imagine español®

Impact Evaluation of Imagine Español® in an Arizona School District

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Abstract

This study evaluated the impact of Imagine Español, a digital Spanish literacy program, on English reading achievement among elementary students in an Arizona school district during the 2024–2025 academic year. Using a quasi-experimental design with propensity score matching, we compared English reading growth of students in classrooms that implemented Imagine Español to those in non-participating classrooms. Results indicated that while use of Imagine Español produced a small, nonsignificant increase in English reading growth for Kindergarten and Grade 1 students on the FastBridge earlyReading assessment, students in Grades 2–6 demonstrated a statistically significant advantage on the FastBridge aReading assessment, with an average growth more than three points higher than matched peers. These findings provide empirical evidence that leveraging students' home language through targeted Spanish literacy instruction can positively influence English reading development, particularly in the upper elementary grades, and highlight the potential of supplemental education technology programs to support emergent bilingual learners.

Introduction

Despite the growing linguistic diversity of classrooms across the United States, English reading achievement among emergent bilingual students — particularly those whose primary language is Spanish — continues to lag behind their monolingual peers (Rodriquez & Slate, 2024). This persistent gap underscores a critical need for instructional approaches that support students' bilingual development and leverage their home language as a resource rather than a barrier. Traditional models of instruction often prioritize English-only interventions, overlooking the potential benefits of literacy development in students' first language as a foundation for academic success in English (Rolstad et al., 2005).

This study addresses that gap by evaluating the impact of Imagine Español, a digital supplemental Spanish literacy program on English reading outcomes for elementary school students. Rooted in the theory of cross-linguistic transfer, which posits that skills developed in a first language can support the acquisition of a second, the study aims to determine whether structured Spanish literacy support can accelerate English reading growth (Zhang et al., 2024). By comparing the English reading achievement of students who used Imagine Español to those who did not over the course of an academic year, the study seeks to provide empirical evidence for the effectiveness of leveraging students' home language through technology-enhanced instruction.

Imagine Learning partnered with an Arizona school district in a large city which implemented Imagine Español during the 2024–2025 school year with the intent to improve student English reading performance. The findings of this study have important implications for educators, administrators, and policymakers seeking to improve literacy outcomes among emergent bilingual students. Demonstrating that targeted Spanish-language support can enhance English reading development challenges the one-size-fits-all approach to reading instruction and highlights the value of digital programs like Imagine Español in fostering equitable academic growth.

Methods

POPULATION

Imagine Learning partnered with a school district in Arizona to evaluate how Imagine Español impacted the success of its students. During the 2024–2025 school year, 30 Grade K–6 teachers across three of the five elementary schools in the district chose to implement Imagine Español with all students in their classroom. In these classrooms, Imagine Español was used at teachers' discretion, with the goal of all students spending time in the program. A total of 604 students in those classrooms used the program (treatment group). Conversely, there were 1,024 students across the five elementary schools who were in classrooms that did not use Imagine Español (control group).

RESEARCH DESIGN

This study was conducted prospectively during the 2024–2025 school year. It evaluated the difference in English reading achievement between treatment and control students. The treatment group was comprised of all students who were in classrooms selected to use Imagine Español during the 2024–2025 school year, while the control group included all students who were not. Assignment to the treatment and control groups was not random, so this study is a quasi-experimental design, and statistical procedures were used to ensure baseline equivalence of the treatment and control samples. Because use of Imagine Español was determined at the classroom level (rather than for individual students or entire schools), statistical corrections for clustering were made for students within teachers' classrooms.

INTERVENTION

Imagine Español is a digital, supplemental Spanish literacy program developed by Imagine Learning. Designed for Spanish-speaking students in the early grades, the program provides personalized, adaptive instruction in key foundational literacy skills such as phonological awareness, phonics, vocabulary, fluency, and comprehension — all delivered in Spanish. Through engaging, interactive activities and culturally responsive content, Imagine Español aims to build strong literacy skills in students' native language, which can support broader academic development and facilitate cross-linguistic transfer to English reading. The program is typically implemented in short, regular sessions and is used to complement core classroom instruction.

