

This CTP Brief is based on an article published in *The Journal of Education Finance*:

School District Spending on Professional Development: Insights Available from National Data (1992-1998)

Summer 2002

Kieran M. Killeen
University of Vermont
David H. Monk
Pennsylvania State University
Margaret L. Plecki
University of Washington

With permission from The Association of School Business Officials International, this original article can be downloaded from the "Related Articles & Books" section of the Publications page on the CTP web site, <http://www.ctpweb.org>. This CTP Brief can also be downloaded from the CTP web site.

What School Districts Spend on Professional Development

Two surprising findings emerge from an analysis of available data on the financing of teacher professional development in this country. One, the average school district expenditure on professional development is at the high end of previous estimates, about 3% of total expenditures rather than the sometimes-cited 1%. Two, during a period when the quality of teaching and professional development needs became a priority of policymakers and school leaders, average expenditures increased only slightly. Seventeen states actually reported a decrease.

The research focused on current expenditure patterns, not on the issue of what are appropriate spending levels. It drew from data gathered in 1992, 1995, and 1998 by two national surveys of public school districts. These were: the school district finances portion of the U.S. Census Bureau's Survey of Local Government Finances; and the Common Core of Data compiled by the National Center for Education Statistics.

Selecting data sources on professional development presents both conceptual as well as operational difficulties. School districts, for example, may not be the principal provider of professional development. States and their agencies often conduct professional development, yet the unit of accounting usually depends on the school district for analysis. Some calculations include teacher salary increments given for professional development. The full cost of professional development may include intangible elements, such as the loss of instructional time due to "early release" days or to other professional development activities.

What the Literature Says About the Cost of Professional Development

Other researchers have noted that the literature on the expenditure for professional development is scarce and inconclusive. The most comprehensive statewide study covered only 30 districts (in California). Most studies have focused on a single district, leaving open the question of whether the findings are representative of other districts, states, or the nation as a whole.

While these studies fail to establish the average levels of expenditures, they still are useful. They show that professional development costs are likely to be well under 10% of a school district's budget. Moreover, district expenditures differ internally and in comparison with other districts within a state. And, geography plays a role in what is spent on professional development, reflected in both inter- and intra-state expenditures and between urban and rural districts.

Definitions and Methodology Used in the Study

The study adopted a definition of "instructional staff support" used by the Census Bureau. This takes in a range of professional development, regardless of the source of funding, and is defined as: Supervision of instruction service improvements, curriculum development, instructional staff training, and media, library, audiovisual, television, and computer assisted instruction services.

Similarly, the NCES data used cover two main categories: improvement of instruction services (including the elements in the Census Bureau data above) and educational media services. The latter category emphasizes costs associated with preparing audiovisual and other media for use by staff and students, not on training of instructional staff to use the resources or on textbooks.

Including media support complements progress made by finance researcher Jennifer King Rice in developing a broader cost accounting model for teacher staff development. The model builds on emerging conceptions of how staff improvement resources are allocated, such as providing time for teachers to do joint planning and to analyze and discuss test data. Until the true cost of newer forms of professional development is known, the Census Bureau and NCES amalgam of instructional and media support will have to suffice.

The research also selected only standard operating school districts and eliminated four states from the study (California, Michigan, Nebraska, and North Dakota) because of their higher level of missing data. Additional states were not included in the longitudinal findings because their data were incomplete for some of the years used in the study.

The study also adjusted for regional differences in the cost of major components of school district budgets. Finally, the study reports findings on a per pupil basis as well as professional development's share of total school district and state expenditures.

Major Findings

Using the 1997-98 data base, the study found that the states' modal level of investment in professional development was 2.82% of their general funds. Only five states spent less than 2% (Delaware was lowest at 1.34%). Slightly more states – eight – spent more than 4% of their general expenditure budgets (the District of Columbia was far ahead of every other entity, reporting an expenditure amounting to 8.5%) (see Table 1).

