



# Using Education Research and Data to Inform Induction and Mentoring

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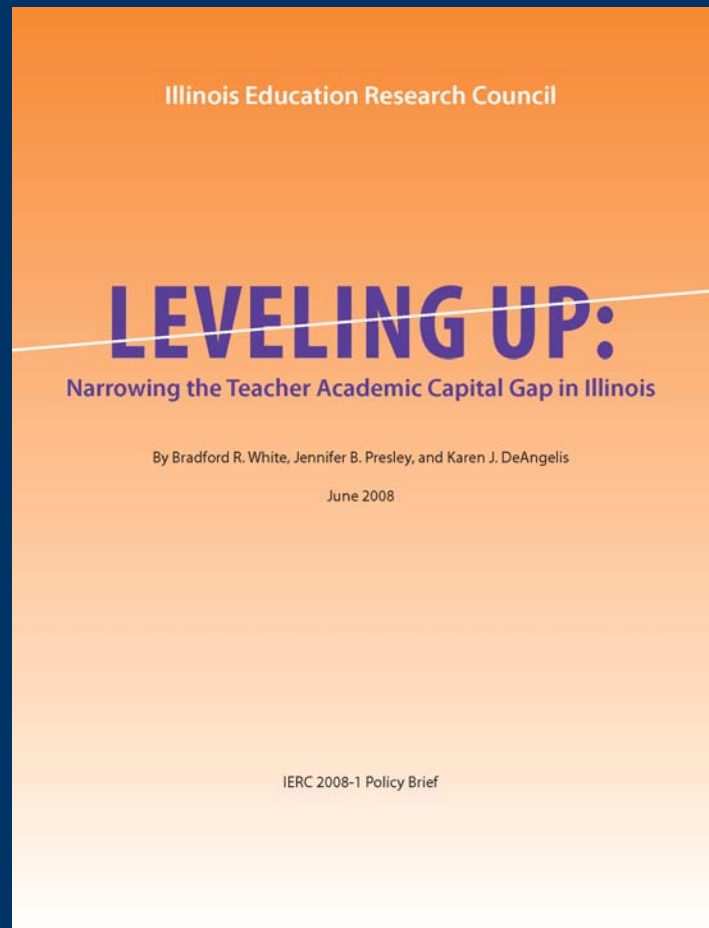


# We will discuss research about three major topics:

- 1) What is teacher quality and how do we measure it?
  - The “Leveling Up” report – our study of the distribution and impact of teachers’ academic characteristics in Illinois
- 2) How do you keep good teachers in the classroom?
  - “Leaving Schools or Leaving the Profession?” – our study of new teacher attrition in Illinois
- 3) What are the effects of induction programs on teacher quality and teacher retention?
  - “Impacts of Comprehensive Teacher Induction” – results from the first year of Mathematica’s randomized, controlled study



