Leaving No Child Behind: Two Paths to School Accountability

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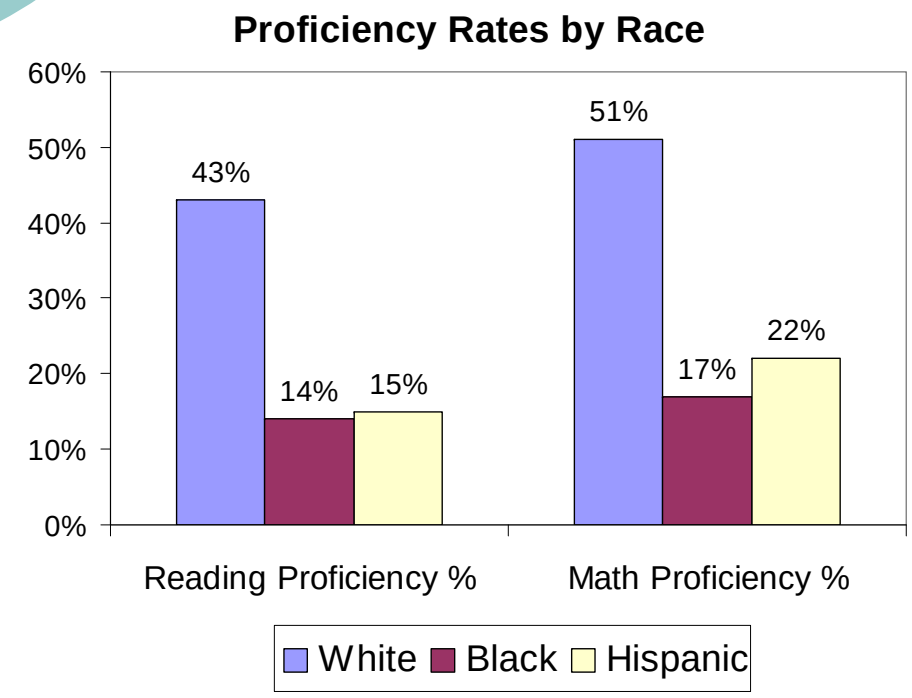
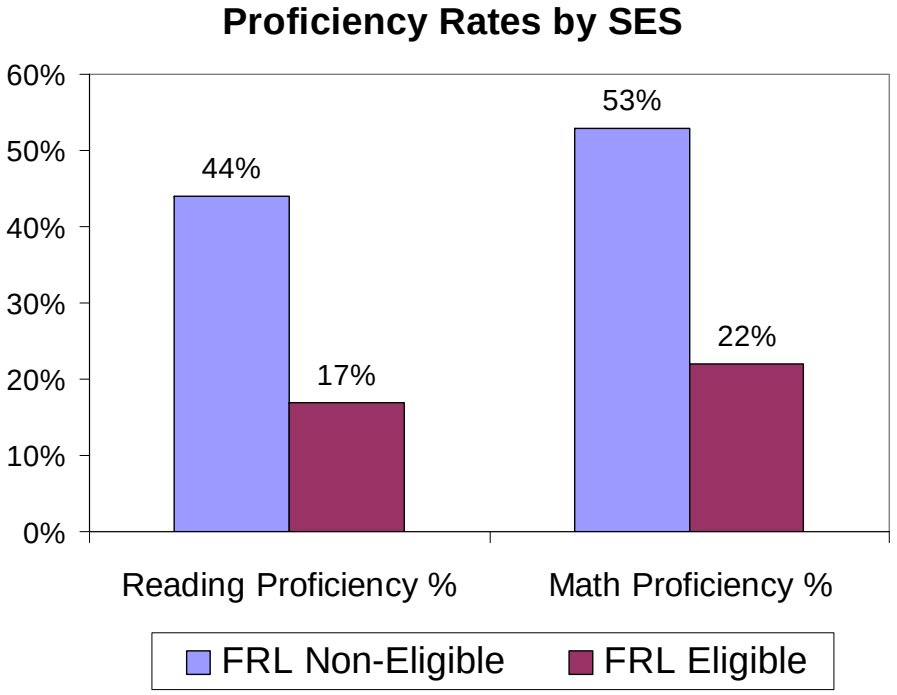
Introduction

- One of the top educational priorities: improving the achievement levels of the economically disadvantaged students and students of racial and ethnic minorities





Introduction

- One of the leading themes of the educational policy to close such economic, racial and ethnic gaps in student achievement is holding schools accountable for their performances.
  - Most recent example is the No Child Left Behind Act of 2001.

