

# Current State K–12 Budget Drivers: Key Trends & Tradeoffs

Basic Education Finance Task Force  
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1 of 15

Overview

Experience

Grad Degree

Staff Ratios

Tradeoffs

## ✓ Teachers Matter

Research findings show a strong relationship between effective teachers and consistent test score gains of their students.

## ✓ Labor Markets Matter

Schools compete in evolving labor markets, and labor markets respond to incentives.

## ✓ Current State Budget Drivers for:

- Teacher experience and
- Teacher graduate degrees
- Staffing ratios
- Budget math: tradeoffs

2 of 15

## The State K-12 Budget

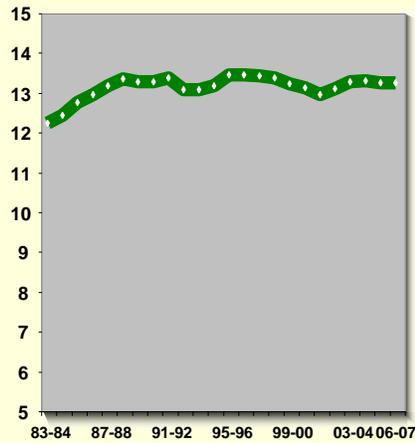
2007-09 BASIC EDUCATION PROGRAMS (Dollars in Millions)		
GENERAL APPORTIONMENT (RCW 28A.150.260)	\$8,968.6	66.3%
SPECIAL EDUCATION (RCW 28A.150.370)	\$1,112.9	8.2%
TRANSPORTATION (RCW 28A.160.150)	\$550.7	4.1%
LEARNING ASSIST. PROGRAM (RCW 28A.165)	\$189.9	1.4%
BILINGUAL (RCW 28A.180)	\$134.5	1.0%
INSTITUTIONS (RCW 28A.190)	<u>\$36.8</u>	<u>0.3%</u>
<b>SUBTOTAL: BASIC EDUCATION PROGRAMS</b>	<b>\$10,993.5</b>	<b>81.3%</b>
2007-09 NON-BASIC EDUCATION PROGRAMS (Dollars in Millions)		
STUDENT ACHIEVEMENT FUND (1-728)	\$869.8	6.4%
INITIATIVE 732 COLA (3.7%, 2.8%) & OTHER COMP	380.0	2.8%
LEVY EQUALIZATION (LEA)	414.7	3.1%
EDUCATION REFORM	265.2	2.0%
K-4 ENHANCED STAFFING RATIO	233.3	1.7%
HEALTH CARE BENEFIT INCREASES	66.4	0.5%
TWO LEARNING IMPROVEMENT DAYS	66.0	0.5%
SALARY EQUITY INCREASES (2007-09)	64.2	0.5%
PROMOTING ACADEMIC SUCCESS	49.0	0.4%
STATEWIDE PROGRAMS/ALLOCATIONS	41.7	0.3%
STATE OFFICE & ED AGENCIES	33.5	0.2%
HIGHLY CAPABLE	17.2	0.1%
EDUCATIONAL SERVICE DISTRICTS	16.0	0.1%
FOOD SERVICES	6.3	0.0%
SUMMER & OTHER SKILLS CENTERS	5.7	0.0%
PUPIL TRANSPORTATION COORDINATORS	1.7	0.0%
<b>SUBTOTAL: NON-BASIC EDUCATION PROGRAMS</b>	<b>\$2,530.6</b>	<b>18.7%</b>
<b>TOTAL - STATE FUNDS</b>	<b>\$13,524.1</b>	<b>100.0%</b>

## Key Budget Drivers: The Salary Allocation Model (SAM)

Table Of Total Base Salaries For Certificated Instructional Staff  
For School Year 2007-08