# What is teacher quality and how do we measure it?



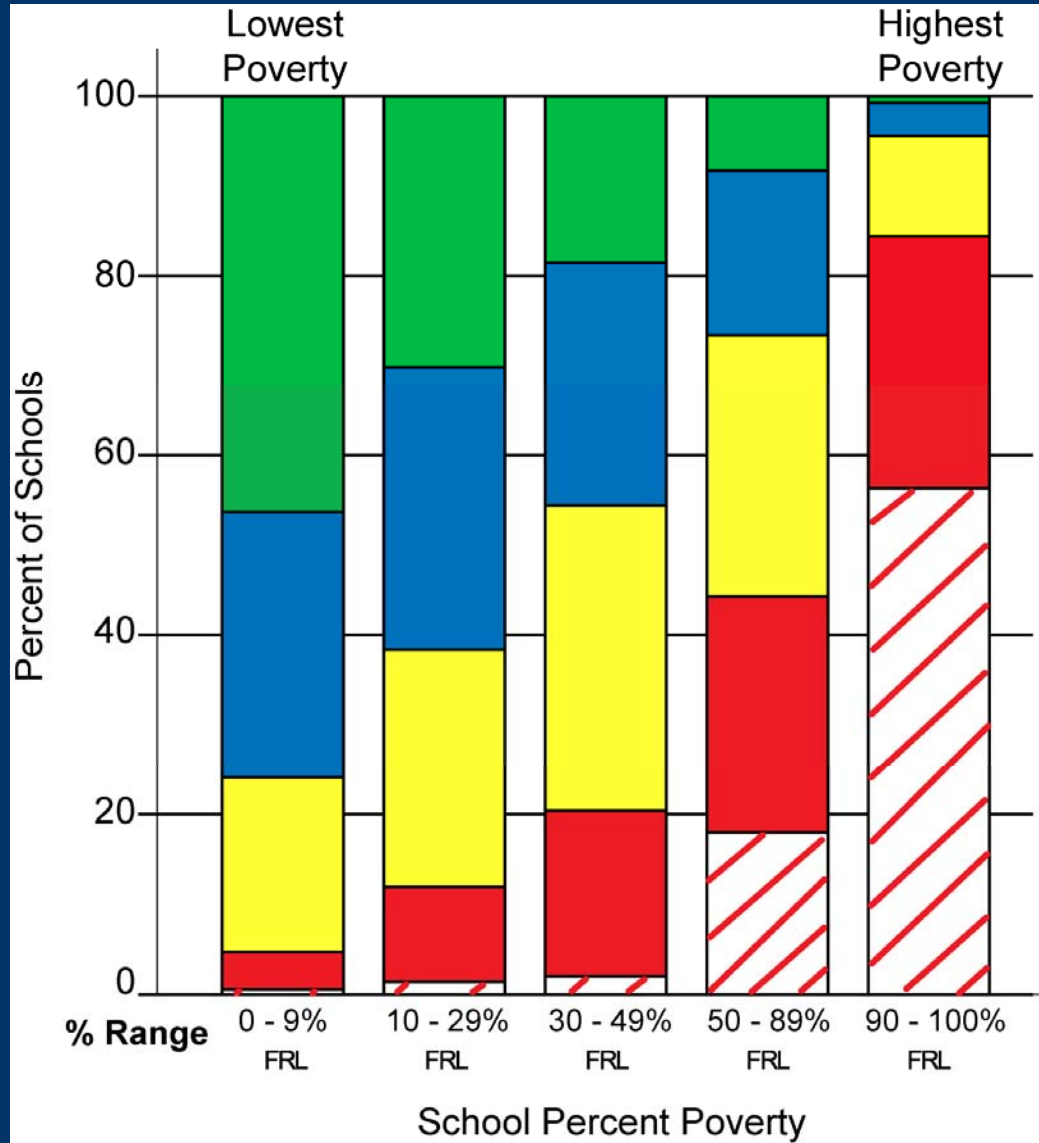


# What teacher characteristics seem to matter?

- The first three to five years of experience
  - Teacher “academic capital”
    - Average teacher ACT composite scores
    - Average teacher ACT verbal scores
    - % of teachers failing Basic Skills Test
    - % of emergency certified teachers
    - Teachers’ average college selectivity
- } School Index of Teacher Academic Capital (“ITAC”)
- *What doesn’t seem to matter?*
    - *Experience beyond the first three to five years*
    - *Advanced degrees (except in subject matter for HS math & science teachers)*