- Two important policy questions emerge:
  - Does the accountability pressure increase the average student achievement?
  - Which student subgroups are benefiting or losing from these systems?

Previous Literature

- Impact on average student achievement
  - Growing literature with mixed results
  - Some nationwide studies find significant improvements as a result of standards-based accountability (e.g. Carnoy and Loeb (2002), Hanushek and Raymond (2005)).
  - State-specific systems have been typically less encouraging (e.g. Koretz and Barron (1998), Clark (2003) and Haney (2000, 2002)).
- Which subgroups benefit/lose?
  - Relatively limited evidence
  - Neal and Schanzenbach (2007) and Krieg (forthcoming) reveal increased concentration on mediocre students in the expense of low and high-achievers as a result of proficiency-count-based accountability.
  - Chakrabarti (2006) indicate that schools focused on students performing just below the proficiency level in Florida.
  - Grissmer and Flanagan (1998) report narrowing achievement gaps possibly due to accountability systems.

Objectives

- Focus on the latter question:
  - What is the impact of Florida's accountability system (A+ Plan) and NCLB on two subgroups of interest?
    - Racial and ethnic minorities
    - Economically disadvantaged students
  - Results might help assess the effectiveness of accountability systems in narrowing the aforementioned achievement gaps.

Policy Background

- Florida's A+ Plan
  - In effect since 1999
  - Schools are assigned grades ("A", "B" etc.) based on the performance of their students on annual curriculum-based testing of all students in grades three through ten.
  - Introduced rewards or assistance and sanctions based on the grade of the school.
    - Assistance includes:
      - Recommendations on how to improve
      - Targeted funding for failing schools
      - Priority for a program that provides reading coaches trained in scientifically-based reading research
    - Sanctions include:
      - Students attending chronically failing schools were eligible for school vouchers, called "Opportunity Scholarships"

Policy Background

- Florida's A+ Plan
  - Between 1999 and 2001,
    - Aggregate test score levels
    - Test scores only in the grades with existing statewide curriculum-based assessments (4^{th},5^{th},8^{th}, and 10^{th} grades)
  - Starting in summer 2002,
    - Incorporate test score data from all grades from 3 through 10.
    - Year-to-year progress of individual students were also used to determine school grades.
  - New grading system places more emphasis on low-performing students
    - Yet, reduces the accountability pressure on schools performing at the highest levels.
    - 54% of the 'A' schools in 1999 received a grade of 'B' or lower in 2000 whereas only 12% of the 'A' schools in 2002 received 'B' or lower in the subsequent year.

Policy Background

- Florida's (Revised) A+ Plan
  - Might narrow the achievement gap in two ways:
  - The receipt of an 'F' grade significantly improves student achievement (Figlio and Rouse (2006), Rouse et al (2007), Chiang (2007), Chakrabarti (2006), and West and Peterson (2006)).
    - These subgroups are disproportionately represented in 'failing' or 'near-failing' schools.
    - Approximately 20% of black students, 10% of Hispanic students, yet only 3% of white students attend 'D' or 'F' schools.
  - The new grading system places more emphasis on previously low-performing students.

Policy Background

- NCLB
  - Several similarities to the A+ Plan:
    - Same grade levels in elementary school (3rd and higher) and same subjects (reading and math)
    - Evaluations based on same test: Florida Comprehensive Assessment Test (FCAT)
  - Important differences:
    - Focuses solely on the % of proficient students in a school
    - Schools must meet the proficiency requirements for each subgroup (e.g. economically disadvantaged, racial minority) with a sufficient number of students

Policy Background

- NCLB
  - Schools that meet these requirements are said to be making ‘adequate yearly progress’ (AYP)
  - Sanctions include:
    - Allowing students to transfer if the school fails to make AYP for two consecutive years.
    - Allowing parents to choose supplementary education services if the school fails to make AYP for three consecutive years.
  - However, the ‘take-up’ rates are very small:
    - Only 1% of eligible students transfer
    - Student demand for educational services leveled-off or declined after 2004 (Sunderman, 2007).

