

1-13-2020

Comparison of Spanish Language Development of SEAL Students in Bilingual and Structured English Immersion Programs

Center for Equity for English Learners, Loyola Marymount University

Wexford Institute

Follow this and additional works at: <https://digitalcommons.lmu.edu/ceelreports>



Part of the [Bilingual, Multilingual, and Multicultural Education Commons](#), [Educational Assessment, Evaluation, and Research Commons](#), [Language and Literacy Education Commons](#), and the [Teacher Education and Professional Development Commons](#)

Brief 11 Recommended Citation:

Cassidy, S., Saldivar, R, & Ross, A. (2020). Comparison of Spanish language development of SEAL students in bilingual and structured English immersion programs. In Center for Equity for English Learners, Loyola Marymount University & Wexford Institute, *Sobrato Early Academic Language (SEAL) Model: Final report of findings from a four-year study (Section 4, Brief 11)*.
doi: <https://doi.org/10.15365/ceel.seal2020>

This report is brought to you for free and open access by the Center for Equity for English Learners at Digital Commons @ Loyola Marymount University and Loyola Law School. It has been accepted for inclusion in Reports by an authorized administrator of Digital Commons@Loyola Marymount University and Loyola Law School. For more information, please contact digitalcommons@lmu.edu.

Student Outcomes: Study #3

Comparison of Spanish Language Development Outcomes of SEAL Students in Bilingual and Structured English Immersion Programs



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 focused on (1) Leader Perspectives and Depth of Implementation Teacher Development, (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 4.

Figure 1

SEAL Research and Evaluation Final Report Overview



Section 4, Brief 11 – Research Focus

Over the past decades, two educational issues have intersected with one another, while simultaneously gaining greater attention from policy makers, educators, and families: 1) early childhood education; and 2) the increased numbers of children with a home language other than English who are entering early childhood programs as Dual Language Learners (DLL). In 2016, the U.S. Department of Health and Human Services (HHS), in conjunction with the U.S. Department of Education (ED), issued a *Policy Statement on Supporting the Development of*

*Children who are Dual Language Learners in Early Childhood Programs*¹, which included a vision for supporting the development of DLL, so that:

...all early childhood programs adequately and appropriately serve the diverse children and families that make up this country. Programs should foster their cognitive, linguistic, social emotional, and physical development and prepare them for success in school and beyond.

This joint HHS and ED policy statement advances that vision (in part) by:

- Setting an expectation for high-quality and appropriate supports and services specifically designed for young children who are DLLs;
- Increasing awareness about the benefits of bilingualism and the important role of the development of the home language;
- Reviewing the research on the unique strengths of and challenges faced by this population, and strategies that are effective in promoting their learning and development. (p. 2)

The SEAL Model addresses this vision to support the use of evidence-based practices for instruction of young children, in PreK through grade 3 classrooms. Research indicates that supporting bilingualism from early ages can have wide ranging benefits, from cognitive and social advantages early in life, to long term employment opportunities and competitiveness in the workplace later in life (Callahan & Gándara, 2014). This, and the HHS/ED policy statement, together lead to the conclusion that there is a need for English learners (EL) to retain and develop their home language in order to prevent language loss. One of the purposes of this study is to add to the research base related to the potential of bilingual programs in the development of the home language and alleviation of language loss.

This research and evaluation study compares the longitudinal Spanish Language Development (SLD) outcomes of children who were identified as English Learners (EL) at Kindergarten, and were in SEAL structured English immersion (SEI) programs with students in SEAL bilingual and two-way immersion (BIL) programs. Three groups of students (grades 1-4, grade K-3, and grade K-2) who were identified as EL in Kindergarten with Spanish as their home language, were part of this study. Each year students in the study were assessed in SLD using the LAS Links[®] Español (LAS Links[®]). This brief is comprised of three parts. Part One provides an overview of the study methods and participants. Part Two presents the results of the comparisons of the SEI and BIL students in the three groups. Part Three provides a summary of findings and related implications.

Spanish Language Development Study Research and Evaluation Questions

What is the difference, if any, in growth in Spanish language development for students in bilingual compared to structured English immersion programs, based on pre and post assessment for three sample groups with annual data from 2016-19?