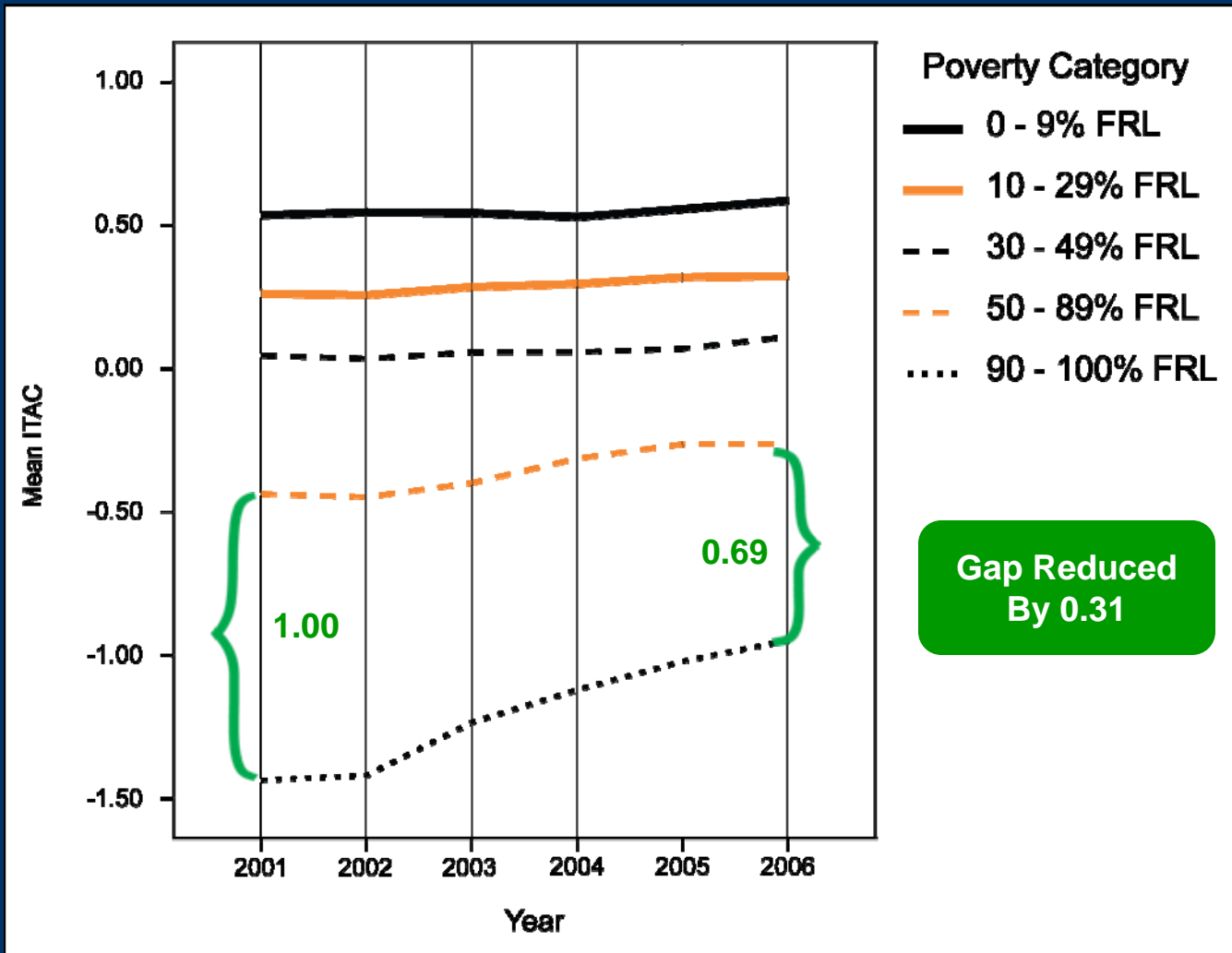
# ITAC is strongly related to school poverty (and minority) levels...