Years of Service	Degrees								
	BA	BA+15	BA+30	BA+45	BA+90	BA+135	MA	MA+45	MA+90 OR Ph.D.
0	32,746	33,630	34,547	35,465	38,412	40,310	39,260	42,207	44,107
1	33,187	34,083	35,011	35,970	38,948	40,836	39,696	42,674	44,560
2	33,607	34,512	35,450	36,483	39,452	41,359	40,135	43,104	45,012
3	34,039	34,953	35,901	36,967	39,930	41,884	40,552	43,513	45,468
4	34,464	35,418	36,372	37,474	40,455	42,423	40,988	43,969	45,938
5	34,902	35,861	36,824	37,988	40,958	42,965	41,432	44,403	46,410
6	35,353	36,291	37,287	38,508	41,464	43,482	41,887	44,843	46,860
7	36,145	37,097	38,106	39,394	42,393	44,467	42,739	45,737	47,812
8	37,304	38,308	39,340	40,735	43,775	45,925	44,079	47,120	49,269
9		39,562	40,646	42,091	45,202	47,425	45,434	48,547	50,770
10			41,967	43,516	46,669	48,966	46,861	50,014	52,310
11				44,984	48,204	50,547	48,328	51,550	53,891
12				46,404	49,781	52,194	49,853	53,126	55,540
13					51,397	53,882	51,431	54,741	57,226
14					53,020	55,632	53,056	56,471	58,977
15					54,400	57,080	54,435	57,939	60,511
16 or more					55,487	58,220	55,523	59,097	61,720

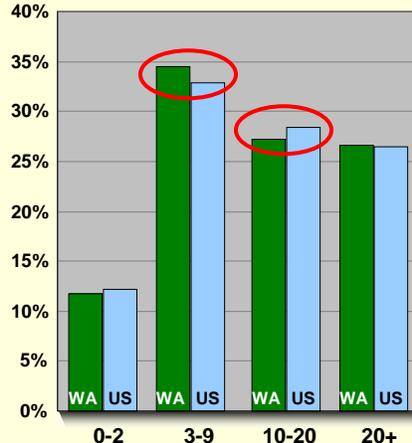
### Average Years of Experience Among Washington State Teachers: 1983 to 2007



School Year

Source: OSPI S275

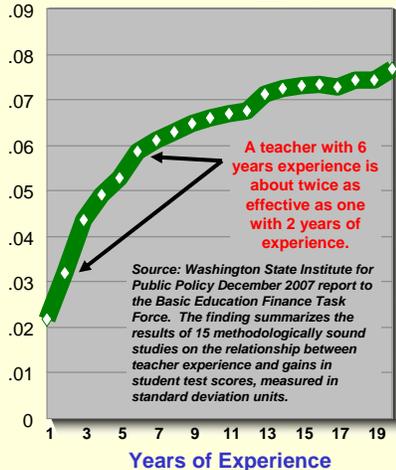
### Compared to United States: The Distribution of Experience in the Teacher Labor Forces, 2004



Years of Experience

Source: NCES, Schools & Staffing Survey

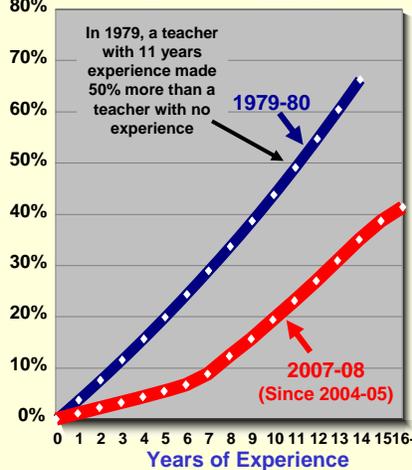
### Teacher Effectiveness (in improving student test scores) By Years of Experience



Source: Washington State Institute for Public Policy December 2007 report to the Basic Education Finance Task Force. The finding summarizes the results of 15 methodologically sound studies on the relationship between teacher experience and gains in student test scores, measured in standard deviation units.

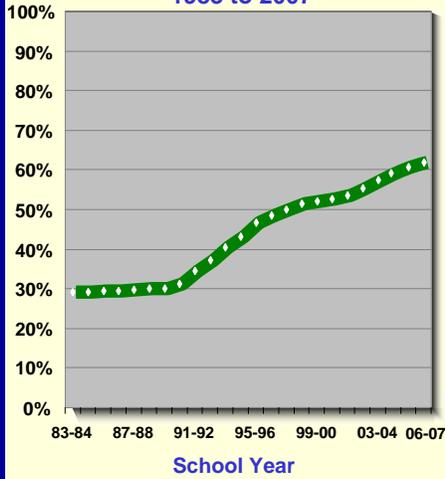
Years of Experience

### Salary Incentives For Teacher Experience In the SAM: 1979 to 2009



Years of Experience

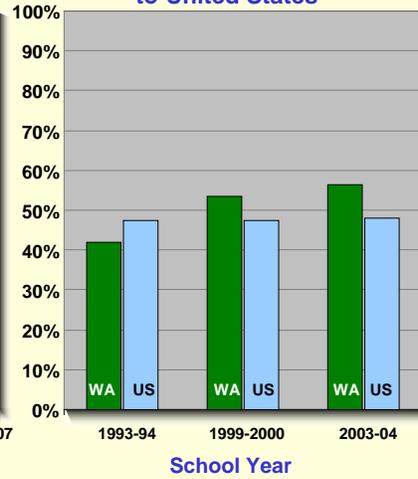
### Percent of Teachers With a Masters Degree (or More): In Washington: 1983 to 2007



