

# Professional Development Cycles at Sumas Elementary

Sarah Condreay (sarahcondreay@gmail.com)

## ABSTRACT

The purpose of this study was to understand how to create and implement job embedded professional development cycles (referred to as “math labs”) at Sumas Elementary School. Sumas Math Labs were designed to support teachers as they provide learning opportunities for students that reflect best mathematics practice, as defined by current research and the Common Core State Standards. Throughout this year there were nine teachers who participated in seven half-day math labs that followed a cycle of experiencing math together, co-planning an activity, co-teaching the activity, and reflecting. As a result of math labs, collaboration became embedded in the school culture, teachers understood the vertical alignment for mathematics instruction, and students were more engaged in the CCSS Standards for Mathematical Practice.

## RESEARCH QUESTIONS

1. To what extent might monthly implementation of job-embedded professional development cycles (referred to as “math labs”) impact teachers’ implementation of CCSS mathematical practices?
2. To what extent have teachers’ collaborative planning, observations of one another, and debriefing lessons become embedded in the school culture as a result of the professional development cycles (math labs)?
3. How might job-embedded professional development cycles (math labs) become a sustainable form of professional development that provide ongoing support and training around effective mathematics instruction? What specific support do teachers need? How can ongoing success of this venture be measured?

## METHODS: MATERIALS

Data Type (Examples)	Question Examples
Pre-Interview Questionnaire	<ul style="list-style-type: none"><li>• Tell me about a typical math lesson in your classroom. What are you doing? What are students doing?</li><li>• To what extent do you see students engaging in the math practices through these routines like choral counting? How do you observe them engaging?</li></ul>
Focus Group Interview	<ul style="list-style-type: none"><li>• What is it about math instruction that you find most challenging at this point?</li><li>• What instructional math activities do you feel most confident with at this point? Why?</li><li>• How do you observe your students benefiting (if at all) from the math instructional strategies you are using in your classroom?</li><li>• What students do you feel are not benefiting as much as they could from the instructional activities you use? Why do you feel this is the case?</li><li>• How do you feel your mathematics instruction has been influenced (if at all) by your participation in the math labs? Why?</li></ul>
Student Interview	<ul style="list-style-type: none"><li>• What do you think about math? Why?</li><li>• What do you think of math labs when teachers come into your room and have teacher-time-outs and watch kids do math?</li><li>• Do you think math labs help kids? Why or why not?</li></ul>

## METHODS: PROCEDURES

- Use a math lab setting to *introduce and practice new Instructional Activities* that promote ambitious mathematics teaching (choral counting, rekenreks, number strings, etc.) for eight K-5 teachers.
- Plan one math lab per month following the math lab cycle
  - Experience: Do the math together as teachers and watch videos of the activity being enacted.
  - Co-Plan: Plan the activity together.
  - Co-Teach: Teach the activity in a classroom. Use Teacher Time Outs to communicate during the lesson about things we notice or want to try.
  - Reflection: Reflect on the lesson and plan for another class.

## FINDINGS WITH SAMPLE RESPONSES

### Vertical Alignment

“It’s impacted me by seeing the vertical alignment through the grades so I can see where my kids will be going next and also what questions I can be asking those kids to push them deeper because I know now where they’re going. That’s helped me.” (Kate, 1<sup>st</sup> grade)

### Embedded Collaboration

“I view it like, as a team. You know, we’re in it together. We all want nothing but the best for each other and we don’t take anything personal. You know? And we keep it on that professional level and you know, we’re just doing it to better ourselves so we can just help our children.” (Kate, 1<sup>st</sup> grade)

### Shifts in Teaching—Standards for Mathematical Practice

MP1: “I think [they’re] comfortable with the struggle. I think they know I’m not going to show them and at first that was ugly, but I don’t get it being ugly any more. They just get that that’s the way we do business... There’s just a different feel in the classroom.” (Ally, 2<sup>nd</sup> grade)

### Student Perceptions

“I think it helps the kids because the way that we do things is getting better and we know that teachers are working together to know what’s best for us and what would help us.” (5<sup>th</sup> grade student)

Challenges	Supports
Finding substitutes	<ul style="list-style-type: none"><li>• Strategic scheduling to limit number of substitutes</li></ul>
Teachers having many things on their plates	<ul style="list-style-type: none"><li>• Plan math labs to support school/district goals</li><li>• Use exit tickets to help determine next months focus</li></ul>
Some students don’t appear to be progressing	<ul style="list-style-type: none"><li>• Continue math labs in the future for sustained growth</li></ul>

## IMPLICATIONS FOR FUTURE PRACTICE

### Next Steps as a Teacher

- Make my teaching practice public by seeking out teachers so that I can continue to grow in my own practice.
- Continue to make time in my day for students to engage in these instructional activities, and give them time to make sense of the concepts within these routines.

### Next Steps as a Teacher Leader

- Present findings to district administration and discuss ideas about how to sustain this work across the district.
- Present at CGI conference in June and the WERA conference in December
- Find ways to measure student growth as a result of the work done in math labs.

### Next Steps as a School and District

- Continue to participate in monthly building math labs for the remainder of the 2014-2015 school year.
- Find ways to use math labs to vertically align between elementary and middle school mathematics.
- Discuss using a math lab model to support professional development in literacy.
- Implement math labs as a regular part of district professional development.