ZioM Evaluation Final Report – August 2020

Executive Summary

EdVestors launched Zeroing in on Math (ZioM) in 2015 to respond to a crisis in math preparation and achievement of middle grades students. In BPS, as in many urban districts around the country, a large percentage of students enter high school unprepared to succeed in rigorous math coursework. Underachievement in math in the middle grades has expansive effects on students because middle grades math proficiency is viewed as a gateway to high school completion, college enrollment, and future accomplishment. ZioM was designed to address this challenge by enabling BPS middle grades classrooms and schools to be places where students are positioned for success.

In SY 2019-2020, ZioM worked with fifteen middle grades schools in BPS. All schools participated in ZioM's Blended Learning cohort, and seven schools received additional supports through participation in ZioM's Deeper Learning cohort. All schools received access to educational technology software, training and support in the use of the technology, and implementation support. The Deeper Learning schools also received professional learning support through on-site observations and coaching and access to additional professional learning opportunities.

From July 2019-August 2020, Education Development Center (EDC) conducted a mixed-methods evaluation designed to answer these questions:

- Research Question 1: *Is ZioM's interaction with school partners associated with improvements in math teaching and learning? Which variables/interventions are most strongly associated with student outcomes?*
- Research Question 2: *What are the distinguishing characteristics of classrooms where students are making the most growth?*
- Research Question 3: *Are students involved in ZioM over multiple years making gains in math proficiency?*
- Research Question 4: *Is ZioM's interaction with school partners improving math teaching? Which variables/interventions have the most impact or influence on teacher practice?*
- Research Question 5: In what ways has ZioM had an influence on schools during the period of remote learning?

The evaluation conducted and analyzed interviews with teachers and principals from the Blend Learning and Deeper Learning cohorts, as well as with ZioM staff. Quantitative analyses were conducted on a data set created through merging data from four sources:

1. *Star Math assessment data*. Star assessment data were available for the 2016–17, 2017–18, and 2018–19 school years
2. *EdTech program usage data*. EdTech usage data were available for iReady, Reflex, ST Math, Study Island, and TenMarks
3. *Teacher Survey Data: Blended Learning End of Year Survey.* Survey data were available for the 2016–17, 2017–18, 2018–19 school years

4. *Student-level secondary data.* Boston Public Schools provided student-level data on demographics (e.g., ELL status, student race/ethnicity), attendance, and MCAS scores for the years, grade levels, and schools in which ZioM was present.

Evaluation Conclusions

Based on the findings from qualitative and quantitative analyses, the evaluation presented these conclusions to EdVestors and ZioM staff:

1) **There was no pattern of statistically significant differences in student outcomes between the Blended Learning and Deeper Learning cohorts.** Statistical analysis of student test scores found few meaningful differences in student outcomes based on cohort.
2) **Quantitative analyses point to potential positive impact of teacher participation in ZioM programs after three years.** This trend was found for both the Blended Learning and Deeper Learning cohorts in analysis of Star assessment data, and for the Blended Learning cohort in analysis of MCAS data.
3) **Promising evidence supports that the Blended Learning Cohort may contribute to positive change for student performance on math assessments.** The evaluation found multiple trends in analyses that suggested that participation in the Blending Learning cohort supported an increase in the percentage of students who met proficiency standards on the Star and MCAS.
4) **Findings suggested that participation in ZioM could be linked to improvements in math achievement scores for ELL students.** Multiple findings indicated that participation in ZioM was associated with a narrowing of gaps in math achievement scores between ELL and non-ELL students. Such findings were not present in all grade levels or years in analyses but represented a trend that appeared consistently for BL and DL cohorts.
5) **For some participants, ZioM provided a powerful professional learning experience. However, these same qualities may limit the scale of participation in ZioM and its impact on traditional measures of student outcomes.** Educators appreciated that ZioM was designed to address a difficult challenge and required a high level of engagement from the teacher as well as the ZioM staff members. For several teachers, ZioM was credited with deepening their sense of purpose and conviction for educating students. These enduring qualities of ZioM may also point to challenges that could limit participation in the current model for other teachers.
6) **ZioM provided a crucial support to teachers during remote learning and they relied on the foundation of EdTech tools.** In interviews, educators emphasized the important influence that ZioM had in the response to transitioning to remote learning. Teachers referred to ZioM as a touchstone that provided them with a sense of community and a way to retain a focus on deeper learning amid severe disruptions due to COVID-19. The EdTech tools served as a central area of focus, around which ZioM provided additional supports.