The rankings remain generally the same when the measurement is on a cost-per-pupil basis, although a few additional states become high spenders. The data also show a high degree of variability in spending on instructional staff support within most states. The state with the lowest variation is Maryland, where the coefficient of variation indicates that about two-thirds of all school districts in the states are within 18.3% of the statewide average. While this was low compared to other states, a coefficient of variation of 10 or higher is typically considered to be inequitable.

The data indicate that the larger a school district and the more urbanized it is, the more it spends on instructional staff support. School districts with enrollments of more than 6,000

The work reported herein was supported under the Educational Research and Development Centers Program, PR/Award Number R308B970003, as administered by the National Institute on Educational Governance, Finance, Policymaking and Management, Office of Educational Research and Improvement (OERI), U.S. Department of Education. The contents do not necessarily represent the positions or policies of the National Institute, OERI, the U.S. Department of Education, or the endorsement of the federal government.

Table 1. Variation in State Spending on Instructional Staff Support¹: A State by State Comparison, 1997-1998

State ²	Enrollment	Cumulative District Expenditures on Instructional Staff Support (ISS in Thousands)	Average District ISS Expenditures as a Percentage of General Expenditures ³	Average District ISS Expenditures Per Pupil ³	Coefficient of Variation
Nation	37,704,027	9,077,745	2.82	198	52.0⁴
Alabama	739,321	126,328	2.88	145	36.8
Alaska	130,633	82,146	4.39	651	66.3
Arizona	794,221	130,122	2.33	141	53.0
Arkansas	456,355	72,853	2.82	129	40.4
Colorado	686,360	151,217	2.71	187	60.0
Connecticut	515,141	158,720	2.38	248	62.5
Delaware	105,697	11,184	1.34	102	59.6
District of Columbia	77,111	67,654	8.79	877	NA
Florida	2,292,161	709,676	4.92	281	26.3
Georgia	1,375,980	370,113	4.59	246	27.2
Hawaii	189,887	36,044	2.85	190	NA
Idaho	244,403	34,983	2.66	142	49.4
Illinois	1,967,308	461,544	2.43	169	80.8
Indiana	985,690	162,093	2.01	132	46.2
Iowa	501,054	87,968	2.52	149	47.4
Kansas	468,980	103,240	3.09	183	43.7
Kentucky	645,232	133,939	3.49	185	44.6
Louisiana	774,561	150,053	4.23	204	28.6
Maine	211,613	36,068	1.75	130	53.7
Maryland	830,744	235,493	3.79	280	18.3
Massachusetts	805,818	221,074	2.53	241	49.5
Minnesota	820,211	252,821	3.34	236	75.5
Mississippi	503,635	77,815	3.73	159	36.4
Missouri	901,668	195,301	3.13	168	61.5
Montana	162,040	29,574	2.35	146	89.4
Nevada	296,621	51,753	1.82	135	78.6
New Hampshire	194,270	36,990	2.16	177	57.6
New Jersey	1,213,634	368,067	2.14	264	61.1
New Mexico	322,742	92,579	5.05	336	55.6
New York	2,820,808	707,285	3.06	364	64.0
North Carolina	1,230,010	208,222	3.18	183	29.8
Ohio	1,846,585	497,531	3.36	203	62.3
Oklahoma	623,174	81,093	1.96	95	72.4
Oregon	520,290	112,257	2.70	188	56.0
Pennsylvania	1,791,100	378,096	2.40	198	44.0
Rhode Island	152,356	44,554	3.06	272	44.5
South Carolina	648,084	177,922	5.05	289	28.8
South Dakota	133,698	18,538	2.06	100	61.1
Tennessee	876,693	205,566	4.56	217	37.9
Texas	3,888,021	881,014	2.65	168	68.1
Utah	480,811	70,731	2.74	146	68.2
Vermont	99,216	18,533	1.68	168	57.6
Virginia	1,110,815	377,720	4.50	281	59.5
Washington	991,235	293,340	3.08	219	55.4
West Virginia	300,737	44,059	2.14	133	47.6
Wisconsin	880,799	294,593	3.83	303	34.8
Wyoming	96,504	19,280	2.94	220	38.5

Source: US Census Survey of Local Government Finances: School District Expenditures (F-33), 1997-1998

Note: (1) The expenditure data were adjusted using Chambers 1998 Geographic Cost Index.

