

Teacher Compensation Reform: A Market-Based Perspective

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- 2004-05 \$179b salaries, \$50b benefits
- 55% of current spending, 90% of instructional spending
- “... human resources are key to organizational success or failure. It is perhaps going too far to say that excellent HR policies are sufficient for success. But success with poor HR policies is probably impossible, and the effects of improved HR success are potentially enormous.”
- (Baron and Kreps, 1999, emphasis in original).

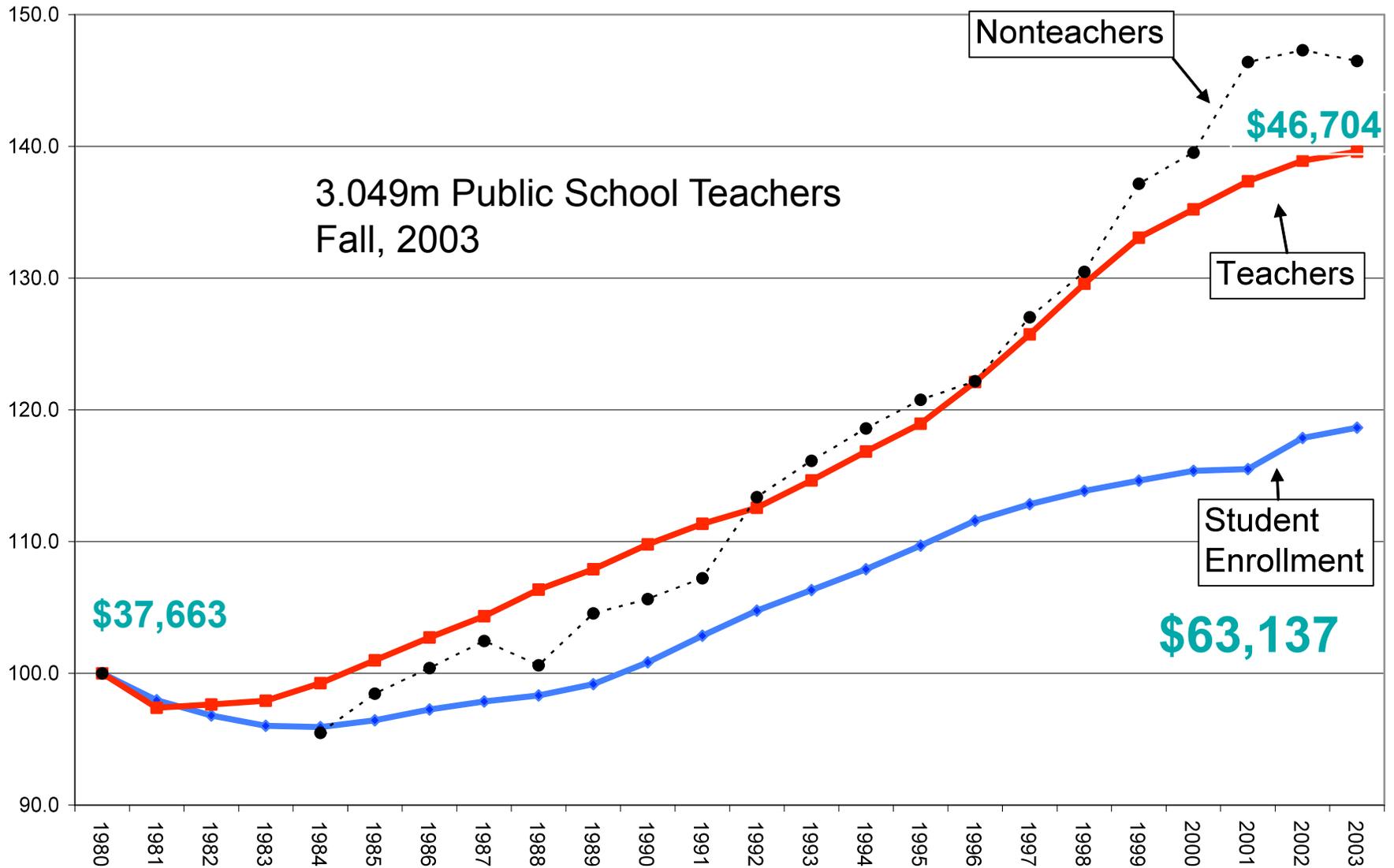
Overview

- Current Compensation
 - Quantity-Quality tradeoff
 - Single Salary Schedule
 - Field Shortages
 - Inequitable exposure to novice teachers
 - Loss of effective teachers
 - Confounding factors
 - Reforms & Research
 - Deferred Compensation (Pensions, OPEB's)

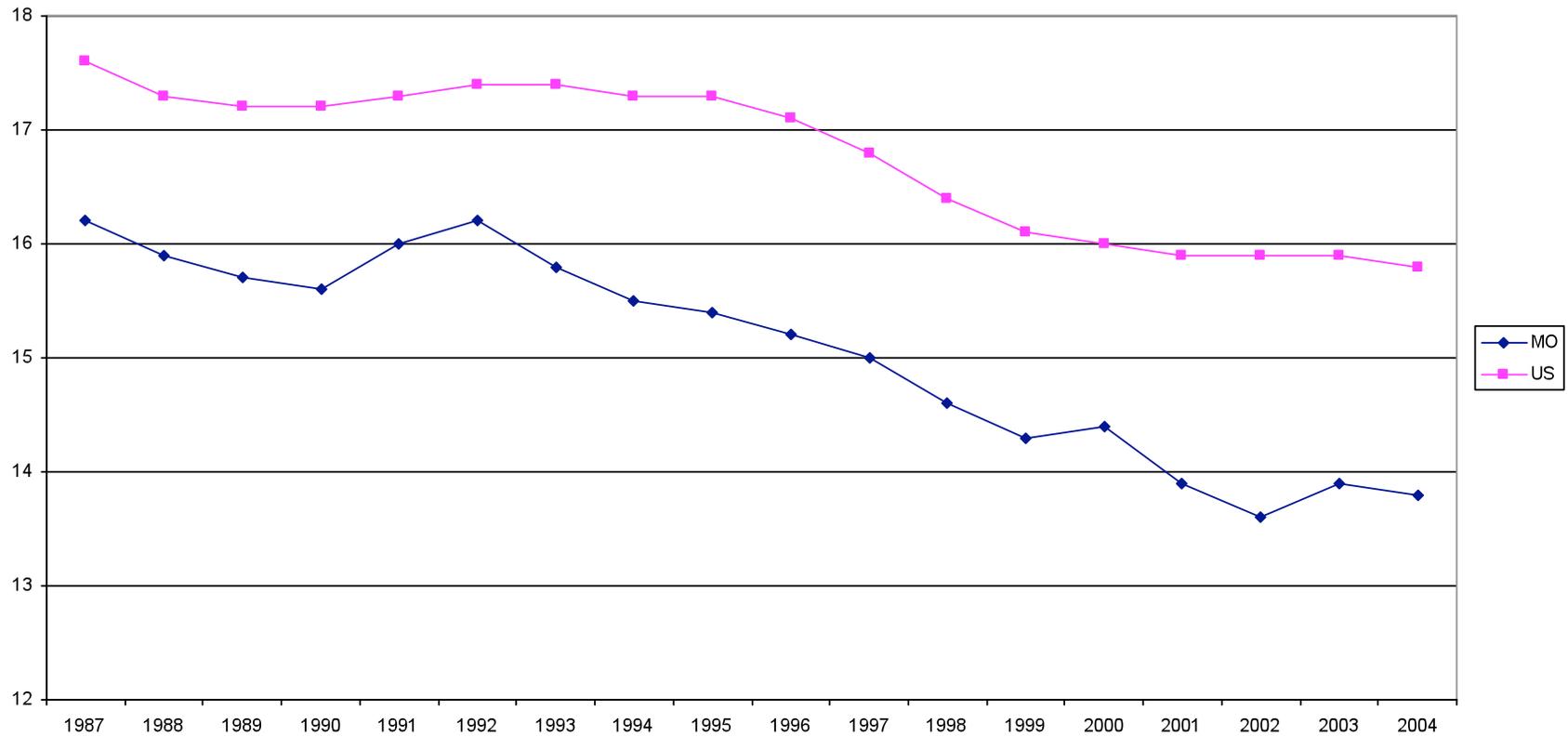
- Digression (slightly, HR strategy of districts)

Teacher Quality/Compensation Quantity-Quality Tradeoff

Student Enrollment, Teacher and Non-Teacher Employment In Public Schools: 1980 - 2003



Falling Student-Teacher Ratios U.S. and Missouri, 1987-2004



Current Compensation

- Single Salary Schedule
 - Rigid by
 - Teaching field
 - Schools within a district
 - Teaching effectiveness
- “You Can’t Repeal the Law of Supply and Demand”