MEASURES

Multiple data sources were compiled to describe students, their performance, and their work in Imagine Español. Student English reading proficiency outcomes were determined using a standardized progress monitoring assessment. Student demographic data were collected to provide additional information on student characteristics that may impact measures of learning outcomes. Data from Imagine Español were incorporated to evaluate student engagement in the program. These data sources are reviewed in more detail below.

English Reading Proficiency. Students' English reading proficiency was determined using the FastBridge earlyReading (Grades K–1) and aReading (Grades 2–6) assessments. The earlyReading assessment is a set of brief, individually administered, skill-specific measures designed for Kindergarten and Grade 1. It is not computer-adaptive; rather, it consists of multiple subtests (e.g., letter naming, phonemic awareness, nonsense word fluency) that assess foundational early literacy skills. In contrast, aReading is a computer-adaptive assessment administered online to students in Grades 2–6. It provides an efficient, continuous measure of overall reading ability across a broad range of skills, including vocabulary, comprehension, and inferencing.

FastBridge scores were obtained for students in fall 2024 and spring 2025. The average number of days between the fall 2024 and spring 2025 assessments was 265 days for earlyReading (264 days for students in the control group and 266 days for students in the treatment group) and 254 days for aReading (255 days for students in the control group and 253 days for students in the treatment group). Fall 2024 scores were used to establish baseline equivalence between study groups, and difference scores (spring 2025 scores minus fall 2024 scores) were used to estimate the effect of Imagine Español on English reading proficiency.

Student Demographics. Information was collected on individual student demographic characteristics and included grade level, gender, race/ethnicity, English language (EL) classification, and special education (SPED) status.

Imagine Español Usage. Program usage data was also obtained to determine students' engagement and progress in Imagine Español. These data included the total minutes students spent in the program.

ANALYTICAL SAMPLE

To ensure that the baseline characteristics of treatment and control students used in analyses were comparable, 1:1 nearest neighbor propensity score matching without replacement using a caliper of .1 was conducted to create a statistically equivalent analytical sample following the fall assessment.[1] Control students were matched to treatment students based on their fall 2024 FastBridge score and all demographic information available: gender, EL classification, SPED status, and race/ethnicity. This matching process was completed on each grade individually before combining the matched grade level samples for each assessment (K–1 for earlyReading and 2–6 for aReading) to create the total analytical samples. The resulting sample in Grades K-1 (earlyReading) included 156 treatment and 156 control students. In Grades 2–6, the resulting sample was 342 treatment and 342 control students.

The final analytical sample was determined following the spring assessment and was comprised of all students included in the original matched sample (detailed above) that also had a spring score. The resulting final analytical sample included 148 treatment and 151 control students in Grades K–1, and 338 treatment and 319 control students in Grades 2–6. The resulting attrition for K–1 is 4.17% (5.13% treatment and 3.21% control) and for 2–6 is 3.95% (1.17% treatment and 6.73% control). **Tables 1** and **2** below describe the characteristics of the final analytic sample.

[1]Propensity score matching was executed using the matchit function in R's MatchIt package.

Table 1: Student Characteristics of the Analytical Sample for the FastBridge earlyReading Analysis (Grades K–1)

	Subgroup	Comparison Students	Imagine Español Students	*p*-value	Standardized Mean Difference (SMD)
n		151	148		
Average (SD) Fall 2024 FastBridge earlyReading Composite Score		31.68 (12.23)	31.99 (10.43)	.817	.027
Grade Level	Kindergarten	85	83	>.999	.004
	Grade 1	66	65		
Gender	Female	79	72	.604	.073
	Male	72	76		
Race/Ethnicity	American Indian/ Alaskan Native	9	7	.878	.127
	Black or African American	15	17		
	Hispanic	105	97		
	Two or More Races	7	8		
English Language classification	No	109	113	.489	.095
	Yes	42	35		
Special education classification	No	140	131		
	Yes	11	17		

