THE EDTECH COLLECTIVE
Instructure Partner Ecosystem

INSTRUCTURE LEVEL 3 ESSA 2025

WAYGROUND

ESSA Level III Brief (2023–24). Implementation and Effectiveness in California.

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Main Research Findings	
English language arts	
+	School-level usage of *Wayground*[1] (the total number of responses across all grades) showed a **significant positive relationship** with **11th Grade ELA** outcomes at **Low**, **Medium**, and **High** usage levels.
Math	
+	School-level usage of *Wayground* (the total number of responses across all grades) showed a **significant positive relationship** with **8th Grade math** outcomes at **Low** and **Medium** usage levels, but the relationship was not significant for High usage.
+	School-level usage of *Wayground* (the total number of responses across all grades) showed a **significant positive relationship** with **11th Grade math** outcomes at **Low** and **Medium** usage levels, but the relationship was not significant for High usage.

INTRODUCTION

Wayground provides an instructional suite where educators can create and deliver accessible curriculum resources intended to meet every student's needs across all grade levels and subjects.

Wayground contracted with Instructure, a third-party edtech company, to examine the relationship between the total number of student responses completed on its platform and English language arts (ELA) and math learning outcomes. Using the Every Student Succeeds Act (ESSA) standards as guidance in developing a study design, findings in this report align with ESSA Level III (Promising Evidence) (see Appendix A).

[1] *Wayground* was formerly known as *Quizizz*.

RESEARCH QUESTIONS

Implementation

1. On average, how many responses did students complete on *Wayground* at each school?[2]

Student outcomes

2. On average, did 3rd–8th and 11th grade students perform better on English language arts (ELA) and math assessments in schools with more *Wayground* usage?

STUDY DESIGN AND METHODS

This study of 6,280 California public schools used a correlational design—aligned with ESSA Level III evidence standards—to examine publicly available school-level data provided by the California Department of Education. To mitigate bias, the study included the following school-level controls: average fall 2022–23 ELA and math scale scores by grade; total enrollment; and the percentages of students with disability status, English learner status, homeless status, and socioeconomically disadvantaged status (see more in Appendix B). Smarter Balanced Summative Assessments (SBA) in ELA and math, which are completed by all California students in 3rd–8th and 11th grade annually, served as the student outcomes for the study.

Usage data were grouped (high, medium, and low) based on how many student responses were completed at each school across grades (usage was not available at the grade level), using a *K*-means clustering method. Researchers then used descriptive statistics and regression models to examine the relationship between the total number of student responses on *Wayground* per school and grade-level student performance on the spring 2024 SBA ELA and math assessments.

IMPLEMENTATION FINDINGS

During the 2023–24 school year, students in these schools completed 4,231,426 total responses on *Wayground* across all grades.[3] On average, students in high usage schools (n = 84) submitted 1,233,435 total responses; students in medium usage schools (n = 583) submitted 347,721 total responses and students in low usage schools (n = 5,613) submitted 30,776 total responses. The "no usage" group (n = 2,160) consisted of schools where students did not submit any *Wayground* responses during the 2023–24 school year and was included in analyses (see Table 1).

Table 1. ***Wayground*** **average usage by school and usage group**

Usage Group	Average Number of Student Responses	Standard Deviation	Range of Responses
High usage (n = 84)	1,233,435	509,831	802,923 to 4,231,426
Medium usage (n = 583)	347,721	143,967	189,503 to 784,629

[2] *Wayground* allows for various response formats including text answers, multiple choice, open-ended questions, audio responses, and video responses.

[3] Schools may have been using *Wayground* for one or multiple school years.

Low usage (*n* = 5,613)	30,776	41,139	1 to 188,954

STUDENT OUTCOMES

The total number of student responses on *Wayground* at each school (across all grades) showed a significant positive relationship with 11th grade ELA outcomes across all usage levels: low (β = 0.05 p = .001), medium (β = 0.04, p = .008), and high (β = 0.03, p = .020). However, there was no statistically significant negative or positive relationship found between the total number of student responses and 3rd–8th grade ELA outcomes, for any usage group.

