



How Dickinson ISD data reveals Prodigy's capabilities to support struggling learners

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The challenge

Math teachers at Texas' Dickinson Independent School District (DISD) — like educators in schools across the United States — face an ever-present challenge: to **reach struggling learners and accelerate their math proficiency**. No two districts are exactly the same. However, there are common denominators that school leaders look for when considering an EdTech solution. Can it:

- **Succeed on a limited budget** or have no cost?
- **Engage students** in 1st to 8th grade to practice math?
- **Boost learning outcomes** for students of all economic backgrounds?
- **Meet the needs** of a diverse student population with a wide range of proficiency levels?

A potential solution for struggling learners

DISD students use **Prodigy**. It's the engaging, curriculum-aligned math platform loved by over 50 million students, teachers and administrators — with differentiated content. No cost, ever. **Prodigy adapts the educational content students encounter, so each child can advance through the curriculum and succeed at their own pace.**

How it works

To help students with lower levels of math proficiency, teachers use Prodigy to:

- **Obtain** live data and reports on usage and progress
- **Create** Plans or Assignments to help struggling learners master certain skills and strands
- **Engage** students in a game-based environment while incorporating the math curriculum
- **Pinpoint** problem areas with adaptive learning that customizes content and reinforces instruction

Note: *Across 13 DISD schools, we observed 4287 students' State of Texas Assessments of Academic Readiness (STAAR) scores — 1374 of whom had active Prodigy accounts. We also compared those that used Prodigy — and for how long — with those that didn't.¹ While not a randomized trial, the results below suggest patterns of interest. This case study observes correlations between students' STAAR scores and their question accuracy in Prodigy,² as well as between math performance and Prodigy usage.*

¹ Most of DISD's Prodigy usage comes from 3rd to 5th grade, where about 50% of students have a matched account. As standardized testing does not begin until 3rd grade, there is no data from 1st and 2nd grade.

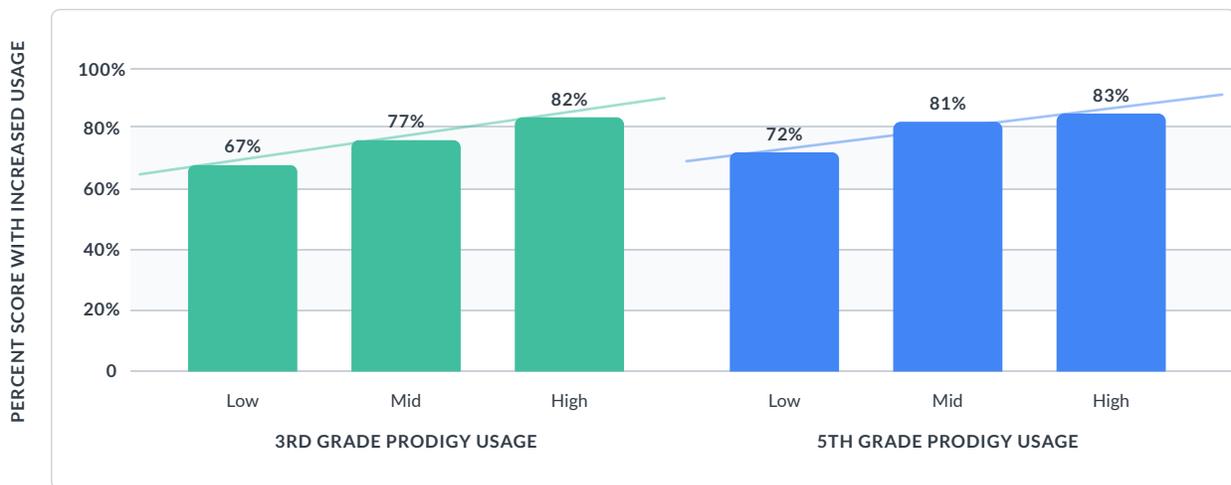
² Question accuracy refers to the number of questions answered correctly out of the total number of questions answered — e.g., if a student answers 9 out of 10 Prodigy questions correctly, their question accuracy is 90%.

Key results

Prodigy can help struggling learners

Data shows that economically disadvantaged (ED) DISD students' math performance is poorer than non-ED students in every grade.³ However, ED students who use Prodigy throughout the school year see improved STAAR scores with increased usage.⁴

ED Median STAAR Scores (3rd and 5th grade)



- ✓ In 3rd grade, high-usage ED students have a 15% higher median STAAR score than the low-usage group.
- ✓ Compared to the low-usage group, 5th grade ED students with high-usage have an 11% higher median STAAR score.
- ✓ Improvements in standardized test scores indicate that — with increased usage — teachers can use Prodigy to support struggling learners.

³ Across DISD, Prodigy is slightly more popular with non-ED students: 35% of all non-ED students use Prodigy, compared to 30% of all ED students. Based on this data, it's important to note that a student seems more likely to use Prodigy if they're not ED, and that non-ED students tend to score higher.

⁴ In this case study, we examine four student usage groups: None (no Prodigy account), Low (spent 0 to 9,000 seconds answering 0 to ~150 questions), Mid (9,000 to 18,000 seconds answering ~150 to ~300 questions), and High (more than 18,000 seconds answering at least 300 questions).

