling students
Small Group Tutoring

- Struggling readers as identified by DIBELS
- Kindergarten: Communication Games
- First Grade:
  - Fall: Communication Games
  - Spring: Early Interventions in Reading Level I
- Second Grade: Continue Early Interventions in Reading Level I
- Third Grade: Early Interventions in Reading Level II
Data Collection

● Qualitative Measures
  ● Factors that facilitated or impeded the implementation, effectiveness, and sustainability of the interventions were investigated through:
    ● Interviews (principals, intervention teachers, parents)
    ● Reflections and surveys (intervention teachers and paraprofessionals)
    ● Teacher portfolios
    ● Field notes from classroom observations
Qualitative Data
Ella helped me to know how to read better.
Project Ella helps us read because we always read.

And when we learn all the vocabulary cards, it helped me a lot because now I know how to read long words. And I am bilingual. I know I answer my questions right and I speak it right.
Quantitative Data
Data Collection

- Quantitative Measures
  - Implementation fidelity measures taken 4 times throughout year using
    - Transitional Bilingual Observation Protocol (TBOP)
  - Teacher Observation Record (TOR)
### Data Collection

<table>
<thead>
<tr>
<th>Program</th>
<th>Condition</th>
<th>Condition</th>
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<tbody>
<tr>
<td>SEI</td>
<td>Experimental</td>
<td>Control</td>
</tr>
<tr>
<td>TBE</td>
<td>Experimental</td>
<td>Control</td>
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</table>

<table>
<thead>
<tr>
<th>Construct</th>
<th>Instrument</th>
<th>K-BOY</th>
<th>K-EOY</th>
<th>1&lt;sup&gt;st&lt;/sup&gt;-BOY</th>
<th>1&lt;sup&gt;st&lt;/sup&gt;-EOY</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt;-EOY</th>
<th>3&lt;sup&gt;rd&lt;/sup&gt;-EOY</th>
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</thead>
<tbody>
<tr>
<td>Oral proficiency (e.g., listening comprehension, picture vocabulary)</td>
<td>WLPB-R, IPT</td>
<td>√</td>
<td>√</td>
<td></td>
<td></td>
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<tr>
<td>Phonemic awareness (e.g., blending phonemes)</td>
<td>CTOPP</td>
<td>√</td>
<td>√</td>
<td></td>
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<tr>
<td>Decoding (e.g., letter word identification)</td>
<td>WLPB-R</td>
<td></td>
<td></td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Reading comprehension</td>
<td>WLPB-R</td>
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</table>
Data Analysis

- Because of the clustering nature of the data in this longitudinal randomized project, analyses were performed within a multilevel framework using the Hierarchical Linear Modeling approach (Raudenbush & Bryk, 2002) to control for statistical overestimation.

  - Level -1: repeated time points: 
    \[ Y_{tij} = \pi_{0ij} + \pi_{1ij} (Time_{tij}) + e_{tij} \]

  - Level-2: students or class
    \[ \pi_{0ij} = \beta_{00j} + \beta_{01j} (Bilingual_{ij}) + r_{0ij} \]
    \[ \pi_{1ij} = \beta_{10j} + \beta_{11j} (Bilingual_{ij}) \]

  - Level-3: class or school
    \[ \beta_{00j} = \gamma_{000} + \gamma_{001} (Treatment_{j}) + u_{00j} \]
    \[ \beta_{01j} = \gamma_{010} \]
    \[ \beta_{10j} = \gamma_{100} + \gamma_{101} (Treatment_{j}) \]
    \[ \beta_{11j} = \gamma_{110} \]

- A total of 390 students (44 classrooms and 22 schools) were included for the final analysis.
Research Question 1: How effective are the structured English immersion and transitional bilingual education programs in developing English proficiency and reading achievement for English-language learners whose first language is Spanish?

- **SEI-E vs. TBE-E**
  - Significant initial difference in favor of SEI-E in oral language, letter word identification and passage comprehension ($ps < .05$)
  - TBE-E experienced significantly higher rate growth rate in two oral language measures and passage comprehension ($ps < .05$).

- **SEI-T vs. TBE-T**
  - Significant initial difference in favor of SEI-E in oral and reading-related skills ($ps < .05$)
  - TBE-T students developed at a significantly faster rate in these skills ($ps < .05$) and were able to catch up with the typical practice English immersion students.
TBE-E vs. SEI-E: Letter Word Identification

TIME1

EWLWW

SEI-E
TBE-E
TBE-E vs. SEI-E: Picture Vocabulary

![Graph showing the comparison between TBE-E and SEI-E in Picture Vocabulary over time.](image-url)
TBE-T vs. SEI-T: Picture Vocabulary

![Graph showing the comparison between TBE-T and SEI-T in terms of picture vocabulary over time. The graph plots EWPVW (Estimated Word Per Minute Vocabulary) against TIME (in units). There are two lines: blue for SEI-T and red for TBE-T. The y-axis ranges from 426.8 to 487.1, and the x-axis ranges from 0 to 4.00.]
TBE-T vs. SEI-T: Passage Comprehension
Research Question 2: Is there a difference in the effectiveness of each model type when instruction is enhanced to reflect best practice in language and literacy instruction as compared to instruction typically provided within each program type?

