Greater Birmingham Mathematics Partnership Phase II

Lessons Learned and Challenges from Phase I

Barriers to implementation identified by teachers

- Lack of curricular materials aligned with inquiry-based pedagogy
- Lack of understanding of how to implement inquiry in their course of study
- Administrators who do not actively support inquiry
- Concerns that parents would react negatively to change
- Pressure to cover material associated with high stakes testing

If fundamental internal barriers are not removed, addressing teacher content knowledge is not sufficient

- Only about 12% of classes were classified as High Implementing
- Reformed pedagogy and increased content knowledge works, but it is hard to make implementation happen, and it takes time

Challenges Addressed in Phase II

Challenge: Bring implementation of reformed teaching practice to scale in an entire school, on all grade levels

Response

- Require commitment from school principal and (virtually) all teachers at each grade level
- All (virtually) teachers take at least two intensive content knowledge courses
- All (virtually) teachers participate in Professional Learning Communities (PLCs)
- Observe (via RTOP) at baseline, and frequently thereafter, teachers in classrooms
- Provide periodic aligned assessments at grade level to be used by teachers (in addition to standardized testing)
- Provide administrators with tools/skills to observe and evaluate reformed teaching

Challenge: Establish strong statistical correlation among high implementation of reformed teaching practice, effective PLCs, and gains in student achievement across diverse populations

Response

- Enlist a small number of entire schools across diverse populations
- Encourage and guide change in teacher practice through PLCs
- Via RTOP observation, verify significant change in teacher practice
- Determine correlation among high implementation of reformed practice, effective implementation of PLCs, and gains on standardized and aligned assessments.

Indicators of Success for Phase II

Gains in Teacher Content Knowledge, Disposition, and Practice

- Continued evidence of significant gains on CKTM-Patterns and CKTM-Geometry tests by (virtually) all teachers in Phase II
- Continued positive changes in teachers' beliefs about mathematics by (virtually) all teachers in Phase II
- High levels of participation in PLCs
- Significant gains in implementation of reformed teaching practice
  - As measured by RTOP scores of teachers' practice in the classroom
  - As shared in PLC meetings
- Gains repeated in subsequent years

Gains in Student Achievement

- Significant gains in student achievement throughout all grade levels in a school from one year to the next
  - As measured by both standardized tests and aligned assessments
- Correlated with level of implementation of reformed teaching practice
- Significant gains in student achievement in successive years
  - Showing realizability of closing achievement gaps through improvement over successive years

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