Table 1

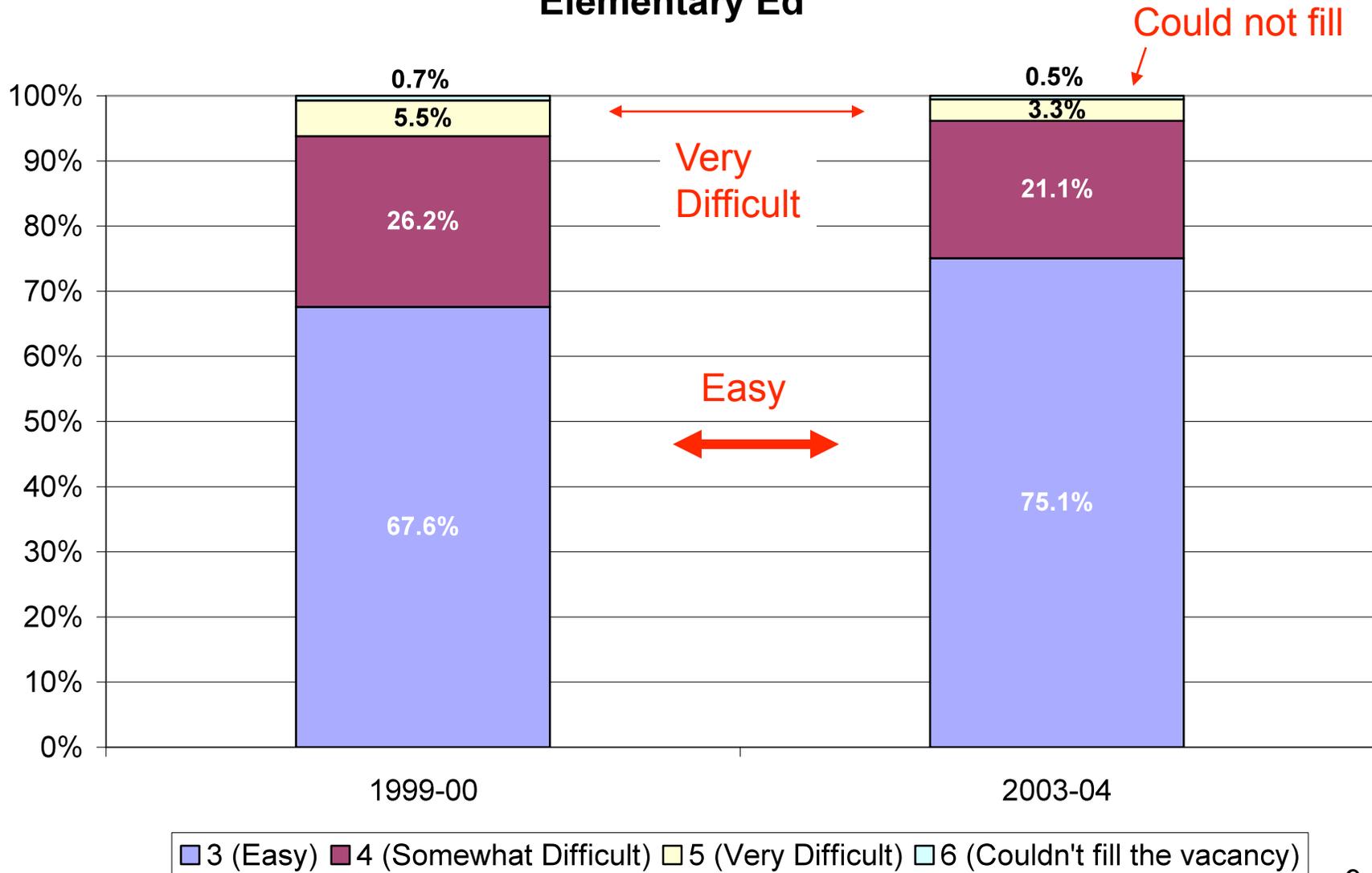
2007-08 Salary Schedule for Columbus, Ohio Public School Teachers

Years Experience	Pre-License Bachelor's Degree	Bachelor's Degree	150 Hours and Bachelor's Degree	Master's Degree	Master's Degree Plus 30 Semester Hours
0	29,313	36,779	37,844	40,788	44,220
1	30,490	38,251	39,353	42,406	43,252
2	31,703	39,795	40,935	44,098	44,981
3	32,991	41,376	42,553	45,863	46,746
4	34,278	43,031	44,282	47,702	48,622
5	35,676	44,760	46,047	49,615	50,571
6		46,525	47,886	51,601	52,594
7		48,401	49,799	53,661	54,727
8		50,350	51,785	55,794	56,897
9		52,337	53,844	58,037	59,177
10		54,433	56,014	60,354	61,531
11		56,640	58,258	62,782	63,995
12		58,883	60,575	65,283	66,570
13		61,237	63,002	67,894	69,218
14		63,701	65,540	70,616	72,013

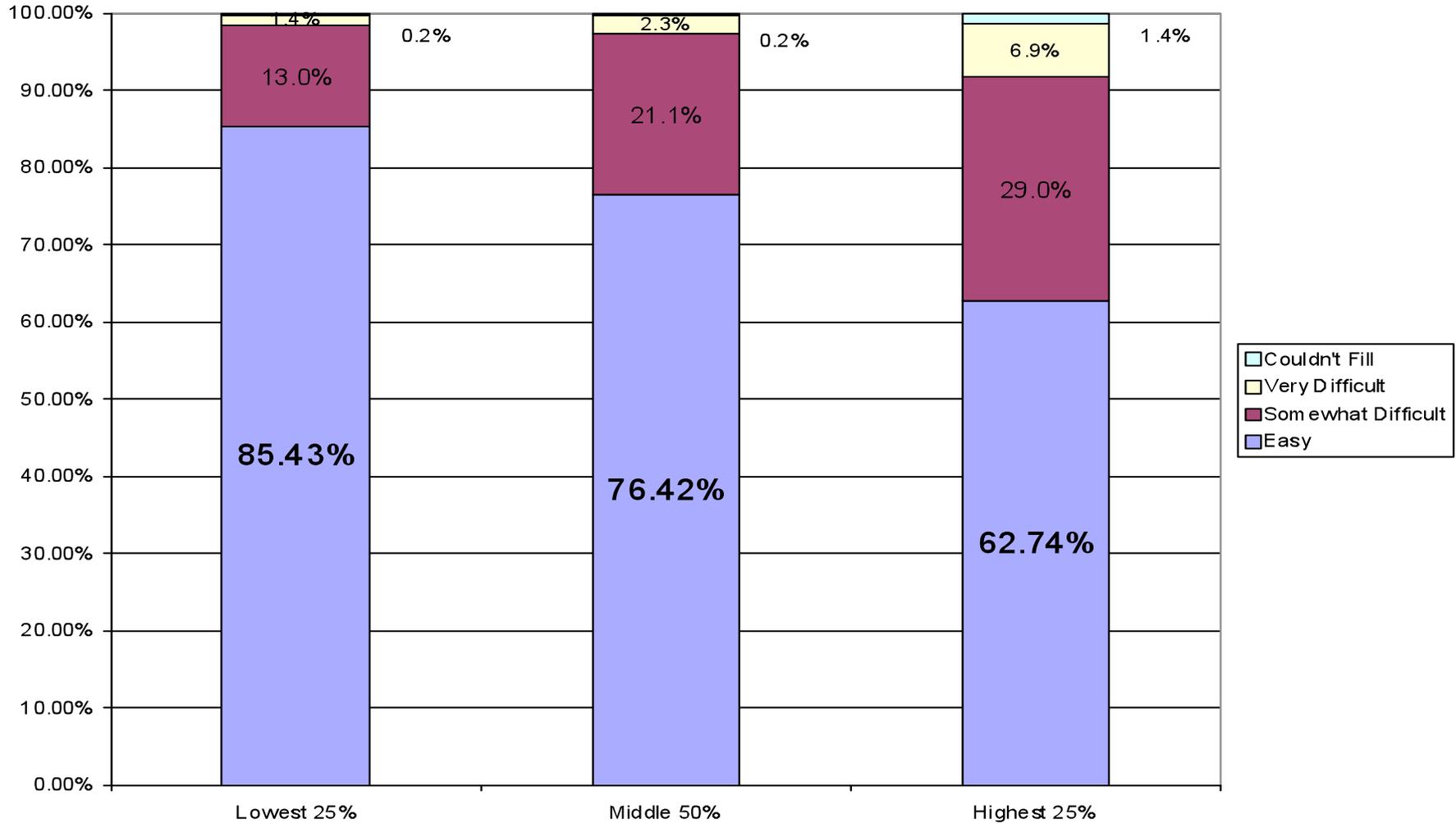
Source: http://www.ceahio.org/staticDocs/CEA_Master_Agreement_071121.pdf

By Teaching Field ...