¹ U.S. Department of Health and Human Services (2016, June). *Policy Statement on Supporting the Development of Children who are Dual Language Learners in Early Childhood Programs*. <https://www.acf.hhs.gov/ecd/dual-language-learners>

Part One: Study Methods and Participants

Purpose

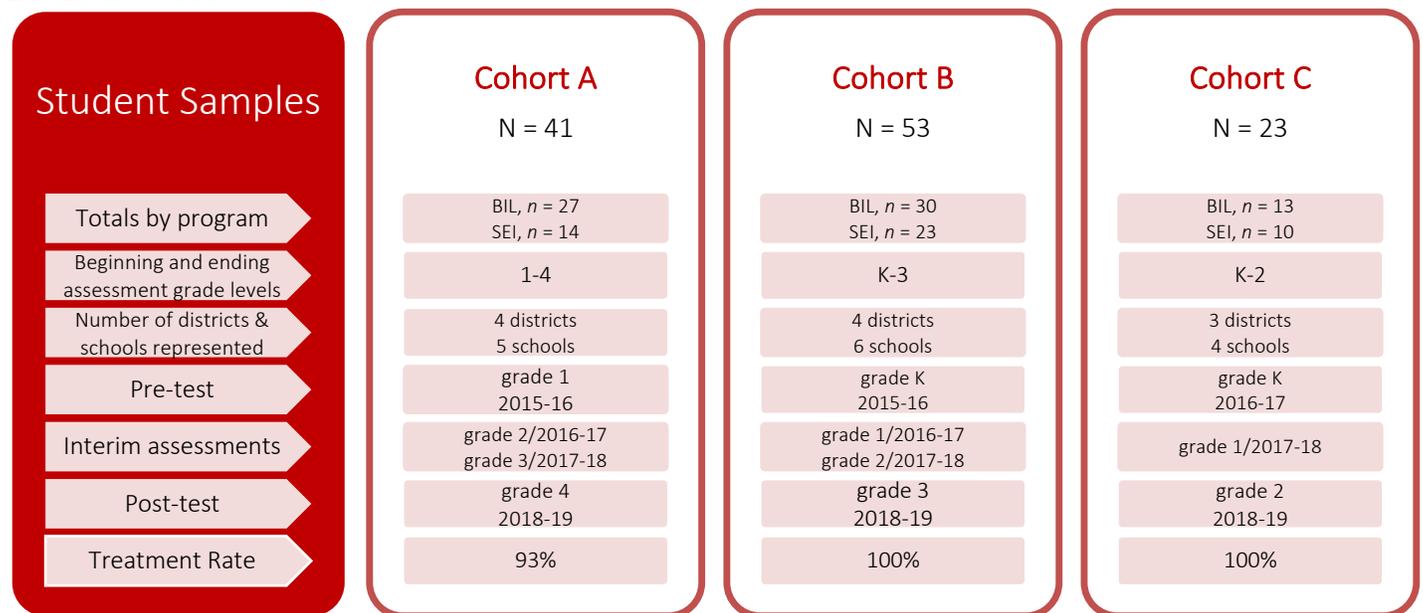
The purpose of this study is to assess the outcomes of SEAL students, originally identified as EL with Spanish as their home language, in SEI and BIL programs. The student samples were assessed using LAS Links[®], over the course of three or four-years, beginning in grade K or grade 1.

Participants

Data were collected from three cohorts of students (described in Figure 2) in five SEAL districts, totaling 117 students (70 BIL and 47 SEI). These students, who had teachers with varying amounts of SEAL training, had scores for their pre-assessment, each interim assessment, and their post assessment. Treatment rates for each student Cohort were determined by the amount of the two-year professional development program each teacher had completed in the years teachers were teaching the students in each cohort of students. Each teacher either would have completed 0, 1, or 2 years of professional development. The years of professional development for each group were compiled across the years the students were in the study (4 years for Cohort A, 3 years for Cohort B, and 2 years for Cohort C), and divided by the total possible number of years of professional development for that cohort. The treatment rates for each cohort are shown in Figure 2. See Section 4 – Appendix O for student totals by district and program type.