- Green = highest ITAC
- Red = lowest ITAC
- Striped = Lowest 10%

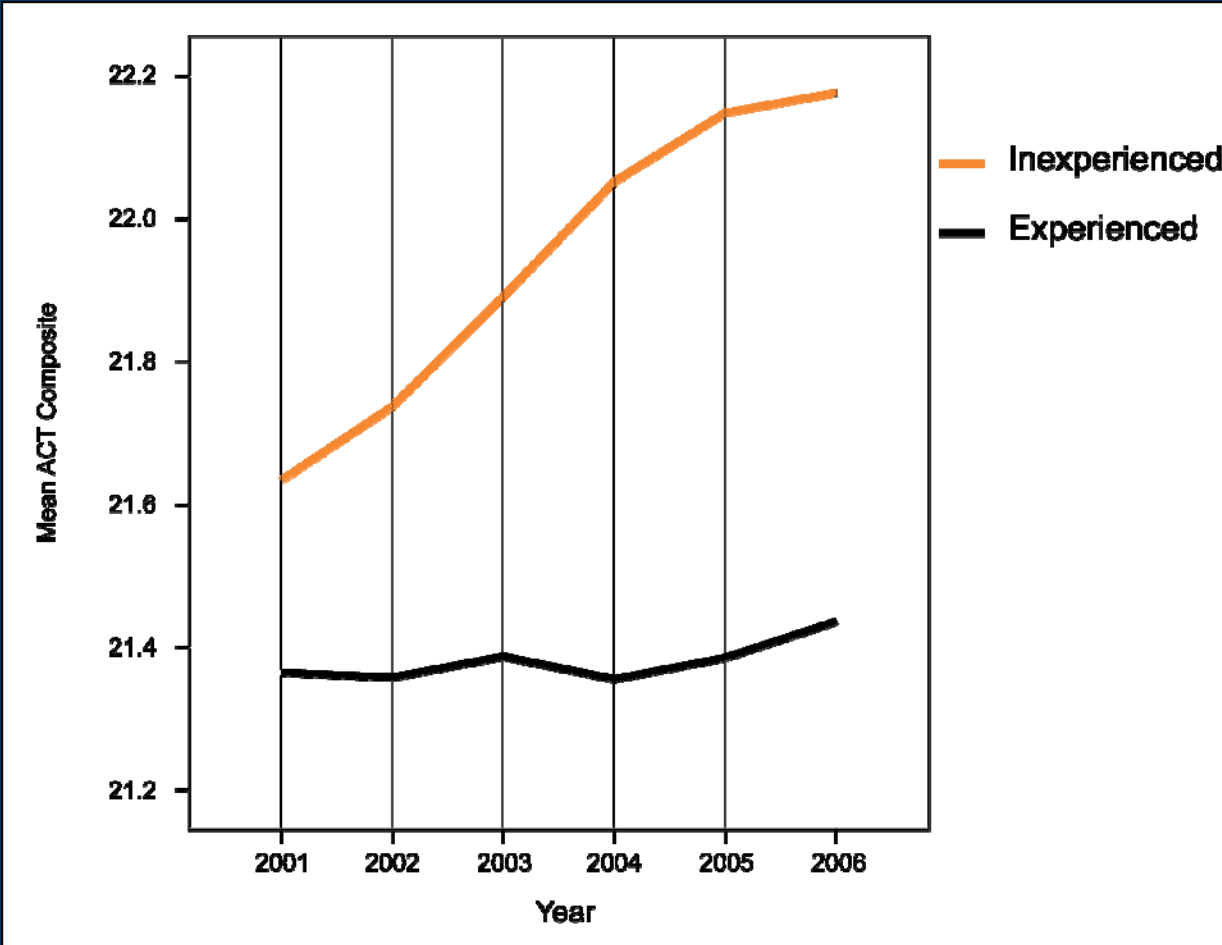


# ... but ITAC gaps are closing over time.





# Why?



**The academic capital of new teachers is improving.**



# Key Findings: New Teachers and Teacher Quality

- Teacher academic capital is not a silver bullet and it is just one of many aspects of teacher quality – but it does mean something.
- The academic capital of new teachers has improved greatly in recent years, especially in our neediest schools
  - But the “ITAC gap” still exists; and
  - Experience matters, too – how do we ensure that these new teachers stay?





# How do you keep high quality teachers in the classroom?



## Illinois Education Research Council

*Bringing Research to Policy and Practice*

POLICY RESEARCH REPORT: IERC 2007-1

### Leaving Schools or Leaving the Profession: Setting Illinois' Record Straight on New Teacher Attrition

Karen J. DeAngelis and Jennifer B. Presley

#### Executive Summary

For some years now, and in most discussions of new teacher attrition, there has been a general belief that half of all new teachers flee the profession within five years. Policy makers and practitioners are concerned about this apparent "crisis" in the teaching profession because they hear that (a) teachers' skills improve during their first two to three years of practice, and it seems a waste to lose so many entrants early in their careers, (b) the poorest and highest minority schools uniformly are more likely to have high turnover of new teachers, and (c) the production pipeline from teacher preparation programs is grossly inefficient in meeting the supply needs of our schools. This latter concern takes on added significance because of an anticipated increase in demand for teachers stemming from high retirement rates among an aging teaching force in the United States. But the national evidence backing up some of these claims stems from sample data that are not representative of new teachers at the state level, and which cannot account for teachers who return to teaching after a gap in service.

The success of policies aimed at lowering new teacher attrition or minimizing the impact of attrition on educational inequities depends on accurate information about, and a solid understanding of, the problem itself. Fortunately, Illinois' State Board of Education has maintained a longitudinal database on who is teaching in Illinois' public schools since the early 1970s. Through shared data agreements that assure individual confidentiality, the Illinois Education Research Council has analyzed 35 years of teacher data to test whether the nationally received wisdom on new teachers accurately applies to Illinois.

<http://ierc.siu.edu>

In this report, we show that the story is actually very different in Illinois.

- Our results refute the notion of a profession in crisis—overall, only 27 percent of new teachers leave teaching in Illinois public schools (IPS) and do not return. Furthermore, we cite evidence that new teacher attrition compares favorably with losses from other similar professions. In addition, Chicago Public Schools and other urban areas are recruiting new teachers with stronger academic qualifications than in the past—now on par with other Illinois locales and regions.
- We do find that new teachers leave their initial schools at significantly higher rates and that attrition differs somewhat across schools based on their locale and the characteristics of their students. Overall, more than two out of five (44%) of new entrants leave their initial school within their first two years, and 67 percent leave their initial school within five years. While this average five year attrition rate may seem high, other research indicates that many new college graduates move to a job in a different organization within their first five years, suggesting that teachers' job mobility is probably not atypical.
- We also find much higher attrition rates in some schools, but contrary to conventional wisdom we show that high-attrition schools exist within every school type category, which suggests that conditions in schools in addition to those related to student body characteristics greatly influence teachers' decisions to stay or leave.