How Difficult Was It To Fill Teacher Vacancies? Elementary Ed

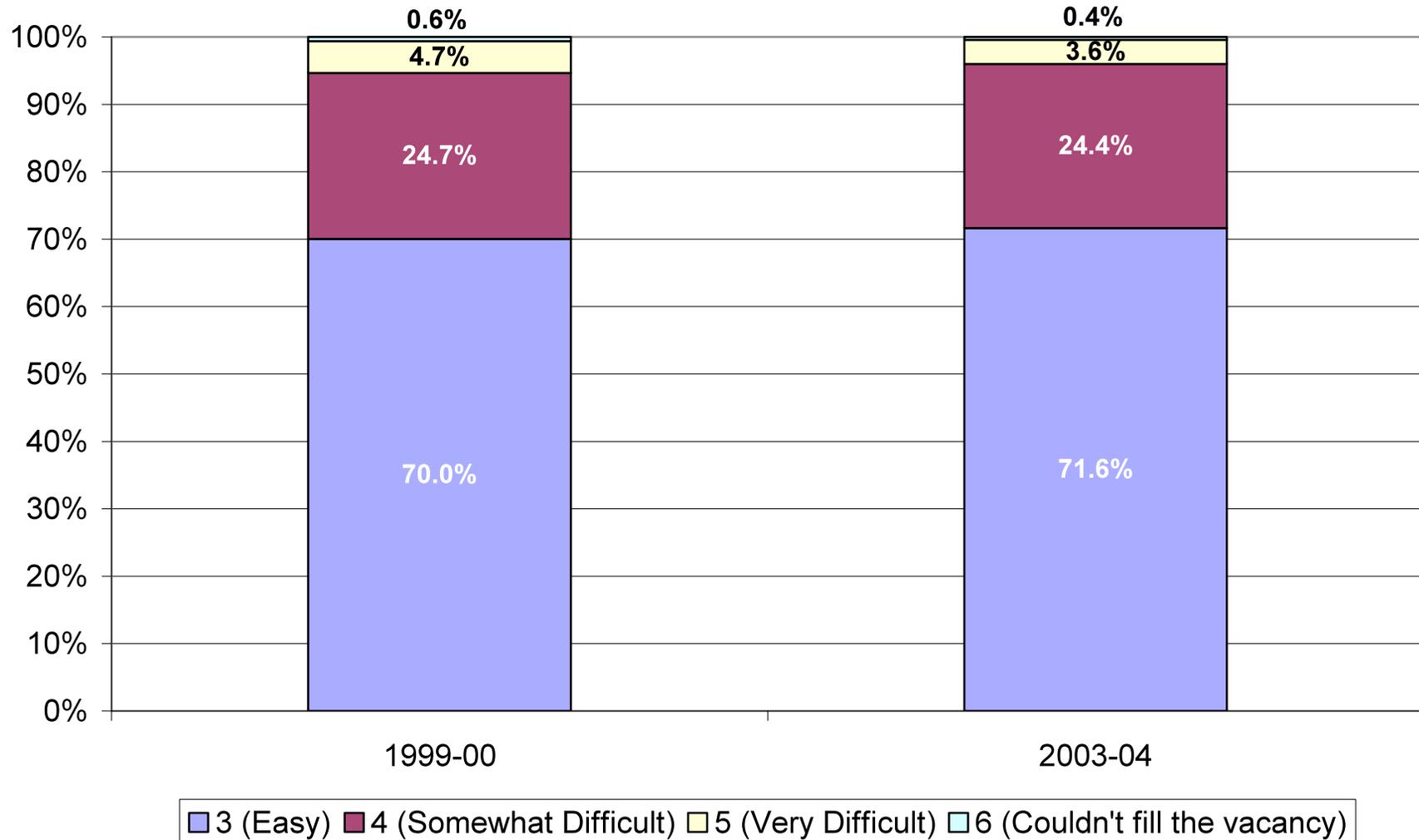


How Difficult Was It to Fill Vacancies? Elementary Education by Poverty Level



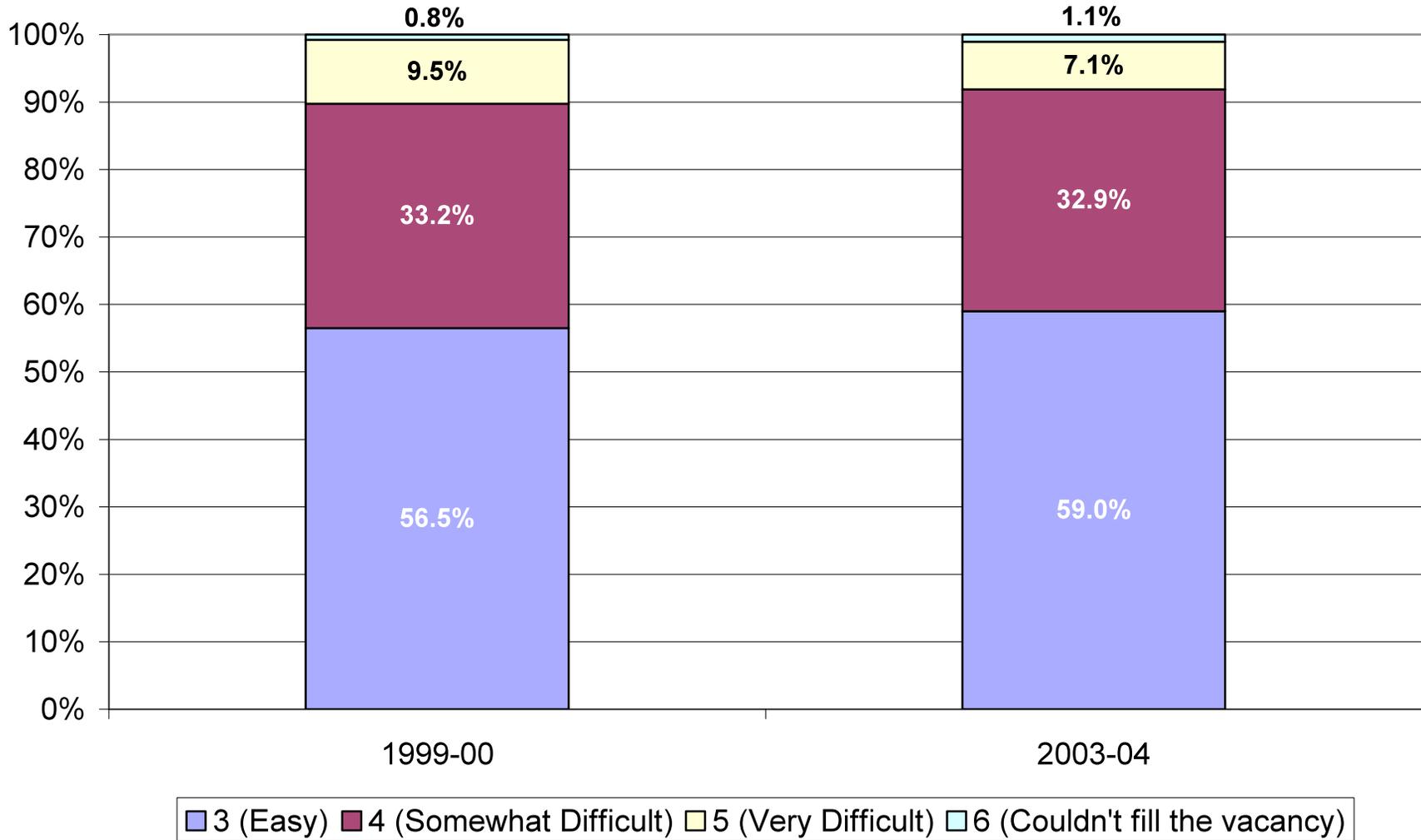
Source: 2003-04 SASS

How Difficult Was It to Fill Teacher Vacancies? Social Studies



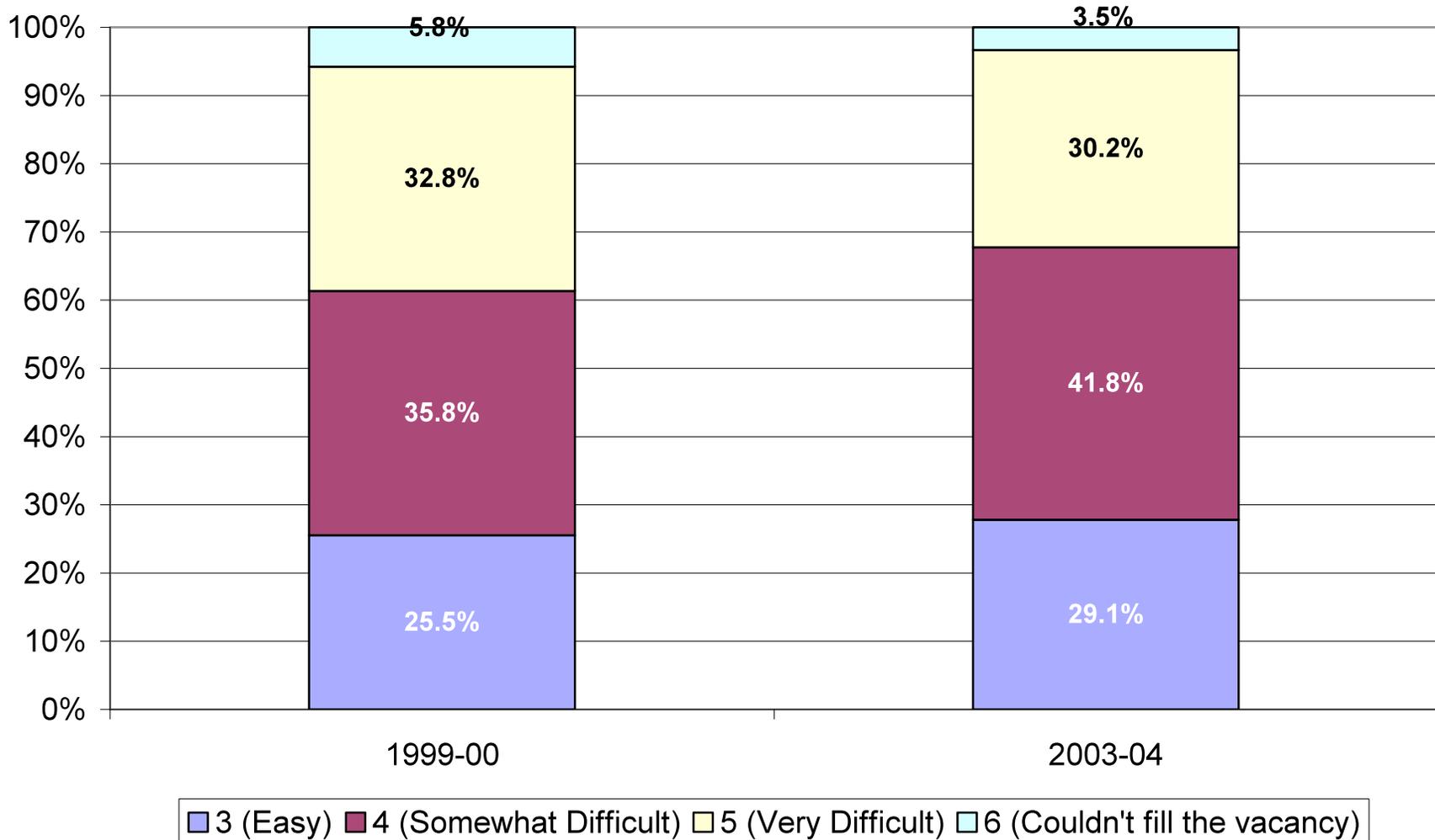
