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# **Principal Turnover and the Distribution of Principal Characteristics**

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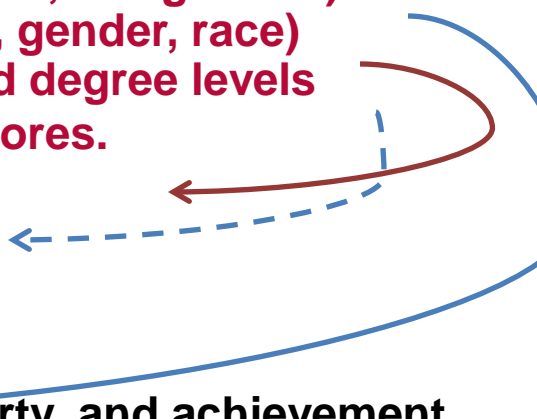
**The Association for Education Finance & Policy**  
**March 2011, Seattle, WA**



# The IERC Principals Project

- **Context:**
  - **Recent research finding principals have a significant (though largely indirect) impact on student outcomes, and that tenure in school (among other things) is associated with student achievement gains**
  - **New policies in Illinois (new principal certification and evaluation programs) and nationally (school-based accountability, RttT, School Improvement grants)**
- **Series of IERC studies on public school principals in Illinois:**
  - 1. Distribution of Principal Characteristics**
  - 2. Principal Turnover**
  - 3. Survey on principal practices and preferences**
  - 4. Principal effects**

# Data

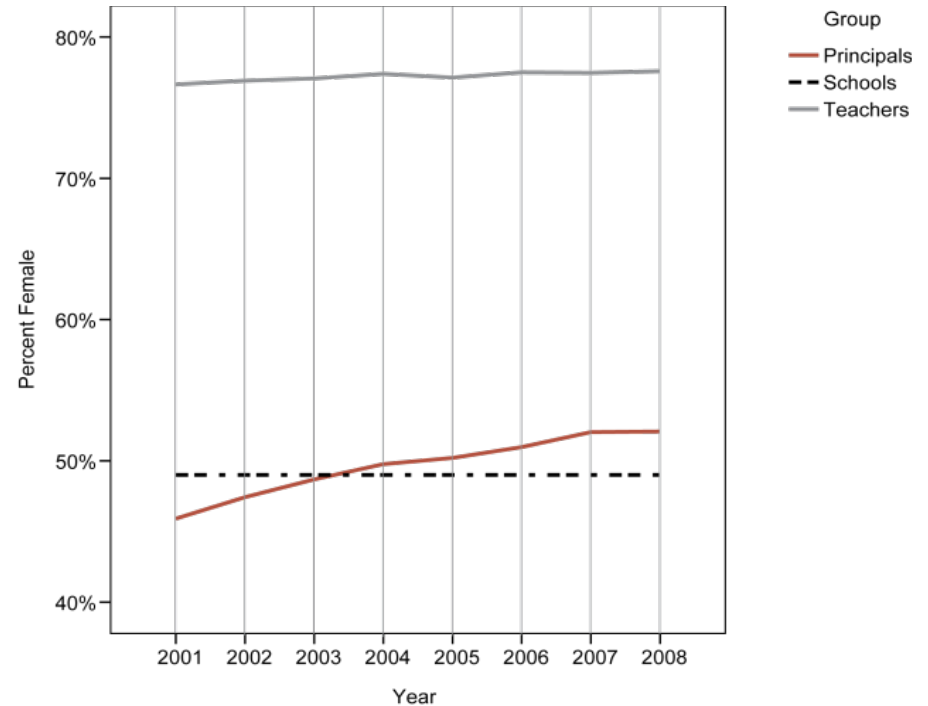
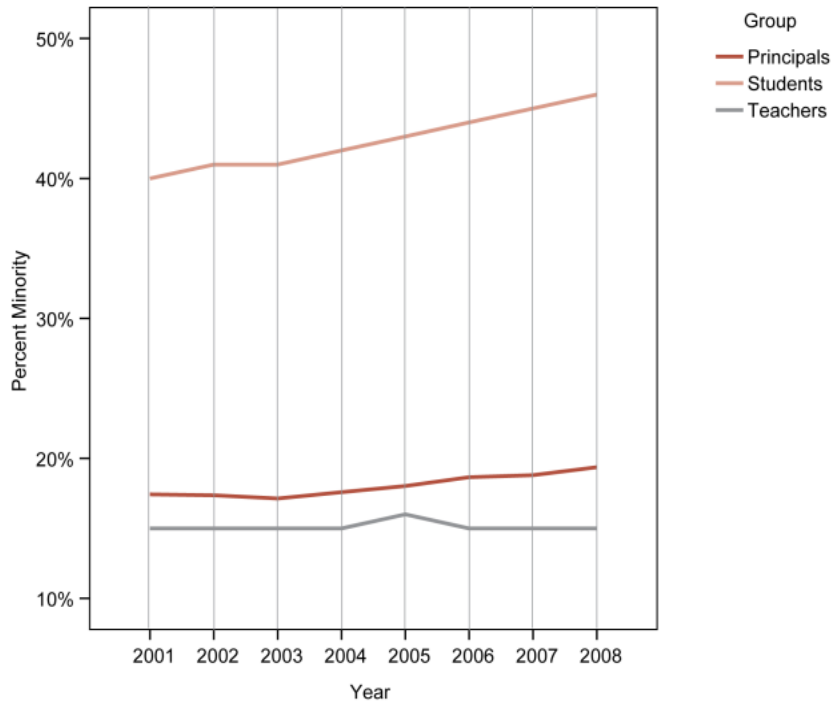
- **3500+ principals/schools per year over 8 years (2001-2008)**
    - Approx 28,000 records for approx 7,000 individuals
    - Employment history dating back to 1971
  - **Principal Data**
    - **Principal service and certifications information from state administrative data (Illinois State Board of Education)**
      - employment information (e.g. school, position, assignment)
      - identifying data (e.g. name and date of birth, gender, race)
      - undergraduate and graduate institutions and degree levels
    - **ACT, Inc. English, Math, and Composite test scores.**
    - **Barrons' (2003) rankings for each institution**
  - **School Data**
    - **ISBE School report card**
      - School level, enrollment, race, gender, poverty, and achievement
    - **Common Core of Data (CCD)**
      - location, urbanicity
- 

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# ***The Distribution of Principal Characteristics***

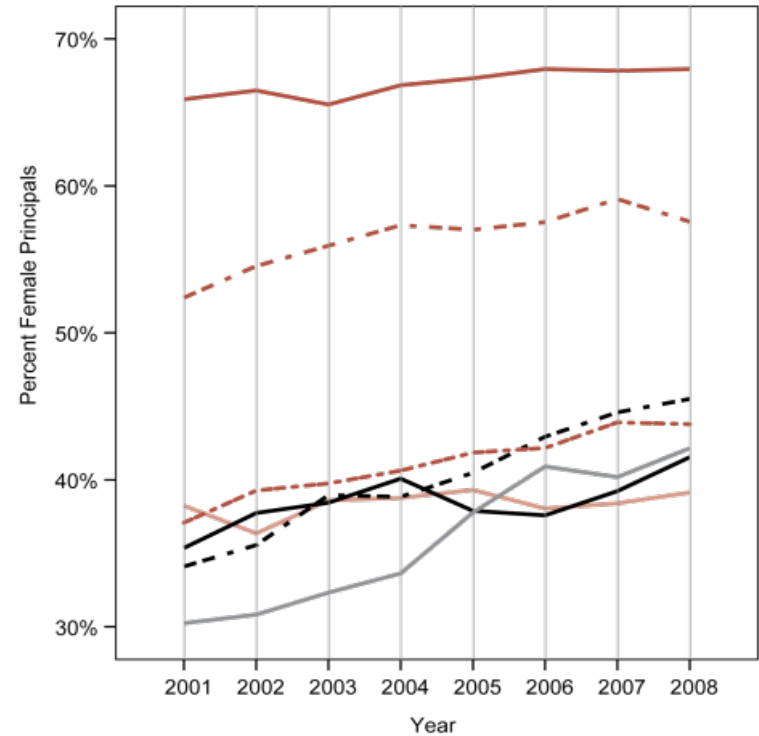
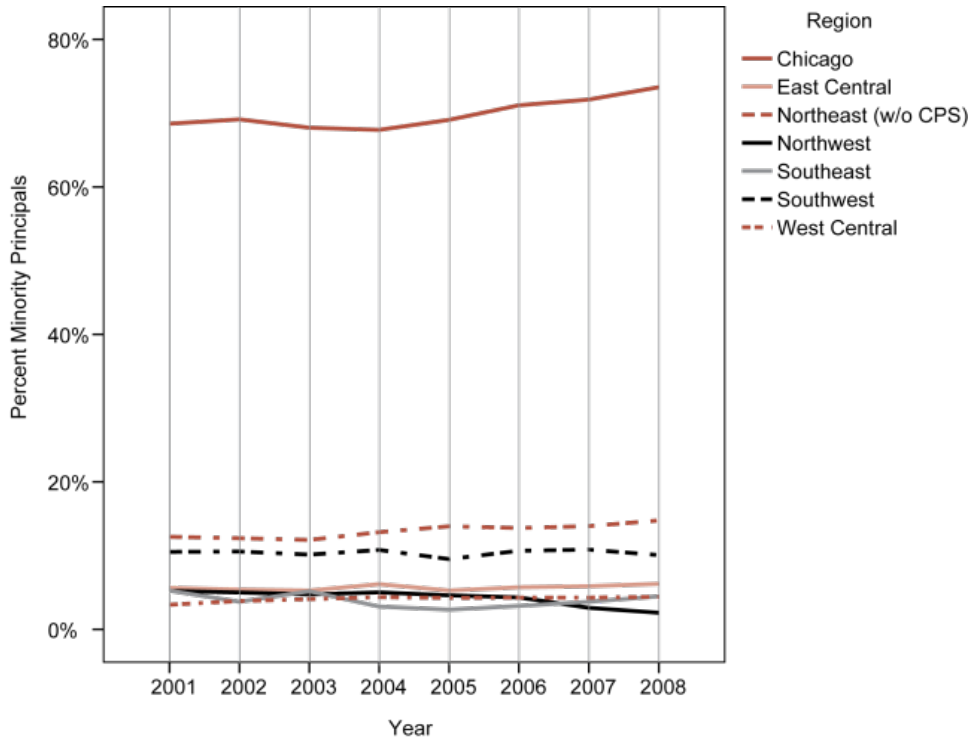
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# Principal, Student, and Teacher Race and Gender