- **SEI models**
  - Statistically significant initial difference in favor of SEI-T
  - SEI-E students developed more rapidly in English phonemic awareness, listening comprehension, letter word identification and passage comprehension ($p < .05$)
  - SEI-E outperformed SEI-T on these measures by the end of 3rd grade

- **TBE models**
  - No statistically significant initial difference between TBE-E and TBE-T
  - The TBE-E students developed more rapidly than TBE-T students in phonemic awareness, picture vocabulary, listening comprehension, and passage comprehension ($p < .05$)
  - TBE-E outperformed TBE-T on these measures by the end of 3rd grade
SEI-E vs. SEI-T: Listening Comprehension

![Graph showing the comparison between SEI-E and SEI-T over time. The graph plots EWLCW against TIME, with two lines: one for SEI-T and one for SEI-E.]
SEI-E vs. SEI-T: Passage Comprehension

![Graph showing the comparison between SEI-E and SEI-T over time. The x-axis represents time, and the y-axis represents EWPCW. Two lines are plotted: one for SEI-T (blue) and one for SEI-E (red). The slopes of the lines indicate the rate of change in EWPCW for each condition.](image-url)
TBE-E vs. TBE-T: Blending Phonemes

TIME

ECBP

TBE-T

TBE-E
TBE-E vs. TBE-T: Passage Comprehension

The graph shows the comparison between TBE-E and TBE-T over time. The y-axis represents EWPCW, and the x-axis represents time. The graph includes two lines: one for TBE-T (blue) and one for TBE-E (red). The lines demonstrate a linear increase in EWPCW with time for both groups.
Research Question 3: Are there student, teacher or school characteristics that predict success in English proficiency and reading achievement for English-language learners whose first language is Spanish?

- Student characteristics:
  - Gender, enrolment in the district pre-K program, and initial level of English language and literacy proficiency.

- Initial difference
  - No significant differences between the two gender groups
  - Students enrolled in the district PK program scored significantly higher on listening comprehension than did those students not in the district PK program ($p < .05$)

- Language and literacy growth
  - Initial level $\rightarrow$ growth rate ($ps < .001$)
  - Girls developed marginally faster than did boys on the two phonemic awareness measures ($ps < .1$), and boys experienced significantly steeper growth ($p < .001$) on two oral proficiency measures (picture vocabulary and listening comprehension) and marginally steeper growth ($ps < .1$) on IPT and passage comprehension.
Q3: Teacher and school characteristics

- Total number of years taught by a native English-speaking teacher is not a significant predictor of English language and literacy acquisition ($p < .05$). This finding may be due in part to the strength of the intervention, which was scripted, and in part to biweekly professional development with teachers.

- SES and mobility $\rightarrow$ language and literacy development.

- Average years of experience of all teachers of each campus $\rightarrow$ language and literacy development

- Student/teacher ratio and percentage of teachers serving bilingual/ESL program positively and significantly predicted letter word identification ($p < .05$).

- School ratings and percentage of students in bilingual/ESL program were not found to impact students’ performance. It should be noted that school ratings were primarily at the recognized or exemplary status over four years, therefore the variability for ‘good’ or ‘poor’ schools was virtually non-existent.
Student characteristics on language development—Picture Vocabulary
Research Question 4: Do student characteristics interact with program type (enhanced or typical), and/or teacher or school characteristics to predict success in English proficiency and reading achievement for English-language learners whose first language is Spanish?

- program model (SEI and TBE) X type (enhanced and typical) over time was statistically significant on segmenting words ($p < .05$) and marginally significant on letter word identification ($p < .1$).

- student gender X program type (enhanced and typical) over time was marginally significant on segmenting words and IPT.
Interaction between program type and model—Segmenting Words

![Graph showing interaction between program type and model](image_url)
Interaction between program type and gender—IPT
Q4 Interaction effect

- **district PK enrollment X program type** (enhanced and typical) over time was statistically significant on decoding measures and passage comprehension ($ps < .05$). When ELLs received enhanced practice, there was no difference between students who were or who were not enrolled in the district PK program on language and literacy development. However, when ELLs received typical practice, there was statistically significant difference between students who were or who were not enrolled in the district PK program on language and literacy development.

- **initial level** of the outcome variable X **program type** (enhanced and typical) over time was statistically significant on listening comprehension, passage comprehension, and word attack measures ($ps < .05$).
Interaction between program type and PK enrollment—Passage Comprehension

EWPCW

TIME

No PK-typical
No PK-enhanced
PK-typical
PK-enhanced
Interaction between program type and initial level—Listening Comprehension

- Low initial-typical
- Low initial-enhanced
- High initial-typical
- High initial-enhanced
Interaction between program type and initial level—Passage Comprehension

- Low initial-typical
- Low initial-enhanced
- High initial-typical
- High initial-enhanced
Discussion