(2) The following states were removed from the analysis due to a high proportion of missing values in 1997-1998: California, Michigan, Nebraska, and North Dakota.

(3) The simple average is calculated as the average value per school district.

(4) The coefficient of variation is calculated as the standard deviation divided by the mean, multiplied by 100. The average reported here is taken across all states (n=47).

Table 2. Instructional Staff Support Expenditures¹ by District Size² and Urbanicity³, 1997-1998

Urbanicity	Unit of Observation	Cumulative District Expenditures on Instructional Staff Support (ISS in Thousands)	Total General Expenditures (TGE in Thousands)	Average District ISS Expenditures as a Percentage of General Expenditures ⁴	Average District ISS Expenditures Per Pupil	
Nation		9,077,745	274,097,818	2.82	198	
School District Enrollment	<i>District Count</i>					
	1-500	3,263	130,598	5,749,613	2.16	160
	501-1200	2,647	397,721	14,682,863	2.73	182
	1201-2750	2,780	1,087,635	36,294,774	3.05	211
	2751-6000	1,785	1,682,184	53,029,692	3.27	237
	6001+	1,179	5,779,607	164,340,877	3.59	253
Urbanicity ¹	<i>Enrollment Count</i>					
	Urban	10,663,096	2,831,115,154	81,848,929,163	3.62	258
	Suburban	18,370,270	4,596,923,924	141,869,684,823	2.83	230
	Rural	8,670,661	1,649,705,699	50,379,203,626	2.75	171

Source: US Census Survey of Local Government Finances: School District Expenditures (F-33), 1997-1998;

Notes: (1) The expenditure data were adjusted using Chambers 1998 Geographic Cost Index

(2) The enrollment data was drawn from the F-33 database; The district size categories were computed by the authors.

(3) The metro status area is the NCES classification of the agency's service area relative to a Metropolitan Statistical Area, where: Urban = a school district that primarily serves a central city of an MSA; Suburban = Serves an MSA but not primarily its central city; Rural = Does not serve an MSA.

(4) The simple average is calculated as the average value per school district.

students spend 28% more for instructional staff support, both as a percentage of their budget and as a per-pupil item. Urban districts also spend at levels above the national average. Urban districts may be better able to tap non-district agencies and services and to have access to higher education programs (see Table 2).

Taking the Long Look

Overall, expenditures for instructional staff support grew slightly during the 1990s. As a share of total budgets, it increased by one quarter of one percent. However, 23 states reported an increase less than this, and 17 states actually reported a

decrease. A few – the District of Columbia, New Mexico, Kansas, Louisiana, and Wisconsin – increased their expenditures at twice the national average between 1991-92 and 1997-98. Several states decreased their expenditures quite significantly (Kentucky, Hawaii, Oregon, New Jersey, and North Carolina).

The per-pupil expenditure increased from \$168 to \$241, or a 43% increase, but inflation makes this a nominal change. Furthermore, the spending variability within states generally remained stable although some, notably Texas, experienced a dramatic reduction in the variability of spending among its districts.

Implications for Research and Policy

The findings from the study strongly suggest that most states spend consistently more than 1% of their expenditures on professional development and that 3% is a reasonable estimate for the nation as a whole.

It also is significant for policymakers and others to know that despite a great deal of rhetoric, resources for teacher professional development did not increase significantly during the 1990s. The lack of additional investment in teachers was consistent – districts continued unequal spending patterns when compared to other districts within the same state.

