

Teacher Turnover in Wisconsin

Michael Chirico

March 17, 2017

Abstract

Turnover in Wisconsin

Introduction

Data

Results

Teacher Experience	Percent of Teachers Who				Exit Wisconsin Public Schools	Number of Teachers
	Remain Same School	in Change Schools Within District	Switch Districts			
1-3 years	85.2	9.4	5.4	7.3		37,044
4-6 years	88.9	8.0	3.1	4.6		33,972
7-11 years	91.1	7.2	1.7	2.8		48,047
12-30 years	94.2	5.3	0.5	3.0		113,334
>30 years	96.7	3.0	0.4	15.1		21,538
All	91.8	6.4	1.8	4.8		253,935

Table 1: Year-to-year Transitions of Teachers by Experience, 2000-08

Conclusion

References

Origin Community	Percent of Teachers Who Move to				Number Teachers Changing Districts	Percent of Origin Teachers	Change in Share of Teachers 2000-06
	Large Urban	Small Urban	Suburban	Rural			
I. All teachers							
Large Urban	5.8	14.6	58.9	20.6	459	1.8	-0.3%
Small Urban	3.3	13.1	45.2	38.4	500	1.1	-0.2%
Suburban	3.7	15.2	45.0	36.1	1,210	1.7	4.1%
Rural	0.8	11.4	24.3	63.5	2,377	2.1	-3.5%
II. Probationary teachers (1-3 years experience)							
Large Urban	7.8	15.9	56.3	20.0	260	3.5	
Small Urban	4.4	12.4	46.9	36.3	230	3.5	
Suburban	4.5	16.1	41.6	37.7	495	5.2	
Rural	0.5	11.4	25.4	62.6	1,024	7.6	

Table 2: Destination Community Type for Teachers Changing Districts, by Origin Community Type and Teacher Experience Level

	Men by Experience Class			Women by Experience Class			All Teachers	
	1-3 years	4-6 years	7-11 years	1-3 years	4-6 years	7-11 years	0-9 Years	
Base year salary (log)	0.004 (0.010)	0.022 (0.015)	-0.021 (0.022)	0.010 (0.005)	0.002 (0.009)	-0.016 (0.012)	0.004 (0.004)	
Adjusted salary (log)	-0.012 (0.007)	0.007 (0.011)	0.031 (0.016)	0.001 (0.004)	0.018 (0.007)	0.023 (0.009)	0.007 (0.003)	
Percent proficient	2.9% (0.7%)	1.9% (0.8%)	1.6% (1.1%)	4.8% (0.4%)	3.9% (0.5%)	4.1% (0.6%)	3.9% (0.2%)	
Percent Hispanic	-1.4% (0.4%)	0.0% (0.5%)	-0.6% (0.5%)	-1.5% (0.2%)	-1.6% (0.3%)	-0.7% (0.4%)	-1.2% (0.1%)	
Percent black	-3.2% (1.0%)	-0.7% (1.1%)	-3.2% (1.1%)	-4.8% (0.6%)	-3.2% (0.7%)	-4.4% (0.8%)	-3.9% (0.3%)	
Percent subsidized lunch	-6.7% (1.1%)	-3.5% (1.5%)	-3.9% (1.6%)	-8.5% (0.7%)	-6.0% (0.9%)	-5.6% (1.0%)	-6.8% (0.4%)	

Table 3: Average Change in Salary and District Student Characteristics (and Standard Deviations) for Teachers Changing Districts, by Gender and Experience

	District Average Characteristics		Campus Average Characteristics	
	Large Urban to Suburban	Suburban to Suburban	Large Urban to Suburban	Suburban to Suburban
Base year salary (log)	-0.015 (0.013)	0.012 (0.008)	—	—
Adjusted salary (log)	-0.039 (0.011)	0.012 (0.006)	—	—
Average Student Characteristics				
Percent proficient	37.1% (0.5%)	0.8% (0.4%)	33.4% (1.3%)	0.3% (0.6%)
Percent Hispanic	-13.3% (0.2%)	0.3% (0.4%)	-8.3% (1.3%)	0.2% (0.5%)
Percent black	-52.9% (0.5%)	0.5% (0.5%)	-56.5% (1.9%)	0.4% (0.6%)
Percent subsidized lunch	-60.8% (0.7%)	-0.7% (0.6%)	-61.8% (1.2%)	-1.0% (0.7%)

Table 4: Average Change in Salary and in District and Campus Student Characteristics (and Standard Deviations) for Teachers with 1-10 Years of Experience Who Change Districts, by Community Type of Origin and Destination District

	Between District Moves		Within District Moves	
	Black Teachers	Hispanic Teachers	Black Teachers	Hispanic Teachers
Percent proficient	16.5% (4.9%)	5.1% (8.7%)	3.2% (0.9%)	1.7% (1.4%)
Percent Hispanic	-1.1% (1.7%)	-6.0% (9.1%)	2.4% (1.1%)	-5.6% (2.4%)
Percent black	-22.9% (7.8%)	10.5% (8.0%)	-1.2% (1.4%)	2.0% (2.2%)
Percent subsidized lunch	-59.0% (6.5%)	-5.8% (9.7%)	-2.4% (0.6%)	-2.7% (1.4%)
Number of teachers	42	22	549	197

Table 5: Average Change in District and Campus Student Characteristics (and Standard Deviations) for Black and Hispanic Teachers with 1-10 Years of Experience who Change Campuses

