

Remediation at Community Colleges: *Student Participation and Outcomes*

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Remediation in Higher Education

- Nationally **35-40%** of 1st year students (**55-60%** at community colleges)
 - (1) Underprepared recent high school graduates
 - (2) Adult students seeking developmental courses
- The remediation placement exam taken once arriving on campus has become the **key academic gate-keeper** to postsecondary study

Remediation in Ohio – Basic Facts

Statewide standards to distinguish between remedial and college-level courses, but schools differ in how they interpret these standards

→ *Lots of variation across colleges as to what is considered remedial and selection process*

Most students are identified using some combination of placement exams, standardized tests and high school transcripts.

2/3rds restrict enrollment in classes until remediation complete → implications for further study, college major, time to degree and aid

The Data:

Ohio Public Higher Education System (The “Average” State)

- Links college applications and transcripts with ACT and SAT scores and surveys (HS information)
- Nearly 66,000 first-time freshman in Fall 1998 (full-time, traditional age, 4yr degree intent)
- Time Period: Fall 1998 → Spring 2003 or 2004
- Can track *across* Ohio publics after “stopping out”

Students in Remediation at Ohio Community Colleges

Two-years	Two-year Univ. Branches	State and Local CCs	Two-year Technical Colleges
Math or English Remediation	43.9%	52.2%	48.8%
Remedial Math	36.9%	45.6%	34.8%
Remedial English	19.2%	29.7%	37.0%
Observations	6,280	23,385	3,629

Sample: First-time, degree-seeking students age 18, 19 or 20 who entered in fall 1998 and took the ACT.

Percentage of Group placed in Remediation

Age 18-20	37.12
Age 21-23	45.70
Age 24+	31.69
Male	34.23
Female	37.87
White	33.90
Black	59.84
Hispanic	46.79
Asian	25.41
Full-time Fall 1998	27.30
Part-time Fall 1998	53.15
Less than Part-time	38.55

Academic Preparation and Remediation

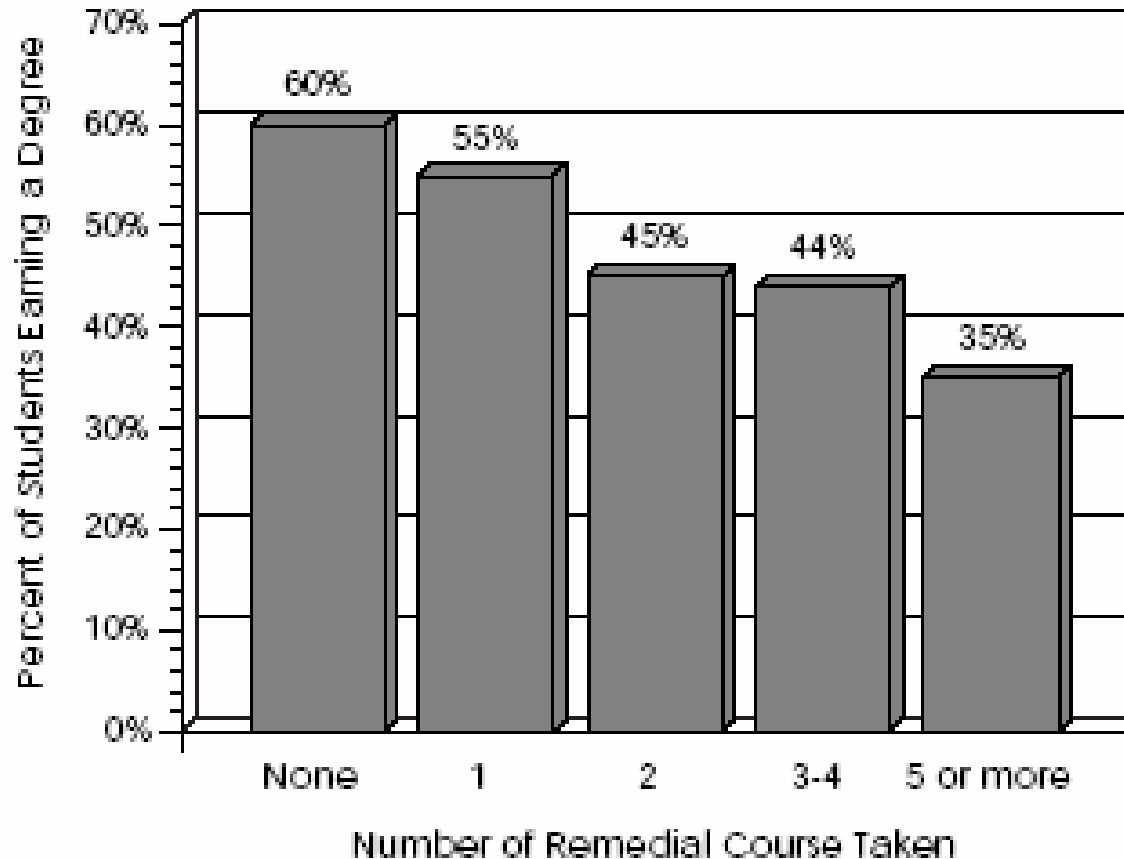
	No Remed	Math Remed	English Remed
ACT Score	23.37	18.26	17.21
ACT Math	23.32	17.38	---
Grades - HS Math	3.26	2.51	---
ACT English	22.77	---	15.77
ACT Reading	23.78	---	16.85
Grades - HS English	3.38	---	2.75