IERC 2007-1

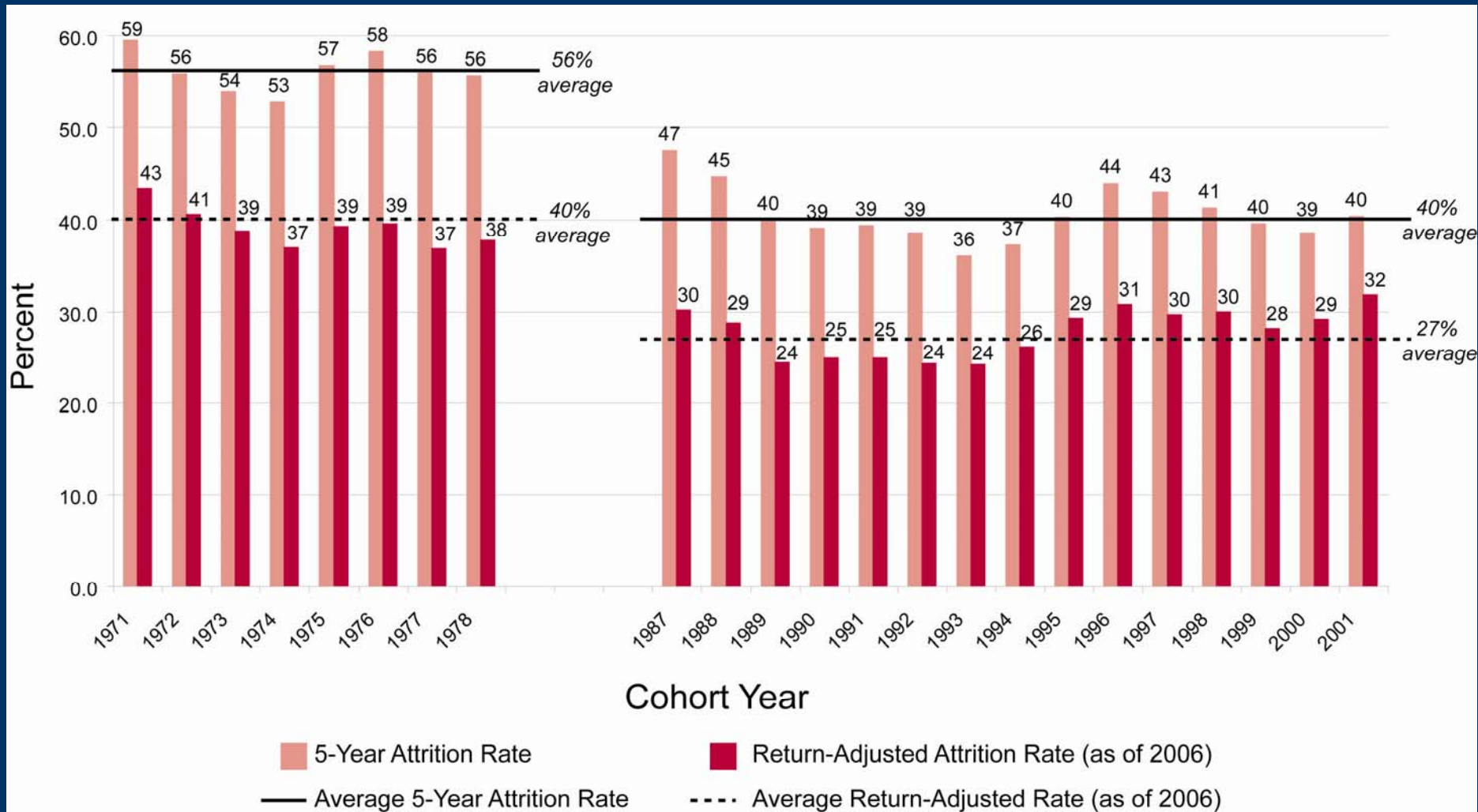


# Two Types of Attrition

1. From the profession: departure of new teachers from teaching in Illinois public schools (IPS)
2. From the school: departure of new teachers from teaching in their initial school



