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Observed Changes in SEAL Classroom Practices

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Sobrato Early Academic Language (SEAL) Model Research and Evaluation, Section 3 — Brief 6

Year 4
Final Report
2020

Teacher Development and Implementation: Study #1

Observed Changes in SEAL Classroom Practices

Loyola Marymount University
Center for Equity for English Learners

Introduction to the SEAL Model and the 4-Year Research and Evaluation Effort

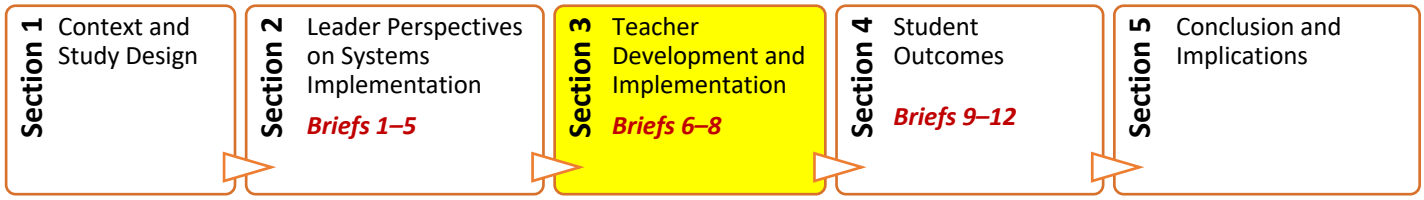
The Sobrato Early Academic Language Model (SEAL) is a preschool through third grade model that powerfully develops students' language, literacy, and academic skills within the context of a whole-school initiative. This intensive approach to language and literacy education is woven into all aspects of the school day where English Learners and native English students learn together. The Model was first piloted in three schools in the Silicon Valley and an initial evaluation of the Model showed significant impact on student achievement, teacher practice, and parent literacy activities. As a result of these pilot findings, SEAL developed a Replication Model, a comprehensive whole-school reform that is implemented systematically and that includes teachers, coaches, principals, district leaders, and families.

Loyola Marymount University's Center for Equity for English Learners and the Wexford Institute conducted an external evaluation of the SEAL preschool through third grade Replication Model from fall 2015–fall 2019. This comprehensive research and evaluation study addressed three broad areas: (1) Leader Perspectives and Depth of Implementation, (2) Teacher Development, and (3) Student Outcomes. Twelve districts and 67 schools across California participated. This Research and Evaluation Final Report presents findings that will allow the SEAL team to institute its short- and long-term evaluation and research agenda based on the SEAL Logic Model and desired results for project management, decision-making, refinement, and expansion.

The SEAL Research and Evaluation Final Report is comprised of five sections presented in a series of briefs (see Figure 1) to maximize usability for multiple stakeholders. This brief is part of Section 3.

Figure 1

SEAL Research and Evaluation Final Report Overview



Section 3, Brief 6 - Research Focus

This research and evaluation brief presents findings on teachers' level of implementation of SEAL's high-leverage practices based on results from the Observation Protocol for Academic Literacies (OPAL©)[1] pre- and post-classroom observations for SEAL PreK–3rd grade teachers in Cohort 3 (Implementation: Y1: 2015-16 – Y3: 2017-18). We report on a matched sample from 59 classrooms across 8 SEAL districts. Part one provides an overview of the study purpose, participants, and methods. Part two presents descriptive findings from OPAL© pre-post classroom observation results. Part three provides classroom snapshots and examples of promising practices. The final section provides a summary of findings and implications.

Teacher Development and Implementation Research and Evaluation Research Question

In what ways do teachers' level of implementation of SEAL's high-leverage practices change as a result of their participation in SEAL's professional learning opportunities?

Part One: Study Methods and Participants

Purpose

This study was designed to examine observed changes in classroom practices of SEAL Cohort 3 PreK–3rd grade teachers who completed SEAL's two-year professional development focused on EL research-based instructional practices.

