The Ongoing Quest for Quality Access in US Tertiary Education:
Dual Enrollment and Developmental Education

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Outline

• Presumed universal access to higher ed assuming broad skills
• Shift to emphasis on outcomes
• Many HE entrants not prepared
• Attempted solutions—dev ed and dual enrollment
• How effective?
• Directions for reform
Access to Higher Education

• All HS grads (and even some others) now expected to be able to attend college
  – About ½ BA granting, ½ community college or less than 2 year colleges

• Highly unequal by social class
High School Completion and Initial Postsecondary Education by SES Quartile
Eighth Graders in 1988
CC First PSE Students in Various Groups
Percent Distribution by Highest Outcome in All PSE Within Eight Years (NELS)

Source: NELS88
Students Expected to Be Proficient in Broad Skills

- Tested in mathematics, reading, writing
  - No consensus about what it means to be “college ready”
- Expected to enroll in appropriate remedial courses before enrolling in “college level” (credit bearing) courses
- Math is particularly problematic
- Some students enroll in several levels of developmental education
Incidence of Remediation

- Community Colleges
  - At least 60 percent
- Non-selective Four Year Colleges and Universities
  - About 30 percent
- Little remediation at highly selective universities
- Incidence underestimates the number of students with weak academic skills
Referrals to Levels of Dev. Ed.
(Achieving the Dream)

Math - Full Sample
- Not referred: 41%
- 3 levels below: 19%
- 2 levels below: 16%
- 1 level below: 24%

Reading - Full Sample
- Not referred: 67%
- 3 levels below: 3%
- 2 levels below: 7%
- 1 level below: 23%
Research on Developmental Education

• Surprisingly little rigorous research on the effects of developmental education
• What research there is suggests that remediation is not very effective—many students would not do any worse if they went directly into college level courses
• Even less research on the best way to carry out remediation
Outcomes for remedial students

Outcomes for non-remedial students

Local treatment effect
Figure 4: Educational Outcome by Reading CPT Score and Estimated Discontinuity

- **Passing First College-Level Course**
  - Estimated Discontinuity = -0.066 (0.008)

- **2 yr Degree Completion**
  - Estimated Discontinuity = -0.025 (0.004)

- **Total Credits Earned**
  - Estimated Discontinuity = 1.527 (0.447)

- **Fall-to-Fall Retention**
  - Estimated Discontinuity = -0.009 (0.008)

- **Transfer to 4 yr**
  - Estimated Discontinuity = -0.016 (0.004)

- **Total College-Level Credits Earned**
  - Estimated Discontinuity = -1.751 (0.467)
Problems with Dev. Ed.

• Many students surprised and discouraged
• Students spend time and money without making any progress towards degrees
• Often taught by part-time teachers
• Many students avoid remediation
• There is tremendous attrition
In-Order Course Completion and Enrollment for Math Remediation

- Completed: 16%
- Not completed: 6%
- Not enrolled: 7%
- Not completed: 12%
- Not completed: 16%
- Not completed: 25%
- Not enrolled: 18%
- Not enrolled: 16%
- Not enrolled: 22%
- Not completed: 41%
- Not completed: 57%
- Not completed: 29%
- Not completed: 41%
- Not completed: 57%
- Not completed: 82%

Referred to Lev. 3 46824
Student Progression for Students Referred to Developmental Math

Math - Full Sample

<table>
<thead>
<tr>
<th>Referral Level</th>
<th>Never enrolled</th>
<th>Not re-enrolled</th>
<th>Not completed dev</th>
<th>GK Not enrolled</th>
<th>GK Not passed</th>
<th>GK Passed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>28%</td>
<td>11%</td>
<td>31%</td>
<td>11%</td>
<td>4%</td>
<td>16%</td>
</tr>
<tr>
<td>1 level below</td>
<td>38%</td>
<td>18%</td>
<td>17%</td>
<td>6%</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>2 levels below</td>
<td>26%</td>
<td>13%</td>
<td>32%</td>
<td>10%</td>
<td>4%</td>
<td>15%</td>
</tr>
<tr>
<td>3 levels below</td>
<td>18%</td>
<td>24%</td>
<td>42%</td>
<td>5%</td>
<td>2%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Legend:
- Never enrolled
- Not re-enrolled
- Not completed dev
- GK Not enrolled
- GK Not passed
- GK Passed
Summary: Progression (Three years)

- Only about 1/3 of referred students complete their math sequence (44% for reading)
- Less than 1/5 complete a college-level math course (24% for reading)
- About 1/3 of referred students never enroll in dev. ed.
- Exit between courses is a serious problem for students referred to multiple levels of dev. ed.
Solutions

• Improve high schools
• Acclimate students to college while still in HS by encouraging them to enroll in college courses (Dual Enrollment)
• Improve delivery of remediation.
Dual Enrollment

• Allows high school students to enroll in college courses
• 71% of high schools and 51% of post-secondary institutions had dual enrollment programs (2002-2003)
• About 5% of all high school students took college courses (2002-2003)
Presumed Benefits

• Make HS more meaningful
• Acclimate students to college
• Teach students what is expected of them in college (early warning)
• Students accelerate their education saving money
• Improve the connections between high school and college
Evidence?

- Only a handful of preliminary studies
- These show positive benefits
- Still much more needs to be known
Reforms of Developmental Education

• Tremendous amount of innovation
• Much more serious attempt to track student progression and diagnose problems that they face and where they exit
• Reforms in counseling, assessment, and pedagogy
• Challenge the model of providing a separate set of classes and services for developmental ed students
For more information:
Please visit us on the web at http://ccrc.tc.columbia.edu, where you can download presentations, reports, 
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