Figure 2

LAS Links[®] Student Cohorts



Children in the study were selected from five districts that began participating in SEAL in 2013-14 or 2014-15. Schools represented in the study were schools that had students in both BIL and SEI programs. For each cohort, Wexford identified students from these schools for the study, randomly selecting them at grade K or 1 (depending on the cohort) from groups of students who had been designated as EL based on their kindergarten records. Most remained in the EL category for the duration of the study, while a small number of the EL students were reclassified as fluent English proficient (RFEP) status during the four years of the evaluation (see Table 1). These RFEP students remained as part of the cohorts of the study.

Table 1**LAS Links[®] Assessment Totals - Student Cohorts by Program and Language Classification**

Cohort	Bilingual		Structured English Immersion		Total
	EL	RFEP	EL	RFEP	
A	23	4	10	4	41
B	25	5	17	6	53
C	13	0	9	1	23
Total	61	9	36	11	117

Note. Cohorts A and B based on 2018-19 language classification and Cohort C based on 2017-18 language classification.

Bilingual and Structured English Language Program Instruction

The SEAL students in this study attended SEAL schools that offered bilingual, dual language immersion and/or structured English immersion instructional programs during the study years. The following are California Department of Education (CDE) definitions for these language acquisition programs:

- Structured English Immersion Program (SEI) – A program for, “...English learners in which nearly all classroom instruction is provided in English, but with curriculum and a presentation designed for pupils who are learning English” (Education Code [EDC], Section 306[c][3], 1998)². Students are offered English language development and access to grade level academic subject matter content.
- Transitional Bilingual Program (BIL) – A language acquisition program for English learners that provides instruction to students utilizing English and a student’s native language for literacy and academic instruction, enabling an English learner to achieve English proficiency and meet state-adopted academic achievement goals. This program begins in TK and grade K, and continues through to third grade, at which time students transition to all English instruction.³
- Dual Language Immersion Program (DLI) – A program for English learners “...that provides integrated language learning and academic instruction for native speakers of English and native speakers of another language, with the goals of high academic achievement, first and second language proficiency, and cross-cultural understanding” (EDC, Section 306[c][1], 1998). This program begins in TK and grade K and continues to sixth grade.

Methods

SEAL EL students were randomly selected during the year of their first assessment, and assessed on the LAS Links[®] in the middle of that year (January/February), and each year thereafter. Students were assessed by assessors who were recommended by their district or Wexford, with all having previous experience in assessing young children in Spanish. For each cohort, pre- and post-assessments of BIL and SEI groups were each summarized by: 1) number and percent of students at each LAS Links[®] proficiency level: *above proficient*, *proficient*, *intermediate*, *early intermediate*, and *beginning*; and, 2) mean scale scores. Tests of significance were conducted to determine differences in the areas and tests indicated in Table 2. More detailed information related to the significance testing is found in Section 4 - Appendix P.

² California Legislative Information. EDC Article 2., Section 306, (1998). *English Language Proficiency Assessment*. http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=306&lawCode=EDC

³ CDE (n.d.). Language Acquisition Programs. *Description of Program Options and Goals for English Learners*. <https://www.cde.ca.gov/sp/el/t3/languageacquisition.asp#one>

Table 2***Summary of Significance Testing, by Student Group***

Differences to be Examined	Significance Test	Student Cohort		
		A	B	C
Difference in the distribution of counts per proficiency level from pre- to post-assessment for BIL and SEI	Fisher’s Exact Test	X	X	X
Difference in the change in overall proficiency level from pre- to post-assessment for students in each group	Wilcoxon Matched-Pairs Signed Ranks Test	X		
	Matched Pairs <i>t</i> -Test	X	X	X
Significant difference in comparison of post overall proficiency, using scaled scores, across the two groups	One-Way ANCOVA	X	X	X
	Levene’s Test for Equality of Variances	X	X	X

Limitations

Given that the SEAL Replication Model implementation occurred across cohorts, each cohort beginning implementation during different time frames, and while the model underwent continued refinement, any comparisons made in this brief should be interpreted with these limitations in mind:

1. The implementation of the SEAL Replication Model for SEAL districts and schools participating in this study included those who began implementation in 2013-14, and those who began in 2014-15.⁴
2. There were differences in provision of student language acquisition programs (bilingual/dual language or structured English Immersion) throughout the evaluation period (2014–2019). That is, some districts and schools were refining or expanding their bilingual/dual language programs at the same time as this evaluation project was being conducted.