Should Remediation only be available at Community Colleges?

- CT and AZ do not allow remediation at publics
- 8 states (e.g., FL and IL) restrict remediation to two years
- CUNY phased remediation out of its 4yrs (1999)
 - 70% of entering freshmen failed at least 1 exam
 - “CUNY university system currently devotes far too much money and effort to teaching skills that students should have learned in high school”
- Limits on government funding of remediation: California, Texas, Tennessee and Utah

Does Remediation have an effect?

Figure Two: Degree Completion of 1982 High School Graduates by Number of Remedial Courses Taken



Phipps (1998) citing Adelman (1998)

Does Remediation improve the outcomes of underprepared students?

- Most of the research is descriptive and/or based on a single institution → little about ***causal*** impact
→ “Conjecture and criticism have filled the void created by the lack of basic information.”

Joint with Eric Bettinger, Case Western Reserve University

- Bettinger & Long. “Addressing the Needs of Under-Prepared College Students: Does College Remediation Work?” NBER WP No. 11325.
- Bettinger & Long. (2007) “Institutional Responses to Reduce Inequalities in College Outcomes: Remedial and Developmental Courses in Higher Education.” In Stacy Dickert-Conlin and Ross Rubenstein, Eds. *Economic Inequality and Higher Education: Access, Persistence, and Success*. New York: Russell Sage Foundation.
- Bettinger & Long. (2005) “Remediation at the Community College: Student Participation and Outcomes.” *New Directions for Community Colleges*.

The Outcomes of Students in and out of Math Remediation (within five years)

	FULL-TIME		PART-TIME	
	None	Remed.	None	Remed.
Stopped Out by Spr 2003	62.5	77.5	83.1	89.3
Mean Credits completed	45.8	40.4	28.7	30.8
Completed a 2-yr Degree	29.1	17.7	11.7	8.6
Transferred to 4-yr college	23.2	18.9	14.3	12.5
At a 4-yr as of Spr 2003	7.4	4.3	4.3	1.4
Completed a 4yr Degree	8.4	4.9	5.2	2.1
Observations	2,027	2,769	498	513

Sample: First-time, degree-seeking students age 18, 19 or 20 who entered in fall 1998 and took the ACT.