School Year

Source: OSPI S275

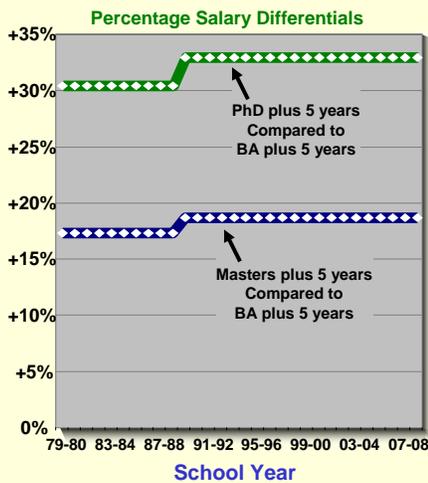
### Washington Compared to United States



School Year

Source: NCES, Schools & Staffing Survey

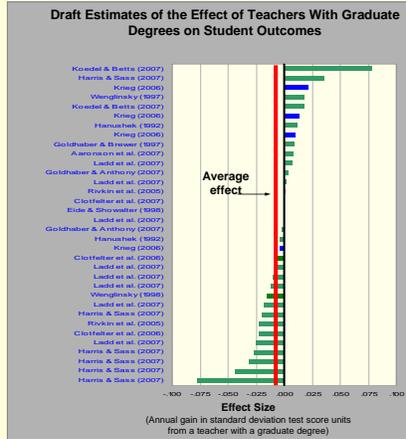
### Salary Incentives For Teacher Degrees In the SAM: 1979 to 2009



School Year

## Teacher Effectiveness and Graduate Degrees

*Do Teachers with Graduate Degrees, Compared to Teachers with a BA, Improve Student Outcomes?*



### Research Method

We located and meta-analyzed 34 results from 13 high quality studies on this topic.

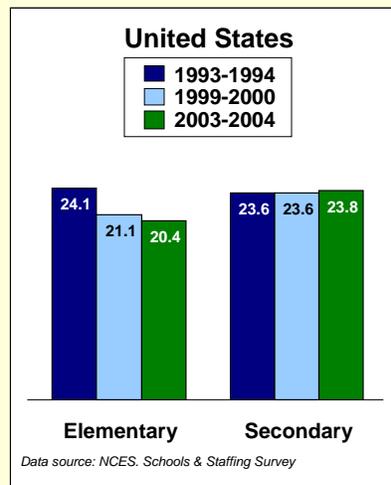
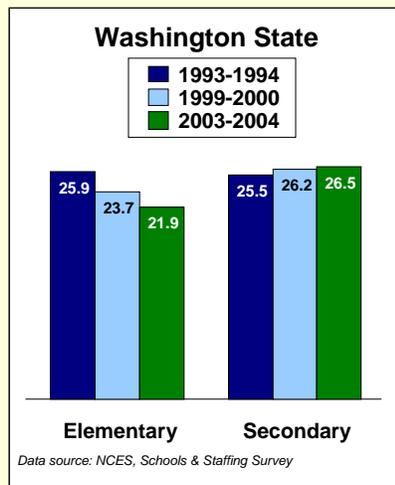
### Preliminary Finding

No. Teachers with a graduate degree do not improve student test scores more than teachers with a BA.

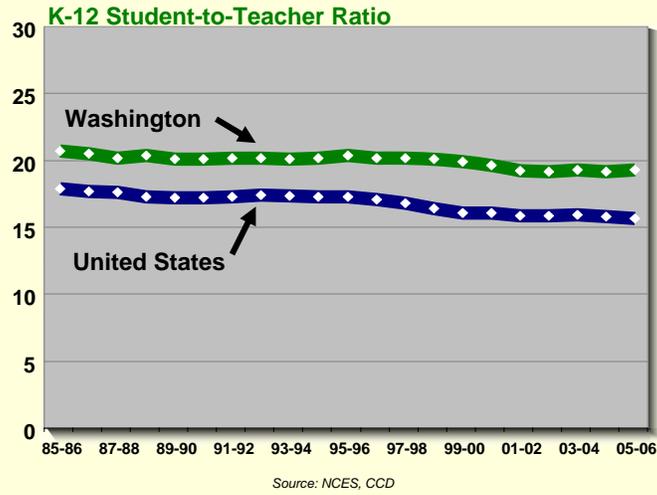
We are investigating whether in-subject graduate degrees affect outcomes.

