Mathematics Differentiation for English Language Learners
Differentiation for ELL’s

Action Research Question: How does differentiating instruction affect the mathematic learning and math language use of the English Language Learners in my classroom?
**Purpose and Rationale**

- Number of students: 11
- Kindergarten ELLs were not able to explain their thinking or participate in mathematics discussion.
- The purpose of my study was to find instructional differentiation techniques that I could use with my ELL population to bridge the gap among mathematics content and communication skills between my ELL’s and native English students.

**Literature and Action Plan**

The research literature concluded three themes:

- Building ELL’s oral communication,
  - (Explicit vocabulary instruction, repetition, and group work)
- Content knowledge,
  - (Manipulatives, visuals, and scaffolding)
- Environment.
  - (Teacher professional development, high expectations, and integrate of native languages and culture)

In my action research I used some of the strategies listed above such as visuals, explicit vocabulary instruction, manipulatives, and group work. Another strategy I implemented was sentence frames. Sentence frames were used to build students’ oral communication skills.

**Data Collection & Analysis**

I collected three types of data:

- Journal and Reflections,
  - (Coded with Non-verbal comm. of content knowledge, Communicate thinking, Verbal comm. of content knowledge, Sentence frames in comm., Intervention)
- Student work samples
  - (Analyzed for mastery of concepts in time and geometry)

**Findings**

- Instructional strategies were implemented an average of 3.8 times during the time unit while strategies were used an average of 7 times during the geometry unit. Interventions also occurred more often during the time unit.
- Students’ verbal communication of content knowledge, communication of thinking, and usage of sentence frames in communication increased in the geometry unit.
- During the geometry unit, students’ pre- to post-assessment scores increased by 18% and only 16% during the time unit.

**Implications**

If educators are to bridge the gap between ELLs and native English speaking students then they should incorporate direction vocabulary instruction including sentence frames, visuals (charts/word walls), and repetition.