ACHIEVEMENT GAPS

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Overview

- Intense interest in equity of education
  - Intergenerational mobility
- Significant government programs
  - Title 1, Head Start, IDEA
  - State school finance policy, court cases
  - Desegregation
- Has it worked?
Findings

- SES achievement gaps unchanged over past half century
  - 90-10, 75-25

- All boats have not risen
  - *Constant achievement of 17-year-olds for past quarter century*

- Hard to attribute programmatic failure to worsening families
  - *Increased single parent families; more education, smaller families*

- Need to rethink programs and policies
WHAT WAS DONE
Compile Longitudinal Data on Student Performance (US DOE)

- Long Term NAEP (n=48)
  - Math and reading
  - Age 13 and 17
  - 1954-1999 birth cohorts

- Main NAEP (n=21)
  - Math and reading
  - Grade 8
  - 1976-2001 birth cohorts
Compile Longitudinal Data on Student Performance (International)

- TIMSS (n=12)
  - Math and science
  - Grade 8
  - 1982-2001 birth cohorts

- PISA (n=17)
  - Math, reading, and science
  - Age 15
  - 1985-2000 birth cohorts
Create SES Distribution

- Parental education
- Items in home
  - Books, washing machines, televisions, cars, computers...
- Combine by assessment and year
  - Principal component
Calculate Trend in Achievement by SES

- Compare top and bottom 10 percent (90-10 gap)
- Compare top and bottom 25 percent (75-25 gap)

  96 observations of gap by birth cohort

- Estimate quadratic trends
  - Standardize by test, age at test, subject
TRENDS IN GAPS
Unconditional and SES Achievement Gaps

![Graph showing average gap (standard deviations) vs. birth year]

- **90-10 gap**: Decreasing trend throughout the years.
- **75-25 gap**: Steady trend throughout the years.

Birth year:
- 1954
- 1959
- 1964
- 1969
- 1974
- 1979
- 1984
- 1989
- 1994
- 1999

Average gap (standard deviations):
- 0.0
- 0.5
- 1.0
- 1.5
- 2.0
- 2.5
- 3.0
Unconditional and SES Achievement Gaps

Average gap (standard deviations)

Birth year


90-10 gap
75-25 gap
SES 90-10 gap
SES 75-25 gap
Unconditional and SES Achievement Gaps
Black-White and Free/Reduced Lunch

![Graph showing the average gap in standardized test scores for White-black, Free-ineligible, and Free/reduced-ineligible over birth years from 1954 to 1996. The graph illustrates a decreasing trend in the gaps over time.](image-url)
All Boats Rising?

Average achievement (standard deviations)

- Younger students
- All students
- Older students
WHAT HAS CHANGED?
Achievement = Families + Schools

- **Family contributions**
  - *Expanding gaps*: widening income distribution; mother age at birth; expanding single parent families
  - *Lessening gaps*: improved parental education; smaller families

- **Schools**
  - *Brown v Board of Education*
  - *Title 1*
  - *IDEA*
  - *Head Start*
  - *Altered state funding, school finance court cases*
  - *NCLB and accountability*
  - *Increased school funding (differential impacts?)*
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THANK YOU

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