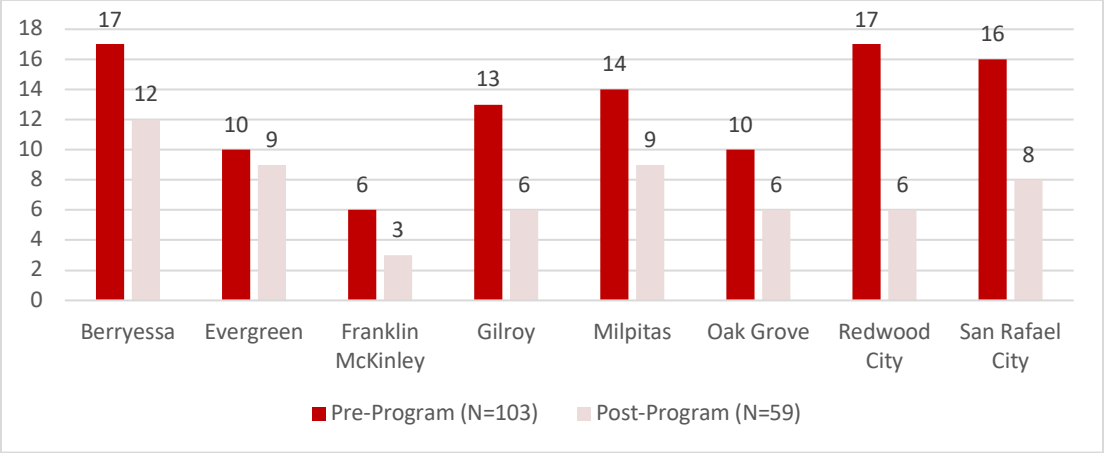
Participants

Study participants included districts and schools in the SEAL Cohort 3 implementation cycle. Given the timing of this study, Cohort 3 allowed the opportunity to capture pre- and post-program implementation data to conduct a comparative analysis of changes in SEAL implementation practices. Classroom observations were conducted across eight SEAL districts in Cohort 3 to obtain classroom implementation data at two intervals: (1) prior to teachers' participation in SEAL training and (2) after participating in a minimum of six SEAL Module professional learning sessions and unit development days over a two-year period. Figure 2 below displays the pre-and post-program classroom observation count by District. Figure 3 displays the pre-and post-program classroom observation count by grade level. Across the 8 SEAL districts, 103 classrooms were observed at pre-program and 59 of the 103 classrooms were revisited for a post-program observation—allowing for a matched sample. At the time of this study, all observed classrooms were implementing a Structured English Immersion (SEI) program model—none were implementing a Bilingual or Dual Language program. All but 2 of the 59 classroom teachers in the matched sample were teaching the same grade level in the same school pre-to-post observation; all completed two years of SEAL professional learning opportunities. Moreover, the classroom observations were conducted at different times of the day and during lessons that covered a variety of content areas including English Language Arts, English Language Development, Mathematics, Science, History-Social Science, and cross content lessons (e.g., Science/ELA) to ensure a representation of typical instruction.

[1] Lavadenz, M. & Armas, E. G. (2010, 2012). *The observation protocol for academic literacies: Conceptual framework and validation report*. Center for Equity for English Learners, Loyola Marymount University.