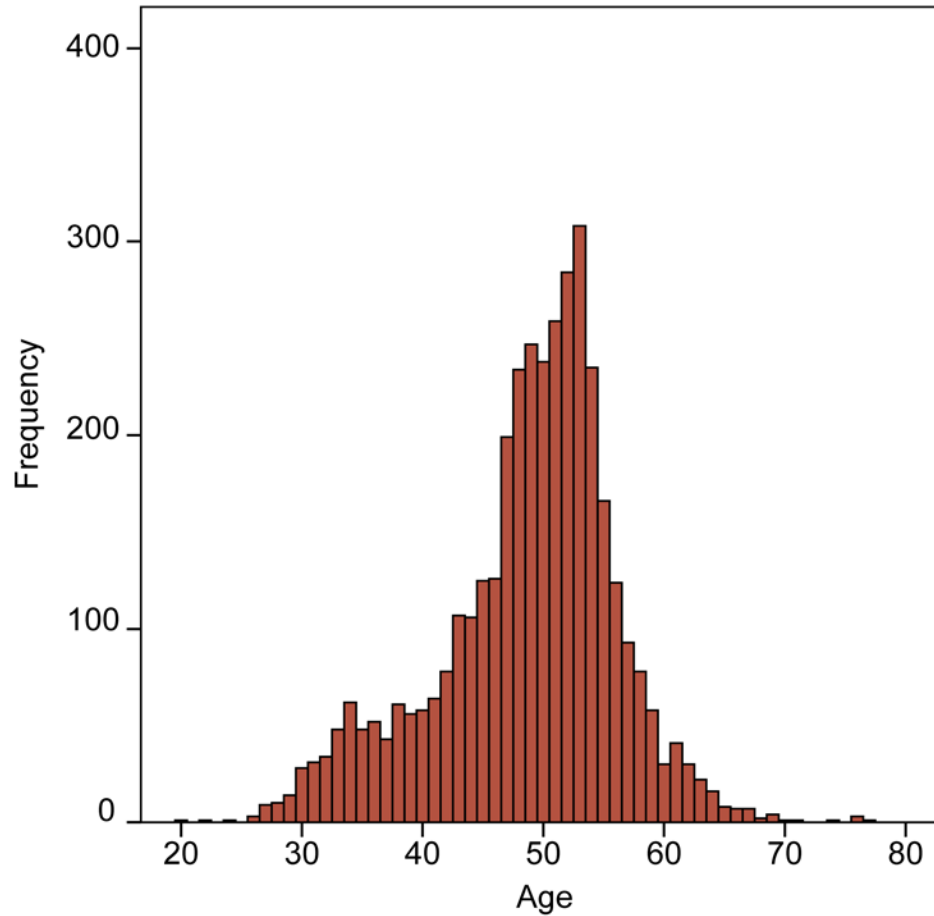
**Relative to the student population in Illinois, minorities are under-represented amongst educators and women are over-represented amongst teachers**