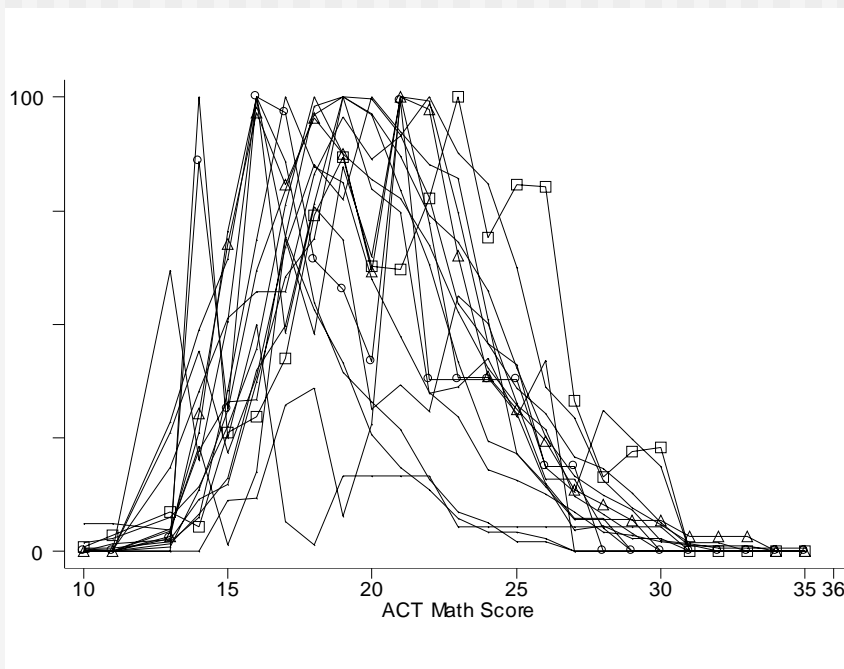
The Outcomes of Students in and out of English Remediation (within five years)

	FULL-TIME		PART-TIME	
	None	Remed.	None	Remed.
Stopped Out by Spr 2003	66.4	80.2	85.2	88.8
Mean Credits completed	45.1	38.2	30.1	29.0
Completed a 2-yr Degree	25.6	16.4	10.5	9.1
Transferred to 4-yr college	24.3	13.9	15.2	8.6
At a 4yr as of Spr 2003	6.9	3.1	3.1	2.1
Completed a 4-yr Degree	8.0	3.4	4.3	2.1
Observations	3159	1637	725	286

Sample: First-time, degree-seeking students age 18, 19 or 20 who entered in fall 1998 and took the ACT.

How could one determine the effect of Remediation?

Problem: Remedial students differ systematically from others in ways that might affect outcomes



Maximum Likelihood Estimate of Remediation Cutoff at Comm. Colleges

→ Use Variation in remediation policies across Universities

Estimation Strategy Intuition

- John and Jim are observationally similar
 - John lives near Cleveland and attends Cleveland College
 - Jim lives near Cincinnati and attends Cincinnati College
 - Cleveland and Cincinnati Colleges have similar student bodies but different remediation policies (i.e., cutoffs, courses and selection processes)
- John is placed in remediation due to Cleveland College's stringent policy while similar student Jim is not due to Cincinnati College's lax policy
- ==> Compare the outcomes of John and Jim

Conclusions

- Students in remediation had better subsequent outcomes in comparison to students with similar backgrounds and preparation who were not required to take the courses
- Reduced the likelihood of dropping out and increases the likelihood of completing a degree
- English appears to reduce the likelihood of transferring to less selective/lower level
- As theory would predict, estimates are more positive for the LATE group, and as the definition of the LATE becomes more restrictive, estimates continue to increase

Conclusions and Other Observations

- Community Colleges: Location of *most* remediation
- Shouldering more of the burden
- What are the effects on students who are *extremely under-prepared* for college-level work?
- Continuing research
 - What is the best way to offer remediation?
Characteristics of remediation program
 - What policies should states follow?
 - Preventative Measures: Early Placement Exams¹⁶