Figure 2

OPAL© Classroom Observations by District, PreK–3rd Grade Cohort 3

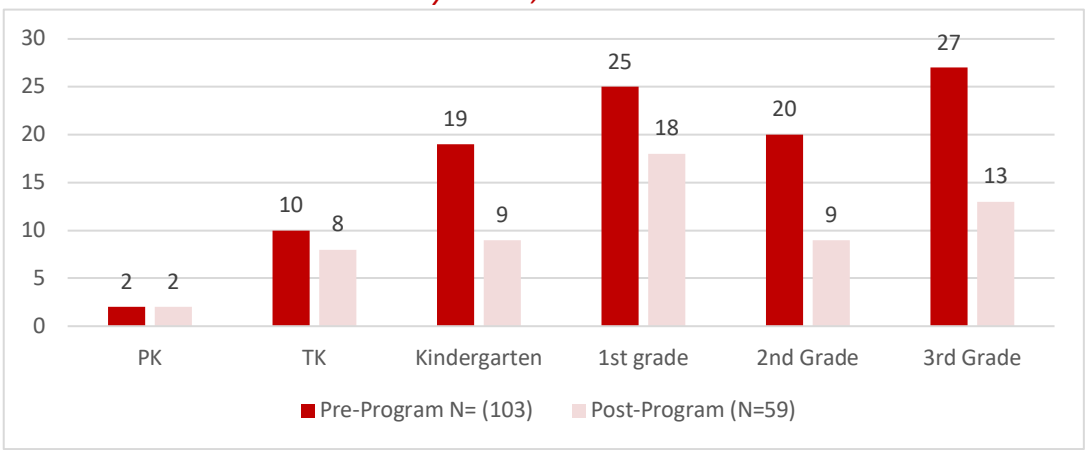


Note. Cohort 3 Implementation Y1: 2015-16; YRS 2–3: 2016-17, 2017-18.

Figure 3 displays the pre-and post-program classroom observation count by grade level; all observations were conducted with the written consent of teachers.

Figure 3

OPAL© Classroom Observations by Grade, PreK–3rd Grade Cohort 3



Note. Cohort 3 Implementation Y1: 2015-16; YRS 2–3: 2016-17, 2017-18.

Two teachers initially observed in a 2nd grade classroom (fall 2016) were observed teaching in a 1st grade classroom during the post-observation (fall 2018).

Research Design and Data Analysis

Use of the OPAL© tool (described in detail below) allowed for a mixed-methods approach to the research question. The OPAL© also allowed for a standard measurement of instructional practices, including a quantitative analysis of instructional practice and a qualitative description of what those practices looked like at the time of observation. Quantitative data recorded for all classroom observations were entered on an excel spreadsheet. Descriptive analyses of the quantitative data provided insights on levels of implementation of research-based practices and classroom interactions. Content analytic procedures were used to analyze OPAL qualitative data in order to generate themes and patterns across classrooms (Hutchinson, 2001)[2].

[2] Hutchinson, S. (2001). Education and grounded theory. In R. Sherman, & R. B. Webb. (Eds.), *Qualitative research in education: Focus and methods*. Routledge Falmer.

Instrument - OPAL© Classroom Observation Tool and Procedures

The Observation Protocol for Academic Literacies (OPAL©) is a validated classroom observation measure that consists of a standard framework allowing educators to make classroom observations on language and content area teaching based on four domains: (1) Rigorous and Relevant Curriculum, (2) Connections, (3) Comprehensibility, and (4) Interactions (see Figure 4). The OPAL© is aligned to California and National Teaching Standards and examines teacher practices and classroom interactions from sociocultural and language acquisition perspectives. Using the OPAL© as a tool to document research-based EL instructional practices, a team of observers visited SEAL classrooms for approximately 20–30 minutes during pre- and post-SEAL implementation. For PreK–1st grade classrooms, pre-observations occurred in fall 2015 and post-observations occurred in fall 2017; for 2–3rd grade classrooms, pre-observations occurred in fall 2016 and post-observations occurred in fall 2018. Observers participate in a three-day training to ensure the reliability of scores. Construct indicators are scored between a 1 (low) and 6 (high) to document the level of implementation. Observer anecdotal notes are recorded as evidence for scores. The full OPAL© tool is found in Section 3 - Appendix A.