For math, the total number of student responses on *Wayground* at each school (across all grades) showed a significant positive relationship with 11th grade math outcomes at the low (β = 0.03, p = .011) and medium (β = 0.03, p = .015) usage levels. Low (β = 0.04, p = .000) and medium (β = 0.03, p = .016) usage levels also showed significant positive relationships with 8th grade math outcomes. 11th and 8th grade math outcomes did not differ between schools in the "no usage" group and schools with high usage. Finally, there was no statistically significant relationship found between the total number of student responses and math outcomes in 3rd–7th grade (see Appendix C).

LIMITATIONS AND FUTURE RESEARCH

The current study offers promising results for *Wayground*, but further research is needed to address its limitations and strengthen findings:

- School-level usage: The study analyzed *Wayground* use at the school level. Important relationships between grade-level use and grade-level outcomes may be masked as a result because different grades have distinct curriculum and learning needs.
- No student-level data: The study did not analyze individual student-level usage, which limits insights into how specific students (and student subgroups) may engage with and benefit from *Wayground*.
- Limited context around the difference between usage and non-usage schools**:** This study's findings are limited by potential unknown differences between schools with *Wayground* use and those without. Future research should use an ESSA Level II quasi-experimental design that establishes baseline equivalence between groups. As a result, this study's findings are correlational, only, and cannot be said to be representative of the causal impact of *Wayground* usage on outcomes.
- Limited to California: The study was limited to California, limiting generalizability. Future research should replicate analyses in other states.

CONCLUSIONS

Given the positive findings, this study provides results to satisfy ESSA evidence requirements for Level III (Promising Evidence).

APPENDIX A

The Every Student Succeeds Act (ESSA) provides schools and districts with a framework for determining which products are evidence-based and have been shown to improve student or other relevant outcomes. Following guidance from ESSA (statute and non-regulatory guidance), Education Department General Administrative Regulations (EDGAR), Standards for Excellence in Education Research (SEER) and What Works Clearinghouse (WWC), Instructure classifies the research of interventions into one of the four ESSA evidence levels. For more information regarding the evidence levels, please visit https://www.instructure.com/resources/product-overviews/ensure-edtech-efficacy-essa-evidence.

 **ESSA Level IV** **Demonstrates Rationale**	 **ESSA Level III** **Promising Evidence**	 **ESSA Level II** **Moderate Evidence**	 **ESSA Level I** **Strong Evidence**
Research-based logic model (theory of change) for why this product should work **Blueprint for implementation** with fidelity, including appropriate usage metrics to track Represents a rationale – **not empirical research** – in an authentic education setting **Limitations** on federal funding eligibility	**Correlational research study** showing positive relationship between tool use and student outcomes Study **did not include comparison groups**, random assignment, or baseline equivalence Most meaningful for districts with **similar context** (student demographics, etc.) Establishes **eligibility for all types** of federal funding	**Quasi-experimental research study** showing students who used the product outperformed students who did not Includes **demographically similar comparison group**, but groups were not randomly assigned District **context should be strongly considered** when interpreting results Establishes **eligibility for all types** of federal funding	**Experimental research study** proving students who used the product outperformed students who did not Utilizes **randomized comparison group** for very strong, highly generalizable evidence Establishes **eligibility for all types** of federal funding

APPENDIX B

Table B1: Average student demographics across all schools in the analytic sample.

Demographic Category	Group	Percentage of overall sample
Gender	Female	48%
	Male	52%
	Non-binary	0.5%
Race	American Indian/Alaskan Native	1%
	Asian	10%
	Black	5%
	Filipino	2%
	Hispanic	57%
	Not Reported	2%
	Pacific Islander	1%
	Two or more Races	5%
	White	22%
Disability		15%
English learner		21%
Homeless		5%

Note: Demographic categories are rounded so the sum of subcategories may not equal 100%.

APPENDIX C

Researchers used regression models to examine the relationship between the total number of student responses on *Wayground* per school and grade-level student performance on the spring 2024 SBA ELA and math assessments, including the following controls: average fall 2022–23 SBA ELA and math scale scores by grade; total enrollment; and the percentages of students with disability status, English learner status, homeless status, and socioeconomically disadvantaged status. The analyses also included *k* means usage groups (No usage, Low, Medium, and High).