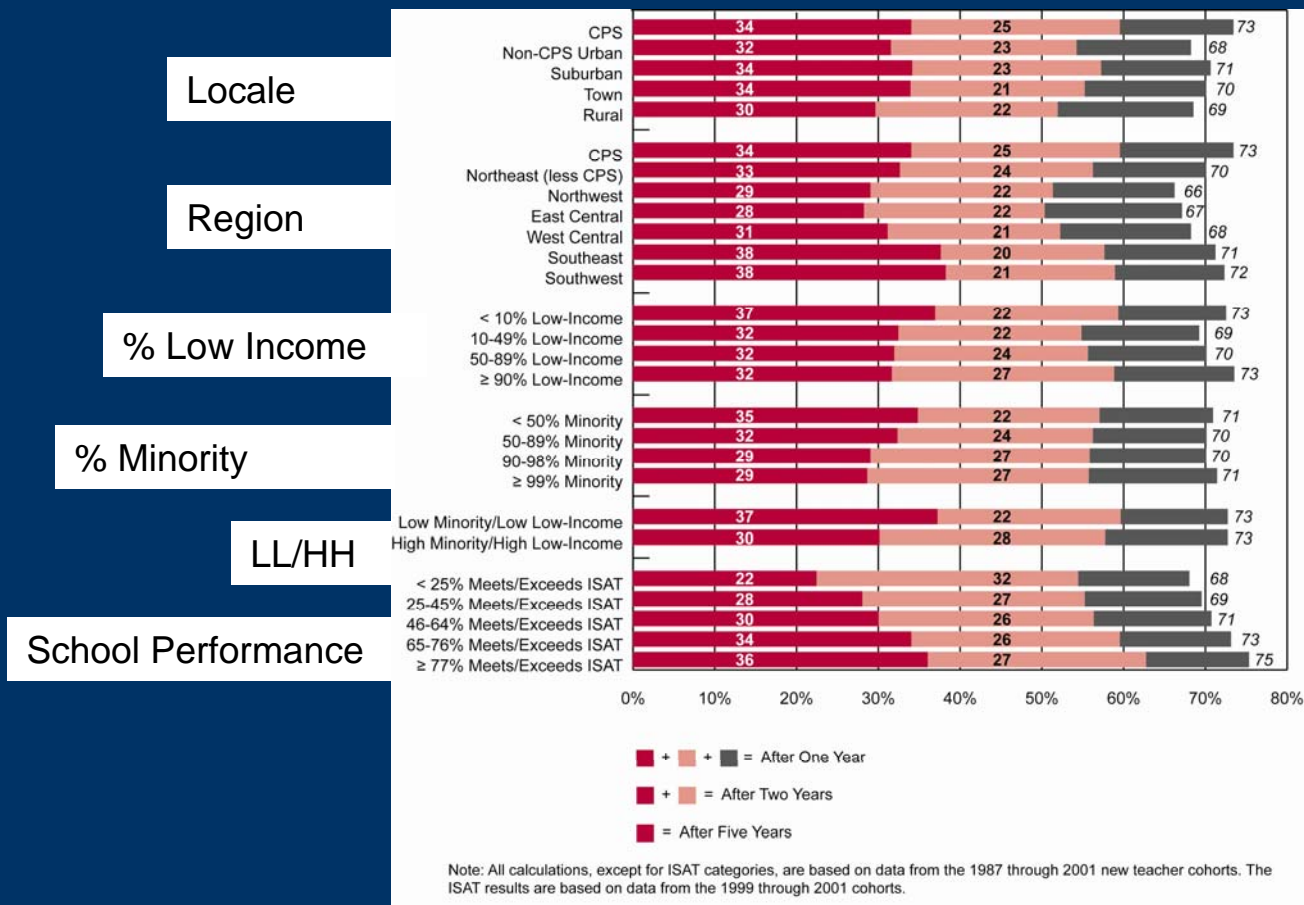
# Attrition from the profession is down since 1970s (now about 40%/27%)





# Attrition from Schools:

## Are certain types of schools “hemorrhaging” new teachers?



We see very little difference in initial school stay rates of new teachers by school characteristics