Figure 4

OPAL© Domains, Definitions, and Description of Indicators

OPAL© Domains	Description of Indicators
1.0 Rigorous and Relevant Curriculum *A rigorous and relevant curriculum is cognitively complex, relevant, and challenging. It allows educators to value and capitalize on students' linguistic and cultural backgrounds.*	1.1 Emphasizes problem solving and critical thinking 1.2 Provides access to materials, technology, and resources 1.3 Establishes high expectations 1.4 Organizes curriculum and teaching 1.5 Provides access to content in primary language 1.6 Facilitates transfer of skills from primary language
2.0. Connections *Bridging connections with students' prior knowledge is the ability to link content to students' lives, histories, and realities in order to create change.*	2.1 Relates instructional concepts to students' realities 2.2 Helps students make connections 2.3 Makes learning relevant and meaningful
3.0 Comprehensibility *Comprehensibility is the attainment of maximum student understanding in order to provide access to content for all students.*	3.1 Scaffolds instruction 3.2 Amplifies student input 3.3 Explains key terms 3.4 Provides feedback and checks for comprehension 3.5 Uses informal assessments
4.0 Interactions *Interactions are varied participation structures that facilitate access to the curriculum through maximum engagement and leadership opportunities.*	4.1 Facilitates student autonomy 4.2 Modifies procedures to support learning 4.3 Communicates subject matter knowledge 4.4 Uses flexible groupings

The OPAL© provides an opportunity to standardize EL-focused classroom implementation data, record levels of practice, and use anecdotal evidence to report on levels of practice. To illustrate its use during this research and evaluation project a SEAL classroom snapshot was developed as an example of high levels of implementation of research-based instructional practices and classroom interactions for ELs. The snapshot is drawn from SEAL OPAL© anecdotal evidence corresponding to high levels of OPAL© mean scores across all four domains.

Box 1. SEAL Classroom: Overall Higher Levels of Practice in all OPAL© Domains

This Structured English Immersion (SEI) first grade classroom has reading, math, science, and research centers that present opportunities for students to explore the unit of study focused on sound and light. Draw and label charts, posters, and many chants about pitch, sound, devices, waves, and light are visible around the room. Key vocabulary words and phrases are highlighted in the posters and chants. Student writing is displayed and journals are used to record on-going learning.

The teacher comments that every student has become a good writer before directing the class to the day's lesson about scientists and engineers. She says, "Engineers are important to the world. Think you will become one?" Students engage in peer discussions around this question. The teacher affirms students' ideas and prompts expansion of key thoughts to deepen discussion. The teacher reviews key terms and has students sound out the word "structure". She reminds the class that engineers, "Build things," "Solve problems," and "Use their hands and brains." Students take out their science journals while the teacher models how to title their page and presents vocabulary words with gestures. When students are ready, the teacher explains that they will build a tower and make observations about their structures as they build them in small groups. They take a moment to recall what group work looks like and she asks, "What do you do if you feel upset with someone in your group?" Students offer strategies such as taking a deep breath and walking away. The teacher adds this strategy to the class Collaborative Work T-chart that details expectations and examples of what collaborative work "Looks like" and "Sounds like." Students are provided the materials for the activity and begin to build their towers. The teacher walks around the classroom, checking in with groups. She reminds students that scientists write things down and encourages the students to pair-share what they learned about building structures.

The constructs of the OPAL© classroom observation tool align with the EL research-based practices reflected in the SEAL Depth of Implementation (DOI)[3] tool, based on the SEAL Logic Model components (see Section 3 Executive summary for more information). The SEAL DOI was developed as part of the overall research and evaluation effort. Although not used as an exclusive evaluation tool for this series of research briefs, the DOI was introduced to SEAL districts and schools as a formative tool to collect evidence and identify areas to deepen and refine SEAL Implementation within and across sites.