Some of my lower level students have shown growth by 2+ grade levels and also show more confidence in the classroom since I intentionally give examples I know they have seen.

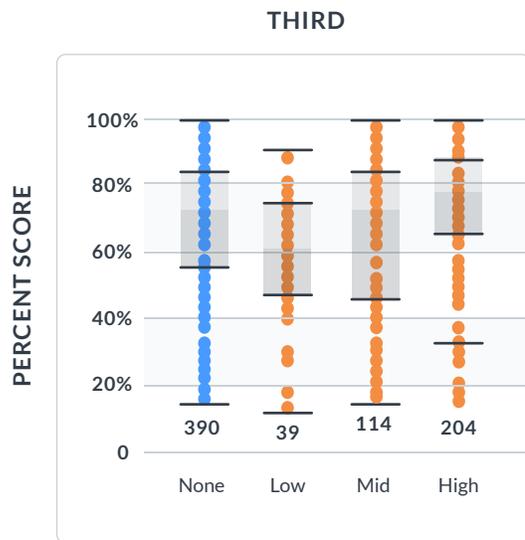
Stephanie Hernandez
6th Grade Classroom Teacher

High Prodigy usage can lead to higher scores

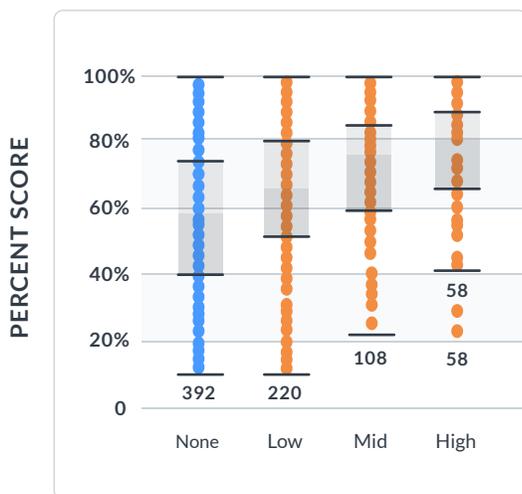
When observing all DISD students — Prodigy users and non-users, as well as ED and non-ED — it appears that regular Prodigy usage can have a positive educational impact.⁵ According to their test scores, the “high” usage group outperforms the others in every grade.

3rd Grade STAAR Scores By Student Usage

Compared to DISD students who have not used Prodigy, 3rd grade students who spend ≥5 hours — or 18,000 seconds — during the school year answering questions in Prodigy achieve an 8% overall higher STAAR score.



FIFTH



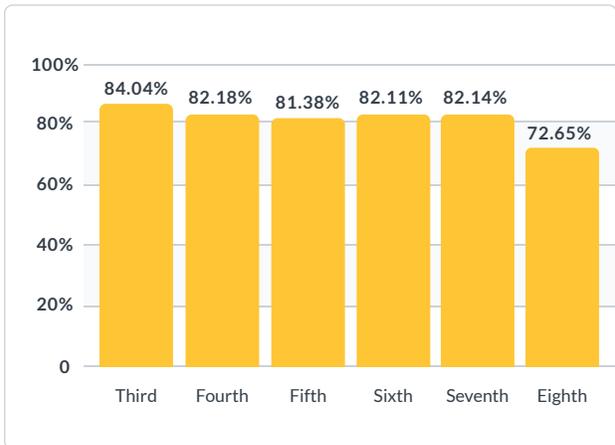
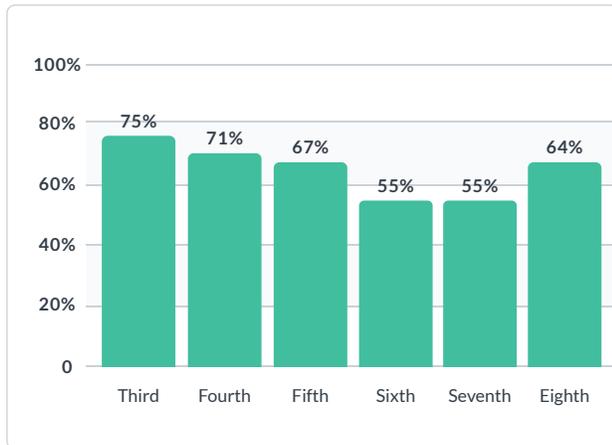
5th Grade STAAR Scores By Student Usage

In 5th grade, the more students use Prodigy, the more their STAAR scores seem to improve. Compared to non-users, those who use Prodigy for five or more hours during the school year have a **38% overall higher STAAR score.**

⁵ Causation cannot be inferred from the data. Because there are factors which couldn't be controlled for, one must view these results as correlational.

STAAR scores and question accuracy

There is a positive correlation between STAAR scores and the question accuracy of students who use Prodigy. Across DISD, Prodigy users' median question accuracy is 83%, indicating the math practice tool can keep low- and high-level learners within a zone of proximal development.



The graphs above illustrate students' median STAAR scores (left) and median question accuracy in Prodigy (right).

A lot of my higher level students are really motivated by Prodigy, but the part that I like the best is when my students can work cooperatively. My lower level math students can play with my higher level ones and they both are engaged in their math work and having fun. It's a great supplementary tool to help keep math fun and engaging, and it works.

William Stenross
4th Grade Classroom Teacher



Support struggling learners in your district!

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