# In fact, there is more difference in school turnover of new teachers within school types

Locale

Region

% Low Income

% Minority

LL/HH

School Performance

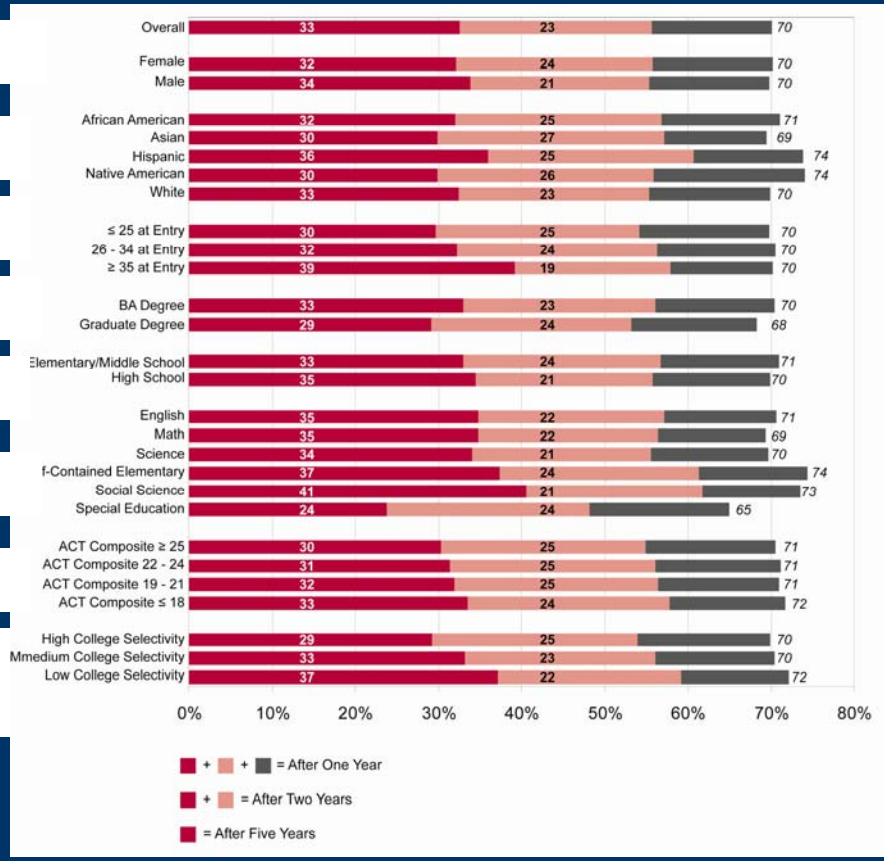
School Type	Percent of New Teacher Stayers By School Type After Two Years			Percent of New Teacher Stayers By School Type After Five Years		
	10 <sup>th</sup> Percentile Schools	50 <sup>th</sup> Percentile Schools	90 <sup>th</sup> Percentile Schools	10 <sup>th</sup> Percentile Schools	50 <sup>th</sup> Percentile Schools	90 <sup>th</sup> Percentile Schools
Overall	33.3	56.7	78.6	8.3	32.1	56.5
CPS	40.0	61.1	80.0	15.0	33.3	56.3
Non-CPS Urban	30.0	53.8	77.3	6.5	30.5	54.5
Suburban	33.3	58.3	80.0	10.0	33.3	57.1
Town	33.3	57.1	83.3	9.1	33.3	60.0
Rural	27.8	52.4	77.8	5.6	30.0	55.6
CPS	40.0	61.1	80.0	15.0	33.3	56.3
Northeast (less CPS)	33.3	57.1	78.3	9.1	31.3	54.4
Northwest	25.0	53.3	75.5	0.0	28.6	50.0
East Central	27.8	50.0	75.0	0.0	27.3	50.0
West Central	29.4	52.2	75.4	7.4	30.4	55.6
Southeast	38.9	60.0	83.3	13.3	40.0	63.2
Southwest	33.3	60.0	82.3	12.5	37.8	62.5
< 10% Low-Income	36.4	60.0	80.6	13.3	36.1	59.5
10 – 49% Low-Income	30.8	55.6	80.0	9.1	31.8	57.5
50 – 89% Low-Income	26.3	57.1	80.0	0.0	30.0	58.6
≥ 90% Low-Income	36.4	60.0	80.0	12.1	30.8	53.8
< 50% Minority	33.3	57.1	80.0	10.0	33.3	58.3
50 – 89% Minority	30.8	57.3	80.0	5.6	32.4	57.1
90 – 98% Minority	29.4	57.1	80.0	0.0	28.6	52.2
≥ 99% Minority	33.3	56.6	76.9	12.5	28.6	50.0
Low Minority/Low Low-Income	36.4	60.0	81.3	13.3	36.4	60.0
High Minority/High Low-Income	35.7	58.8	80.0	11.5	29.1	50.0
< 25% Meets/Exceeds ISAT	20.0	54.5	80.0	0.0	18.8	42.9
25 – 45% Meets/Exceeds ISAT	27.3	57.1	80.0	0.0	25.0	57.1
46 – 64% Meets/Exceeds ISAT	31.3	60.0	83.3	0.0	30.8	60.0
65 – 76% Meets/Exceeds ISAT	33.3	60.0	86.7	0.0	33.3	60.0
≥ 77% Meets/Exceeds ISAT	35.7	60.0	100.0	11.1	37.5	63.6