Source: Schools and Staffing Surveys, 1999-00, 2003-04

How Difficult Was It to Fill Teacher Vacancies? English/LA



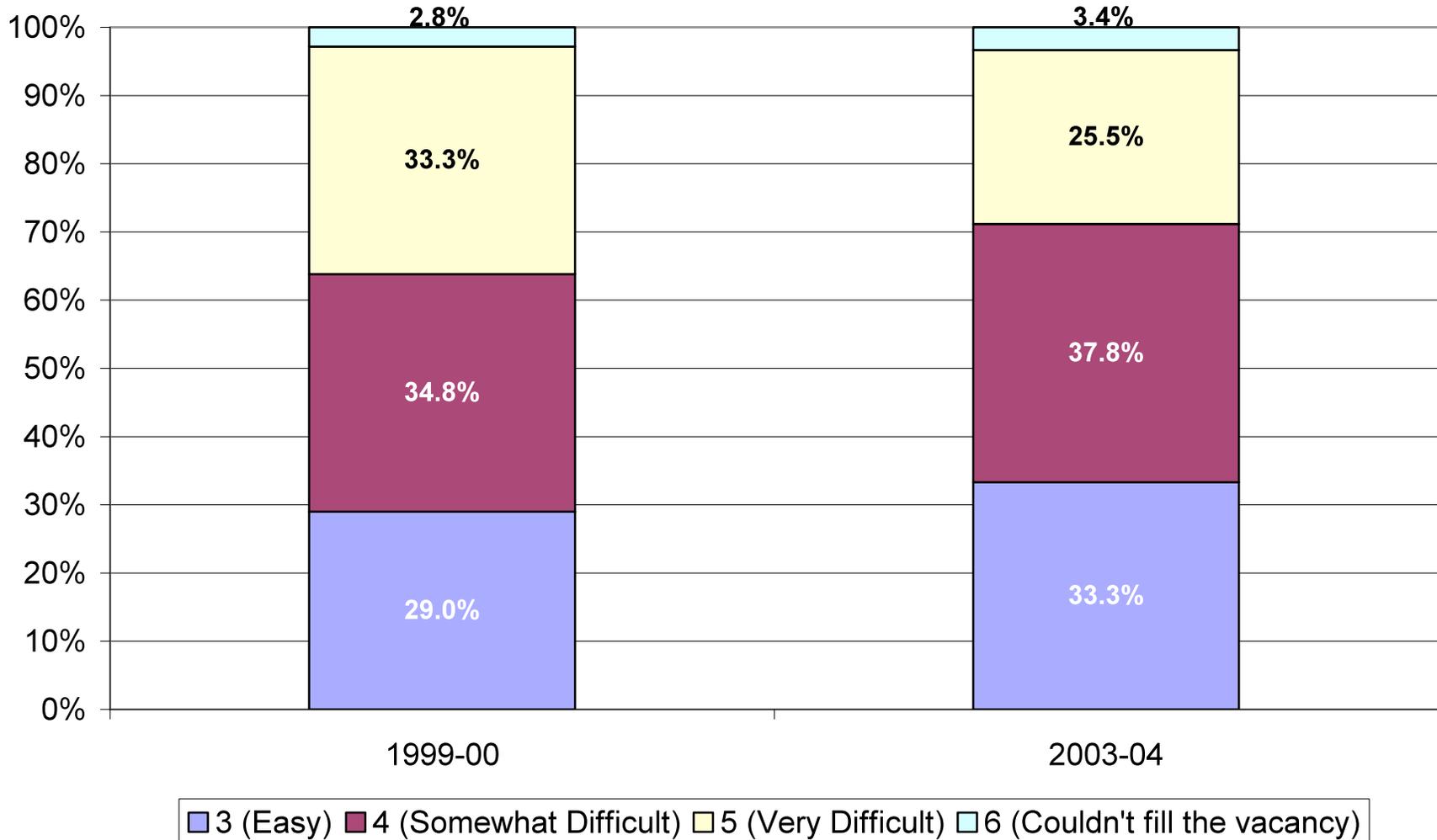
Source: Schools and Staffing Surveys, 1999-00, 2003-04

How Difficult Was It to Fill Teacher Vacancies? Special Ed



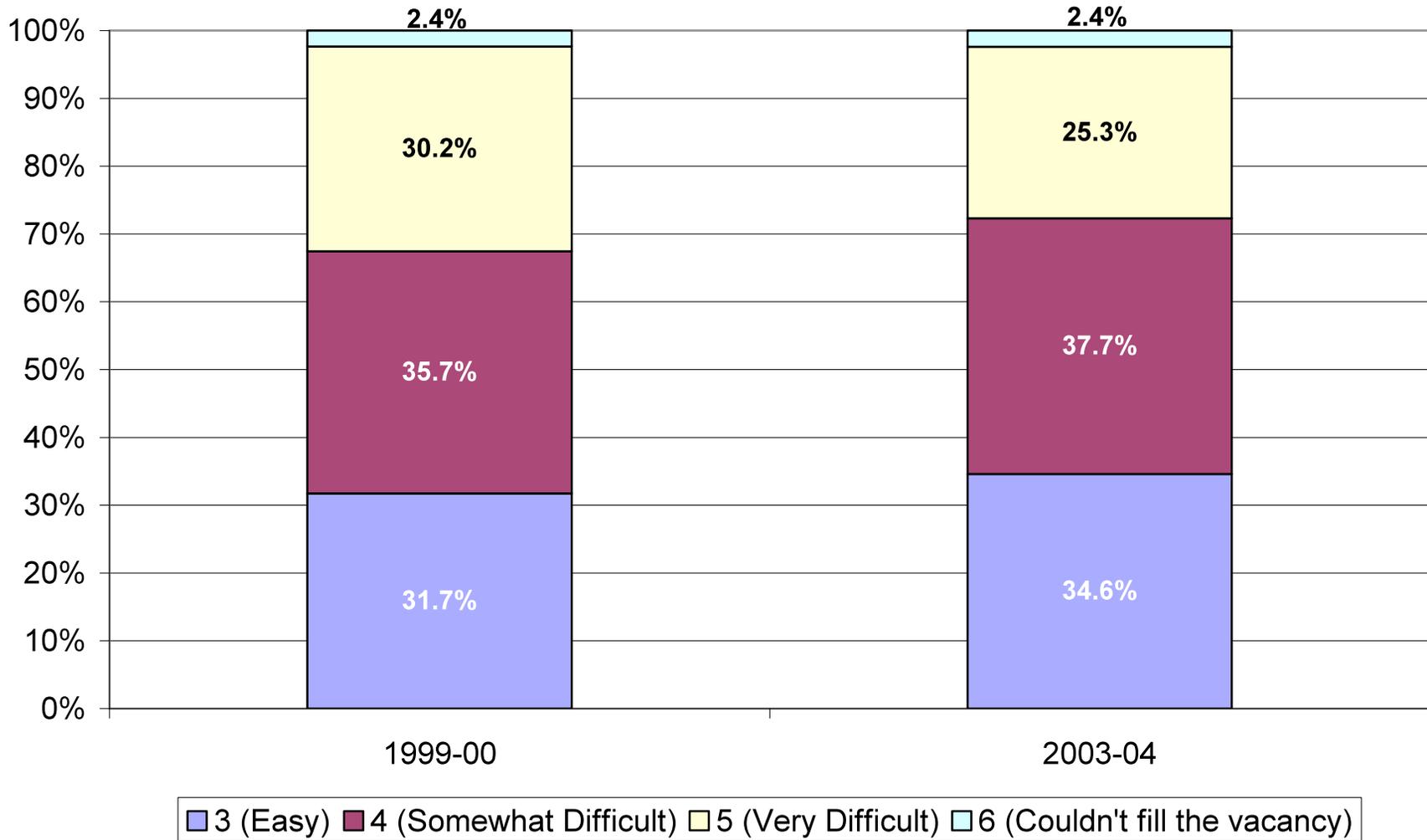
Source: Schools and Staffing Surveys, 1999-00, 2003-04

