**Digital Promise**
Accelerating Innovation in Education

# Highline Public Schools
## ST Math Pilot Study Brief

## Product Info

**Product Name:** ST Math

**Product Description:** Support of math core content for Common Core State Standards (CCSS) grades K-8 adaptive intervention for CCSS grades 6-12. Each objective in grades 2 through 6 contains pre and post quizzes that are available in English and Spanish.

Highline Instructional Strategies:

- Use "Test Drive" to try puzzles in advance of instruction & use puzzles in lesson launch.

- Provide structures for journaling (for example, stuck sheets)

- Support students in using offline strategies for online work: using manipulatives to represent the math in the puzzles, using number charts, accessing anchor charts

- Encourage students to collaborate on understanding puzzles, then complete work on their own computer.

- Support students in using project-based learning with ST Math (see strategies in Advancing Students Recommendation).

- Provide accessibility to whiteboards to support visible thinking and problem solving.

- Support students in self-tracking progress in ST Math: track accomplishments (e.g. Kindergarten Log, 1st-3rd Log, 4th-6th Notebook, accomplishments log).

**Learning Focus:**

- Support of math core content for CCSS grades K-5 in all classrooms

- Support of math core content for CCSS grades 6-8 (classwork) and adaptive intervention (homework) in some ELL and Special Education classrooms

- Adaptive intervention for CCSS grades 9-12 in some ELL and Special Education classrooms.

**Teacher Training:**

- See below for "Classroom Implementation Guidance," created by Highline Instructional Supports Team members

- PD Courses are available for purchase after year 1
    - Introductory
    - Advanced: Building Math Workshops, etc.

**Student Usage Minimum:**

- Grades K and 1: 60 minutes per week (20-30 minutes per session)

- Grade 2-5: 90 minutes per week (30-45 minutes per session)

**Device Specifications:** Highline is currently using the following hardware, although several older devices are still in use: HP Chromebooks, laptops, and desktops as well as Apple iPads.

**Cost:** Renewal $82,250 per year (with an additional 150 secondary licenses as intervention only).

# District Context

**District demographics:** Highline Public Schools has a total enrollment of 20,000 students attending 18 elementary, 4 middle, 4 comprehensive high, and 4 small high schools. Nearly 40% of the students identify as Hispanic, nearly a quarter of students identify as White, 15% of students identify as Black or African American, and 14% identify as Asian. 54% of students receive free or reduced price lunches in the district. 27% of Highline's students are English learners and about 15% have IEPs.

# Pilot Goal

Our goal is to study all digital tools to determine impact on student achievement in respective content areas as measured by standards-based metrics. This will be completed for each digital tool. Our team's work will be focused on communication of program components with school leadership to deepen knowledge of the instructional focus and how to analyze student outcomes.

A deeper understanding of each tool will help to build more fidelity such as syllabus progress of ST Math. Programs being used with fidelity will be analyzed with external data measurements to determine if student achievement is impacted. In our study of ST Math, we will identify students who have met syllabus progress and analyze their state assessment achievement to determine if there is in fact, correlation between the two metrics

# Implementation Plan

**Duration:** August 2016 to June 2018

**Quality of Support:** During the first year, schools purchase an in-person training. Additional ongoing training costs approximately $2,500 per day. All schools have access, to Self-Guided Online Courses (Asynchronous via Web Browser) and Just-in-Time Live Webinars (Instructor-Lead via WebEx). Teachers and administrators have the ability to track student progress, time on task, and standards mastery.

**Implementation Model:** Teachers and paras were trained to check student screens for status frames and address needs with each use, check in with students based on Alerts in Console weekly, track student progress in the program (Are students making 3% per week syllabus progress in grades K-5? Are students in grades 6-12 making progress on their interventions?) monthly, and confirm that students are on track for at least 50% syllabus progress annually.

Administrators receive a monthly report to check usage and progress across grade levels and classrooms.

**Data collected:** Pre- and post-surveys were administered to educator and students to measure educator engagement and satisfaction as well as student engagement. Additionally, we will use usage reports.

## Findings

**Educator engagement:** Teachers and district leaders found that ST Math, a graphically rich, interactive virtual manipulatives, helps students develop a conceptual understanding of abstract concepts.

**Student learning:** Ongoing data collection will identify the impact on student learning. Based on teacher and para monthly tracking, it was identified that 85 percent of 3rd grade students, 77 percent of 4th grade students, 69 percent of 5th grade students, and 74 percent of 6th grade students using ST Math were meeting or exceeding 70 percent syllabus progress.

## Outcome

**Purchasing Decision:** Based on current results, the plan is to continue with this product but we will also seek other content tools that may be able to provide ongoing assessment data.