A Good Start & Paying for Persistence: Building Knowledge to Improve Education

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IHEP Summer Institute
Birmingham, AL
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Workshop Outline

• Background on MDRC

• Opening Doors & evaluation

• Projects
  ▫ Learning Communities
  ▫ Performance-Based Scholarships
  ▫ Achieving the Dream
  ▫ Others
Opening Doors

• Purpose: test the effectiveness of programs designed to increase student success

• 4 program strategies at 6 community colleges
  ▫ Learning communities: Kingsborough Community College (NY)
  ▫ Performance-based scholarships: Delgado Community College and Louisiana Technical College – West Jefferson (LA)
  ▫ Enhanced student services: Lorain County and Owens Community Colleges (OH)
  ▫ Guidance course tied to basic academic skills instruction: Chaffey College (CA)

• Primary research questions - Do the interventions result in:
  ▫ Increased course completion and persistence?
  ▫ Higher rates of graduation or transfer?
  ▫ Increased employment and better jobs?
Alternatives

- Trend analysis

What would the outcome be in the absence of the program?
• Pre-Post Design

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-program GPA</th>
<th>Post-program GPA</th>
<th>Pre-Post Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td>2.0</td>
<td>2.6</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Problems with this approach:
• Not always feasible
• Pre-program period not representative
• Other factors possibly responsible
### Comparison Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-program GPA</th>
<th>Post-program GPA</th>
<th>Pre-Post Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants</td>
<td>2.0</td>
<td>2.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Comparison Group</td>
<td>2.2</td>
<td>2.4</td>
<td>0.2</td>
</tr>
<tr>
<td>Estimated difference</td>
<td></td>
<td></td>
<td>0.4</td>
</tr>
</tbody>
</table>

Issue of selection bias remains
Random assignment is:
(In simple designs)

The assignment of program participants randomly to two groups: a treatment group allowed to enter the program and a control group that is not.

The experience of the control group gives the counterfactual.
Random Assignment Design

1. Targeted students invited to participate in study
2. Students give consent
3. Baseline data collected
4. Random assignment
5. Program group: Enrolled in intervention
6. Control group: Received regular courses and services
Pros of Random Assignment

- No selection bias
- Internal validity
- External validity
- Identification of useful or wasteful program
- Any systematic difference confidently attributed to program
- Increases knowledge of program
Cons of Random Assignment

- Costs
- Suitability of questions
- Applicability
- Burden on sites
- Limited outcomes studied
- Control group contamination
- “Endogenously defined” subgroup analyses
- Inability to control no-shows
Relevance to Summer Institute?

Habit #2: Begin with the end in mind
Success Stories

• Learning Communities Program at Kingsborough Community College (KCC)
  ▫ Groups of ≈ 25 freshman took 3 linked courses together: English (usually developmental), student development (taught by counselor), and a standard college course, such as sociology or health.

• Performance-Based Scholarships in Louisiana
  ▫ Low-income parents received $1,000 for two semesters ($2000 total) on two conditions: enrolled at least half-time and maintained “C” or better average.
  ▫ Scholarship paid in increments: $250 on enrollment, $250 on passing midterms, $500 on passing courses.
Two-Year Effects of KCC Learning Communities

- Learning Communities improved:
  - students’ college experience
  - students’ progression through developmental English requirements, and
  - some educational outcomes while students were in the learning community program, but the effects diminished in subsequent semesters.

- The evidence is mixed about whether the program increased persistence.
Impact of Learning Communities on Students’ College Experience

Engaged in Classes

Acquired Useful Skills

Rated College “Good” or Excellent

- ** Program Group
- Control Group
# Key Effects on Academic Outcomes During Learning Community Semester

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Program Group</th>
<th>Control Group</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of courses attempted</td>
<td>4.9</td>
<td>4.4</td>
<td>0.4***</td>
</tr>
<tr>
<td>No. of courses passed</td>
<td>3.8</td>
<td>3.2</td>
<td>0.6***</td>
</tr>
<tr>
<td>No. of regular credits earned</td>
<td>8.0</td>
<td>7.7</td>
<td>0.3</td>
</tr>
<tr>
<td>No. of developmental credits</td>
<td>3.5</td>
<td>2.6</td>
<td>0.9***</td>
</tr>
</tbody>
</table>
**Effects on English Skills Assessment Tests Through Third Semester**

<table>
<thead>
<tr>
<th>Outcome (%)</th>
<th>Program Group</th>
<th>Control Group</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attempted reading test</td>
<td>17.8</td>
<td>13.3</td>
<td>4.5***</td>
</tr>
<tr>
<td>Passed reading test</td>
<td>88.6</td>
<td>86.0</td>
<td>2.5*</td>
</tr>
<tr>
<td>Attempted writing test</td>
<td>46.8</td>
<td>39.1</td>
<td>7.7***</td>
</tr>
<tr>
<td>Passed writing test</td>
<td>66.2</td>
<td>60.5</td>
<td>5.7**</td>
</tr>
</tbody>
</table>
No Immediate Impact on Persistence, but Maybe a Long-Term Effect
Louisiana Results

- Scholarships led students to:
  - enroll for more credits
  - pass more courses and
  - persist.