# Principal Race and Gender by Region

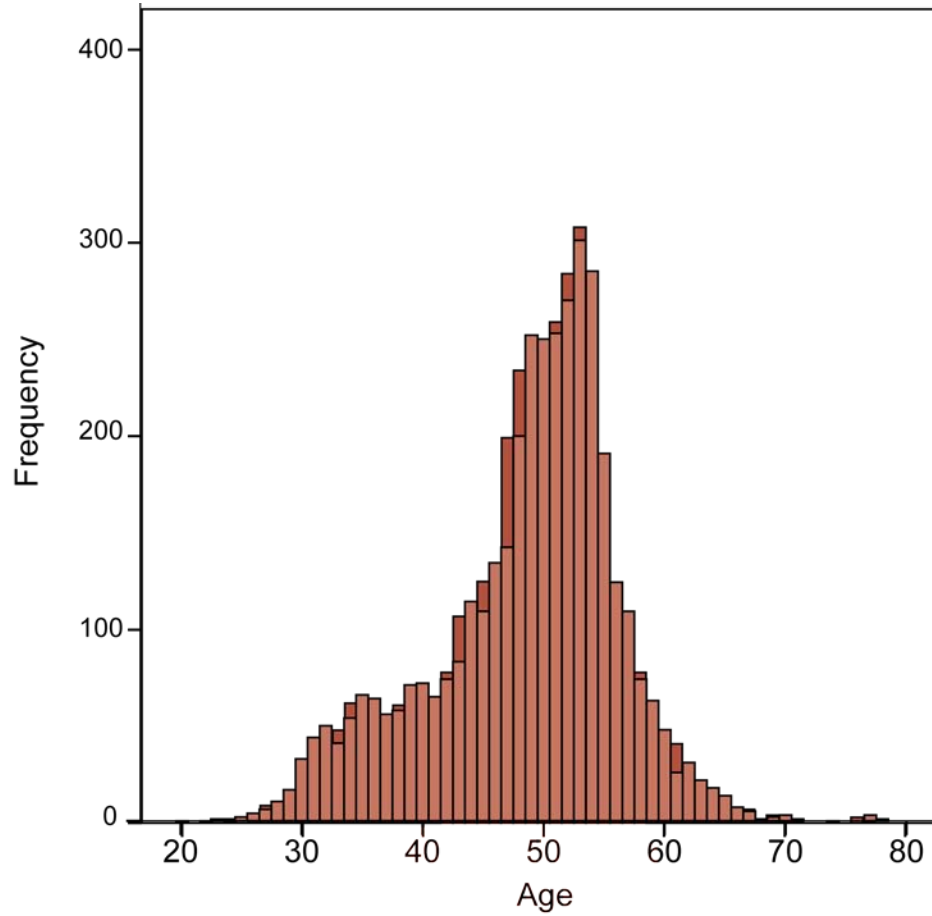


**Minorities make up a much larger proportion of principals in Chicago...and so do women**

# Principal Age Distribution (2001)

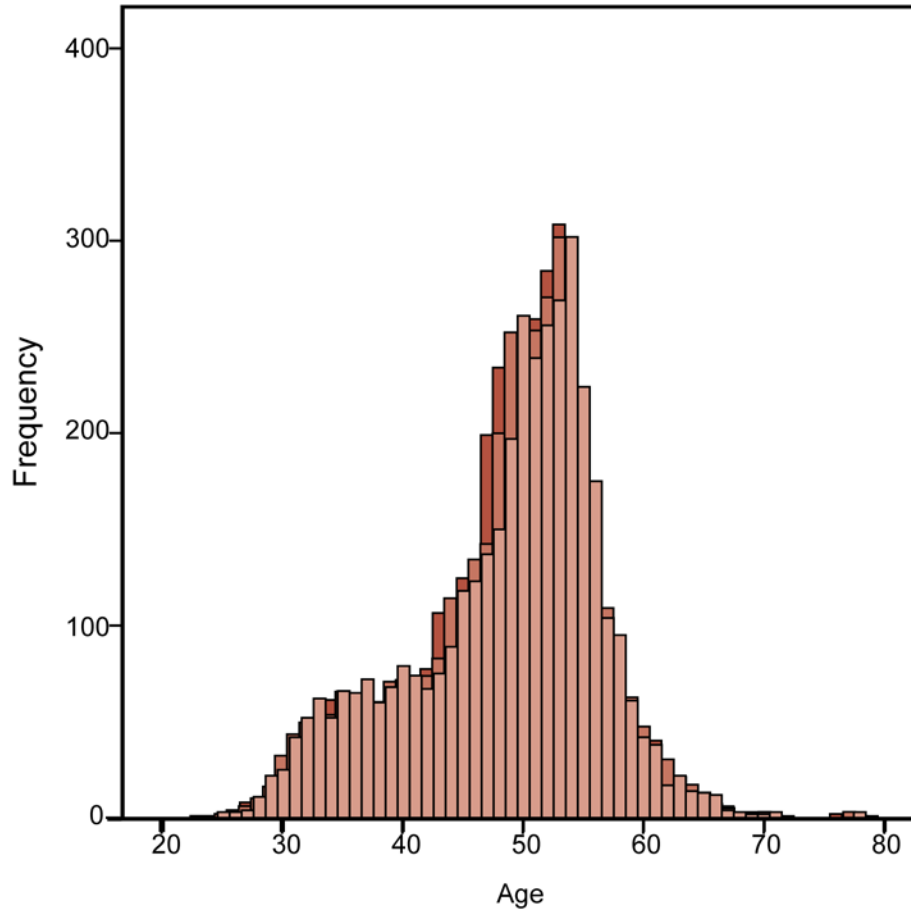


# 2002

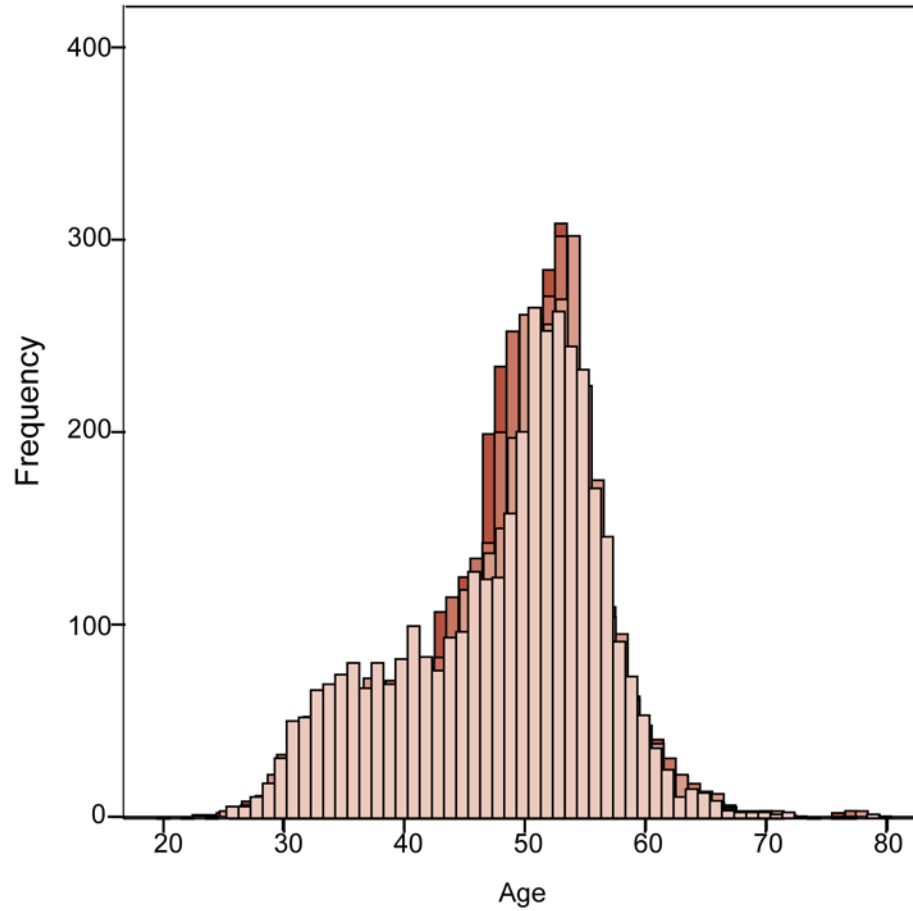




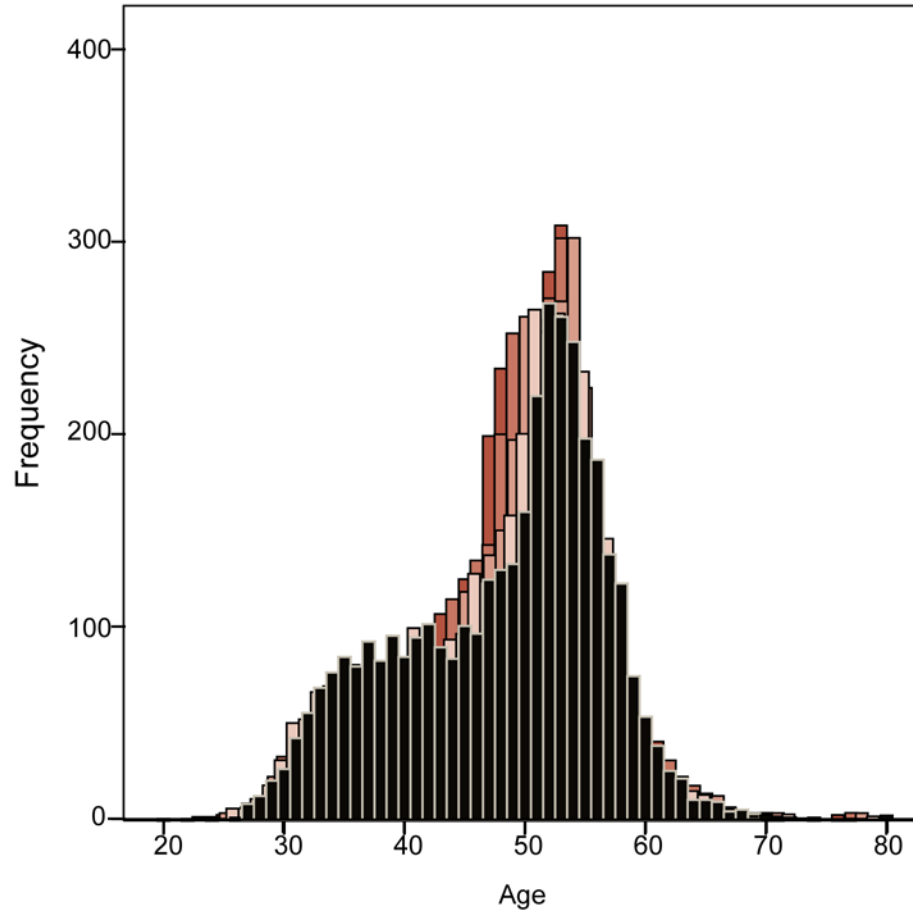
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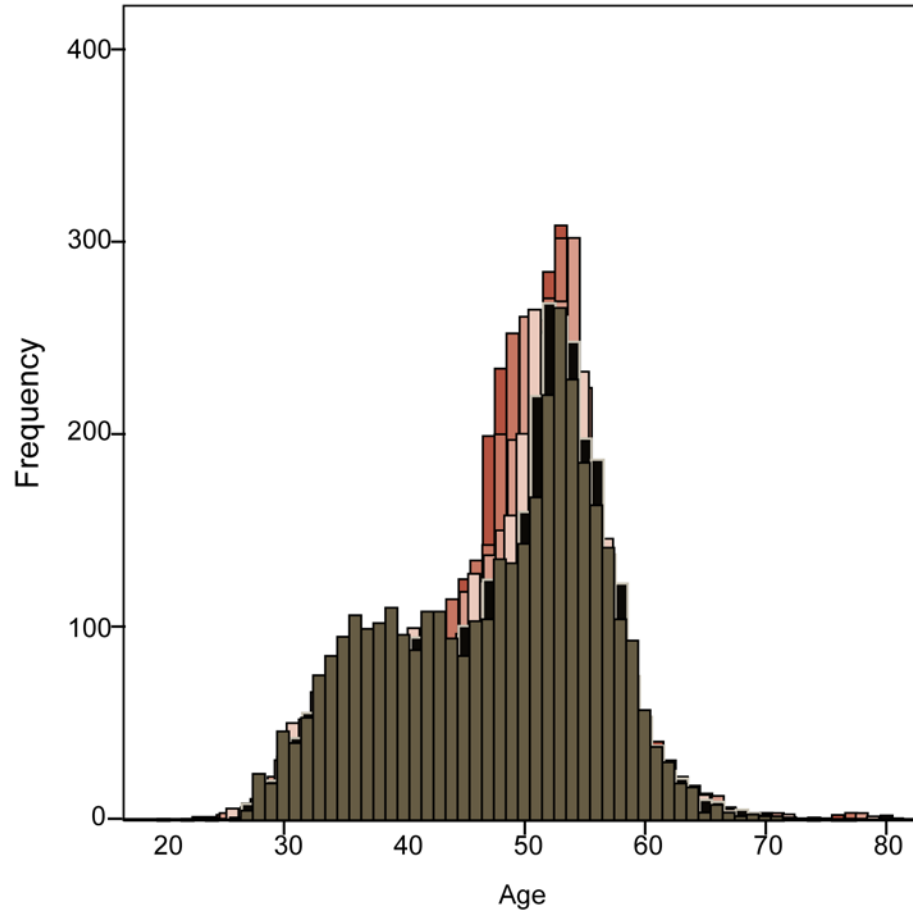
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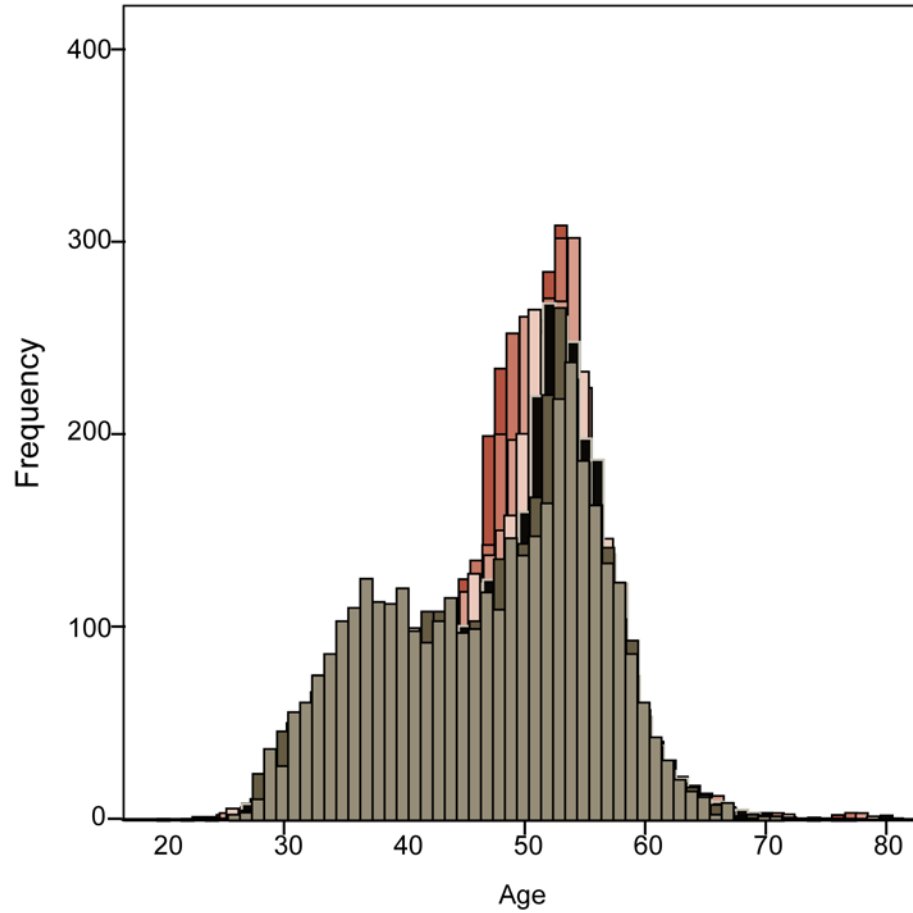
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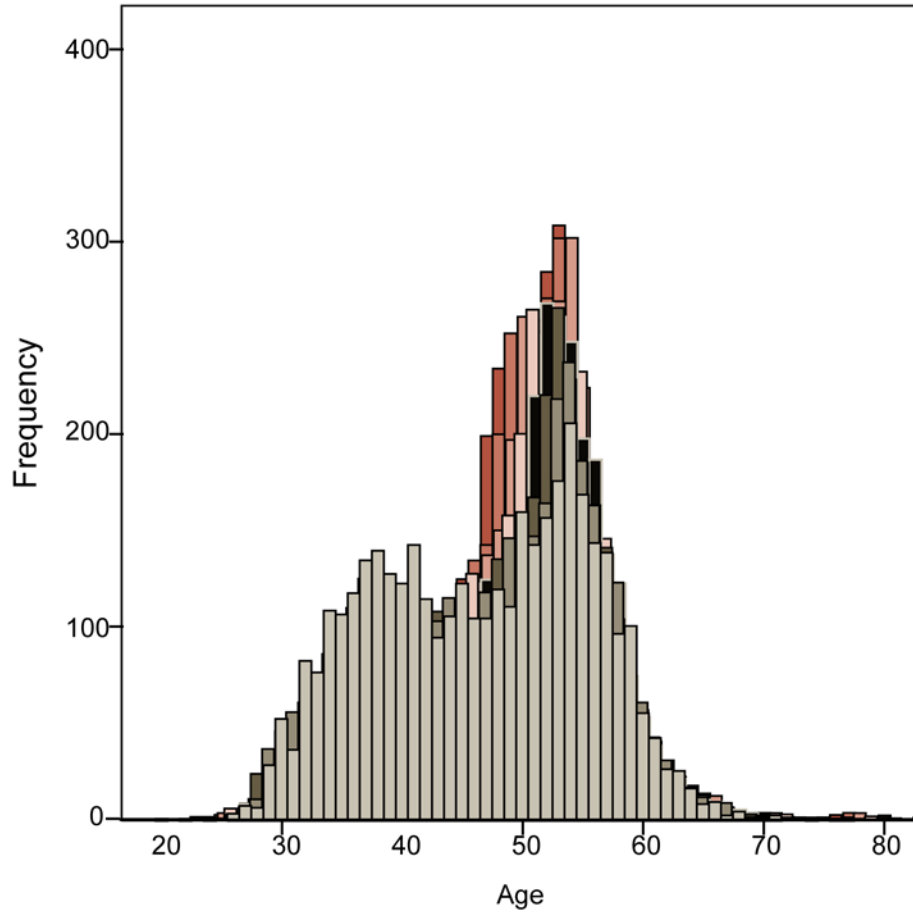
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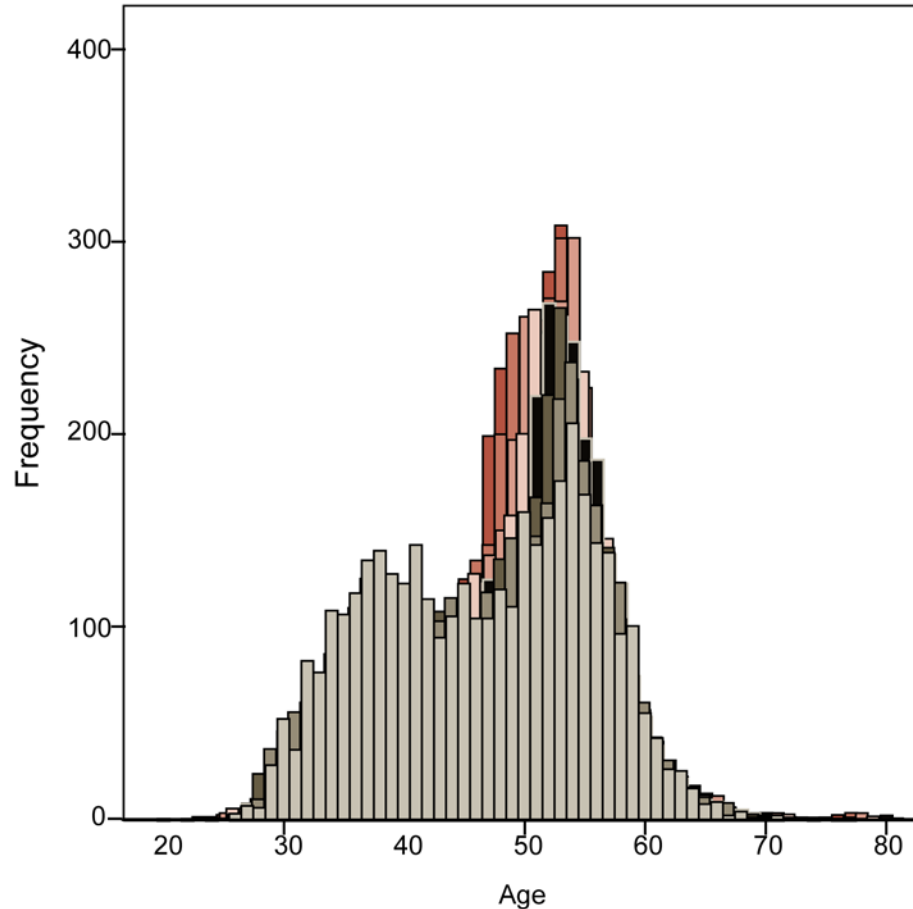
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# 2008

