

# Using assessment data to make personalized learning a practical reality



ClassHero is a math system for today's students, teachers and schools. By utilizing assessment results ClassHero creates one-click differentiation, transforming data into engaging, productive and, most of all, effective daily practice.



## Pleasant Ridge Union

Pleasant Ridge Union School District is located in Grass Valley, California.

This case study was created based on interviews with the staff of Pleasant Ridge Union including Superintendent Rusty Clark, Alta Sierra Elementary Principle Thomas Bivens and IT Director Robert Thompson.

*“The beauty of assessment data paired with ClassHero is that we can upload results and the prescription for individualized learning is already there.”*

*– Rusty Clark, Superintendent*

## Overview

This case study examines how Pleasant Ridge Union School District implemented ClassHero in their elementary schools. Like so many schools across the US, Pleasant Ridge had thoughtfully invested in classroom technology such as devices and assessment software, only to find a gap in applying such technology to directly improve student learning. In an effort to meaningfully utilize their students' assessment results, Superintendent Rusty Clark decided to pilot ClassHero for Math in their elementary schools. For the first time, teachers were able to put assessment data to immediate use, with ClassHero providing one-click differentiation based on integrated results and productive practice with a colorful and engaging student app.

## The Promise of Classroom Technology

Like thousands of school districts across the country, Pleasant Ridge Union invested in math assessment software with the promise of improving outcomes through differentiation and personalized learning. What they found was the all too familiar gap between data and daily practice.

“Most schools struggle with common assessments. There's pushback from the teachers saying you're requiring us you're to be more robotic” says Rusty Clark, superintendent at Pleasant Ridge Union, when asked how assessment data is being leveraged in the classroom. Thomas Bivens, principal at one of Pleasant Ridge's elementary schools, similarly states, “assessment results have been fantastic in being able to have conversations about areas of math that need improvement” but when it comes to using results states that “there's resistance because teachers, in general, haven't had to use assessment data before”

## Putting assessment Data to Work

Past attempts to bridge the gap between data and daily practice at Pleasant Ridge Union had proven unsuccessful. “We've tried math programs, both paid and free, that haven't moved the needle at all, it was just busy work” says Bivens. In the winter of 2018, the district decided to pilot ClassHero. Importing assessment data directly into ClassHero was simple and straightforward, according to the district IT Director Robert Thompson, “The whole setup was probably 20 minutes of my time. It was nothing.”

Using the district’s imported assessment data, ClassHero now allows teachers to differentiate their assignments with a single click, showing them easy and actionable recommendations that help keep practice personalized for each and every student, and simultaneously aligned to teacher instruction. **“Teachers fight looking at data like the plague, but with ClassHero in their classroom, they can't wait to see how kids are doing. It's changed their whole mindset.”** says Clark.

## A Prescription That Delivers

Unlike traditional math software, ClassHero prescribes a tried and tested recipe for improvement: 10 minutes of productive practice that keeps both high achievers and reluctant learners in the Zone of Proximal Development. **“As teachers have watched the use of ClassHero they're becoming more aware of what good solid practice is, and conversations with the kids have really reinforced it.”** says Bivens. “ClassHero created a platform where kids are actually starting to understand the concepts, developing the mathematical focus to be able to complete longer assessments that are more rigorous and robust” adds superintendent Clark.

## Objective Gains in Performance

The purpose of this section is to evaluate the relationship between the use of ClassHero and math skill development as measured by assessment software. We evaluated the statistical impact of using ClassHero as well as to identify usage patterns among students who had demonstrated the biggest gains. The results could provide "student use" guidelines to teachers when tracking subsequent ClassHero usage.

We used data from three successive assessments. Between the first two assessments (Fall and Winter), ClassHero was not in use. Between the second and third assessments (Winter and Spring) ClassHero was used to various degrees, by several teachers and their students. Content domains evaluated were limited to the content that was taught by the teacher between the two assessments. Growth in math skill development was charted by domain-specific scores with corresponding ClassHero usage patterns against each student in the corresponding math domains. *(Continued on next page)*

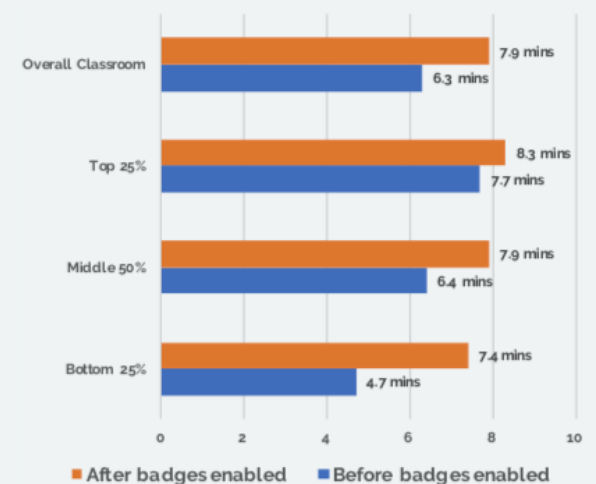
### Independently Verified

In an independent study conducted by the **SW WA STEM Network** over summer 2017, “at a 90% confidence level, students who participated in the pilot had greater academic gains in math than students who did not”. Students that did not use ClassHero either used traditional practice software or paper assignments or a combination of both.

In a benchmark study where classroom data was compared before and after Badges were introduced, the average gain in practice-time was 20%.



Among children that clocked the lowest practice-times before badges were introduced, there was a gain of 50% in practice times after Badges were introduced.



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## Objective Gains in Performance (continued)

The study produced the following results:

- In domain one, **assessment scores grew 13 points higher than expected** (when compared to growth in earlier trimester as benchmark) among students who had the following ClassHero usage pattern: Representing 45% of the student cohort, these students had worked on at least 119 correct attempts per domain-specific skill in ClassHero and at least a 61% accuracy.\*
- In domain two, **assessment scores grew 11 points higher than expected** (when compared to growth in earlier trimester as benchmark) among students who had the following ClassHero usage pattern: Representing 33% of the student cohort, these students had worked on at least 128 correct attempts/ domain-specific skill in ClassHero and at least a 73% accuracy.\*
- As reference, average expected growth in assessment Scores for Grades 3-5 is **6.8 points between Fall and Winter**, and **4.9 points between Winter and Spring**.

Conclusions were drawn through **ClassHero's Collaboratory** framework - an AI driven system that helps identify key correlations between ClassHero usage patterns and improvement in assessment scores. The intention of the **ClassHero Collaboratory** framework is to drive simple district-specific prescriptions for software usage that would lead to improved scores and better accountability. Both data and conclusions related to this study were shared with the district.\*

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*- Rusty Clark, Superintendent*