- Effects continued into 3rd and 4th semesters

- Hurricane Katrina precluded measuring long-term effects (e.g., graduation)
Effect of Hurricane Katrina

Cohort 1

Cohort 2

Cohort 3

Cohort 4
## Selected Findings for First two Semesters (n = 1,019)

<table>
<thead>
<tr>
<th></th>
<th>Treatment</th>
<th>Control</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Registration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First semester</td>
<td>82.2</td>
<td>76.8</td>
<td>5.5**</td>
</tr>
<tr>
<td>Second semester</td>
<td>64.8</td>
<td>49.8</td>
<td>15.0 ***</td>
</tr>
<tr>
<td><strong>Number of credits attempted</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First semester</td>
<td>8.6</td>
<td>8.0</td>
<td>0.6 **</td>
</tr>
<tr>
<td>Second semester</td>
<td>6.2</td>
<td>5.0</td>
<td>1.2 ***</td>
</tr>
<tr>
<td><strong>Total credits earned</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First semester</td>
<td>5.9</td>
<td>4.6</td>
<td>1.2 ***</td>
</tr>
<tr>
<td>Second semester</td>
<td>3.9</td>
<td>2.8</td>
<td>1.1 ***</td>
</tr>
</tbody>
</table>
## Selected Findings for First two Cohorts (n = 537)

<table>
<thead>
<tr>
<th>Registration</th>
<th>Treatment</th>
<th>Control</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>First semester</td>
<td>74.4</td>
<td>69.8</td>
<td>4.6</td>
</tr>
<tr>
<td>Second semester</td>
<td>57.1</td>
<td>38.9</td>
<td>18.1***</td>
</tr>
<tr>
<td>Third semester</td>
<td>49.4</td>
<td>37.6</td>
<td>11.8 ***</td>
</tr>
<tr>
<td>Fourth semester</td>
<td>30.1</td>
<td>22.9</td>
<td>7.2 **</td>
</tr>
</tbody>
</table>

<table>
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<th>Number of credits attempted</th>
<th>Treatment</th>
<th>Control</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>First semester</td>
<td>7.2</td>
<td>6.7</td>
<td>0.5</td>
</tr>
<tr>
<td>Second semester</td>
<td>4.9</td>
<td>3.5</td>
<td>1.4 ***</td>
</tr>
<tr>
<td>Third semester</td>
<td>5.4</td>
<td>4.0</td>
<td>1.4 ***</td>
</tr>
<tr>
<td>Fourth semester</td>
<td>2.7</td>
<td>2.1</td>
<td>0.6</td>
</tr>
</tbody>
</table>

<table>
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<th>Total credits earned</th>
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<th>Control</th>
<th>Impact</th>
</tr>
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<tbody>
<tr>
<td>First semester</td>
<td>4.5</td>
<td>3.4</td>
<td>1.1 ***</td>
</tr>
<tr>
<td>Second semester</td>
<td>3.4</td>
<td>2.1</td>
<td>1.3 ***</td>
</tr>
<tr>
<td>Third semester</td>
<td>3.1</td>
<td>2.2</td>
<td>0.9 **</td>
</tr>
<tr>
<td>Fourth semester</td>
<td>1.6</td>
<td>1.5</td>
<td>0.1</td>
</tr>
</tbody>
</table>
Impact of Scholarships on Total Credits Earned

Opening Doors group  Control group

1st semester after random assignment
2nd semester after random assignment
3rd semester after random assignment
Total credits earned after random assignment

*** ***
**

Opening Doors group  Control group
Lessons

• Learning Communities
  ▫ Significantly improved academic outcomes during the learning communities semester
  ▫ Most notable lasting effects are on perceptions of college experience and completion of English exams (both reading and writing)
  ▫ One semester of learning communities gives students a boost, but may not be transformative

• Performance-Based Scholarships
  ▫ Large, positive effects on all measures of academic achievement
  ▫ Positive effects endured even after scholarship ended
  ▫ Financial incentive tied to performance seems key
Next Generation Projects

- Testing variations in other locations with different populations is essential to determining whether the findings can be generalized (and even strengthened) as the basis for large-scale replication and widespread policy change.