Policy Background

- NCLB
  - Expected to boost the achievement levels of minorities and the economically disadvantaged due to the specific subgroup requirements.
  - However, the high rates of failure in Florida to make AYP might induce ignorance among schools:
    - In the first year of designation, 75% of schools failed to make AYP in Florida.
    - In 2003, 55% of the ‘A’ schools and 87% of the ‘B’ schools failed to make AYP based on the federal standards.
  - Failing to make AYP has been shown not to improve student achievement in Florida (West and Peterson, 2006)

Data and Empirical Strategy

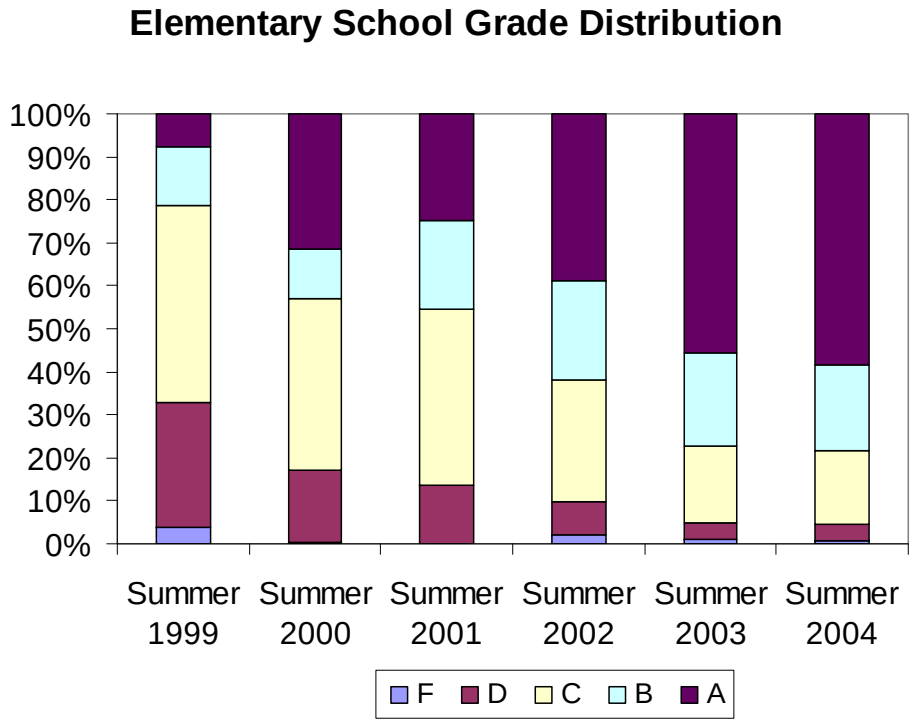
- Data
  - Longitudinal, administrative data on individual students in Florida between 1999-2000 and 2004-2005.
  - Contains FCAT scores (math and reading) and student characteristics (sex, gender, race, FRL eligibility etc.)
  - Focus on grades 3 through 5: 1,580,030 student-year observations for FRL eligible, 711,159 for black, 640,580 for Hispanic and 1,539,907 for white students.

Data and Empirical Strategy

- Empirical Strategy
  - For each racial and economic subgroup, estimate school fixed-effects models:
  - Outcome of interest: standardized, average reading and math scores
  - Variables of interest:
    - School grade in 2002 * POST: give the impact of the grading change on subgroup achievement (relative to receipt of ‘C’)
    - Identifiable subgroup in 2002 * POST: gives the impact of subgroup counting for AYP on subgroup achievement
  - Also control for student characteristics such as sex, gender, FRL status etc. and year dummies.