How Difficult Was It to Fill Teacher Vacancies? Math



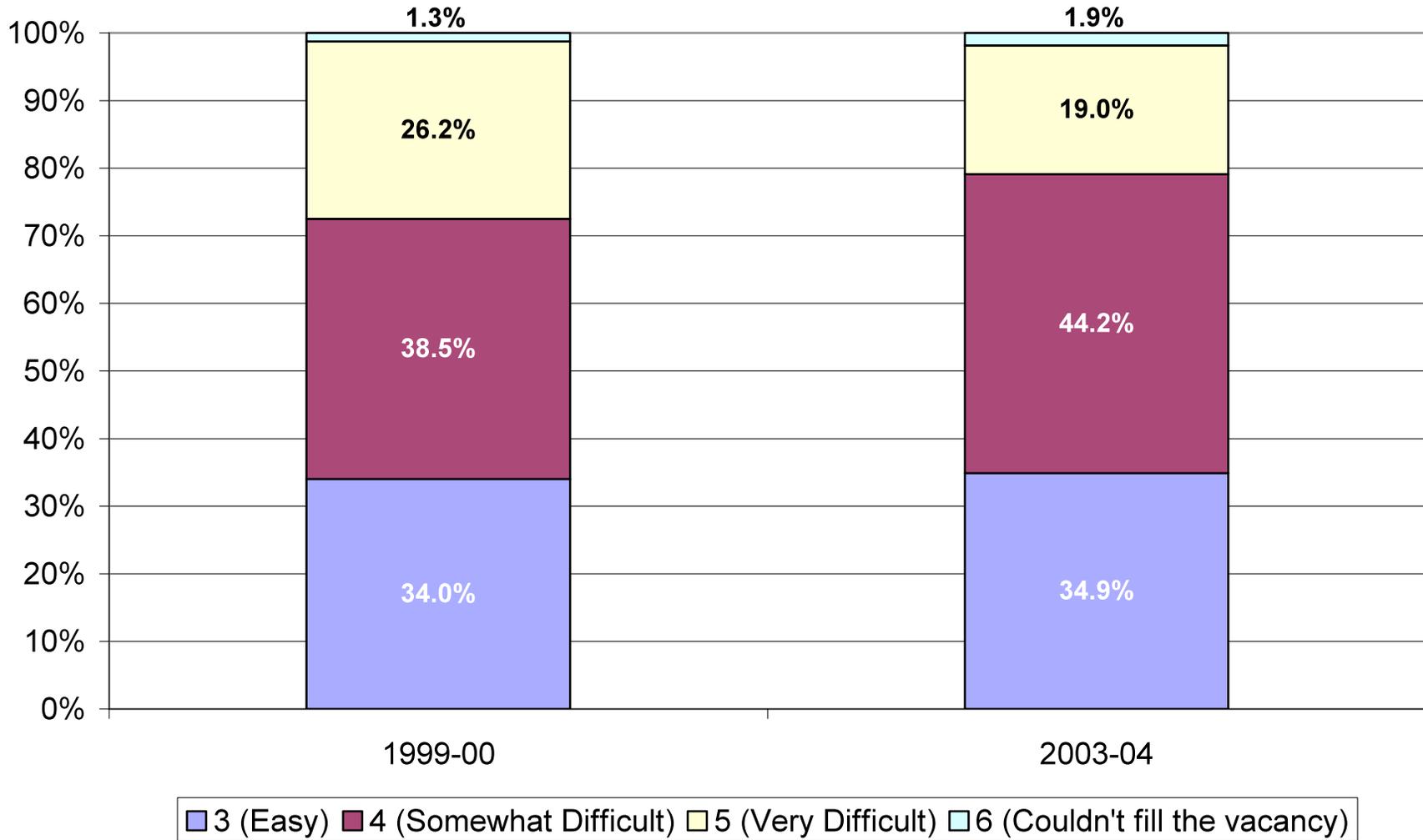
Source: Schools and Staffing Surveys, 1999-00, 2003-04

How Difficult Was It to Fill Teacher Vacancies? Physical Sciences



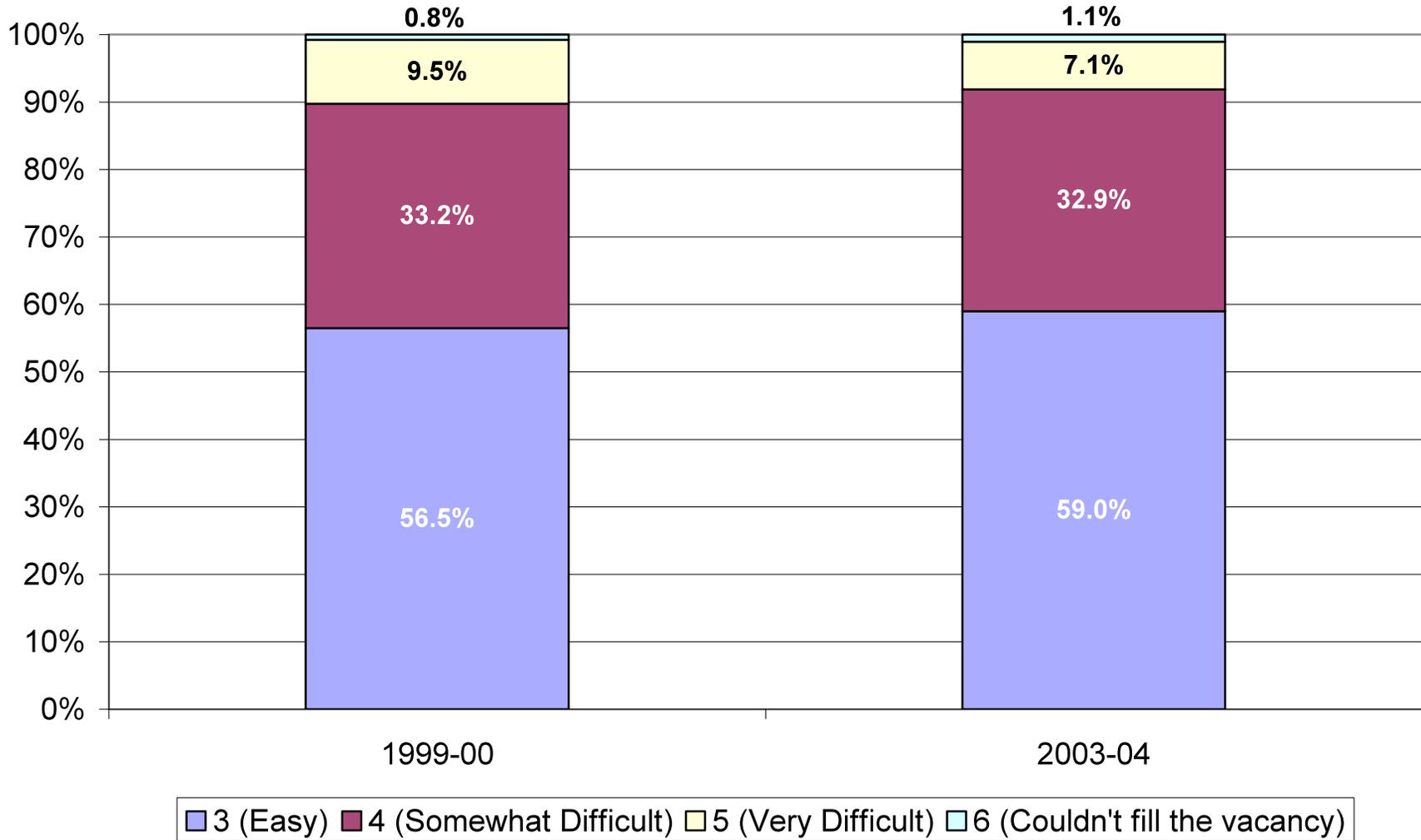
Source: Schools and Staffing Surveys, 1999-00, 2003-04