  ▪ Learning Communities Demonstration
  ▪ Performance-Based Scholarship Demonstration
Learning Communities Demonstration

- 5-year grant from Institute for Education Sciences at U.S. DOE
- Part of the National Center for Postsecondary Research, a partnership between Community College Research Center at Columbia University Teachers College (lead), MDRC, and University of Virginia
- Uses a random assignment design to ascertain the effectiveness of learning communities for students in need of developmental English or math
- Six community colleges across the nation:
  - Queensborough Community College (NY)
  - Hillsborough Community College (FL)
  - Kingsborough Community College (NY)
  - Merced College (CA)
  - Houston Community College System (TX)
  - Community College of Baltimore County (MD)
- Final report in fall of 2011.
# Variation of Learning Communities

<table>
<thead>
<tr>
<th>Core</th>
<th>Linked with:</th>
</tr>
</thead>
<tbody>
<tr>
<td>QCC developmental math</td>
<td>Fall 07: developmental English</td>
</tr>
<tr>
<td></td>
<td><strong>Spring 08</strong>: college-level English composition; speech; business; or sociology</td>
</tr>
<tr>
<td>HCC developmental reading</td>
<td>student success course</td>
</tr>
<tr>
<td>KCC integrative seminar</td>
<td><strong>two</strong> courses required for an occupational major: (accounting; business administration; mental health and human services; early childhood education; and pre-nursing/allied health)</td>
</tr>
<tr>
<td>Merced developmental English</td>
<td>developmental reading; developmental math; or guidance course</td>
</tr>
<tr>
<td>Houston developmental math</td>
<td>student success course</td>
</tr>
<tr>
<td>CCBC developmental English or reading</td>
<td>college-level health; psychology; speech; history; computer information systems; or sociology</td>
</tr>
</tbody>
</table>
Performance-Based Scholarship Demonstration

• Anchor funding from Bill & Melinda Gates Foundation

• Variations along six dimensions of the program:
  • Target group
  • Dollar amount of the scholarships
  • Duration of the scholarships
  • Types of counseling and other services accompanying the scholarships.
  • Administrative arrangements for disbursing scholarships
  • Schedule of scholarship payments
Scope of PBS Demonstration

• 3 Waves phased in over 3 years
  • First phase (08 – 09):
    • 2-3 Ohio colleges,
    • 2 New York City
    • University of New Mexico
  • Second phase (09-10)
    • California
    • Washington
    • Arizona or Florida
    • New York State colleges
  • Third phase (10-11)
    • Minority-serving institutions
# Wave I Sites

<table>
<thead>
<tr>
<th>Sample Selection Criteria</th>
<th>New York City</th>
<th>Ohio</th>
<th>University of New Mexico</th>
<th>California</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>22-35</td>
<td>All</td>
<td>16-26 (primarily 17-19)</td>
<td>16-26 (primarily 17-19)</td>
</tr>
<tr>
<td>Must be a parent?</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Collegiate level</td>
<td>All</td>
<td>All</td>
<td>First-year</td>
<td>First-year</td>
</tr>
<tr>
<td>Remediation level requirement</td>
<td>At least one remedial course required</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
## Wave I Sites (continued)

<table>
<thead>
<tr>
<th></th>
<th>New York City</th>
<th>Ohio</th>
<th>University of New Mexico</th>
<th>California</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intervention</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scholarship amount per semester</td>
<td>$1,300</td>
<td>$900, full time $450, part time</td>
<td>$1,000</td>
<td>$1,000/$3,000</td>
</tr>
<tr>
<td>Scholarship duration</td>
<td>2 semesters</td>
<td>2 semesters</td>
<td>4 semesters</td>
<td>1-3 semesters</td>
</tr>
<tr>
<td>Scholarship distribution</td>
<td>$200 at enrollment $450 at midterm $650 at term end</td>
<td>Full payment at term end</td>
<td>¼ at enrollment ¼ at midterm ½ at term end</td>
<td>TBD</td>
</tr>
<tr>
<td>Advising at scholarship distribution?</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Scholarship limited to institution (nontransferable)?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Policy Relevance

- Alternative to merit scholarships

- Target group customized for each state in order to:
  - direct the opportunity to the students with highest unmet need and
  - inform policy discussions on state aid programs

- Interactions with public benefits minimized

- Demonstration authorized in HEA
Contact Information

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