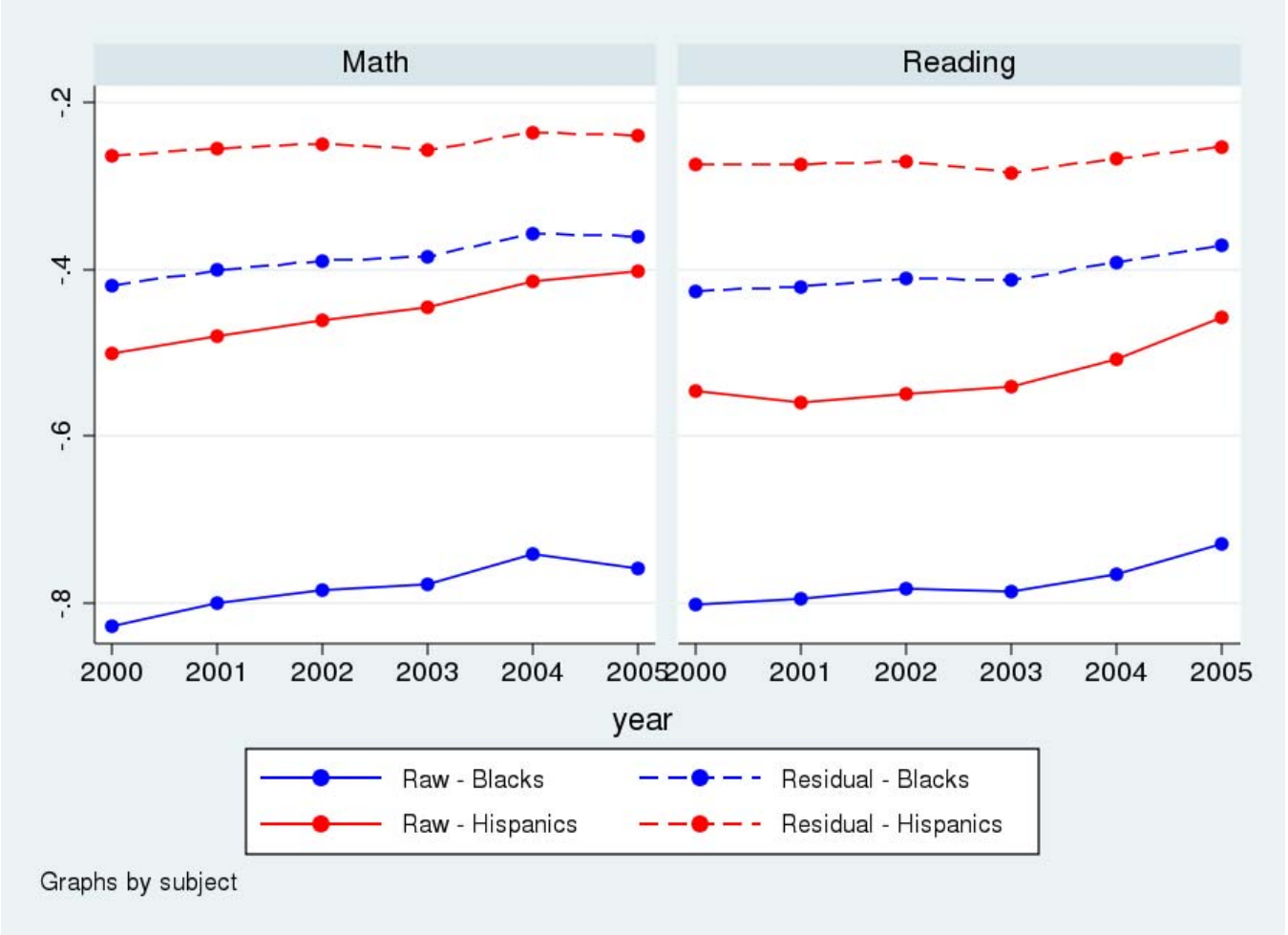
Data and Empirical Strategy

- Empirical Strategy
  - Why school grades in 2002?
  - The specifics of the new grading formula was not announced until the middle of 2001-2002 academic year
  - Left very little time for schools to adapt:
    - Change in grade distribution in 2002 was mainly due to system change (Rouse, 2007)
  - 2002 grades are more likely to reflect the 'true' hierarchy of school quality



Results:
Has the Achievement Gap Narrowed in Florida?

- Racial Achievement Gap in Florida: 2000-2005



Results:
Are the Accountability Systems Responsible?