⁴ Students in this study attended schools in districts that started SEAL implementation in 2013-14 and 2014-15. Students in this study were enrolled in grade K in SEAL schools in 2014-15 (Cohort A), 2015-16 (Cohort B) and 2016-17 (Cohort C).

Part Two: Findings

Change in Number of BIL and SEI Students at Each Proficiency Level from Pre- to Post-Assessment

Tables 3, 4, and 5 present the number of students in BIL programs (bilingual, dual language immersion) in each cohort: 1) who scored at each of the LAS Links[®] proficiency levels on the pre-assessment; 2) the number of students at each level on the post-assessment; and, 3) the change in the number of students scoring at each proficiency level from pre- to post-assessment, which was calculated by subtracting the number of students at pre-assessment from the number at post-assessment for each level. For instance, in Cohort A, four children began the pre-assessment in the *above proficient* level. By the post-assessment, three students were at the *above proficient* level, for a decrease of one (-1) in the total number of students at that level from pre- to post-assessment. Similarly, the remaining proficiency levels are summarized for the BIL group with the pre-, post- and change-data. Likewise, the data are summarized in the same way as the BIL group for the students in SEI programs.

Table 3

LAS Links[®] Change in Number of Cohort A Students by Proficiency Levels from Pre- to Post-Assessment

LAS Links [®] Español proficiency level	BIL Raw Score			SEI Raw Score		
	Pre	Post	Change	Pre	Post	Change
Above Proficient	4	3	-1	0	1	1
Proficient	11	15	4	1	1	0
Intermediate	8	5	-3	4	2	-2
Early Intermediate	3	2	-1	5	1	-4
Beginning	1	2	1	4	9	5

Note. *n* = 27 for BIL. *n* = 14 for SEI. Pre-test administered in grade 1, 2015-16. Post-test administered in grade 4, 2018-19.

Table 4

LAS Links[®] Change in Number of Cohort B Students by Proficiency Levels from Pre- to Post-Assessment

LAS Links [®] Español proficiency level	BIL Raw Score			SEI Raw Score		
	Pre	Post	Change	Pre	Post	Change
Above Proficient	0	10	10	0	0	0
Proficient	8	15	7	0	8	8
Intermediate	12	2	-10	8	2	-6
Early Intermediate	10	1	-9	9	3	-6
Beginning	0	2	2	6	10	4

Note. *n* = 30 for BIL. *n* = 23 for SEI. Pre-test administered in grade K, 2015-16. Post-test administered in grade 3, 2018-19.

Table 5

LAS Links[®] Change in Number of Cohort C Students by Proficiency Levels from Pre- to Post-Assessment

LAS Links [®] Español proficiency level	BIL Raw Score			SEI Raw Score		
	Pre	Post	Change	Pre	Post	Change
Above Proficient	0	1	1	0	0	0
Proficient	4	9	5	0	0	0
Intermediate	6	2	-4	2	2	0
Early Intermediate	3	1	-2	5	0	-5
Beginning	0	0	0	3	8	5

Note. *n* = 13 for BIL. *n* = 10 for SEI. Pre-test administered in grade K, 2016-17. Post-test administered in grade 2, 2018-19.

Utilizing the statistical tests described in Table 2, the pre-post differences between the BIL and SEI groups in the distribution of counts by proficiency level were analyzed. Significant differences were found for Cohort B and Cohort C and are described in the findings below:

Findings

Are there significant differences between the BIL and SEI groups in the distribution of counts by proficiency level from pre- to post-assessment?