Note: All calculations, except for ISAT categories, are based on data from the 1987 through 2001 new teacher cohorts. The ISAT results are based on data from the 1999 through 2001 cohorts.



# Are certain types of teachers are more apt to leave their initial school?

- Gender
- Race/Ethnicity
- Age
- Grad Degree
- Elem/High School
- Subject Taught
- ACT
- College Competitiveness



We found very little difference in initial school stay rates of new teachers by teacher characteristics<sub>4</sub>



# But when we combine school and teacher characteristics...

- We find that high academic capital teachers from disadvantaged schools were the most likely to leave.
- And remember from the previous section:
  - The proportion of high academic capital teachers in disadvantaged schools is increasing
  - So retention of these teachers is likely to become more of a problem!





# Key Findings: New Teacher Attrition

- New teachers' commitment to the profession has improved and is stronger than conventional wisdom would suggest.
- There are some differences in initial school attrition rates by school type
  - But they are modest given the categorical labeling of disadvantaged schools as “hard to staff”
- There is tremendous variation in retention rates within each school type
  - Including those that are commonly viewed as attractive places for teachers to work
- School conditions other than those considered in this study strongly influence new teachers' decisions to stay in a school.
  - School leadership? School culture? What else? Maybe induction programs...





# What are the effects of induction programs on teacher quality and teacher retention?





# The Study

- “Gold standard” – randomized controlled study involving:
  - 1,009 teachers, 418 schools, 17 districts, and 13 states
- What is “comprehensive teacher induction”?
  1. Carefully selected and trained full-time mentors
  2. Curriculum of intensive and structured support
  3. Focus on instruction, w/ opportunities for new teachers to observe experts
  4. Formative assessment with observations, evaluation, and ongoing feedback
  5. Outreach to administrators for systemic support of program goals



# Findings: Positive impacts on teacher induction support

## Control group received support...

- 75% had an assigned mentor (13% full time)
- 74 minutes/week with mentor (38% during school hours)
- 81% say mentor meeting time is adequate
- 28% kept log, 42% observed others teaching

## ...but treatment group received more

- 93% had an assigned mentor (74% full time)
- 95 minutes/week with mentor (77% during school hours)
- Positive impacts on types and intensity of assistance received, all 22 areas of guidance, many areas of PD



# Findings: No positive impacts on outcomes after one year

- No impact on classroom practices
- No positive impacts on student achievement
  - Some evidence of negative impacts at selected grades
- No impact on teacher retention
- No positive impacts on *composition* of teaching workforce



# Some possible explanations...

- First year only – how long would we expect it to take before we see an impact?
  - On instruction? On achievement? On retention?
  - Mentors trained during first year when evaluation was occurring.
- A majority of *both* groups received some induction support
  - e.g. 93% of treatment vs. 75% of control had mentor



# Summary

- Recent cohorts of new teachers are bringing with them much higher academic capital characteristics
- **New teacher attrition has declined since the 70's, and return-adjusted rates are closer to one quarter than the urban legend of one half**
- There are large differences in new teacher attrition even among very similar types of schools
  - **So it is difficult to predict what types of schools – and what teacher characteristics – are likely to lead to higher attrition rates**
- **Mathematica's study of comprehensive induction found no positive impacts on outcomes after one year of study implementation**



# What are the implications of this research for you and your program?

- For New Teachers
  - What do I need to make me a more effective teacher?
  - What would make me stay at a school? What would make me leave?
  - How does the induction program effect me?
- For Mentors
  - How can I help new teachers become more effective more quickly?
  - What can I do to help new teachers stay at our school?
  - How can I influence the effectiveness of our induction program?
- For Program Coordinators
  - What are the important things to look for in determining the effectiveness of our induction program?
  - What effects are reasonable to expect from our program?
  - How can induction help to improve teacher quality and retention?