Table 2: Student Characteristics of the Analytical Sample for the FastBridge aReading Analysis (Grades 2–6)

	Subgroup	Comparison Students	Imagine Español Students	*p*-value	Standardized Mean Difference (SMD)
n		317	338		
Average (SD) Fall 2024 FastBridge earlyReading Composite Score		482.08 (38.26)	483.77 (35.79)	.284	.084
Grade Level	Grade 2	75	79	.976	.054
	Grade 3	55	60		
	Grade 4	72	78		
	Grade 5	76	75		
	Grade 6	39	46		
Gender	Female	168	176	.874	.019
	Male	149	162		
Race/Ethnicity	American Indian/ Alaskan Native	12	11	.971	.074
	Asian	2	1		
	Black or African American	16	20		
	Hispanic	235	254		
	Two or More Races	8	8		
	White	44	44		
English Language classification	No	249	259	.620	.046
	Yes	68	79		
Special education classification	No	299	317	.901	.023
	Yes	18	21		

ANALYTICAL APPROACH

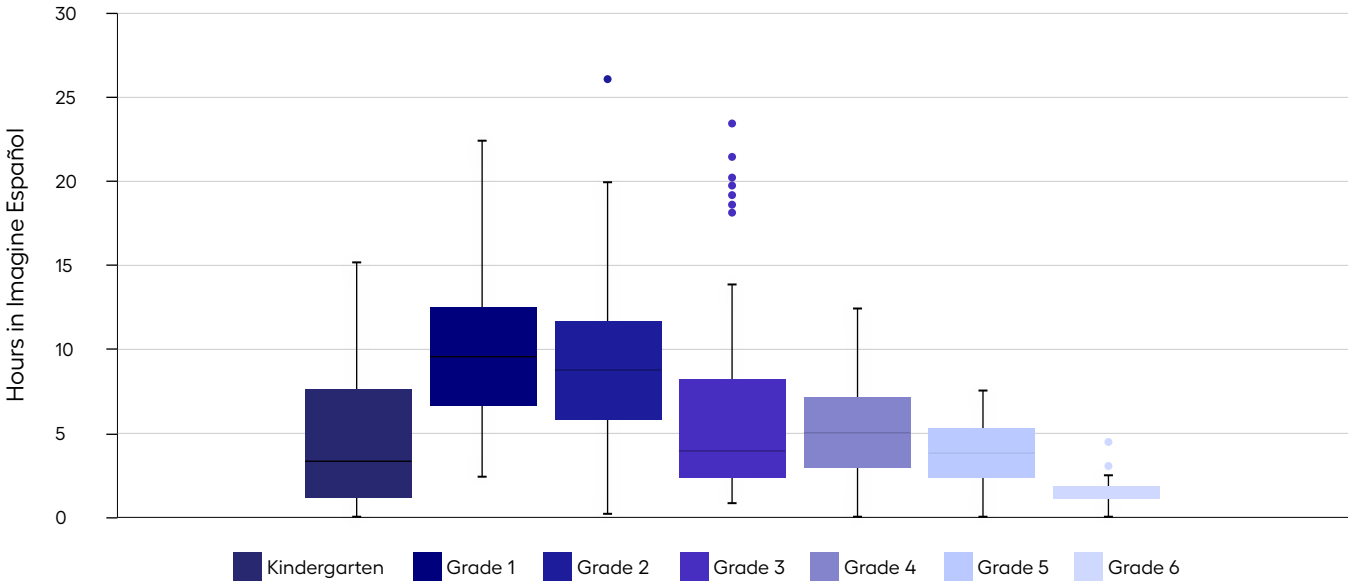
Multiple linear regressions were used to evaluate the differences in FastBridge earlyReading and aReading growth from fall 2024 to spring 2025 between Imagine Español users and non-users, controlling for fall 2024 FastBridge achievement and other covariates (including grade level, gender, race/ethnicity, EL classification, and SPED classification). An indicator of whether a student was a control or treatment student was included in the regression as the primary predictor variable. Using multiple linear regressions after propensity score matching ensured that any remaining differences in the underlying treatment and control samples were controlled for by the regression models, effectively isolating the impact of Imagine Español. Hierarchal linear modelling (HLM) was incorporated in all statistical models to address classroom-level clustering effects.