- Regression Analysis – Impact of Grading Change

School grade in 2002	Subgroup			
	Black	Hispanic	White	Economically disadvantaged
A	-0.001 (0.012)	-0.001 (0.013)	0.014 (0.007)	-0.001 (0.009)
B	-0.006 (0.013)	0.009 (0.015)	0.001 (0.008)	-0.002 (0.010)
D	**0.034** **(0.018)**	**0.051** **(0.023)**	0.036 (0.023)	**0.044** **(0.015)**
F	**0.109** **(0.036)**	0.069 (0.047)	0.026 (0.077)	**0.101** **(0.032)**

Results:
Are the Accountability Systems Responsible?

- Regression Analysis – Impact of NCLB

	Subgroup			
	Black	Hispanic	White	Economically disadvantaged
Subgroup counted for AYP (effect starting in 2002-03)	0.010 (0.015)	**0.026** **(0.016)**	0.013 (0.020)	0.014 (0.048)
Subgroup counted for AYP (effect starting in 2003-04)	0.001 (0.015)	**0.029** **(0.016)**	0.005 (0.021)	0.020 (0.054)

Results:
Are the Accountability Systems Responsible?

- Regression Analysis – Impact of Grading Change or NCLB

School grade in 2002	Subgroup			
	Black	Hispanic	White	Economically disadvantaged
A	-0.010 (0.012)	-0.006 (0.013)	0.007 (0.008)	0.006 (0.009)
B	-0.011 (0.013)	-0.002 (0.014)	-0.003 (0.009)	-0.003 (0.010)
D	**0.036** **(0.018)**	**0.051** **(0.022)**	**0.040** **(0.022)**	**0.041** **(0.015)**
F	**0.116** **(0.036)**	**0.082** **(0.048)**	0.053 (0.080)	**0.112** **(0.033)**
Subgroup counted for AYP (effect starting in 2002-03)	0.001 (0.015)	**0.025** **(0.016)**	0.020 (0.020)	-0.016 (0.048)

Results:
Are the Accountability Systems Responsible?

- Regression Analysis – Combined Effect of Grading Change and NCLB for Schools with Different Grades

	Subgroup					
	Black students			Hispanic students		
School grade in 2002	Schools with measurable subgroup	Schools without measurable subgroup	p-value of difference	Schools with measurable subgroup	Schools without measurable subgroup	p-value of difference
"Safe" A – 430 points or higher	-0.026 (0.027)	-0.042 (0.029)	0.447	0.036 (0.027)	-0.007 (0.029)	**0.061**
"Marginal" A – 410-429 points	-0.043 (0.028)	-0.034 (0.036)	0.773	0.034 (0.028)	0.040 (0.039)	0.875
B	-0.034 (0.027)	-0.038 (0.034)	0.902	0.038 (0.027)	0.025 (0.035)	0.646
D	0.012 (0.030)	-0.002 (0.093)	0.877	0.091 (0.033)	0.083 (0.046)	0.864
F	0.092 (0.044)	n/a	n/a	0.115 (0.057)	0.156 (0.087)	0.680

Conclusions and Policy Implications

- Found evidence suggesting that the grading change in Florida has been effective:
  - Receiving ‘near-failing’ or ‘failing’ grades leads to improvements in subgroup achievement levels
- Subgroup requirements of NCLB has been less effective:
  - No improvement for black students
  - Improvement for Hispanic students – specifically at safe ‘A’ schools, which had arguably been released from accountability pressure following the change in the grading system in 2002

Conclusions and Policy Implications

- NCLB's subgroup requirements with rather ineffective sanctions are not likely to improve the achievement levels of disadvantaged students
  - Especially in states with already high standards of proficiency and heterogeneous schools
  - High rates of failure to make AYP might have contributed to ignorance among schools
- Holding schools responsible, especially, for the learning gains of low-performing students, combined with effective sanctions appears to lead to substantial gains in the progress of disadvantaged subgroups
  - Also suggest that it is possible to improve the achievement of disadvantaged students without singling out their performance.
- Florida's new grading system provides little incentive to boost student performance in highest-performing schools.
  - NCLB sub-grouping requirements may put pressure on these schools
  - May suggest that the ideal school accountability system would still put accountability pressure on high-performing schools to improve the performance of minorities and economically disadvantaged students.