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Chelsea Achieves in Mathematics: University of Massachusetts Institute for Community Inclusion, Chelsea Public Schools and Capic Head Start funded by the Board of Higher Education Improving Teacher Quality

Institute for Community Inclusion, University of Massachusetts Boston

Chelsea Achieves in Mathematics

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Summary/Abstract

Project Abstract:

1) **Partners:** Chelsea Achieves in Mathematics (**CAM**) is a partnership between the University of Massachusetts Boston (UMB) and Chelsea Public Schools, Early Learning Center (ELC) and Capic Head Start (CHS). **CAM** will provide 15 hours of professional development on mathematics to early educators for PDP/CEU each year.

2) **Principal Objectives: CAM** will *increase early educators' content knowledge* in mathematics and *application of pedagogy into practice*. CAM will integrate the *Building Blocks Mathematics* (BBM) into the *Opening the World of Learning (OWL)* Curriculum framework. The merging of two scientifically based research curriculum will improve teachers' effectiveness and student outcomes in mathematics, language, and literacy.

3) **Major Activities**- CAM educators will participate. 45 hours of (PD) will be provided over three year. and receive classroom coaching.

Goals and Objectives

1. 80% of early educators will demonstrate a significantly increase in their knowledge and belief relevant to teaching children mathematics.
2. 80% of all preschool classrooms will implement BBM with 80% fidelity in year three.
3. 80% of all children will demonstrate gains in language, literacy, and mathematics.
4. 80% of all classrooms will scores show gains in the Instructional support domain of the CLASS

Results/Impacts

First year of project no result or impact to report.

Base line data will be collected twice a year in all classrooms to assessing the use of Building Block curriculum using fidelity checklist and the Classroom Assessment Scoring System (CLASS) to measure the quality of teacher-child interactions. The results classroom assessments will be used to inform PD and identify the needs of individual teachers and classrooms and to develop action plans.

The district will share child level data from Peabody Picture Vocabulary Test (PPVT), the Phonological Awareness Language Screening (PALS) and the Work Sampling System on a random sample of 25% of all participating preschoolers. In addition these student will be assessed each fall and spring using the *Tool for Early Assessment in Math* (TEAM). The cumulative gains of students' mathematical thinking will be tracked and well as changes in language and literacy scores from previous preschool classes within the district.

Approaches and Methods

The approach to this project is to combine professional development, coaching, and implementation of a research based curriculum to increase the quality and quantity mathematic instruction to improve students outcomes in mathematics and language.

Conclusion/Next Steps

Implementation began in January 2014 of curriculum

Teacher, coaches, and project staff are working on merging curriculum to fit the need of participating classrooms as program differ in length ranging from full day more than 5 hours to half day 2 ½ hours.

Two full day trainings have occurred as of March 2014 and another is schedule for April 2014

Baseline classroom level data was collected using CLASS in Fall 2013. Spring data will be collected using the curriculum fidelity checklist and CLASS.

Child level data was collected in fall 2013 and will be collected again in spring 2014.

References and Resources

Clements, D. H., Sarama, J., & DiBiase, A. M. (Eds.). (2004). *Engaging young children in mathematics: Standards for early childhood mathematics education*. Routledge.

Copley, J. V. (2004). The early childhood collaborative: A professional development model to communicate and implement the standards. *Engaging young children in mathematics: Standards for early childhood mathematics education*, 401-414.

Partnership Information

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