Part Two: Observed Changes in SEAL Classroom Practices

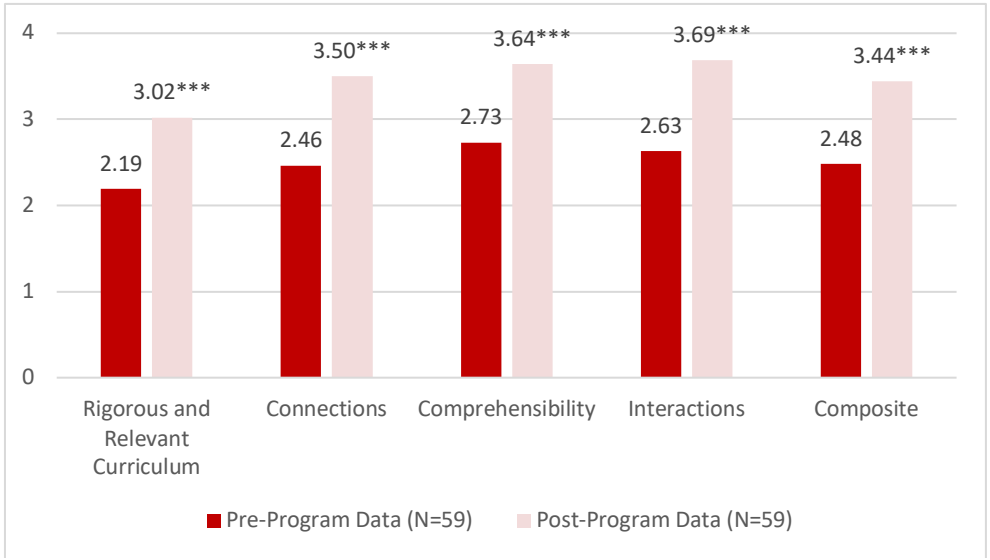
The findings in this section aim to answer the research question: *In what ways do teachers' level of implementation of SEAL's high-leverage practices change as a result of their participation in SEAL's professional learning opportunities? What is the significance of these results*? We drew from qualitative and quantitative data to answer these research questions. To do this, OPAL© scores for pre-post classroom observations from matched scores of 59 PreK–3rd grade teachers in Cohort 3 were analyzed. Figure 5 presents pre-post results categorized by the four OPAL© domains and composite score. (See Section 3 - Appendix B for all descriptive statistics of observed changes in SEAL classroom practices drilled down to OPAL domain indicators as well as an analysis by grade-level.) A paired sample t-test indicates that scores were significant for all domains and the overall composite score. To measure the magnitude of the difference from pre-post, the effect size was calculated using Cohen's D[4]. Results indicate a large effect in all four OPAL© domains and overall composite scores (See Section 3 - Appendix C).

[3] The SEAL Depth of Implementation (DOI) tool was developed to capture data on the levels of implementation of the SEAL Model and can be used at the project, district, and site level. The tool is comprised of six focus areas with corresponding research-based key indicators for leadership, professional learning, and classroom and instructional practices that are measured on a four-point scale ranging from "No Implementation" to "Sustainable Implementation."

[4] Cohen's D, d=Mean (post) - Mean (pre)/SD_{pooled}; where $SD_{pooled} = \sqrt{((SD_1^2 + SD_2^2)/2)}$

Figure 5

Pre- and Post-Program Classroom Observations Average by Domains, PreK–3rd grade Cohort 3 (N=59)



Highest Mean: Interactions

Lowest Mean: Rigorous & Relevant Curriculum

Highest Growth: Interactions

Post-program results were significantly higher for all OPAL© domains and all 18 indicators

***p < .001

Qualitative Findings

This section presents qualitative findings collected with the OPAL© tool. Researchers conducted a thematic analyses of anecdotal notes data provided by certified OPAL© raters during post-observation sessions. Patterns emerged during the coding and analysis of raw data for teaching and learning practices collected at the time of observation. Figure 6 presents key findings across the four OPAL© domains.