Results

IMAGINE ESPAÑOL USAGE

Treatment students in the final analytic sample for earlyReading (Grades K–1) spent an average of 7.20 (*SD* = 5.45) hours in Imagine Español throughout the school year, while those for aReading (Grades 2–6) spent an average of 5.33 (*SD* = 4.70) hours in the program. Average time in Imagine Español varied by grade level, with the highest average usage in Grade 1 and the lowest average usage in Grade 6. See **Figures 1** for a distribution of hours by grade.

Figure 1. Distribution of Hours Spent in Imagine Español by Grade



PROGRAM IMPACT ON EARLY READING ACHIEVEMENT (GRADES K–1)

Overall, use of Imagine Español was found to generate a small but nonsignificant impact on students' English reading performance for students in Grades K–1. Specifically, students who used Imagine Español demonstrated an average growth of 1.87 points higher from fall 2024 to spring 2025 on the FastBridge earlyReading assessment compared to otherwise similar non-user students, $B = 1.87$, $p = .37$. Program usage and the other covariates in the model accounted for 25% of the variance found in fall-to-spring difference scores, $R^2 = .25$, $F(10,288) = 10.88$, $p < .001$. The Hedges' *g* effect size of Imagine Español program usage was .13.[2] **Table 3** summarizes the results of the regression. The covariate-adjusted mean difference score (spring composite score minus fall composite score) was 24.59 for Imagine Español users and 22.72 for non-users.

[2]Propensity score matching was executed using the matchit function in R's MatchIt package. The effect size is calculated using Hedges' g computation following What Works Clearinghouse's Procedures and Standards Handbook, Version 5.0. The unadjusted standard deviations of the spring 2025 scores can be found in Appendix A.

Table 3: Overall Impact of Imagine Español on Fall 2024-to-Spring 2025 FastBridge earlyReading Composite Score Growth

Coefficients	Estimate	Standard Error	*p*-value
Intercept	13.82	5.86	.02
Imagine Español User Indicator	1.87	2.06	.37
Grade-Level Indicator			
1	-22.75	2.34	<.001
Fall 2024 earlyReading Composite Score	.40	.11	<.001
Male Indicator	-3.00	1.88	.11
Race/Ethnicity Indicator			
Black or African American	1.86	4.33	.67
Hispanic	2.93	3.14	.35
Two or More Races	3.46	4.64	.46
White	6.18	3.80	.10
EL Indicator	2.00	2.44	.41
SPED Indicator	-.97	2.26	.67

PROGRAM IMPACT ON READING ACHIEVEMENT (GRADES 2–6)

Overall, use of Imagine Español was found to generate a positive and statistically significant impact on the English reading performance of students in Grades 2–6. Specifically, students who used Imagine Español demonstrated an average growth of 3.61 points higher from fall 2024 to spring 2025 on the FastBridge aReading assessment compared to otherwise similar non-user students, $B = 3.61$, $p < .01$. Program usage and the other covariates in the model accounted for 23% of the variance found in fall-to-spring difference scores, $R^2 = .234$, $F(14,640) = 15.24$, $p < .001$. The Hedges' *g* effect size of Imagine Español program usage was .16.[3] **Table 4** summarizes the results of the regression. The covariate-adjusted mean difference score (spring composite score minus fall composite score) was 12.51 for Imagine Español users and 8.90 for non-users.

[3]The effect size is calculated using Hedges' g computation following What Works Clearinghouse's Procedures and Standards Handbook, Version 5.0. The unadjusted standard deviations of the spring 2025 scores can be found in Appendix A.