The study also revealed large gaps in knowledge about spending on teacher professional development. Questions in need of further study include:

- What policies at the state level influence the variation in spending at the district level?
- How do governance differences, e.g., county-based school districts versus urban school systems, affect levels of spending on professional development?
- What is the extent of the influence of state accountability measures on local district

expenditures for teacher professional development?

- At the local level, how does enrollment growth change the nature of spending for professional development?
- Is there competition between higher teacher salaries and investments in professional development?
- When budgets are tight, do districts expect teachers to assume more personal responsibility for funding their professional development?

Data elements also need to be improved. More disaggregated categories for spending, unlike the combined data sources used by the Census Bureau and NCES, would give a better picture of where the money is spent. Also, it would be helpful to link funding sources to expenditures at district and school levels.

While research knowledge about what constitutes quality teacher professional development has been accumulating, little empirical work exists to improve an understanding of the level and efficacy of investments in professional development at any level.



Center for the Study of Teaching and Policy

A National Research Consortium

University of Washington (lead institution) • Stanford University • University of Michigan • University of Pennsylvania • Teachers College/Columbia University

Other active participants in CTP's research and dissemination program include researchers affiliated with Indiana University, Michigan State University, Pennsylvania State University, the University of California at Santa Barbara, the University of North Carolina, and Education Matters, Inc.

CTP studies the way policies and conditions in schools, districts, states, and the nation shape the quality of teaching and learning in our nation's elementary and secondary schools. The Center pays particular attention to the ways these policies and conditions interact with each other to influence the teaching profession and its practice.

The Center's program of research is carried out in collaboration with various other research organizations, among them other OERI-funded research centers, including the Consortium for Policy Research in Education (CPRE), the Center for Research on Education, Diversity, and Excellence (CREDE), and the Center on English Learning and Achievement (CELA). CTP is affiliated with a variety of professional and advocacy organizations which represent teachers, teacher educators, state and local policymakers, disciplinary groups, and educational reform interests.

CTP TEACHING QUALITY POLICY BRIEFS

One of the Center's chief goals is to offer timely and useful information concerning efforts to improve the quality of teaching to national, state, and local policy communities. The Teaching Quality Policy Brief series is one vehicle for accomplishing this purpose. Issued periodically throughout the year, these briefs summarize Center working papers, reports, occasional papers, and other research products. The original publications, as well as the briefs, are available for download from the Center's website: www.ctpweb.org

CTP Policy Briefs:

- #1 **State Action to Improve Teaching**, December 1999
- #2 **State Teaching Policies and Student Achievement**, December 1999
- #3 **A Different Approach to Solving the Teacher Shortage Problem**, January 2001
- #4 **Connecticut's Story: A Model of State Teaching Policy**, June 2001
- #5 **San Diego City Schools: Comprehensive Reform Strategies at Work**, February 2002

Recent CTP Research Reports and Papers:

- Understanding How Policy Meets Practice: Two Takes on Local Response to a State Reform Initiative**, June 2002
- San Diego's Big Boom: District Bureaucracy Supports Culture of Learning**, January 2002
- Out-of-Field Teaching, Educational Inequality, and the Organization of Schools: An Exploratory Analysis**, January 2002

Contact Information

Michael S. Knapp, Center Director
Miller M201, College of Education
University of Washington 353600
Seattle, WA 98195-3600
Email: mknapp@u.washington.edu

Michele C. Ferguson, Center Manager
Miller 203C, College of Education
University of Washington 353600
Seattle, WA 98195-3600
Phone: 206-221-4114
Fax: 206-616-6762
Email: ctpmail@u.washington.edu

Sally Brown, Communications Director
Miller 404B, College of Education
University of Washington 353600
Seattle, WA 98195-3600
Phone: 206-543-5319
Fax: 206-616-6762
Email: salbrown@u.washington.edu

Web Address
<http://www.ctpweb.org>



Center for the Study of Teaching and Policy
University of Washington Box 353600
Seattle, WA 98195-3600

Nonprofit Organization
US POSTAGE PAID
Seattle, WA
Permit No. 62