Figure 6

OPAL© Qualitative Data Analysis Results by Domain

Rigorous and Relevant Curriculum	•Frequent use of essential questions to set goals and expectations of student learning •Prominent access to materials, technology (e.g., laptops and chromebooks), and resources to promote learning •Some themes and use of thematic teaching to support students' understanding •Some evidence of teacher-facilitated prompts to promote problem solving and critical thinking •Minimal use of L1 support or transference from primary language to English
Connections	•Limited opportunities for students to apply learning to respond to community issues (students' social realities) •Consistent use of teacher-led prompts to help students expand on previous learning •Consistent opportunities to make home-school connections through visual artifacts such as maps, posters, photos, and self-portraits
Comprehensibility	•Prominent use of scaffolding to enhance comprehensibility •Some amplification of student input via open-ended questioning (e.g., what do you think?) •Some evidence of clarification of key terms with use of gestures and/or visuals •Limited evidence of informal assessments to adjust instruction
Interactions	•Limited evidence of student autonomy and choice •Some evidence of teachers modifying/adapting instruction to improve enhance learning •Predominant use of teacher-directed flexible grouping to meet individual and group learning needs

Part Three: SEAL Classroom Snapshots

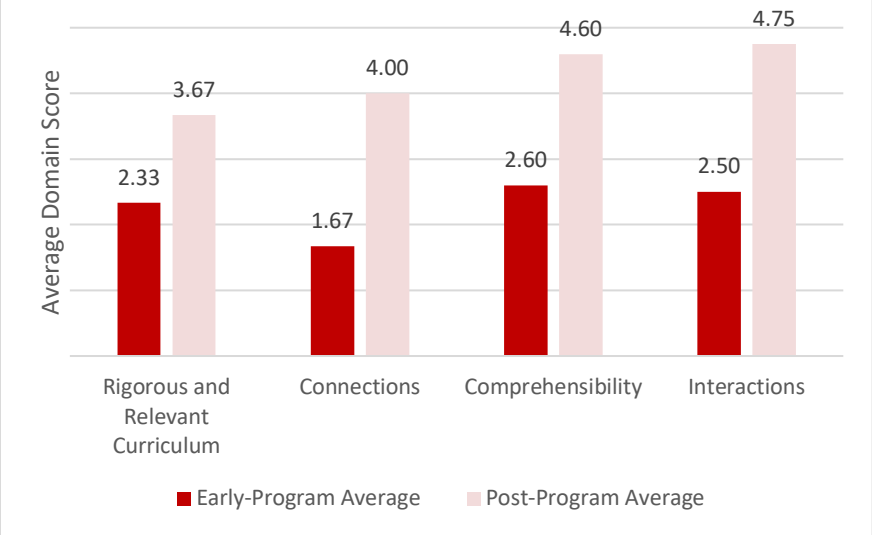
SEAL's Professional Development Model is based on research-based, high-leverage practices for ELs. The OPAL© tool was used to determine levels of implementation of practices as well as to collect anecdotal notes during the observation period. This section uses OPAL© data results to develop snapshots of classrooms where high levels of SEAL practices were observed. We define snapshots as a brief record of teaching and learning activities during the designated observation period. High levels of research-based practices using the OPAL© are reflected on a minimum score of 5 on a 6-point implementation scale. The snapshots represent teachers' practices at the completion of the two-year long SEAL Professional Development program. They are presented as follows, Snapshot 1: Increase in levels of implementation in all OPAL domains (Figure 7), and Snapshot 2: Greatest overall growth from the pre- to the post-observation (Figure 8).

Snapshot 1: Increase in all OPAL© Domains
What did pre-and post-classroom instruction look like for this teacher?

Figure 7 presents results from a kindergarten teacher who increased in levels of implementation in all OPAL© domains between the pre- to post-program observation.

Figure 7

Increase in Levels of Implementation in all OPAL© Domains, Classroom Snapshot 1 (Kindergarten teacher)



Snapshot of a teacher who increased by at least one level in all four OPAL domains.

Level Increase:
R&R Curriculum = Low to Mid
Connections = Low to Mid
Comprehensibility = Mid to High
Interactions: Mid to High

OPAL Scale Cut Points:
Low = 1–2 (1.00 – 2.49)
Mid = 3–4 (2.50 – 4.49)
High = 5–6 (4.50 – 6.00)

Pre-program Classroom Observation Snapshot - Kindergarten Teacher, Structured English Immersion (SEI)

The day's lesson is on the theme push and pull. The teacher focuses on vocabulary development related to the theme while introducing key concepts. Questioning is teacher directed and focused on the meaning of vocabulary words. The use of some visuals provides support for student comprehension and writing. There are limited materials and resources available for student use. Students are assigned to work in small group pods. Although a poster displays norms for collaborative conversations, the teacher directed lesson provides limited opportunities for students to engage in peer conversations around content discussion. The classroom includes a reading center with some literature books (in English), alphabet activities, and a seating area.