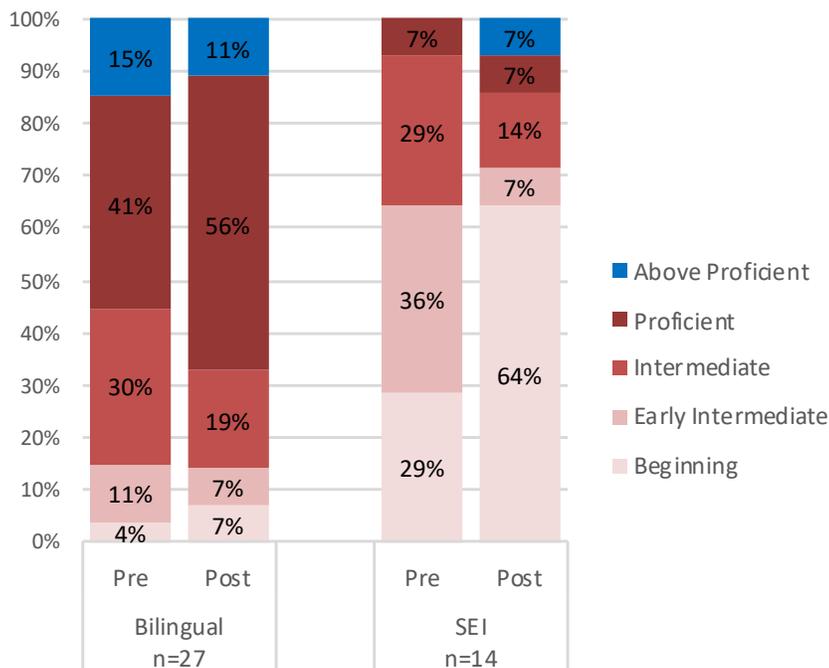
Cohort A	Cohort B	Cohort C
<ul style="list-style-type: none"> No statistically significant difference, $p = .077$ 	<ul style="list-style-type: none"> Yes, there is a statistically significant difference in the distributions by proficiency levels for the two groups ($p = .028$), with the BIL group showing a greater increase in proficiency from pre to post. 	<ul style="list-style-type: none"> Yes, there is a statistically significant difference in the distributions of proficiency levels for the two groups, ($p < .001$) with the BIL group showing a greater increase in proficiency from pre to post.

Changes in Overall Proficiency Levels from Pre- to Post-Assessment

This section describes the analysis to determine the changes in pre-post Overall proficiency levels on LAS Links[®] within the BIL and SEI groups, and comparing the two groups. Figures 4-6 present the pre- and post-proficiency levels of the BIL group and the SEI group for each Cohort.

Figure 4

LAS Links[®] Español Overall Growth by Proficiency Level, Cohort A

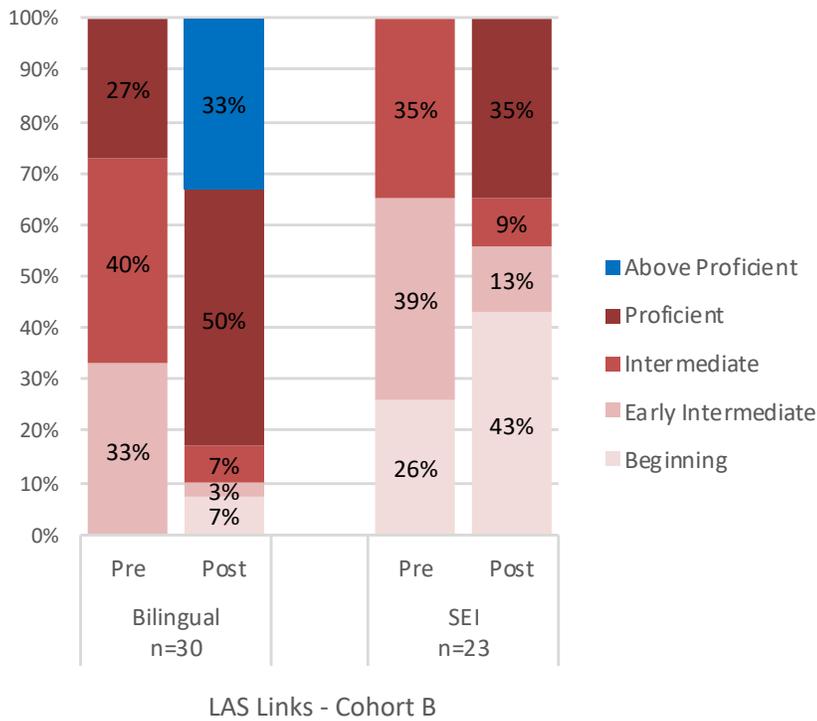


Cohort A

The results by proficiency level are visually represented in Figure 4. Students in BIL classrooms scored similarly from pre-to-post from grades 1 to 4, increasing from 56% to 67% in *proficient and above proficient* levels on LAS Links[®]. BIL students made greatest progress in moving from the *intermediate* to *proficient* level. Overall, almost all BIL students maintained or further developed their Spanish language skills.