Table 4: Overall Impact of Imagine Español on Fall 2024-to-Spring 2025 FastBridge aReading Composite Score Growth

Coefficients	Estimate	Standard Error	*p*-value
Intercept	110.52	17.97	<.001
Imagine Español User Indicator	3.61	1.29	.005
Grade-Level Indicator			
3	-1.05	1.43	.46
4	-5.85	1.71	<.001
5	-4.80	2.03	.02
5	-4.54	3.37	.17
Fall 2024 aReading Test Theta	-.20	.03	<.001
Male Indicator	.38	1.16	.74
Race/Ethnicity Indicator			
Asian	22.12	15.84	.16
Black or African American	-2.00	5.27	.71
Hispanic	1.72	4.98	.73
Two or More Races	4.41	5.30	.41
White	3.50	5.04	.49
EL Indicator	-3.03	1.95	.12
SPED Indicator	-7.72	4.49	.09

Conclusion

This study provides evidence of the efficacy of Imagine Español on student English reading achievement for students in Grades 2–6 by comparing students who participated in Imagine Español with those who did not during the 2024–2025 school year. Results show that students that participated in Imagine Español demonstrated an average growth of more than three points higher from fall 2024 to spring 2025 on the FastBridge aReading assessment compared to similar comparison students. This difference was statistically significant. While results on the FastBridge earlyReading assessment for students in Grades K–1 were positive, they were nonsignificant. This could be due to an underpowered sample (N = 299), or differences between the earlyReading and aReading assessments, and should be further investigated in future evaluations. Ultimately, this study provides evidence that the use of Imagine Español supports students' English reading achievement in Grades 2–6.

References

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Appendix A

Table A1: Unadjusted Mean FastBridge earlyReading Scores by Grade

	Fall 2024 (SD)	Spring 2025 (SD)	Mean Change
Grade K			
Imagine Español (*n* = 83)	31.72 (4.72)	60.14 (11.90)	28.42
Comparison (*n* = 85)	30.47 (4.91)	60.89 (11.23)	30.42
Grade 1			
Imagine Español (*n* = 65)	32.32 (14.88)	53.86 (27.57)	21.54
Comparison (*n* = 66)	33.24 (17.60)	47.94 (27.35)	14.70
All Grades			
Imagine Español (*n* = 148)	31.99 (10.43)	57.39 (20.49)	25.40
Comparison (*n* = 151)	31.68 (12.23)	55.23 (20.89)	23.55

Table A2: Unadjusted Mean FastBridge aReading Scores by Grade

	Fall 2024 (SD)	Spring 2025 (SD)	Mean Change
Grade 2			
Imagine Español (*n* = 79)	465.62 (31.21)	485.45 (28.02)	21.57
Comparison (*n* = 75)	452.05 (36.75)	473.62 (34.37)	19.83
Grade 3			
Imagine Español (*n* = 60)	474.86 (31.91)	493.46 (23.85)	14.33
Comparison (*n* = 55)	474.07 (31.90)	488.4 (29.22)	18.60
Grade 4			
Imagine Español (*n* = 78)	490.4 (41.25)	498.23 (39.71)	8.44
Comparison (*n* = 72)	492.8 (23.61)	501.23 (22.67)	7.83
Grade 5			
Imagine Español (*n* = 75)	498.14 (38.07)	508.55 (32.19)	4.10
Comparison (*n* = 76)	499.13 (27.45)	503.23 (32.27)	10.41
Grade 6			
Imagine Español (*n* = 46)	514.59 (25.09)	523.55 (21.60)	-0.08
Comparison (*n* = 39)	511.88 (22.10)	511.8 (36.83)	8.97
All Grades			
Imagine Español (*n* = 338)	486.77 (38.24)	500.13 (32.89)	13.31
Comparison (*n* = 317)	483.77 (35.79)	494.25 (33.52)	10.48