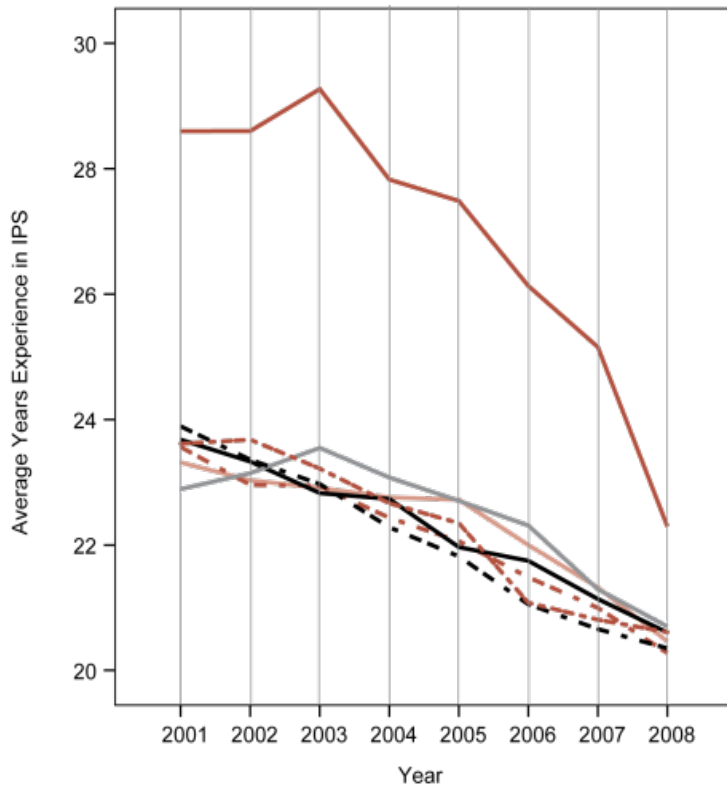


# Illinois principals are getting younger on average, and distribution becoming less normal, more bimodal

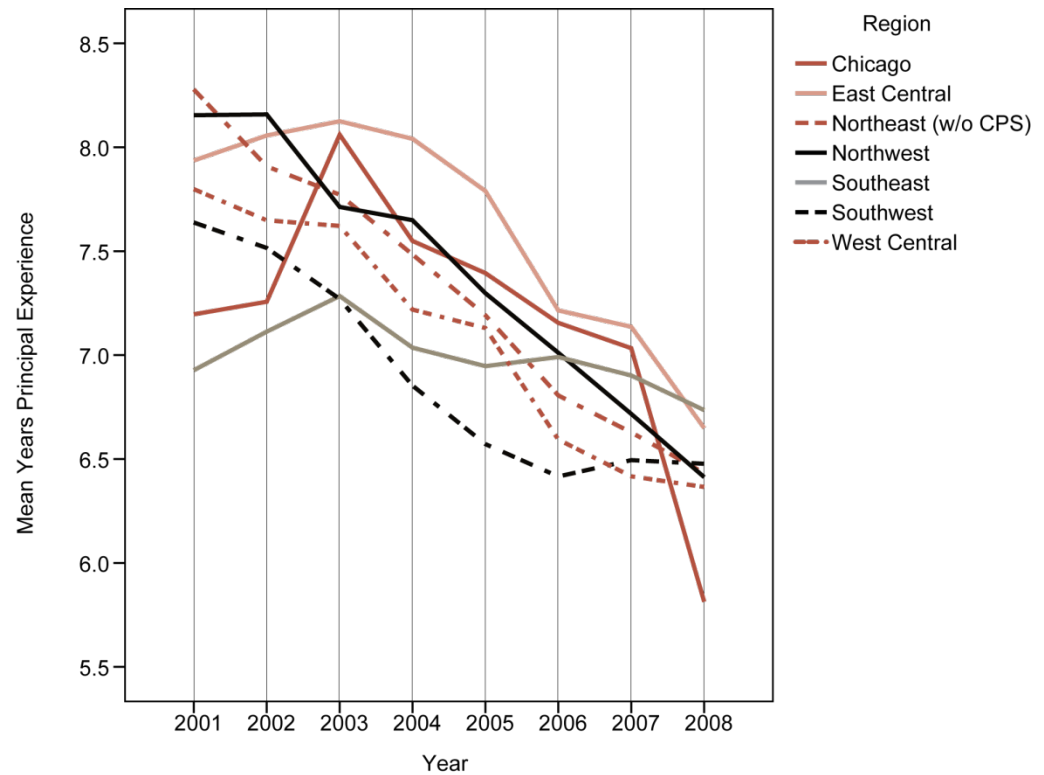


# Principal Experience by Region

## Experience in Any Position



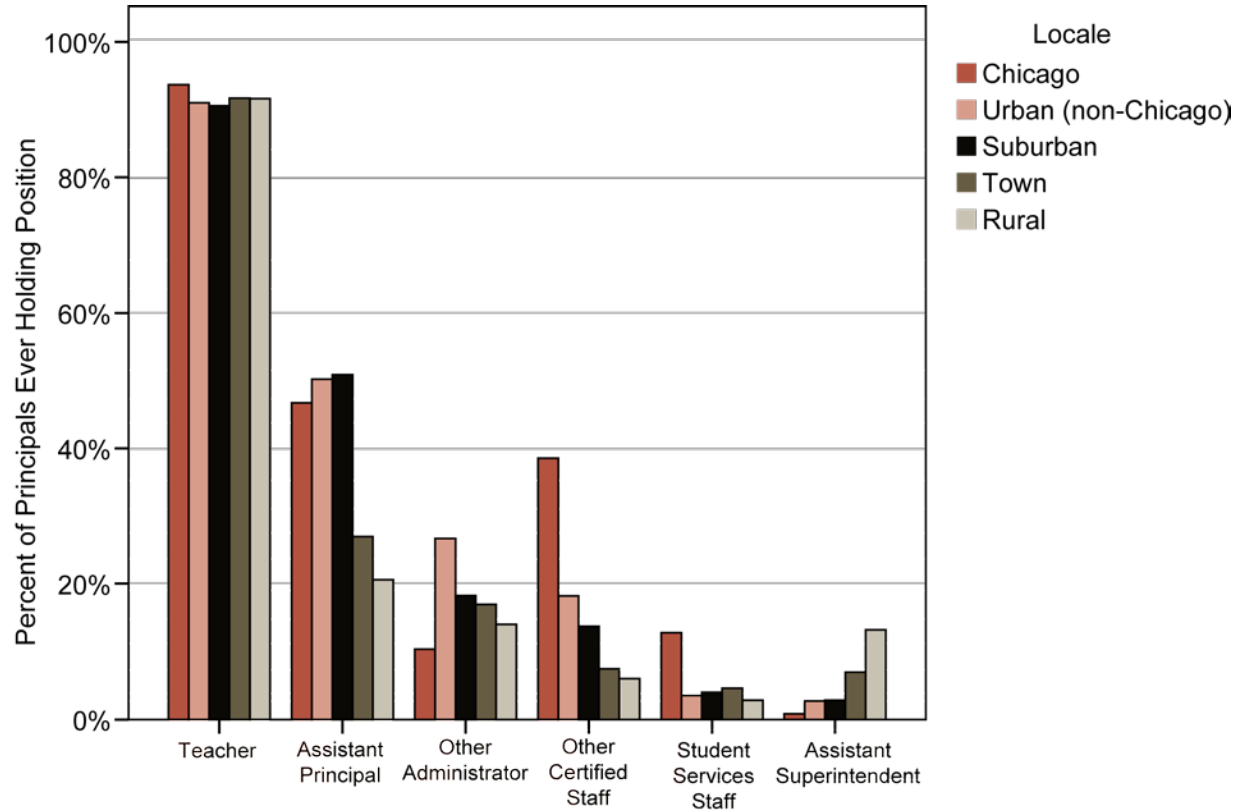
## Experience as a Principal



**Chicago principals have more overall experience, but there's not much difference between regions in terms of experience as a principal**