How Difficult Was It to Fill Teacher Vacancies? Biological Sciences



Source: Schools and Staffing Surveys, 1999-00, 2003-04

How Difficult Was It to Fill Teacher Vacancies? English/LA



Source: Schools and Staffing Surveys, 1999-00, 2003-04

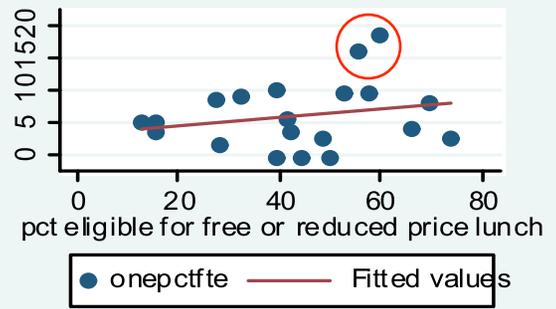
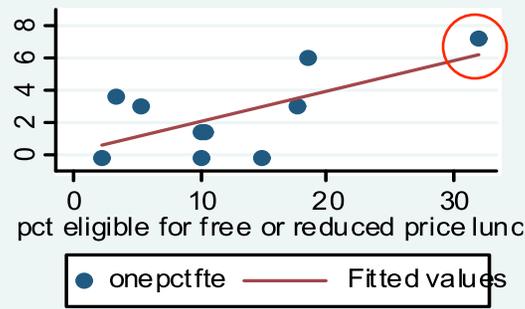
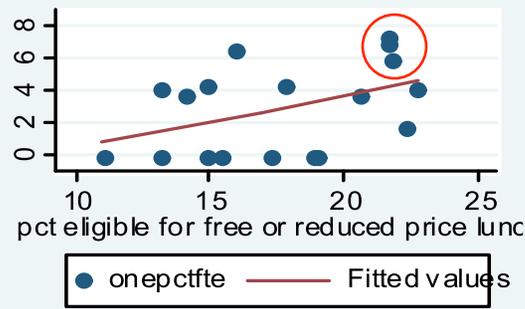
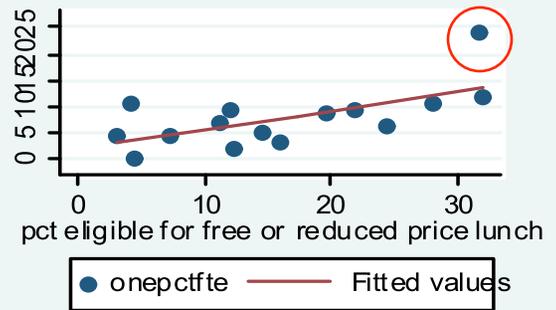
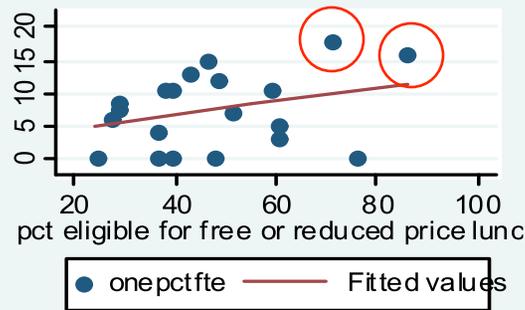
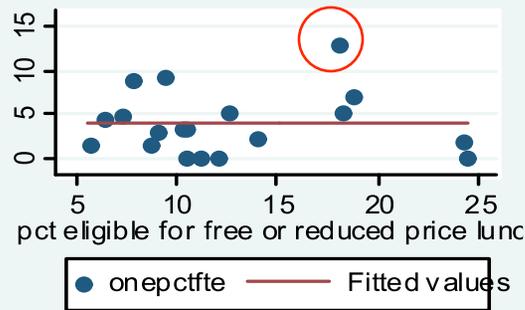
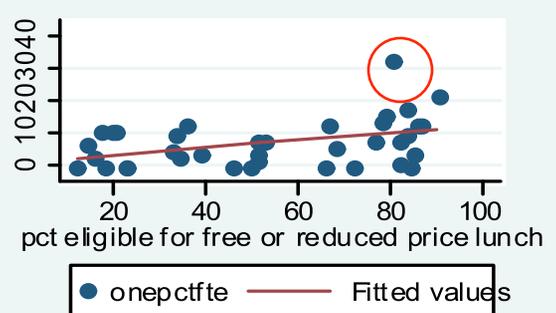
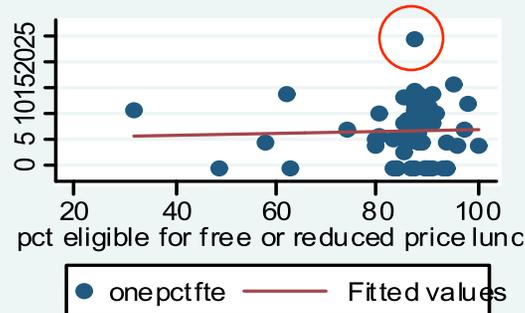
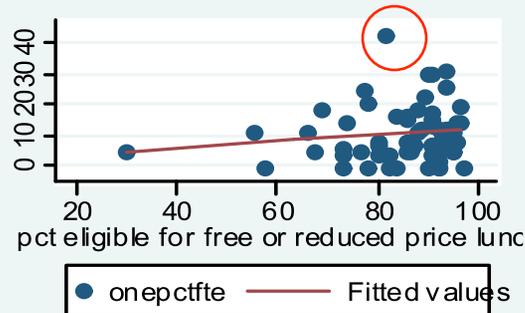
Table 5

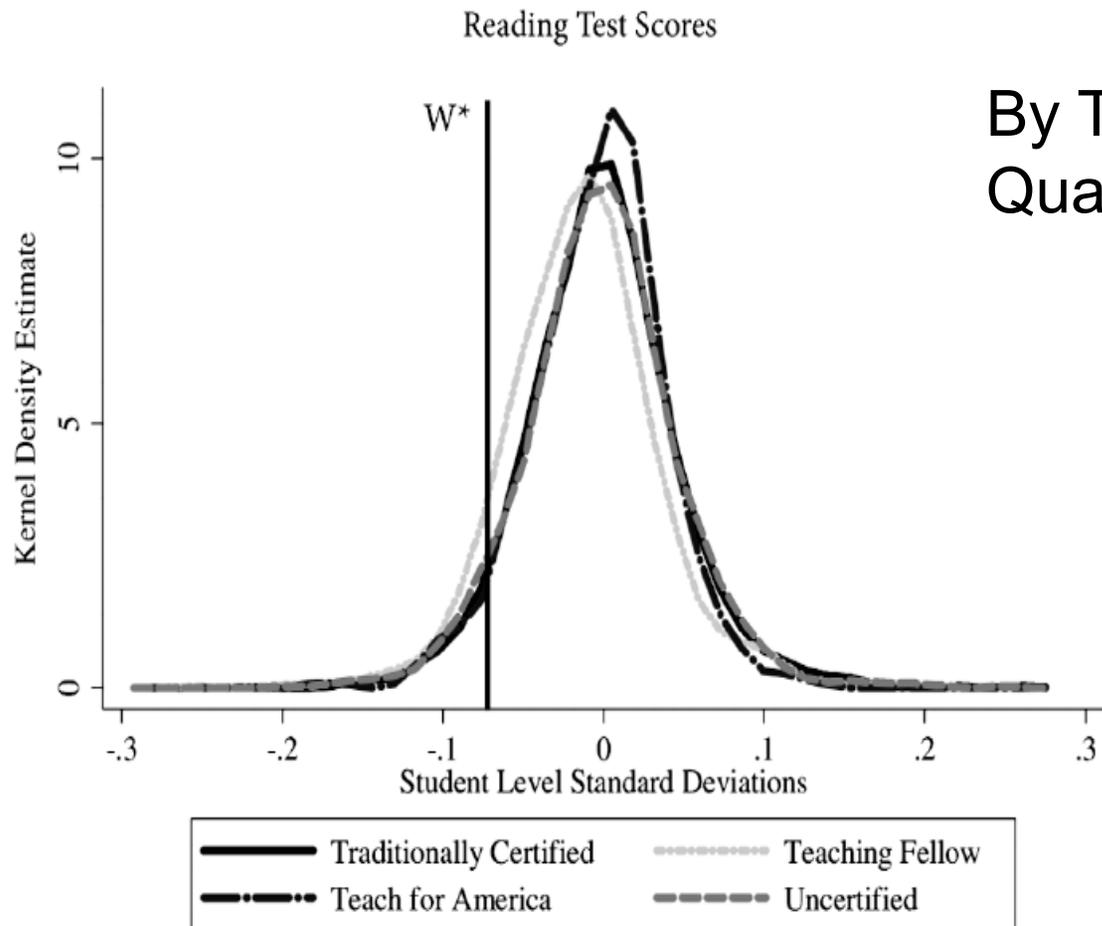
Relationship Between Percent of Teachers Inexperienced and Student Poverty:
Missouri Public Elementary Schools, 2005-06

Dep Var =	Percent First Year Teachers		Percent with Exp < 3 Years	
	OLS	FE - District	OLS	FE - District
Percent FRL Eligible in School	.051 (5.81)	.066 (4.15)	.077 (5.62)	.115 (4.42)
N Schools	1250	1250	1250	1250
N Districts	---	522	---	522

Source: Missouri Department of Elementary and Secondary Education

Percent Student Poverty and Percent Novice Teachers: Elementary Schools in Nine Largest Missouri School Districts, 2005-06





By Teacher
Quality...

