



## Promoting Learning and Interest in Mathematics for Urban Black and Latinx Children Through Culturally Relevant Daily Robot Coding Activities

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Project type: Developing and Testing Innovations

Project URL: <http://birdsandbotsofny.org/> (under construction, coming soon)

Project Overview: This project will develop culturally relevant mathematics robot coding activities to increase the interest and improve achievement in mathematics of NYC Black and Latinx students in 1st - 3rd grades.

Teachers struggle to identify culturally-relevant context for the topics in mathematics curriculum. Teachers have positive attitudes about using robot coding technology in mathematics, but are concerned about robot capabilities to address standards-based curriculum.

### Lessons Learned & Insights Gained

*PD workshops about culturally relevant mathematics pedagogy helped the teachers to recognize the need for culturally relevant math tasks in order to engage their students in learning. There is a diversity of skills, knowledge, and attitudes among the teachers, which requires more individualized support. Even with the online collaboration space, there is a struggle to sustain teacher engagement in the project between PD workshops.*

### Equity

*The use of sociocultural relevance to support mathematics teaching and learning for students from diverse cultural backgrounds. Having teachers develop sociocultural contexts with ideas that are familiar to students e.g., robots coding directions to and from neighborhood landmarks. Designated devices for each teacher to take home, making sure technology resources are always accessible to the teachers.*

### New Challenges & Next Steps

*Our challenges are high mobility of teachers and students, hard to reach parents, scheduling times for PD during the academic year, and keeping teachers engaged outside PD. Creative approach included providing individual training and video recordings to the teachers who were unable to attend PD in-person, using Slack online collaborative platform to address teachers' questions and challenges. This year tasks are co-design of activities with the teachers and PD of teachers with focus on connecting coding, culturally relevant teaching and mathematics.*