Although few SEI students scored at *proficient* and *above proficient* as compared to the BIL group, the SEI group increased that number from 7% to 14%. By grade 4, almost two-thirds of the group maintained at or regressed into the *beginning* level.

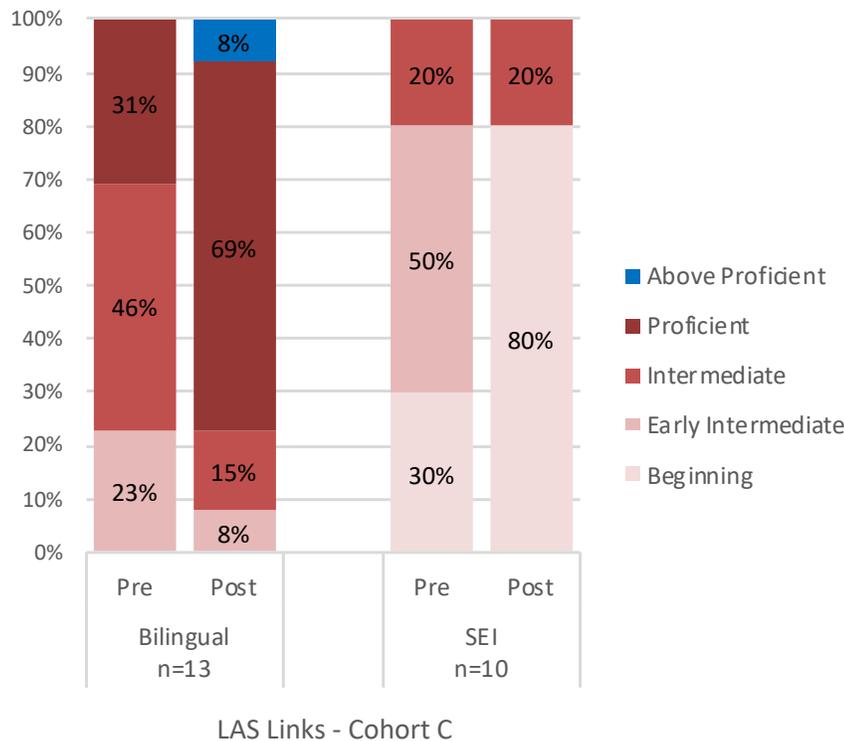
Figure 5
LAS Links[®] Español Overall Growth by Proficiency Level, Cohort B



Cohort B
 Figure 5 presents the results by proficiency level for Cohort B. From grades K to 3, BIL students increased from 27% to 83% scoring *proficient* and *above proficient*. Very few BIL students scored at the *beginning* and *early intermediate* levels. Only about 7% regressed to a lower level.

The percent of the SEI group scoring *proficient* and *above proficient*, increased from 35% at pre-assessment in grade K to 44% at post-assessment in grade 3. However, by grade 3, 43% of the group had maintained or regressed into the *beginning* proficiency level.

Figure 6
LAS Links[®] Español Overall Growth by Proficiency Level, Cohort C



Cohort C
 BIL students scoring at *proficient* and *above proficient* increased from 31% at pre-test to 77% at post-test, as shown in Figure 6. Only 8% of the group remained at the *beginning* level.

A majority of the SEI group (80%) scoring at *beginning* and *early intermediate* on the pre-test regressed, scoring at the *beginning* level on the post. The total percent of students scoring at the *intermediate* level on the pre-assessment (20%) remained the same on the post-assessment. No SEI students improved their levels of proficiency.