Note: Shown are estimates of teachers' impacts on average student performance, controlling for teachers' experience levels and students' baseline scores, demographics and program participation; includes teachers of grades 4-8 hired since the 1999-2000 school year.

Source: Kane, Rockoff, & Staiger (2006, fig.6)

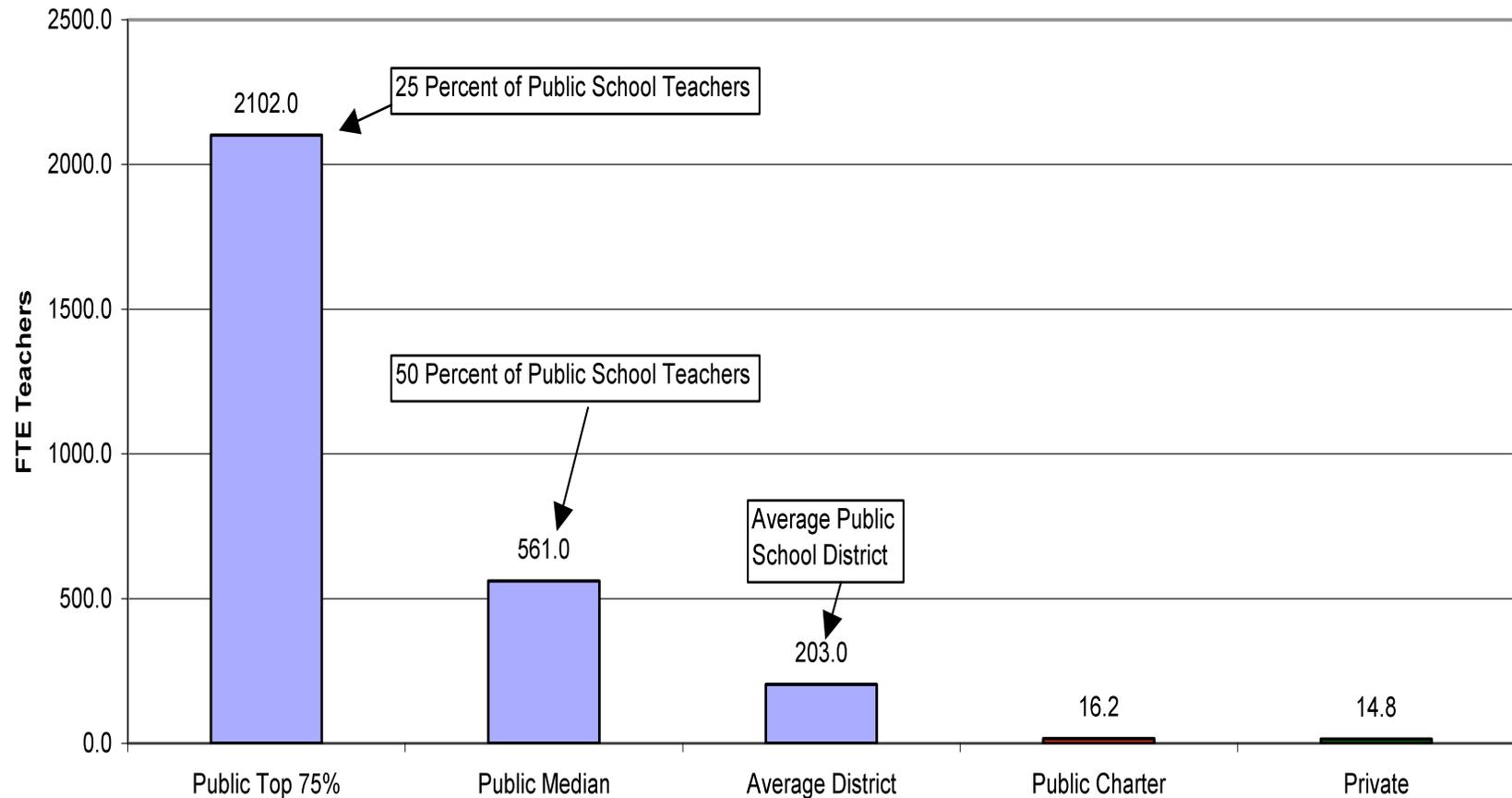
Figure 1. Variation in teacher effectiveness by type of teacher certificate: New York City Public Schools, 1998-99—2004-05.

Confounding factors

- Tenure
- Size of Wage-Setting Units

Size of Wage-Setting Units ...

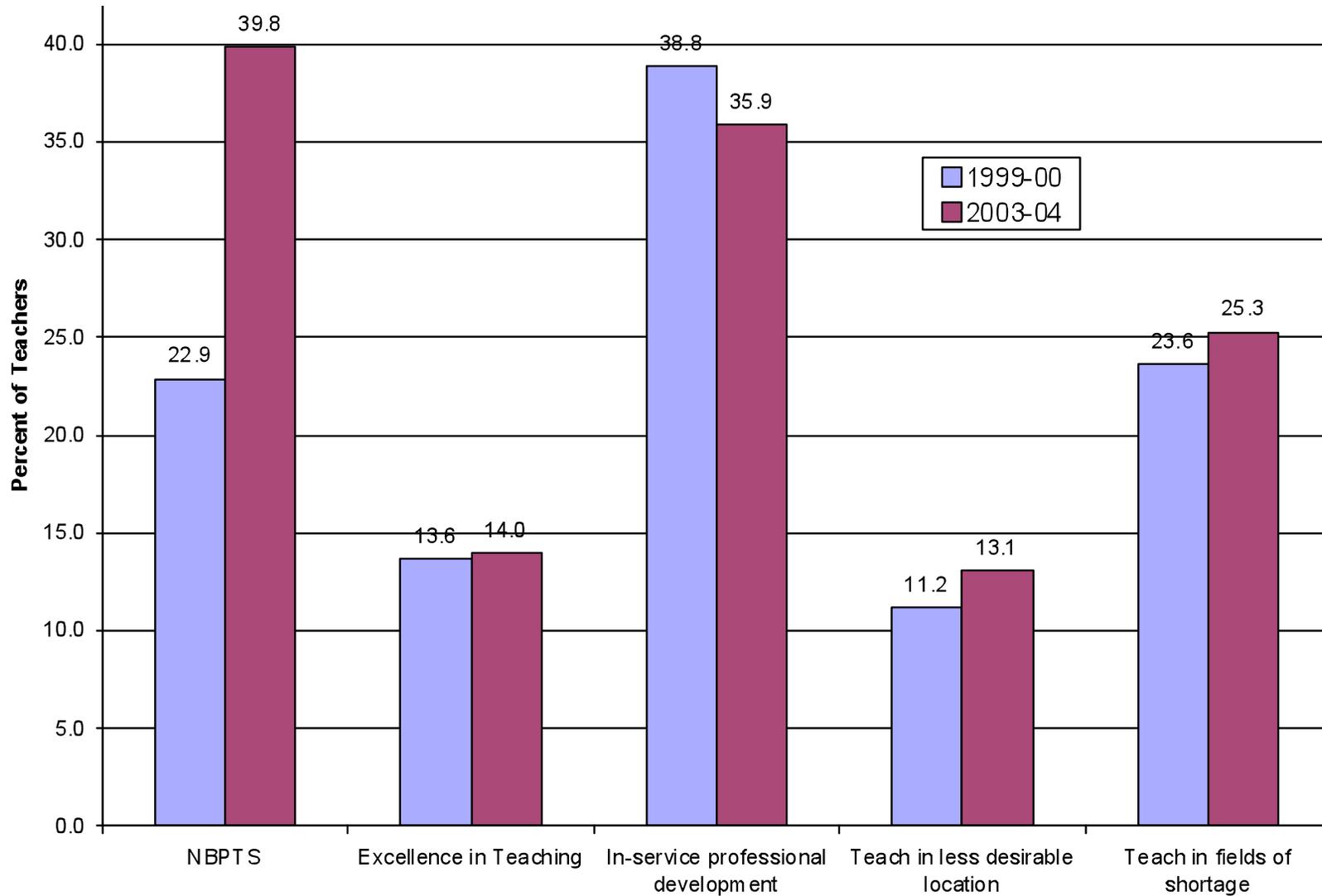
Teams Versus Bureaucracies: Size of Wage-Setting Units
In Traditional Public, Charter and Private Schools
FTE Teachers Employed