Regression analyses were completed for each grade. Models included a "no usage" group of schools and usage groups were compared against this group. However, this study's findings are correlational, only, and cannot be said to be representative of the causal impact of *Wayground* usage on outcomes when compared to schools without *Wayground* usage. Baseline equivalence between user and non-user schools was not examined in this study. This Researchers used standardized correlation coefficients (beta coefficients) to characterize the practical importance of statistically significant effects; these are colored **green.** Statistical significance is determined at $p < 0.05$.

Table C1: Regression results for English language arts by usage group

School-level usage group (across all grades)	ELA outcomes by grade	Unstandardized beta coefficient	Standard Error	*t*-value	*p*-value	*β*-value (standardized beta coefficient)
Low use (*n* = 5,613)	**3**	-0.69	0.74	-0.94	.349	-0.01
Medium use (*n* = 583)		1.02	2.98	0.34	.731	0.00
Low use (*n* = 5,613)	**4**	-0.54	0.77	-0.70	.483	0.00
Medium use (*n* = 583)		-1.05	3.12	-0.34	.737	0.00
Low use (*n* = 5,613)	**5**	-1.00	0.80	-1.25	.211	-0.01
Medium use (*n* = 583)		0.27	3.16	0.09	.932	0.00
Low use (*n* = 5,613)	**6**	1.96	1.18	1.67	.095	0.02
Medium use (*n* = 583)		0.91	2.04	0.45	.654	0.00
High use (*n* = 84)		-4.55	8.19	-0.56	.578	0.00
Low use (*n* = 5,613)	**7**	2.28	1.90	1.20	.229	0.02
Medium use (*n* = 583)		3.11	2.35	1.33	.185	0.02
High use (*n* = 84)		7.90	5.94	1.33	.184	0.01
Low use (*n* = 5,613)	**8**	1.35	1.93	0.70	.484	0.01
Medium use (*n* = 583)		2.67	2.39	1.12	.264	0.02
High use (*n* = 84)		3.52	6.06	0.58	.562	0.01
Low use (*n* = 5,613)	**11**	6.97	2.02	3.45	**.001***	**0.05***
Medium use (*n* = 583)		7.41	2.78	2.67	**.008***	**0.04***
High use (*n* = 84)		9.28	3.98	2.33	**.020***	**0.03***

Note: Per this analysis, there were no high use schools with 3rd—5th grade ELA achievement data.

Table C2: Regression results for math by usage group

School-level usage group (across all grades)	Math outcomes by grade	Unstandardized beta coefficient	Standard Error	*t*-value	*p*-value	*β*-value (standardized beta coefficient)
Low use (*n* = 5,613)	**3**	-0.91	0.68	-1.35	.178	-0.01
Medium use (*n* = 583)		1.23	2.73	0.45	.652	0.00
Low use (*n* = 5,613)	**4**	-1.19	0.69	-1.72	.085	-0.01
Medium use (*n* = 583)		-2.14	2.78	-0.77	.442	0.00
Low use (*n* = 5,613)	**5**	-1.20	0.75	-1.59	.112	-0.01
Medium use (*n* = 583)		-0.81	2.97	-0.27	.786	0.00
Low use (*n* = 5,613)	**6**	1.53	1.29	1.19	.235	0.01
Medium use (*n* = 583)		1.13	2.24	0.50	.615	0.00
High use (*n* = 84)		0.49	9.01	0.05	.957	0.00
Low use (*n* = 5,613)	**7**	3.00	1.83	1.64	.101	0.02
Medium use (*n* = 583)		3.36	2.26	1.49	.137	0.02
High use (*n* = 84)		1.05	5.73	0.18	.855	0.00
Low use (*n* = 5,613)	**8**	5.25	2.05	2.56	**.011***	**0.03***
Medium use (*n* = 583)		6.16	2.54	2.43	**.015***	**0.03***
High use (*n* = 84)		7.60	6.45	1.18	.239	0.01
Low use (*n* = 5,613)	**11**	7.00	1.69	4.14	**.000***	**0.04***
Medium use (*n* = 583)		5.58	2.32	2.40	**.016***	**0.03***
High use (*n* = 84)		5.91	3.34	1.77	.077	0.02

Note: Per this analysis, there were no high use schools with 3rd—5th grade math achievement data.