The statistical tests described in Table 2 were utilized to determine if there is a significant difference in the changes in overall proficiency within each (BIL and SEI) group. *This analysis is not a comparison of BIL to SEI groups; it compares each group's progress from pre-to post-assessment on overall mean scale scores, as shown in Table 6.*

Table 6

Descriptive Statistics for LAS Links[®] Español Pre-Post Overall Proficiency Levels for Cohorts A, B, and C

Cohort	Program	n	Pre-Assessment		Post-Assessment	
			M	SD	M	SD
A	BIL	27	3.52	1.01	3.56	1.05
A	SEI	14	2.14	0.95	1.86	1.35
B	BIL	30	2.93	0.79	4.00	1.08
B	SEI	23	2.09	0.79	2.35	1.37
C	BIL	13	3.08	0.76	3.77	0.73
C	SEI	10	1.90	0.74	1.40	0.84

Findings

Are there significant differences in the changes in Overall proficiency level from pre- to post-assessment for students in each group?

Cohort A

- No statistically significant difference for the BIL group ($p = .976$)
- No statistically significant difference for the SEI group ($p = .453$)

Cohort B

- Yes, there is a statistically significant difference in proficiency level from pre to post for the BIL group of students ($p < .001$)
- There is no statistically significant difference in proficiency level from pre to post for the SEI

Cohort C

- Yes, there is a statistically significant difference in proficiency level from pre to post for the BIL student group ($p < .001$)
- There is no statistically significant difference in proficiency level from pre to post for the SEI group ($p = .096$)

Overall, for all three cohorts, the BIL group is maintaining or further developing their Spanish skills, while SEI students are losing their Spanish language skills.

Comparison of SEI and BIL Post-Assessment Based on Mean Scale Scores

LAS Links[®] assessment data was analyzed to determine if there were statistically significant differences between the mean scale scores of students in BIL and SEI programs. The pre- and post-assessment means and standard deviations for BIL and SEI groups in each cohort, along with the adjusted means for each cohort and group to account for differences in preassessment scores of the BIL and SEI groups, are presented in Table 7.

Table 7

Descriptive Statistics for LAS Links[®] Español Post Overall Proficiency for Cohorts A, B, and C

Cohort	Program	n	Post-Assessment Scale Scores		
			Observed Mean	Adjusted Mean	SD
A	BIL	27	508.63	498.31	45.39
	SEI	14	428.64	448.55	71.15
B	BIL	30	517.73	503.72	41.63
	SEI	23	443.65	461.93	64.88
C	BIL	13	493.46	482.14	24.21
	SEI	10	392.80	407.52	44.71

One-Way ANCOVA was utilized to account for initial differences between the BIL and SEI groups for each cohort. Complete data tables and results are detailed in Section 4 – Appendix P. Results of the ANCOVA showed that:

- **Cohort A** – There was a statistically significant difference ($p = .012$) in the adjusted post-assessment means with the BIL group (M = 498.31) outperforming the SEI group (M = 448.55). Pre-test scores had a significant effect on post-test scores.
- **Cohort B** – There was a statistically significant difference ($p < .01$) in the adjusted post-assessment means, with the BIL group (M = 503.72) outperforming the SEI group (M = 461.93). Higher pre-test scores were associated with higher post-test scores.
- **Cohort C** – There was a statistically significant difference ($p < .001$) in the adjusted post-assessment means, with the BIL group (M = 482.14) outperforming the SEI group (M = 407.52). Higher pre-test scores were associated with higher post-test scores.

Following are the findings for the comparison of BIL and SEI groups on post-overall mean scale scores:

Findings

Are there significant differences in the comparison of post-overall mean scale scores across the two groups?

Cohort A	Cohort B	Cohort C
<ul style="list-style-type: none"> • Yes. The BIL group scored significantly higher than the SEI group ($p = .012$) 	<ul style="list-style-type: none"> • Yes. The BIL group scored significantly higher than the SEI group ($p < .001$) 	<ul style="list-style-type: none"> • Yes. The BIL group scored significantly higher than the SEI group ($p < .001$)

Part Three: Summary of Findings and Implications

Summary of Findings

This research and evaluation brief reports on the quantitative analyses that answer the research question: *What is the difference, if any, in growth in Spanish language development for students in BIL compared to SEI programs, based on pre and post assessment for three sample groups with annual data from 2016-19?*