## Class Size

Washington and the United States: Three Snapshots

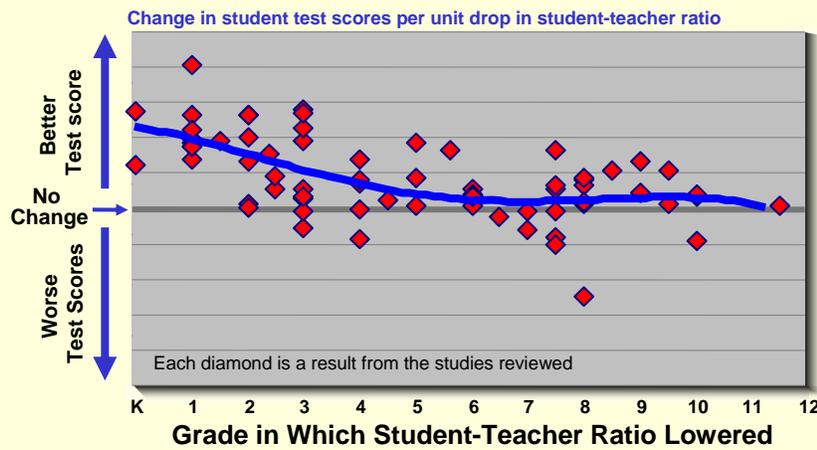


**Student-to-Teacher Ratios (Not Class Size)**  
 Washington and the United States: 1985-86 to 2005-06



**Do Reduced Student-Teacher Ratios Increase Test Scores?**

The results of 38 statistically-sound studies (with 69 grade-level tests) of the effect of lower student-teacher ratios on test-score outcomes



\* Effect Size Metric: the change in the standard deviation of test scores on standardized tests.

**Budget Algebra**

**The Tradeoff Between Two Budget Drivers:  
Student-Teacher Ratios and Teacher Base Salaries**

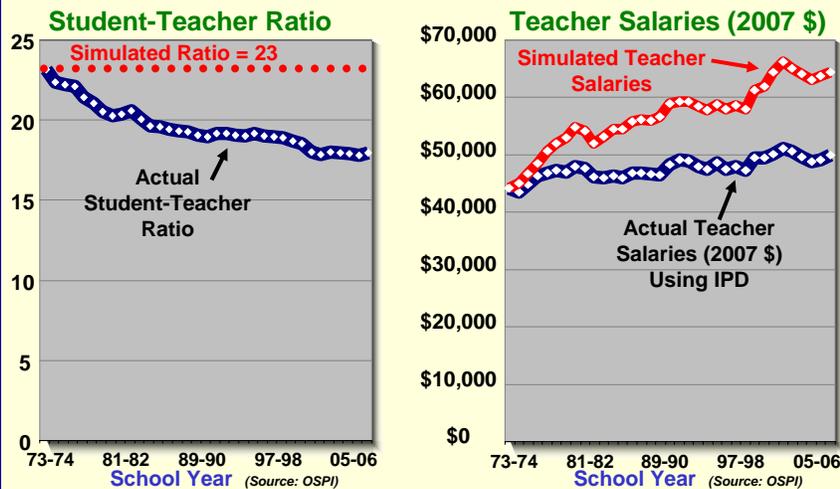
(1) **Total State Budget for Teachers** = **Average Teacher Salary** X **Number of Teachers**

(2) **Number of Teachers** =  $\frac{\text{Student Enrollment}}{\text{Student-to-Teacher Ratio}}$

(3) **Average Teacher Salary** =  $\frac{\text{Total State Budget for Teachers} \times \text{Student-to-Teacher Ratio}}{\text{Student Enrollment}}$

**Budget Simulation—1973 to 2007**

**The Tradeoff Between Two Budget Drivers:  
Student-Teacher Ratios & Teacher Base Salaries**



## Conclusions

**If the Task Force keeps elements of an input-based State K-12 financing system, then, to improve student outcomes...**

- ✓ The incentive structure for teacher experience should be changed,
- ✓ Policies regarding rewards for graduate degrees should be changed, and
- ✓ Tradeoffs between student-staff ratios and the level of teacher salaries should be recognized.