Post-program Classroom Observation Snapshot - Kindergarten Teacher, Structured English Immersion (SEI)

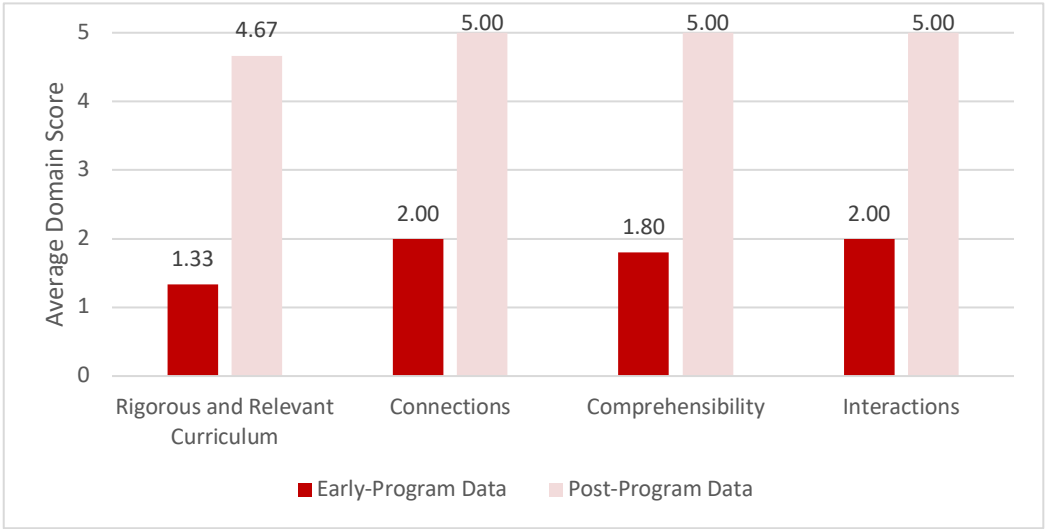
The lesson's theme includes the essential question, "How do humans change the environment?" It is reflective of the unit focus on living/non-living things and a second focus question is posted on the wall, "How can we help animals survive?" The classroom environment includes many resources, books, and chants related to the theme. Key words and phrases are highlighted within the chants. The classroom features an exploration center where students are invited to make observations using academic language. They also use visual charts and sentence starters such as, "I observe… and I notice…" to note animal and plant parts. A Venn diagram is used to compare and contrast land and pond snails. A narrative retell chart based on The Great Kapok Tree is available and includes pictures from the story; some of these are labeled. Students wear lab coats and simulate a lab environment while exploring different centers, reviewing high frequency words and using vocabulary in context. The teacher provides whole group instruction and divides students into groups to learn more about their assigned snail. A poster displays norms for collaborative conversations, groups are named according to specific habitats, and a student leads a short activity to remind the class to focus on good choices and display good behavior. The teacher facilitates small group work, asks questions to expand students' thinking, and includes multiple opportunities for intentional use of academic language.

Snapshot 2: Greatest Overall Growth
What did pre-and post-classroom instruction look like for this teacher?

Figure 8 presents results from a 2nd grade teacher who demonstrated the greatest overall growth in all OPAL© domains between the pre- to post-program observation. Her classroom was observed in fall 2016 and again in fall 2018 after two-year completion of the SEAL professional development program. This teacher increased one level or more in all four OPAL© domains.

Figure 8

Classroom Teacher with Greatest Overall Growth (2nd grade teacher)



Snapshot of a teacher who showed the greatest overall growth in all domains.