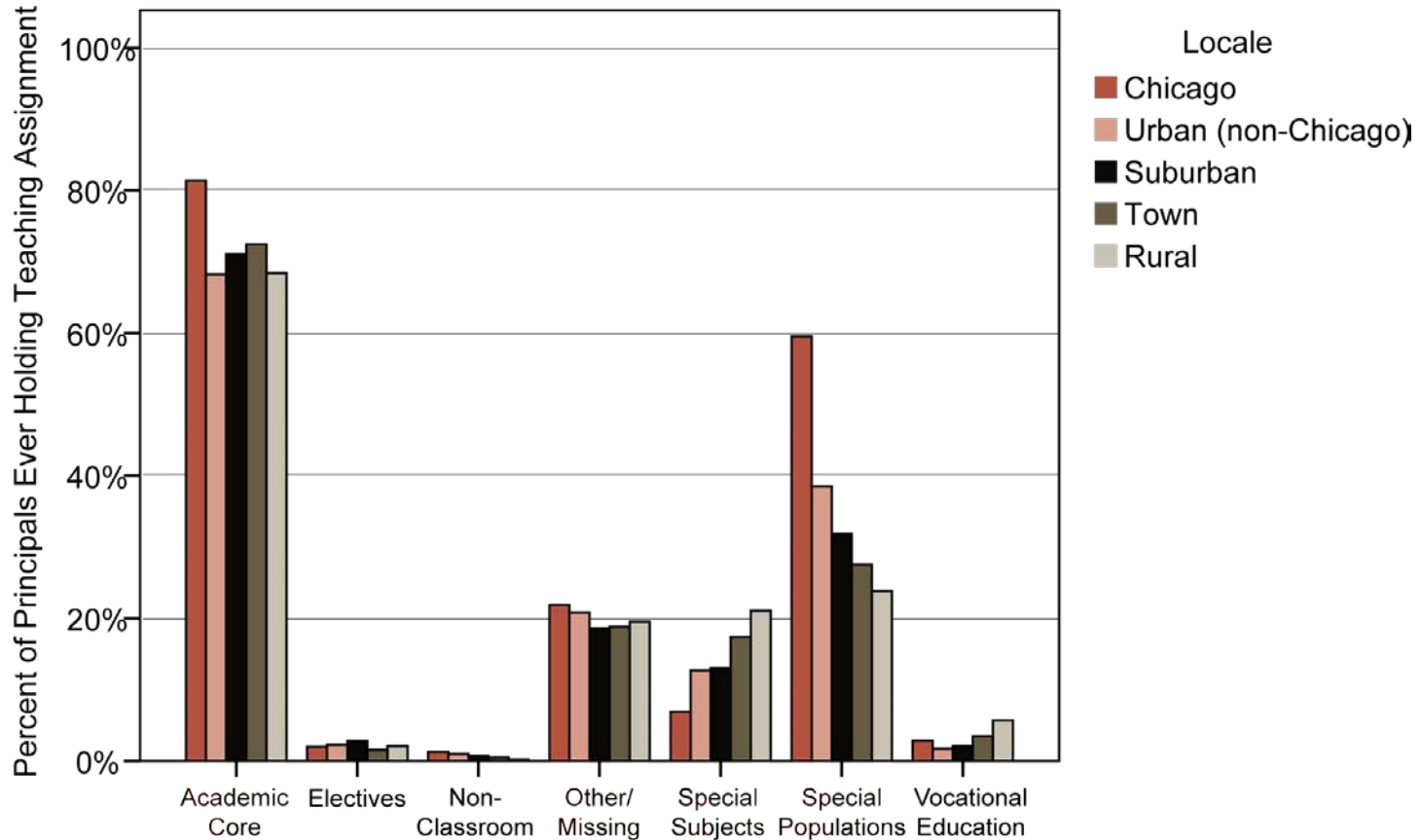


# Principals' Previous Positions by Locale



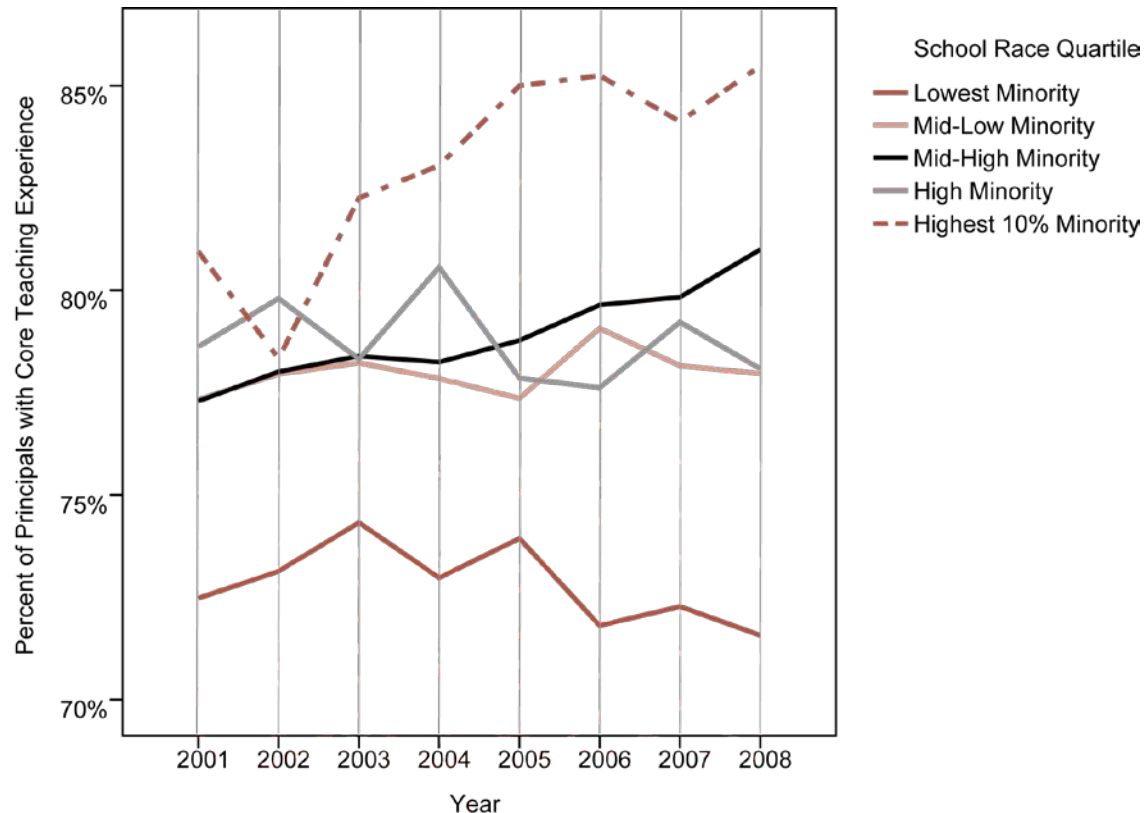
**Principals in town/rural schools were less likely to have experience as APs, other certified staff, or student services, and more likely to have worked (or to concurrently work) as superintendents/asst supts.**

# Principals' Prior Teaching Assignments by Locale



**Principals in more populous locales are more likely to have experience teaching special student populations and less likely to have experience teaching “specials” (such as art or PE)**

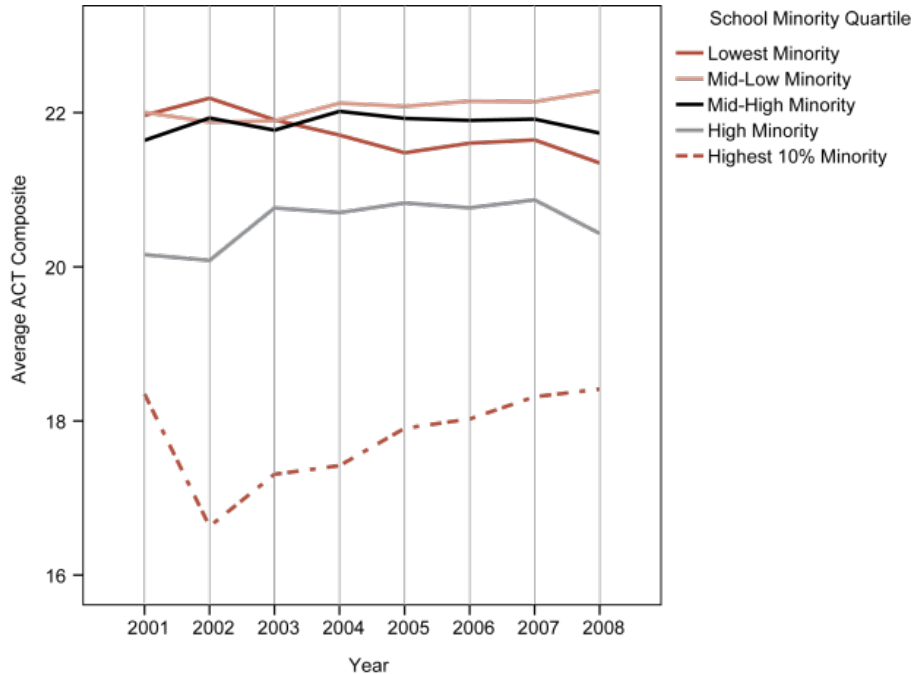
# Academic Core Teaching Experience by School Racial Composition (Non-CPS Schools)



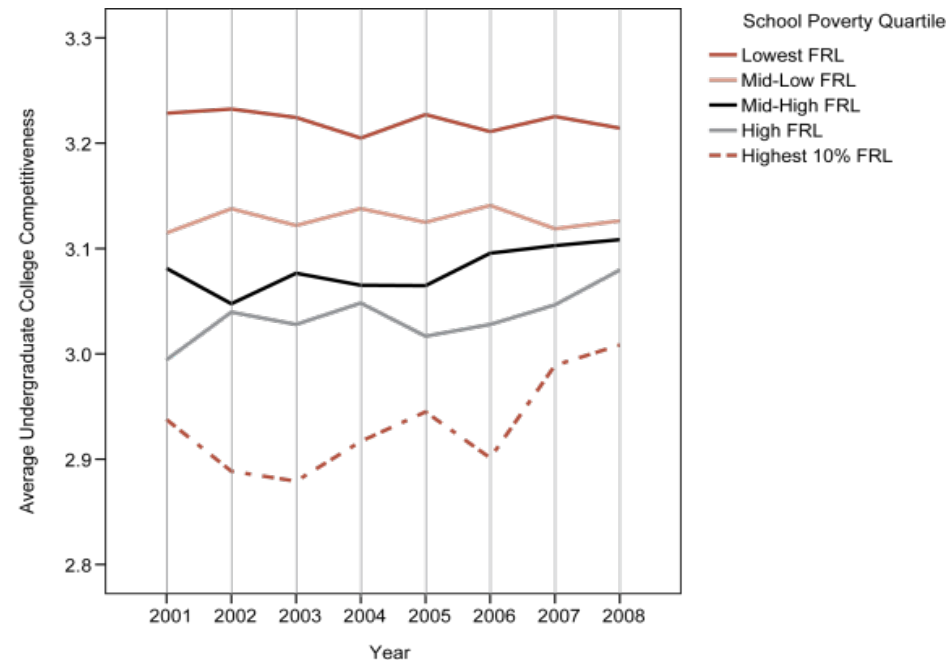
**Even excluding Chicago, principals in high-minority schools are more likely to have an academic core teaching background**

# Principal Academics by School Demographics

## Principal ACT by School Minority



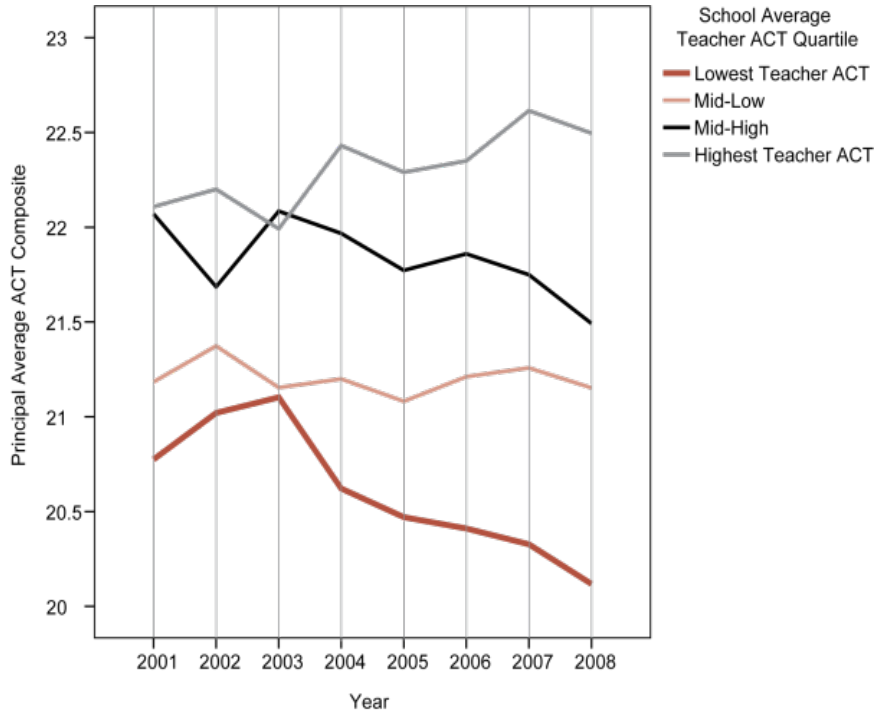
## Principal College by School Poverty



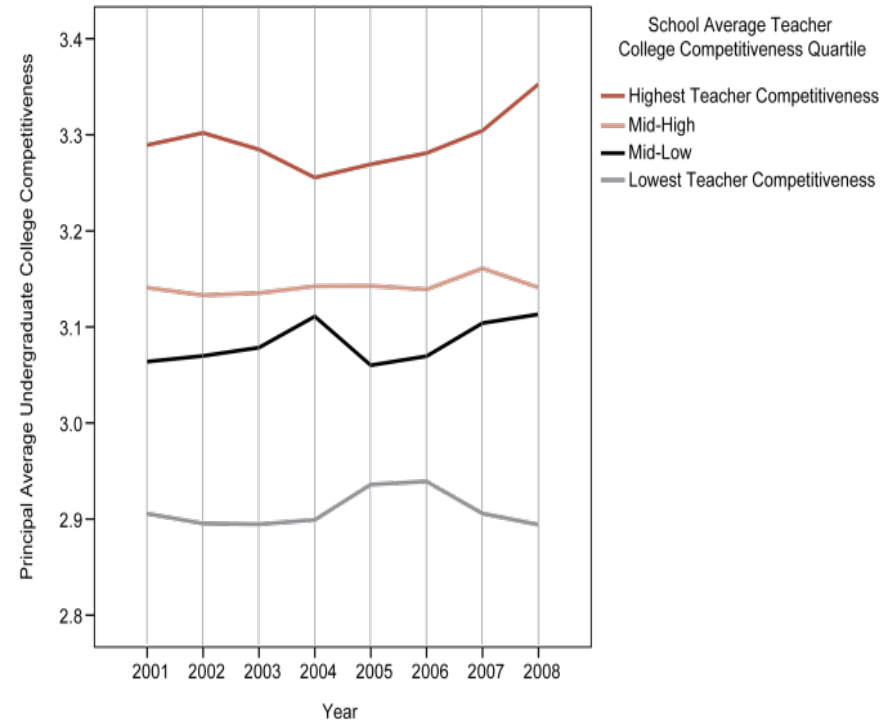
**The principals in the most disadvantaged schools tend to have the weakest academic backgrounds**