Quartile of Distribution	Probability Teachers Move to New School within District	Probability Teachers Move to New District	Probability Teachers Exit Public Schools
Residual salary			
Highest	—	1.4%	4.8%
3rd	—	1.4%	5.0%
2nd	—	1.6%	5.0%
Lowest	—	1.9%	5.4%
Percent proficient			
Highest	5.6%	1.7%	4.7%
3rd	6.8%	1.9%	4.4%
2nd	6.2%	1.9%	5.4%
Lowest	6.9%	1.7%	4.8%
Percent eligible for reduced-price lunch			
Highest	7.7%	1.7%	5.6%
3rd	6.9%	1.6%	4.3%
2nd	6.2%	1.9%	4.5%
Lowest	4.9%	2.0%	4.8%
Percent Black			
Highest	6.7%	1.6%	6.2%
3rd	5.7%	1.5%	4.7%
2nd	6.6%	1.8%	4.5%
Lowest	6.7%	2.2%	3.9%
Percent Hispanic			
Highest	6.9%	1.5%	6.0%
3rd	5.6%	1.9%	4.8%
2nd	6.0%	1.8%	4.5%
Lowest	7.1%	1.9%	4.1%

Table 6: School Average Transition Rates by Distribution of Residual Teacher Salary and Student Demographic Characteristics (data weighted by number of teachers in school)

	Teacher Experience				
	1-3 years	4-6 years	7-11 years	12-30 years	>30 years
First year base salary (log)	-0.04 (0.05)	-0.05 (0.04)	-0.07* (0.03)	0.00 (0.02)	-0.16* (0.07)
First year base salary (log) * female	-0.08 (0.05)	0.05 (0.04)	0.05 (0.03)	-0.02 (0.02)	0.10 (0.08)
Campus average student characteristics					
Percent proficient	-0.06** (0.02)	0.02 (0.02)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.03)
Percent eligible for subsidized lunch	-0.03* (0.02)	-0.07*** (0.01)	-0.04*** (0.01)	-0.02** (0.01)	0.10*** (0.03)
Percent Black	0.05** (0.02)	0.11*** (0.02)	0.04*** (0.01)	0.05*** (0.01)	0.06 (0.04)
Percent Hispanic	0.03 (0.02)	0.09*** (0.02)	0.04** (0.01)	0.01 (0.01)	-0.05 (0.05)
Interactions					
Black * percent Black	-0.09 (0.05)	-0.10** (0.03)	-0.01 (0.02)	-0.00 (0.02)	-0.23** (0.08)
Hispanic * percent Black	-0.15* (0.06)	-0.18** (0.06)	-0.13** (0.05)	-0.08 (0.05)	-0.22 (0.32)
Black * percent Hispanic	-0.05 (0.09)	-0.03 (0.06)	-0.00 (0.04)	0.03 (0.04)	0.14 (0.22)
Hispanic * percent Hispanic	-0.12* (0.05)	-0.16*** (0.05)	-0.13*** (0.03)	-0.08** (0.03)	-0.49 (0.38)
Observations	28,287	25,609	35,946	81,801	14,773

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table 7: Estimated Effects of Starting Teacher Salary and Student Demographic Characteristics on the Probability that Teachers Leave School Districts, by Experience (linear probability models; standard errors in parentheses)

	Teacher Experience				
	1-3 years	12-30 years	4-6 years	7-11 years	>30 years
First year base salary (log)	-0.09 (0.05)	-0.02 (0.02)	-0.10* (0.04)	-0.12*** (0.03)	-0.31*** (0.09)
First year base salary (log) * female	-0.08 (0.05)	-0.02 (0.02)	0.05 (0.04)	0.05 (0.03)	0.11 (0.08)
Campus average student characteristics					
Percent proficient	-0.08*** (0.02)	-0.02** (0.01)	0.00 (0.02)	-0.02* (0.01)	-0.03 (0.03)
Percent eligible for subsidized lunch	-0.01 (0.02)	-0.00 (0.01)	-0.03 (0.02)	-0.01 (0.01)	0.05 (0.04)
Percent Black	0.02 (0.02)	0.03*** (0.01)	0.06** (0.02)	0.00 (0.01)	0.09 (0.05)
Percent Hispanic	-0.01 (0.03)	-0.00 (0.01)	0.03 (0.02)	-0.01 (0.02)	0.01 (0.06)
Interactions					
Black * percent Black	-0.08 (0.05)	0.01 (0.02)	-0.09** (0.03)	0.00 (0.02)	-0.23** (0.08)
Hispanic * percent Black	-0.14* (0.06)	-0.08 (0.05)	-0.18** (0.06)	-0.11* (0.05)	-0.33 (0.32)
Black * percent Hispanic	-0.03 (0.09)	0.04 (0.04)	-0.01 (0.06)	0.01 (0.04)	0.16 (0.22)
Hispanic * percent Hispanic	-0.11* (0.05)	-0.08** (0.03)	-0.15** (0.05)	-0.10** (0.04)	-0.65 (0.38)
Observations	28,287	81,801	25,609	35,946	14,773

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table 8: Estimated Effects of Starting Teacher Salary and Student Demographic Characteristics on the Probability that Teachers Leave School Districts with District Fixed Effects, by Experience (linear probability models; standard errors in parentheses)