

We are drawing from lessons learned about students’ self-confidence and enjoyment in developing video representations to co-develop mathematics lessons with teachers. Currently, we are developing Python-based programming activities of visual representations that support algebraic thinking and fractions.

**New Challenges & Next Steps**

*-The partner school is implementing a new mathematics curriculum and is no longer able to participate in the research. We pivoted to partnerships with charter schools.*

*- We will need to recruit the next cohort of teacher participants.*

*-We will begin classroom implementation of co-developed lessons in 2023.*

**Equity**

***-*** *ESTRELLA broadens the participation of Latinx students in Python coding using Jupyter Notebooks and state of the art Python libraries.*

**-** *ESTRELLA uses image and video representations to support bilingual students’ understanding of mathematics and computer programming.*

**Lessons Learned & Insights Gained**

*-Teachers are excited about using image and video representations to teach middle school mathematics.*

*- We had to modify the professional development plan with teachers to address their contexts and meet their daily needs.*

**Developing and Testing Bilingual Curricula that Infuse Authentic Computer Programming Experiences into Middle School Mathematics for Latinx Youth**

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Project type:​ Developing and Testing Innovations Project

Project URL: http://www.estrella.unm.edu

Project Overview: Middle school teachers co-design lessons to advance student understanding of mathematics through computer programming of visual representations. Teachers will conduct action research projects to study topics of interest to them as they implement this integrated curriculum.

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