# Principal Academics by Teacher Academics

## ACT Composite



## College Competitiveness



**Principals' academic characteristics tend to be similar to those of the teachers at their school**

# Summary: Distribution of Principal Characteristics 2001-2008

- Proportion of women increased to more than 50% and proportion of minorities *slightly* increased
  - Principals in more populous areas (Chicago/ Northeast/ urban/suburban) are more likely to be minorities and more likely to be women
- Today's principals are younger and less experienced than those eight years ago
  - But assistant principal and academic core teacher experience have increased, and principals in the state's most urban areas are more likely to have such experience
- Principals' academic characteristics haven't changed much
  - And they are distributed in much the same manner as teacher academic backgrounds – schools with low proportions of poor and minority students tend to have principals with the strongest academic backgrounds

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# *Principal Turnover*

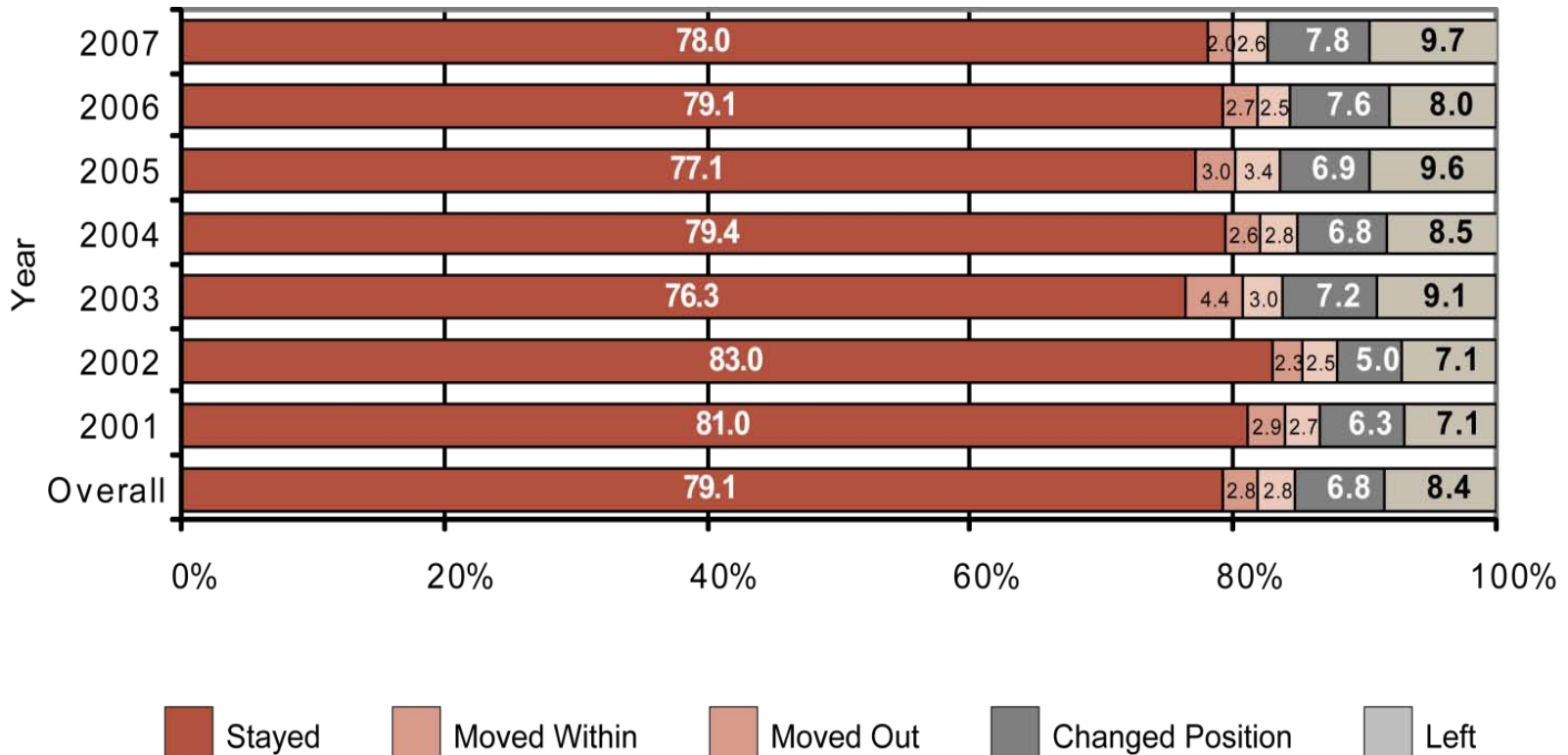
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**For the population of Illinois principals in each year, we identify each principal's status in the subsequent year as follows:**

1. **Stayer:** stayed in the same school as principal
2. **Within District Mover:** remained a principal but moved to another school within the same district
3. **Out-of-District Mover:** remained a principal but moved to another school in a different district
4. **Changer:** changed to a non-principal position within IPS
5. **Leaver:** left the IPS system altogether



# Overall Principal Turnover, 2001-08

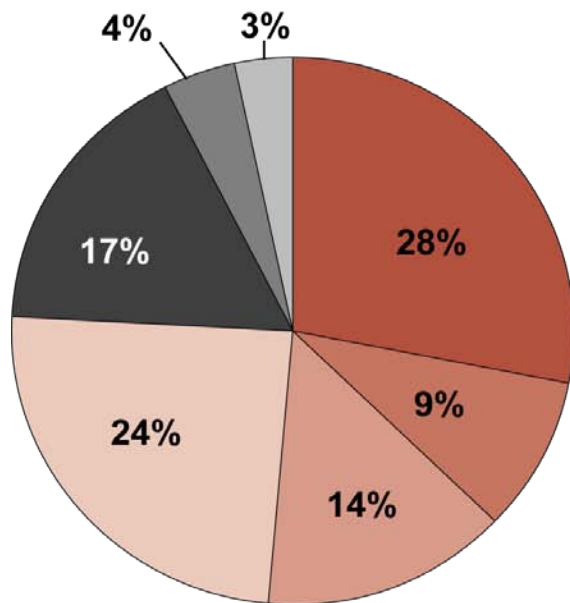


**Decline in principal stability**

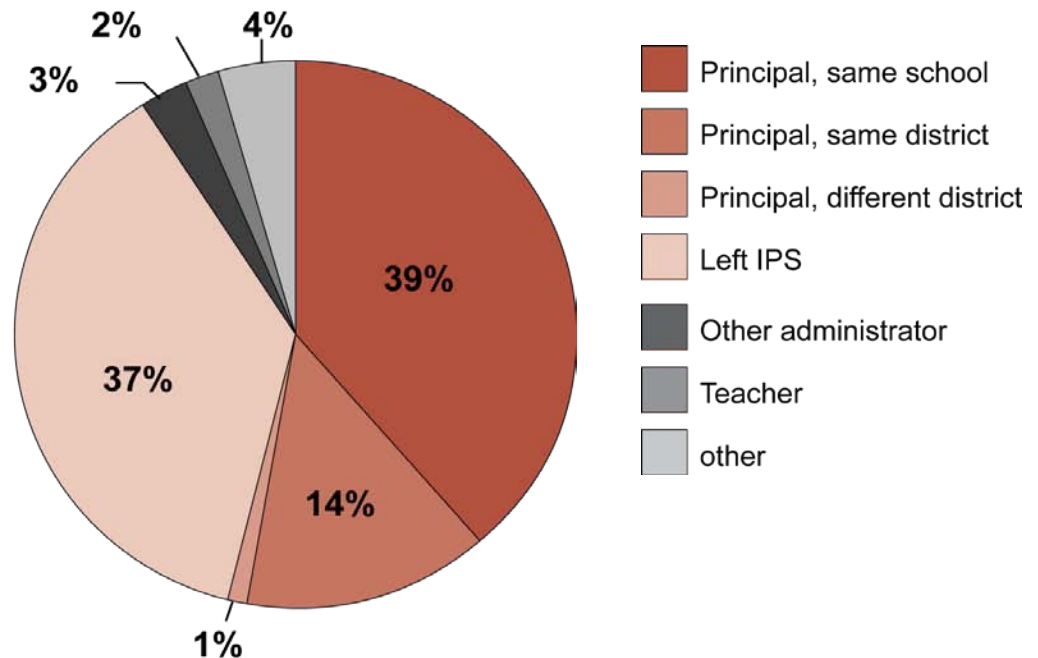
**(79% stay rate now vs. 86% in the 1990s)**