- All significant findings were in favor of treatment group, reflecting a range of oral and reading proficiency in English (including phonological processing, oral language, and comprehension).
- By the end of 3rd grade, the overall performance levels of treatment and control group in oral language development were 0.7 and 1 SD, respectively, below that of the average monolingual speakers of the same age. Compared to the initial (beginning K) level of 3 standard deviations below the mean, this suggests the number of years required before ELLs can fully master academic language in English (August & Hakuta, 1997; Collier, 1987; Cummins, 1984; Genessee & Riches, 2006).
- The ultimate goal of reading is comprehension (Vaughn et al., 2006). On average, treatment students demonstrated statistically higher performance than control students on contextualized reading comprehension and scored higher than the average monolingual English speakers of the same age by the end of 3rd grade.
Discussion

- When analyzing growth rates on measures of phonemic awareness, oral proficiency and reading skills, bilingual education is more effective in developing Spanish-speaking English language learners’ English proficiency and reading achievement (Francis, Lesaux, & August, 2006; Rolstad, Mahoney, & Glass, 2005; Slavin & Cheung, 2005).

- Based on measures of phonemic awareness, oral language and reading-related skills, when Spanish-speaking English language learners were provided with structured, consistent English intervention, they outperformed their peers who received typical instruction. Thus, an English language development model enhanced with structured, consistent and standards-aligned curriculum in language and literacy is more effective than a typical practice model for Spanish-speaking English language learners. The enhanced English model over time from kindergarten to 3rd grade reflected a developmental perspective beginning with English oral language skills, progressing to decoding skills and comprehension, and concluding with content area reading instruction (Gersten & Baker, 2000; Gersten, Baker, Shanahan, Linan-Thompson, Collins, & Scardella, 2007).
Discussion

- Student gender and initial level of the each outcome variable were both significant predictors on language and literacy development over time; SES, mobility rate, student/teacher ratio, percentage of teachers serving in bilingual/ESL programs, and average years of experience of all teachers of each campus were found to impact English language and literacy outcomes for ELLs in our study (Laine, Greenwald, & Hedges, 1995; Yang Hansen, 2008).

- Student characteristics of gender, enrollment in the district PK program, and initial level of achievement on the outcome variable interact with program model (i.e., SEI and TBE) and program type (i.e., enhanced and typical).
Discussion

- Project ELLA addressed the problem related to the need of higher levels of English fluency and literacy as it created a project that began at Kindergarten and moved through with an intervention annually through third grade laying the groundwork for success for a better future for growing Spanish-speaking populations.

- It controlled for program type and school effects and altered typical programs with feasible interventions that schools could easily and effectively implement the intervention.
Discussion

- It addressed the need for direct observational data related to language of instruction within bilingual classrooms and addressed other instructional practices directly observed (there have been few direct observation studies in bilingual classrooms).

- It applied rigorous experimental and quasi-experimental methods controlling for problematic confounding variables that have been noted in earlier studies such as the comparison of differing districts and schools in large scale studies, as well as programmatic/curricular/instructional nuances within program types being compared or not fully explained.
Practical Applications
Oral Language Development

- **Structured practice daily**
  
- **Complete sentences**
  - Model complete sentences for students.
  - Request students to respond in complete sentences.

- **Oral language scaffolds**
  - Use visuals (e.g., elicit student talk about photos or drawings).
  - Provide example responses (e.g., answer choices, sentence stems).

- **Incorporate content-related themes to stimulate discussion.**
Listening Comprehension Development

- Daily read-alouds using authentic children’s literature
- Repeated readings of story
- Use of L1 for clarifications of vocabulary and content
- Preview-review strategy
- Leveled questions strategy
- Interactive read-aloud sessions
Direct Instruction

- 5 strands of reading (phonemic awareness, letter-sound correspondence, word recognition and spelling, fluency, comprehension)
- Supplemental direct instruction in reading for struggling readers
- Vocabulary (STELLA)
- Academic language (oral & written)
- Comprehension in content reading (CRISELLA)
Vocabulary Instruction

- Purposeful and careful selection of vocabulary words
  - Tier 1, 2, & 3 words (Beck, McKeown, & Kucan, 2002)
- Pre-teach vocabulary
- Pictures to illustrate vocabulary words
  - For example: picture cards, digital images from Google Image search, magazine/newspaper photos
- Words presented in context
  - Story context (STELLA)
  - Example sentences
  - Sentence stems for student practice
- Word Walls using vocabulary cards w/picture
- Daily review of explicitly taught words
Integrating Content Area Reading

- **Advantages**
  - Based on science textbook (no need to purchase new materials)
  - Grade-level content
  - Science content increases students’ interest and motivation

- **Explicitly teach reading skills during content reading**
  - Decoding
  - Fluency
  - Vocabulary
  - Comprehension

- **Integrate ESL teaching strategies**
The ELLA Model

- Importance of quality instruction
- Importance of structured ESL time
- Scaffolded progression of L2 foci: Oral Language > Reading Skills > Content Area Reading
- Supplemental intervention for struggling readers
- Integrate content with language learning
- On-going staff development
- Para-professionals as integral part of instructional process
To find out more about Project ELLA or other research projects and programs, please visit us at [http://ldn.tamu.edu](http://ldn.tamu.edu)