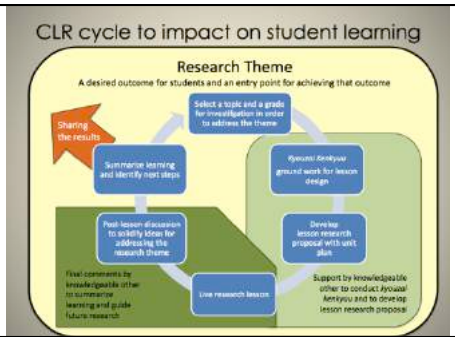
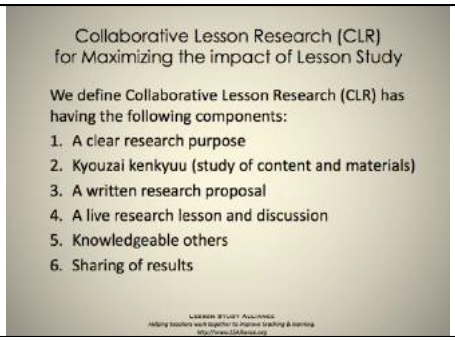
Collaborative Lesson Research (CLR)

Perspectives From Four Bay Area Schools

- Overview of each school's context and CLR implementation
  - Benefits of making CLR school-wide
  - Challenges to making CLR a school-wide effort and how they approached the challenge
  - The initial impact of student learning/growth
  - Impact of teachers and the school culture



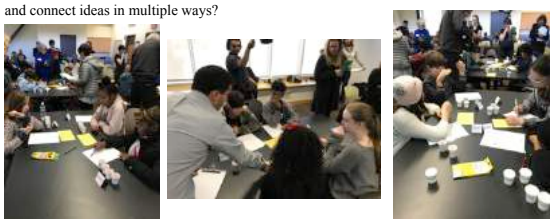


Bret Harte Middle School - Oakland, CA

- Approximately 600 students
  - 6th-8th grade
  - 9th grade newcomers
- Ethnically, racially and economically diverse
- Math department
  - 1 teacher per grade level
  - Instructional coach, newcomer teachers

Bret Harte Middle School - Oakland, CA

Research Theme: How are we creating lessons that support students' ability to express and connect ideas in multiple ways?



Bret Harte Middle School - Oakland, CA

CLR Implementation

2-3 Cycles per year since 2015

- November 2016: Team members from Grades 6-9; 7th grade lesson: Evaluating Number Statements
- March 2017: Team members from Grades 6-9; 8th grade lesson: Solving Systems of Equations
- January 2018: Team members from Grades 6-9, 6th grade lesson: Kool Aid Ratios
- Upcoming: May 2018: Team members from Grades 6-9, 8th grade lesson: TBD

Hillcrest Elementary School - San Francisco, CA

Karen Cortez
3rd grade Spanish Bilingual teacher

K-5 Elementary School
- Approximately 500 students
- 24 Classroom Teachers, 6 Support and Specialist Teachers

Hillcrest Elementary School

Research Theme: How can we help students access prior knowledge to understand new concepts in mathematics?

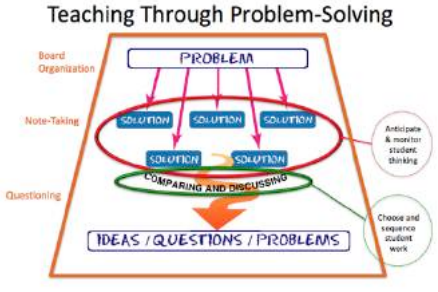
Hillcrest CLR Implementation

2 cycles per year since 2014

Research lessons 2017-18:

- October 2016: Team members from grades 3: 3rd grade lesson: Elapsed Time
- November 2016: Team members from grade 2: 2nd grade lesson: Missing Part Subtraction
- November 2016: Team members from grade 4: 4th grade lesson: Decimals
- March 2017: Team members from grades K-2: 1st grade lesson: Subtraction with Decomposition
- March 2017: Team members from grades 5: 5th grade lesson: Solving for an Unknown (Volume)
- April 2017: Team members from grades 2-4: 3rd grade lesson: Equivalent Fractions

Teaching Through Problem-Solving



San Francisco Community School

Lauren Goss
K/1 teacher

K-8 School
- Approximately 300 students
- 16 Classroom Teachers, 2 Support and Specialist Teachers

San Francisco Community School

Research Questions:

K/1 Math: How can explaining peers' thinking and being flexible thinkers strengthen student belief that we can all learn from each other (within the Teaching Through Problem Solving model)?

2-8 Math: How will using Teaching Through Problem Solving strengthen students' perseverance and flexibility with problem solving?

4-8 Humanities: How can we build a passion for studying the English language and how it works to empower readers and writers to speak their truth/knowledge honestly and clearly?

CLR Implementation

Research lessons 2016-17:

- Fall 2016, K/1 Team, 1st Grade Lesson, Solving for unknowns (addition & subtraction)
- Spring 2017, K/1 Team, Kindergarten Lesson, Composition & Decomposition of a number

Research lessons 2017-18:

- Fall 2018, K/1 Team, 1st Grade Lesson, Addition within 20 (whole school attended)
- Winter, 2-8 Math Team, 4th & 5th grade lesson, Partitive Division with Money
- Spring 2018, K/1 Team, Kindergarten Lesson, Subtraction
- Spring 2018 4-8 Humanities Team, 4th & 5th grade lesson, Sentences and Fragments
- Spring 2018, 2-8 Math Team, 2nd grade lesson, Two-Step Word Problems (whole school attended)

John Muir Elementary School - San Francisco, CA

Sara Liebert, Instructional Reform Facilitator and Math Coach

K-5 Elementary School
- Approximately 240 students
- 15 Classroom Teachers, 7 Support and Specialist Teachers

John Muir Elementary School
Research Theme

Nurture students mathematical agency and identity through the design of lessons that engage students in problem solving and productive talk.

John Muir CLR Implementation

Research lessons 2016-17:

- November 2016: Team members from grades 2-5; Measurement: Area
- April 2017: Team members from grades K-5; 5th grade lesson: Multiplying Fractions
- April 2017: Team members from grades K-5: 3rd grade lesson: Addition with Multiple Addends
- April 2017: Team members from grades K-5: 1st grade lesson: Addition with regrouping; 4th grade lesson: Comparing Fractions

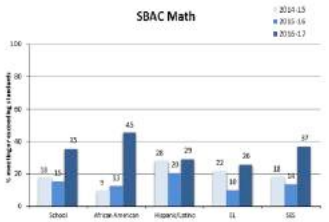
CLR Implementation

Research lessons 2017-18:

- November 2017: Team members from grades 4-5; 5th grade lesson: Adding Decimal Numbers
- December 2017: Cross District Public Lesson; 4th grade lesson: Division with Remainders
- March 2018: Team members from grades 2-3: 2nd grade lesson: Subtraction
- March 2018: Team members from grades K-1: 1st grade lesson: Addition with Regrouping
- March 2018: Whole School Public Lesson: 5th grade lesson: Patterns and Linear Equations

CLR Impact on Student Learning:

John Muir Elementary Smarter Balanced Math Assessment



Q & A

Panel:

David Pistrang - Bret Harte Middle School, Oakland

Karen Cortez - Hillcrest Elementary School, San Francisco

Lauren Goss - San Francisco Community School, San Francisco

Sara Liebert - John Muir Elementary School, San Francisco