# First-Time Principal Turnover: 2001 & 2002 cohorts after six years

Illinois



Chicago

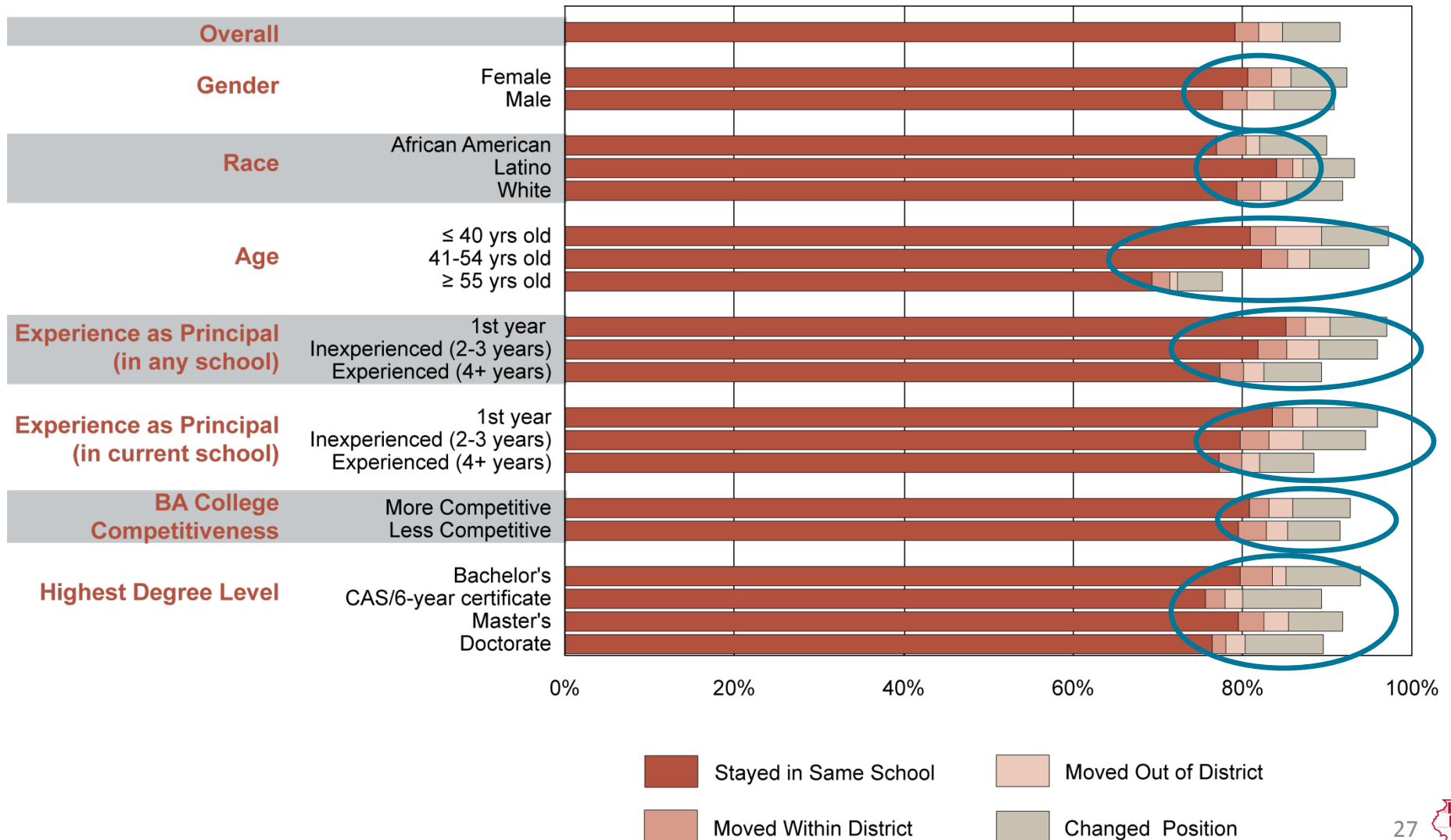


**Decline in stability for first-time principals too**

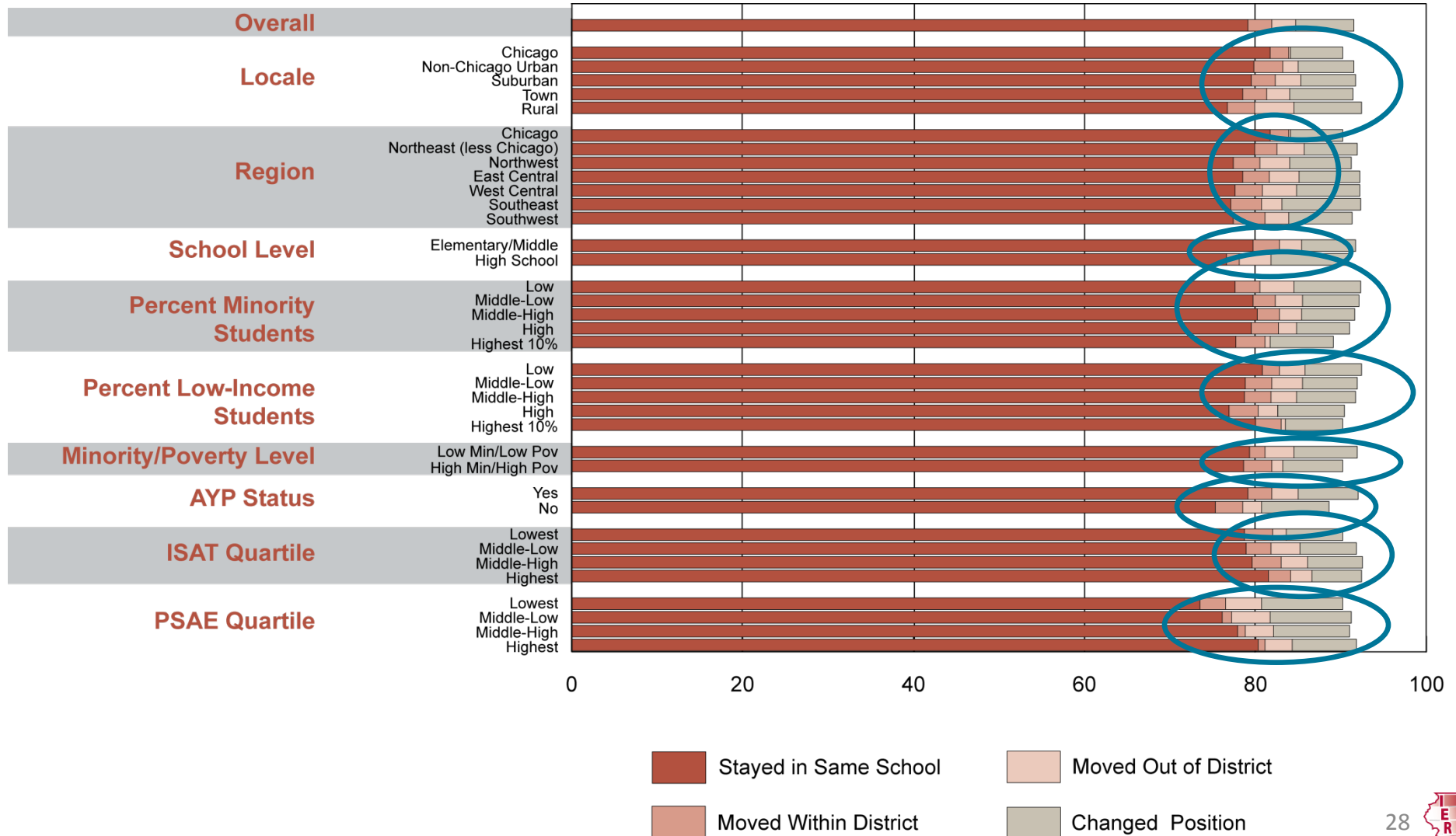
(State: 28% now vs. 38% in 1990s)

Chicago: 39% now vs. 53% in 1990s)

# Average Turnover Rates by Principal Characteristics

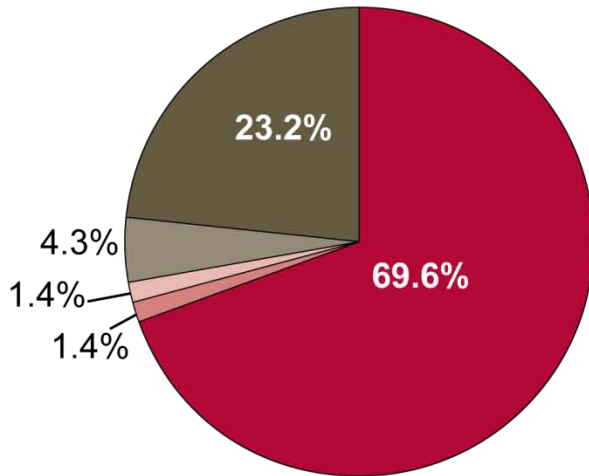


# Average Principal Turnover Rates by School Characteristics

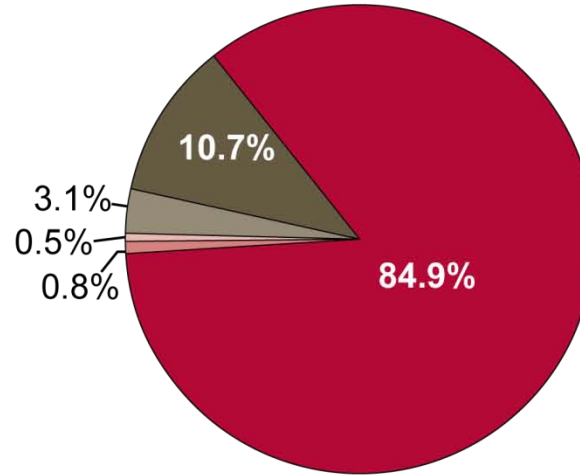


# Leavers: Average Rates of Return

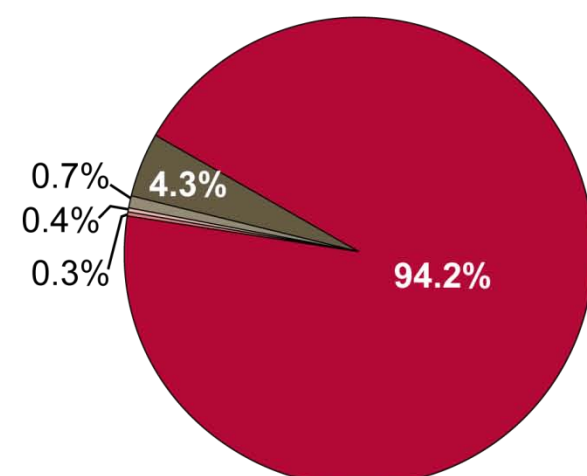
≤ 40 years old



41 – 54 years old



≥ 55 years old



- Did not return
- Returned as principal to same school
- Returned as principal to same district
- Returned as principal to different district
- Returned to different position

**Most who leave don't return (though younger leavers more likely to do so)**

# Leavers: Reasons for Leaving

	Overall	≤ 40 years old	41–54 years old	≥ 55 years old
Retirement	65.6%	1.1%	64.6%	72.9%
Other	23.6%	34.9%	20.4%	24.2%
Education position in non-public or out-of-state school	3.5%	24.5%	4.2%	1.0%
Involuntary departure <sup>a</sup>	2.3%	12.8%	3.2%	0.7%
Domestic/child care responsibilities	1.4%	12.8%	1.5%	0.2%
Health issue or death	1.4%	1.1%	2.6%	0.8%
Non-education vocation	1.2%	4.3%	2.3%	0.2%
Military service/Other leave of absence	0.5%	3.2%	0.8%	0.0%
Sabbatical/Return to school	0.5%	5.3%	0.4%	0.0%
N	1,536	94	528	914

<sup>a</sup> Includes reduction in force and forced resignation by the board.

**Most leavers cited retirement as their reason for leaving and few left to pursue work outside of education**

## Within District Movers: Characteristics of initial and receiving schools

	% Minority Students		% Low-Income Students		Mean Achievement (standardized score)		Mean Teacher ACT Score		% Inexperienced Teachers	
	Initial	Receiving	Initial	Receiving	Initial	Receiving	Initial	Receiving	Initial	Receiving
<b>Overall</b>	38.4	39.5*	43.4	42.2 <sup>†</sup>	-0.10	-0.13	20.9	21.0	17.2	18.4*
<b>Chicago</b>	95.1	93.8	87.0	84.4	-1.53	-1.47	19.7	19.8	19.6	22.5 <sup>†</sup>
<b>Non-CPS Urban</b>	52.3	52.4	54.7	47.3**	-0.32	-0.35	21.2	21.2	17.3	17.4
<b>Suburban</b>	43.5	45.6**	37.9	38.3	0.02	-0.04	20.8	21.0	18.8	21.3**
<b>Town</b>	13.2	12.0	42.6	38.8	0.20	0.26	21.2	21.1	12.2	10.4
<b>Rural</b>	5.4	7.1**	26.7	27.5	0.40	0.34	21.2	21.3	15.0	15.0

**Within district movers experienced very little change in student and teacher characteristics**

Note: Significance tests reflect differences between initial and receiving schools.

