Paper Title  Evaluation Findings for the College Readiness Program on Student Outcomes

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Background and Purpose

• College Readiness Program (CRP) developed by the National Math and Science Initiative (NMSI)
• College Board Advanced Placement (AP) coursework in secondary schools, emphasis on underserved schools
• Expansion in two states funded through U.S. Department of Education ED) Investing in Innovation (i3) grant - $15 million
• Goal is Validation of program over three years in Indiana and Colorado since 2012
• 3 cohorts of schools; about 20 new schools per year
College College Readiness Program

- Creates college-ready culture in secondary schools, with emphasis on schools not well represented in AP program
- Actively recruits schools for three-year program
- Support includes summer training for teacher and content expert support for teachers
- Students receive tutoring, payment of exam fees
- Also includes financial incentives and students for successful test taking (i.e., scores to gain college credit)

Research Questions in Evaluation

- Are key components of the CRP implemented with fidelity in the two states?
- What are the impacts of the CRP on the likelihood that students in the 10th through 12th grades within a school:
  - Take AP exams in targeted subjects and
  - More importantly, pass those exams?
- Passing AP exams is equivalent to college credit
### Components Considered in Implementation

- **Program Operational Oversight in Program Schools**
  - Regional director; school- and student-level data collection and analysis
- **Teacher Supports**
  - Content specialists, trainings, lead teachers, and team meetings
- **Student Supports**
  - Paid exam fees, equipment and supplies, and open enrollment
- **Awards**
  - Awards/incentives for administrators, teachers, and students

### Implementation Study Methodology

- **Developed fidelity matrix to assess variations in implementation per i3 program requirements**
  - Operational definition for indicators
  - Data source
  - Indicator and intermediate-level scores
  - Threshold scores to assess fidelity (high, medium, low)
- **Conducted data collection**
  - Surveys of school and program personnel
  - Program measures collected by NMSI
- **I3 mandated approach here is measuring compliance and dosage – little observation of “what works”**
Implementation Results

- Mixed results for Fidelity
  - Programmatic components implemented with high or moderate fidelity
    - Operational oversight
    - Awards
  - School-based components implemented with low fidelity
    - Teacher supports
    - Student supports

- Fidelity challenges: Thresholds hard to meet across schools
  - Student/teacher attendance at trainings
  - Targets for open enrollment
  - Students/teachers weren’t always available for Saturday sessions

Impact Study Methodology

- Comparative interrupted time series (CITS) design
  - Comparison of AP test outcomes of high schools implementing APTIP to comparable high schools over time
  - Outcomes include the overall percentage of students in school taking or passing AP tests in mathematics, science, or English subjects
    - Example: in school with 1000 students, increase in share of total kids taking these courses of 5 percent would be 50 students (5 percent of 1000 is 50)
Impact Study - Results for First Cohort

- Raise overall passing at school from about 5 to 8 percent in three years
- Effect in first year is sustained

Impact: First and Second Cohort, Combined

- Effect in first year is sustained and may increase in second year
Impact: Third Cohort (one year only)

- Effect in somewhat smaller (3 vs 4 percent) but may represent smaller schools
- Can’t offer as many courses

Some Implications

- Program seems to have effect in first year that is sustained into years 2 and 3 with grant funding
  - Longer term question is how well schools sustain on own
- Impacts are substantial — increase of 4% at a school with 1400 students is 56 more per year college prepared
  - Expansion is 2 states cost $15 million; about $2000 per additional student passing AP test
- Limit of this study is fidelity not well understood; don’t know what components worked to produce results
- NMSI has just received i3 funds for larger implementation