The first analysis consisted of counts of students at each proficiency level for each group (BIL and SEI) in the pre- and post-assessments, and the change in each level from pre- to post- at each level, which was calculated by subtracting the number of students at pre-assessment from the number at post-assessment for each level. The results of the first analysis are the following:

- **Cohort A, BIL:** As shown in Table 3 and Figure 4, Cohort A BIL students made the greatest progress in moving from the *intermediate* to *proficient* level. Overall, almost all BIL students maintained or further developed their Spanish language skills.
- **Cohort A, SEI:** Almost two-thirds of the SEI group remained at or regressed into the *beginning* level.
- **Cohorts B and C, BIL:** As shown in Tables 4 and 5, and Figures 5 and 6, Cohorts B and C BIL students showed significant differences in the distribution of counts per LAS Links[®] proficiency level from pre- to post-assessment. Compared to SEI students, a greater number of individual BIL students moved up into higher proficiency levels from pre- to post-assessment and fewer moved downward into lower levels.
- **Cohorts B and C, SEI:** As shown in Tables 4 and 5, and Figure 6, 43% of Cohort B and 80% of Cohort C SEI students remained at or regressed into the *beginning* level.

For the second analysis, the BIL group pre and post-assessments means, as shown in Table 6, were compared to determine if there was a significant growth from pre to post assessment for that group, and a similar analysis was conducted for the SEI group. The results of the second analysis showed:

- **Cohort A, BIL:** The BIL group scored slightly higher on the post-assessment, but not significantly.
- **Cohort A, SEI:** The SEI group scored lower on the post assessment, but not significantly.
- **Cohorts B and C, BIL:** When comparing the pre- to post-assessment overall mean scale scores within the each of the BIL and SEI groups, Cohorts B and C showed significant differences in the change in overall proficiency for the BIL groups but not for SEI. This indicates that the BIL students in both cohorts improved significantly while the SEI students did not.
- **Cohorts B and C, SEI:** There was no significant difference from pre- to post-assessment for SEI students.

For the third analysis, comparing the pre and post-assessment means of BIL and SEI groups in Cohorts A, B, and C, the results in Table 7 show that there were significant differences on the LAS Links[®] post-assessment overall proficiency of the BIL and SEI students. Across all three Cohorts, accounting for differences in the groups' pre-assessments, the BIL groups scored significantly higher than the SEI groups.

Though there are some differences among the cohorts, overall, the summary of significant differences indicates that students in BIL programs are continuing to develop Spanish, their home language. There are also indicators that students in SEI programs are not maintaining or developing their Spanish language skills, resulting in language loss.

Implications

The results of this study support a conclusion that bilingual (including biliteracy and dual language) programs play a crucial role in lessening language loss and increasing development of the home language. In considering the importance of nurturing bilingualism and biliteracy in young children before they lose knowledge and use of the home language, there needs to be greater encouragement and incentives for districts and schools to adopt, maintain and improve bilingual programs for their students.

There are also implications for districts to support programs for parents to: 1) provide parents with the evidence of the value of learning in both languages; and, 2) encourage and support parents to engage in school, district and community leadership activities to develop and maintain bilingual programs. Increasing district and school capacity to provide effective bilingual programs has implications for stronger pre-service and in-service programs to promote teachers' language, culture, and pedagogical skills to teach in bilingual programs, with incentives to do so. Strong bilingual programs, district and university efforts to create pathways to Seals of Biliteracy, and incentives for students to become bilingual teachers, could increase the number of bilingual teachers necessary for the increased need for bilingual programs.

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



<http://www.wexford.org>



<http://soe.lmu.edu/centers/ceel>

The
SOBRATO
Family Foundation

<http://www.sobrato.com/SEAL>

Brief 11 Recommended Citation: Cassidy, S., Saldivar, R, & Ross, A. (2020). Comparison of Spanish language development of SEAL students in bilingual and structured English immersion programs. In Center for Equity for English Learners, Loyola Marymount University & Wexford Institute, *Sobrato Early Academic Language (SEAL) Model: Final report of findings from a four-year study (Section 4, Brief 11)*. doi: <https://doi.org/10.15365/ceel.seal2020>