- \*  $p \leq .05$
- \*\*  $p \leq .01$
- \*\*\*  $p \leq .001$
- <sup>†</sup>  $p \leq .10$

## Out-of-District Movers: Characteristics of initial and receiving schools

	% Minority Students		% Low-Income Students		Mean Achievement (standardized score)		Mean Teacher ACT Score		% Inexperienced Teachers	
	Initial	Receiving	Initial	Receiving	Initial	Receiving	Initial	Receiving	Initial	Receiving
<b>Overall</b>	24.8	24.9	29.5	27.8 <sup>†</sup>	0.16	0.29***	21.4	21.5*	18.6	17.7
<b>Chicago</b>	92.7	66.7	87.5	42.9**	-1.42	-0.47 <sup>†</sup>	19.8	21.1	23.8	23.7
<b>Non-CPS Urban</b>	48.5	33.9**	40.0	29.8*	-0.02	0.28 <sup>†</sup>	21.6	21.6	19.2	16.8
<b>Suburban</b>	37.8	34.7 <sup>†</sup>	28.0	24.9*	0.21	0.37**	21.3	21.6***	20.1	19.1
<b>Town</b>	10.8	14.3	36.2	30.0 <sup>†</sup>	0.12	0.23	21.4	21.5	11.8	13.9
<b>Rural</b>	6.1	2.8***	26.5	30.1**	0.18	0.22	21.6	21.5	18.2	16.8

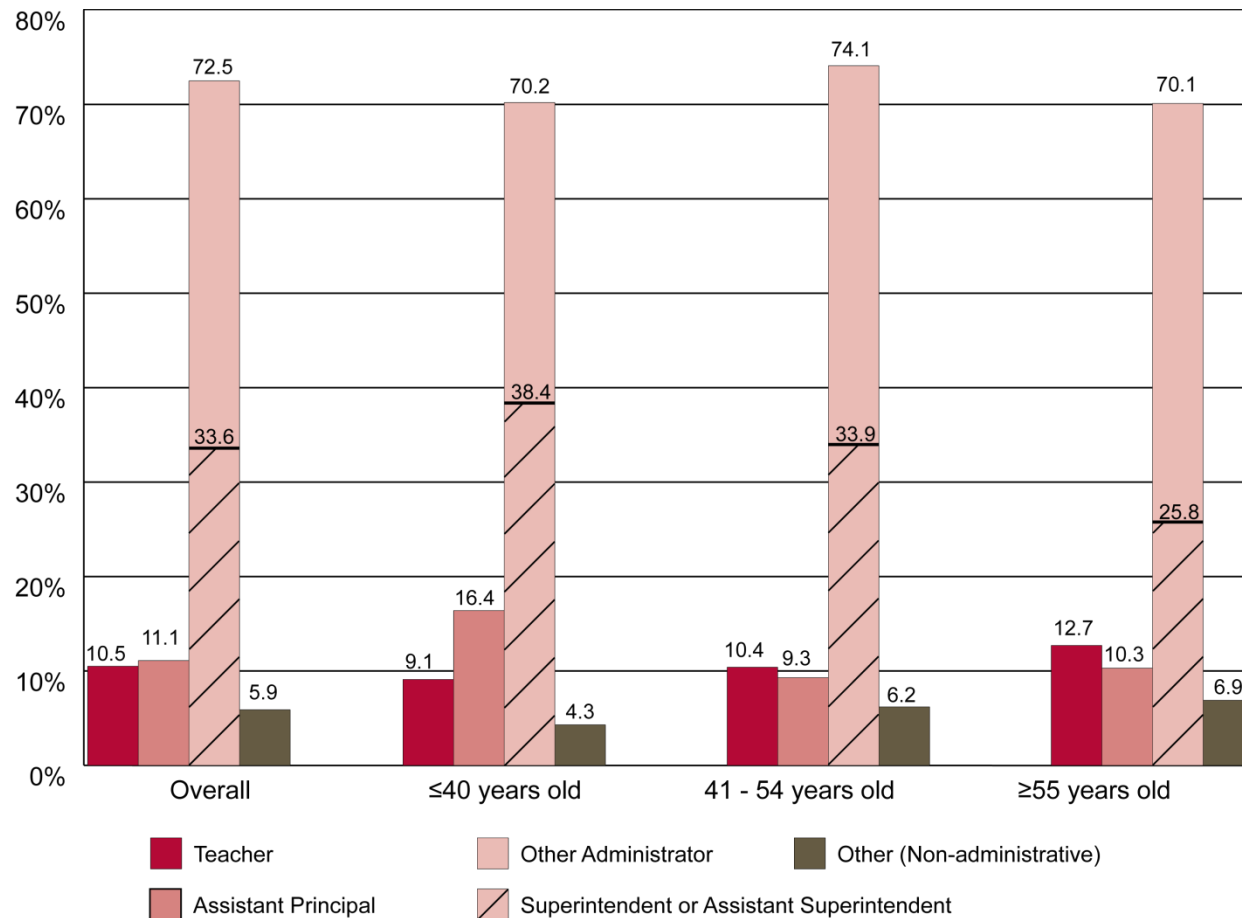
**Between district movers tended to move to schools with less poverty and higher achievement**

Note: Significance tests reflect differences between initial and receiving schools.

- \* p≤.05
- \*\* p≤.01
- \*\*\* p≤.001
- † p≤.10



## Changers: New position in subsequent year



**Changers tended to move to other (school- or district-level) administrative positions**

# Multinomial logit model of principal turnover, 2003-2007 cohorts: Part 1 *(Stayed in the same school is the reference outcome)*

Principal Characteristics		Moved Within District	Moved Out of District	Changed Positions	Left IPS
<b>Gender</b> (Male is reference)	Female	0.73*	0.95	0.97	0.83**
	African American	1.27	1.26	1.24†	1.16
<b>Race/Ethnicity</b> (White is reference)	Latino	0.41*	1.47*	1.06	0.94
		1.19*	1.01	1.02	1.02
<b>Age</b>		0.99*	1.00	1.00	1.00
<b>Age<sup>2</sup></b>		0.53	1.47	1.04	1.15
		0.68	1.63	0.76	1.23
		0.49*	1.88	1.19	1.29
<b>Degree Level</b> (BA is reference)	CAS	0.92	1.04	1.04	0.93
	Master's	1.09	1.02	0.88	0.94
	Doctoral	1.76**	1.56*	0.94	1.16
<b>BA competitiveness ranking</b> (Competitive/very competitive is reference)	Highly/most competitive	1.53†	2.03***	1.45**	1.36
	Less/non competitive	1.88**	2.58***	1.36*	1.58*
<b>Years of principal experience</b> (1 <sup>st</sup> year is reference)	2 years	1.93**	1.82**	1.50**	1.67**
	3 years	1.92**	2.64***	1.46*	1.52*
	4 years	2.41***	1.86*	1.81***	2.27***
	5 years	1.45	2.36**	1.52*	2.60***
	6 years	1.32	1.40	1.72***	2.24***
	7 years	1.62†	2.21**	1.38†	2.29***
	8 years	1.11	2.33**	1.24	1.92***
	9 years	1.17	1.53	1.44†	2.36***
	10 years	2.08**	1.55	1.49†	3.72***
	11 years	0.74	0.70	1.41	2.97***
	12 years	1.24	1.46	1.10	1.85**
	13 years	1.36	1.02	1.01	3.48***
	14 years	1.49	1.54	1.09	3.65***
	15 years	1.41	0.45	1.53	3.45***
	16 years	2.23†	0.53	0.78	3.08***
	17 years	0.60	0.43	0.56†	3.82***

Note: Relative risk ratios are reported. All models include year dummies.

† p ≤ .10  
 \* p ≤ .05  
 \*\* p ≤ .01  
 \*\*\* p ≤ .001

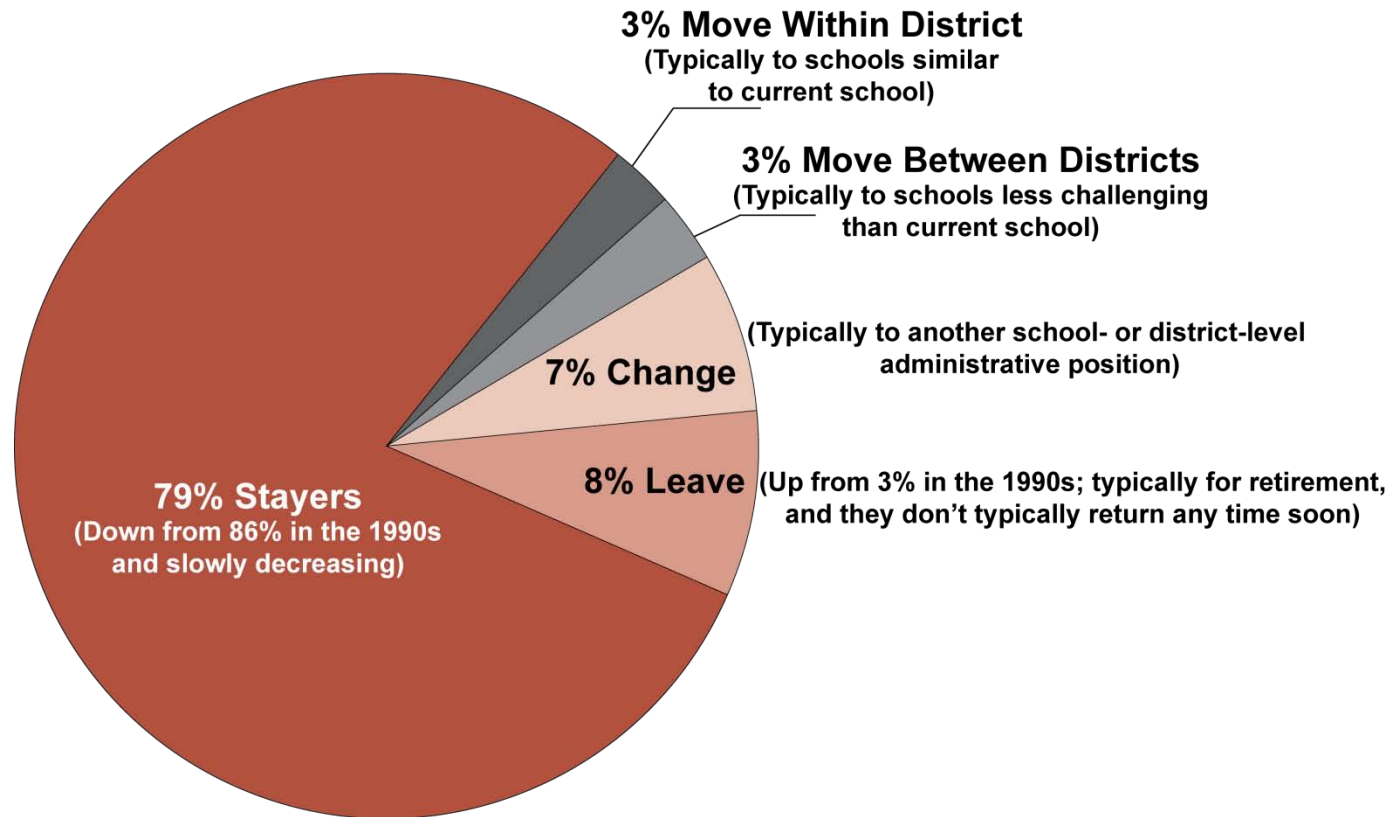
## Multinomial logit model of principal turnover, 2003-2007 cohorts, Part 2 *(Stayed in the same school is the reference outcome)*

<b>School Characteristics</b>		Moved Within District	Moved Out of District	Changed Positions	Left IPS
<b>Locale</b> (Suburban is reference)	Chicago	0.59*	0.02***	0.79	0.54***
	Non-Chicago Urban	1.07	0.71†	1.06	0.97
	Town	0.92	0.97	1.23	1.02
	Rural	1.24	1.26†	1.24*	1.05
<b>School Level</b> (Elementary/ Middle is reference)	High School	0.55***	1.35*	1.34**	1.02
<b>% Minority Students</b>		1.00	1.00	1.00	1.00
<b>% Low Income Students</b>		1.01*	0.99	1.00	0.99*
<b>Mean standardized achievement score</b>		0.98	0.72**	0.81**	0.81***
	<b>AYP status</b> (1=yes, 0=no)	0.75*	0.95	1.02	0.82*
<b>School Size</b> (in 100s)		0.92***	0.96*	1.00	1.00
<b>Mean Teacher ACT composite score in school</b>		1.01	1.06	0.99	1.00
<b>% of Teachers in School with 3 or fewer years of experience</b>		0.77	1.89	1.26	0.88
<b>% Non-highly Qualified Teachers in School</b>		1.01	1.02***	1.00	1.02***

Note: Relative risk ratios are reported. All models include year dummies.

- † p≤.10
- \* p≤.05
- \*\* p≤.01
- \*\*\* p≤.001

# Summary: Principal Turnover 2001-08



- **Chicago: both greater retention AND greater attrition**
- **For better or worse, accountability pressures appear to have had a negative impact on principal stability**