Point growth by domain:

R&R Curriculum = 3.33
Connections = 3.00
Comprehensibility = 3.20
Interactions = 3.00

Pre-program Classroom Observation Snapshot – 2nd Grade Teacher, Structured English Immersion (SEI)

Students are seated in rows facing forward for a whole group mathematics lesson on expanded form. The classroom has a classroom library, computer center, and math center. There are several bulletin boards that include student writing focused on their summer vacation, but no visible theme or topic that conveys an overall focus for student learning. Math posters remind students about math symbols and the use of transition words. Students join the teacher in a math chant while she uses gestures to review a previous lesson. Questioning is

teacher directed and student response opportunities are limited to repeating the teacher's chant or use of hand movements (e.g. to show expanded form). The teacher asks one open-ended question, "How do we know?" but does not wait for student answers and answers the question herself. Students are asked to independently complete a series of worksheets and follow-up assignments based on the lesson.

Post-program Classroom Observation Snapshot – 2nd Grade Teacher, Structured English Immersion (SEI)

Students are continuing their geology unit on water erosion. They have already conducted a series of hands-on activities on the topic as indicated by rocks, moss, sticks, and fabric observed around the classroom as well. Student science journals contain evidence of student written and visual output to document their inquiry cycles as comprehension of content learning. The teacher leads the whole class in a know/want to know activity as she records student responses on a T-chart. Classroom visuals—including rocks, journals, teacher-made charts on volcanic eruptions and earthquakes, help students recall what they already know about landforms while the teacher charts what they want to learn. Today they are working on finding solutions for water erosion. The teacher asks students to get into groups, reviews the expectations for the activity, and reviews behavior standards. Collaborative group structures and expectations are evident as students participate in simulated play and share ideas on how to solve erosion problems using rocks, moss, sticks, fabric, and plant material to wrap around a hill of sand. The teacher rotates from group to group offering constructive feedback and support while intermittently charting vocabulary from the activity (e.g., fractions, cause and effect, water/wind erosion) for the students to reference.

Part Four: Summary of Findings and Implications

The findings delineated in this research and evaluation brief highlight pre-post classroom observations collected utilizing the OPAL© tool. The following presents general findings:

Quantitative Results

- Quantitative evidence from the OPAL© revealed statistically significant growth from pre- to post-program classroom observations
- The highest growth occurred in the Interactions domain
- The highest post-classroom observation mean result was in the Interactions domain
- Results indicate a large effect size in all four OPAL© domains and overall composite scores

Qualitative Results

- **Rigorous and Relevant Curriculum** – Teachers demonstrate frequent use of essential questions to set goals and expectations for student learning; visible use of thematic teaching; prominent access of materials, technology, and resources for learning; minimal use of transference from L1 to L2
- **Connections** – While connections to previous learning and home-school connections are evident in some classrooms, overall there are limited opportunities for students to apply learning to respond to community issues
- **Comprehensibility** – Teachers employ frequent use of scaffolding strategies to enhance comprehensibility. This includes evidence of clarification of key terms through the use of gestures and/or visuals; however, there is limited evidence of use of informal assessments to provide feedback and adjust instruction
- **Interactions** – Limited evidence of student autonomy and choice; teachers primarily lead interaction with some evidence of attempts at implementing collaborative structures and making modifications to enhance learning

Implications: Teacher Support and Professional Development

- Identify strategies and practices that refine and expand teacher capacity to engage students in problem solving and critical thinking activities
- Create opportunities for teachers to reflect on and incorporate cross-linguistic resources in the classroom and leverage the use of primary language resources
- Explore additional ways to integrate community action and responsiveness to student's local context in instructional planning and delivery
- Expand opportunities for teachers to participate in professional learning focused on differentiation of language development practices

This Brief is based on the 4-Year External Research and Evaluation Study
conducted by the Center for Equity for English Learners at Loyola Marymount University
and Wexford Institute for the Sobrato Family Foundation.

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http://www.wexford.org http://soe.lmu.edu/centers/ceel/ http://www.sobrato.com/SEAL

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