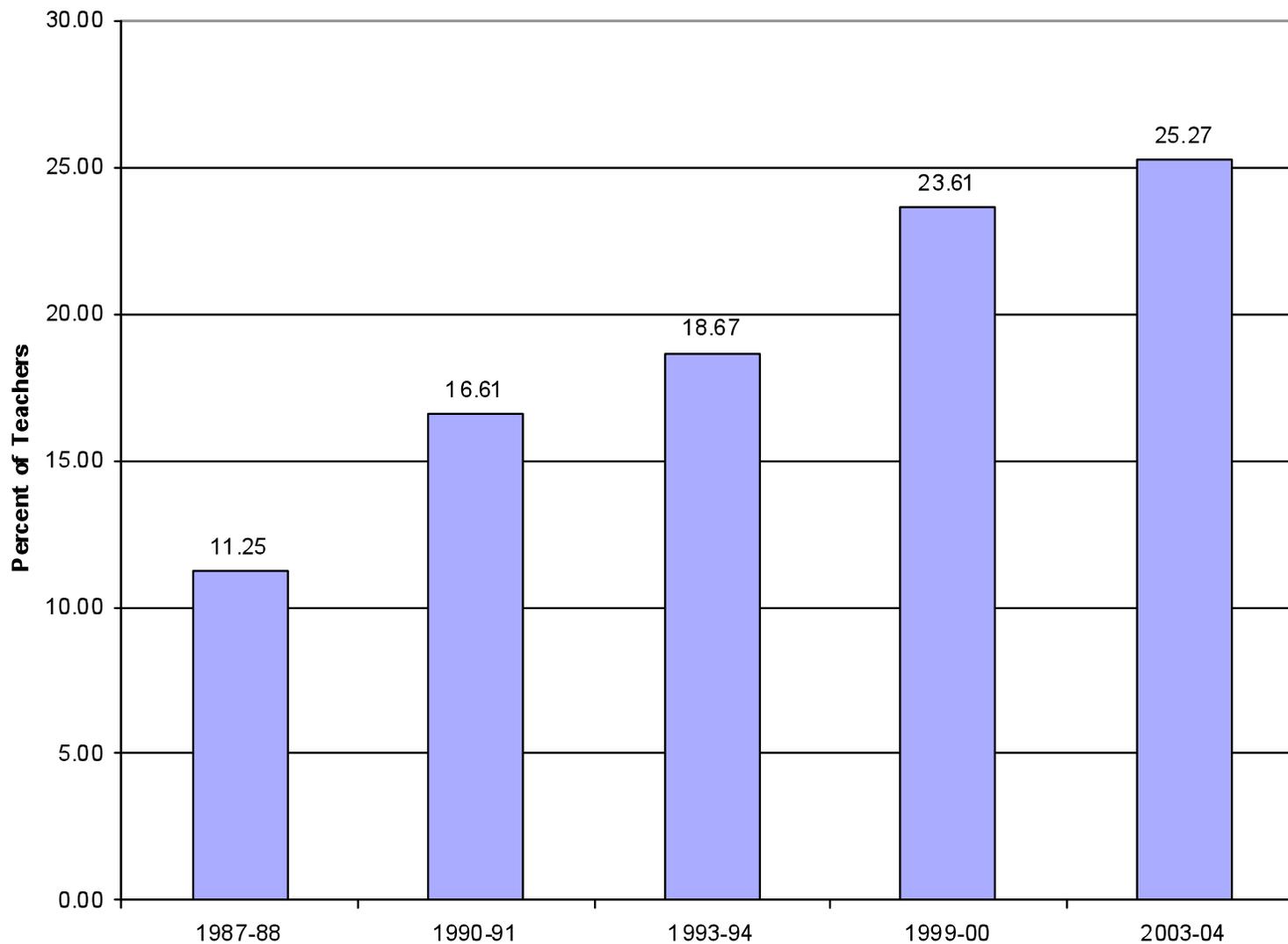
Source: U.S. Department of Education, 1999-00 Schools and Staffing Surveys

Types of Incentives

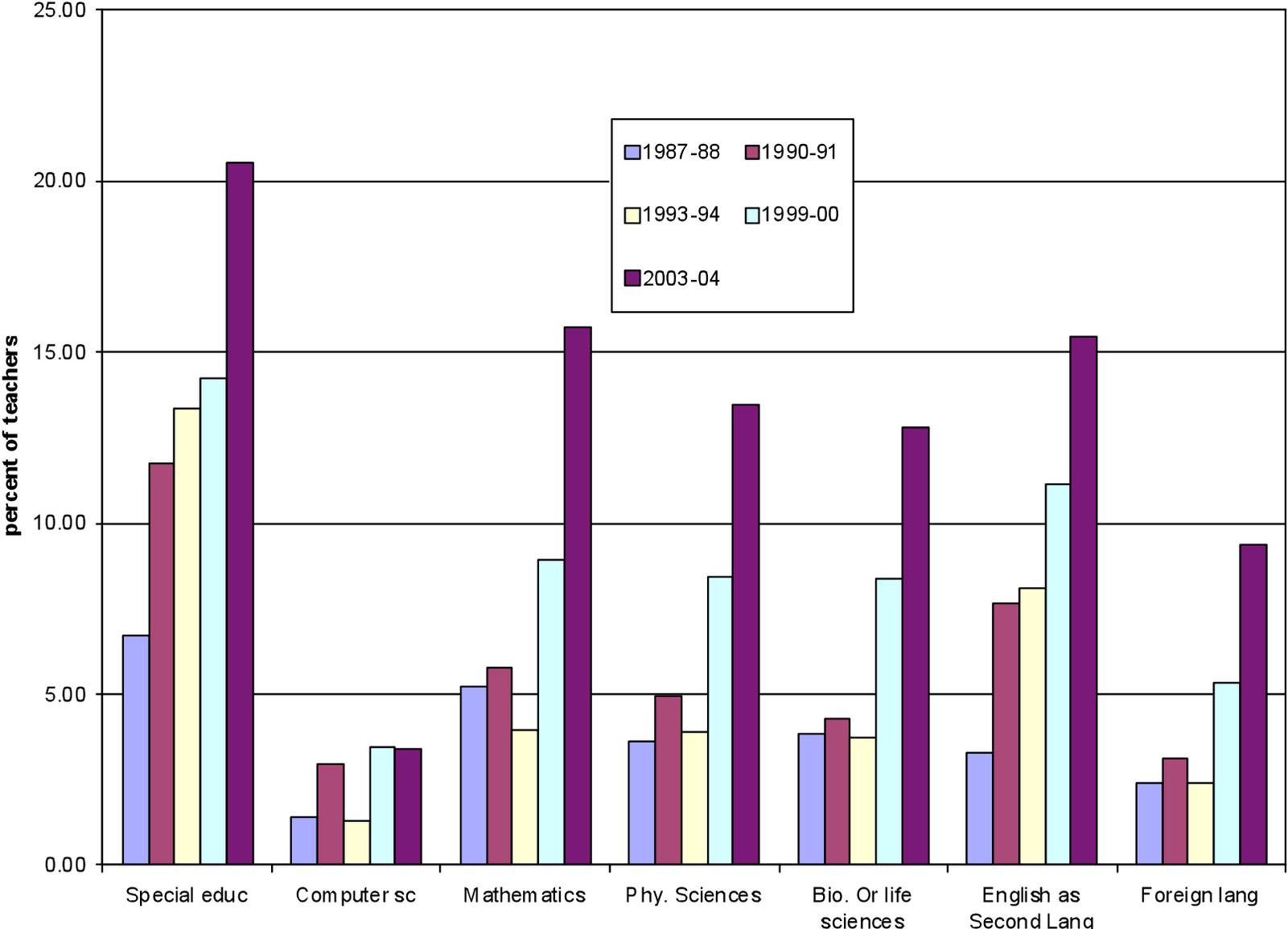
“Does the district currently use any pay incentives such as cash bonuses, a salary increase, or different steps on a salary schedule to reward ...”



Does The District Use Pay Incentives to Recruit Or Retain Teachers to Teach in Fields of Shortage?



Incentives by Teaching Field



Research Findings

- Field Differentials
- School Differentials
 - Large literature on teacher turnover and mobility (relative pay matters)
 - NC: Clotfelter, Glennie, Ladd, Vigdor (2006)
- Performance pay
 - Podgursky and Springer (2007)
 - Nashville experiment (NCPI)
 - Muralidharan and Sundararaman (2008)

Muralidharan and Sundararaman (2008)
Teacher Performance Pay: Experimental Evidence from India

		INCENTIVES (Conditional on Improvement in Student Learning)		
		NONE	GROUP BONUS	INDIVIDUAL BONUS
INPUTS (Unconditional)	NONE	CONTROL (100 Schools)	100 Schools	100 Schools
	EXTRA PARA TEACHER	100 Schools		
	EXTRA BLOCK GRANT	100 Schools		

**Total Compensation = Current
+ Deferred Compensation**

Conclusions

- “Regulatory space” & incentives for experimentation
 - NCPI, TIF
 - Retirement benefits: Cash balance, DC option
 - Math and science
- Evaluation