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Wyoming Department of Education

District Professional Development Expenditures  
From SY1997-1998 Through SY1999-2000

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## EXECUTIVE SUMMARY

In Wyoming, the current focus on standards-based reform and increasing student expectations raises expectations for teachers. This creates a need to invest time and resources to improving teachers' expertise in facilitating standards-based learning.

Research tells us that:

- ❖ Systematic reforms place many demands on teachers to improve subject-matter knowledge and pedagogical skills (Corcoran, 1995);
- ❖ Three main barriers to providing high-quality professional development are (1) insufficient time, (2) the lack of a results-driven approach, and (3) inadequate funding (U.S. Department of Education, 2000); and
- ❖ The level of teachers' expertise is the single most important school factor in enhancing student learning (Darling-Hammond, 1999; Ferguson, 1991; Greenwald, Hedges, & Laine, 1996; Wenglinsky, 2000).

The National Staff Development Council recommends that districts dedicate 10% of their budgets to professional development.

In this age of accountability and data-driven decision-making, educational expenditures provide an indication of districts' values and priorities. In Wyoming, the 48 public school districts report their yearly expenditures from General and federal (Special) funds to the Wyoming Department of Education (WDE). Using WDE Accounting and Reporting data, this study examined:

- ❖ Districts' monetary investments in professional development for teachers as a percentage of General (local and state) and federal funds, and
- ❖ Compared these percentages to MAP's cost-based estimate for professional development spending by the prototypical school, (1.5% of General Funds).

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## **Major Findings**

1. On average, less than one quarter of WY's school districts devoted 1.5% of their General Fund to professional development for teachers over the three-year period, SY97-98 through SY99-00.
2. The highest percentage of any district's General Fund dedicated to professional development was 5.81% in SY97-98, 3.84% in SY98-99, and 4.62% in SY99-00. This percentage increased only slightly when expenditures from General and federal funds were combined<sup>1</sup>.
3. When professional development expenditures from both General and federal funds were combined and averaged over the three school years, half of WY's districts dedicated 1.5% of these combined budgets to professional development.
4. Average district professional development spending statewide for the three years was 0.9% of General Funds, 11% of federal funds, and 1.6% from General and federal funds combined.

## **Recommendations**

Increasing district investments in high quality professional development focused on increasing teacher expertise and student achievement in standards-based environments will require effective policy decisions. Various policy options for addressing this need should be considered, including:

- ❖ Development of state standards for professional development based on national models;
- ❖ Requiring districts to design comprehensive local professional development plans that align with standards and to which districts are held accountable;

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<sup>1</sup> When professional development expenditures from block grants and federal funds were combined and compared as a percentage to total expenditures from these revenue sources, the highest percentage of any district was 6.1% in SY 97, 5.6% in SY 98, and 5.7% in SY 99.

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- ❖ Consideration of categorical funding for professional development in the MAP funding model to ensure that all districts dedicate an appropriate amount of their budgets to professional development;
- ❖ Increasing the cost-based estimate for professional development to support the increased need for professional development in reforming to standards-based environments; and
- ❖ Creation of a comprehensive statewide system for the delivery and evaluation of high quality professional development services for teachers, staff members and administrators.

Whichever direction policymakers choose, strengthening teacher expertise in standards-based educational practice has the greatest potential for improving the academic achievement of Wyoming's children. To do so will require a strong commitment to supporting professional development by districts and the state.

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## **INTRODUCTION**

Many leading corporations spend upwards of 10-20% of their budgets on continuing professional development for their employees. Considerably less has been spent on professional development for educators. Businesspeople will tell you that if you want to determine what a company values, look where it spends its money. In this age of accountability and data-driven decision-making, educational expenditures provide an indication of educational institutions' values and priorities. In Wyoming, the 48 public school districts report their yearly expenditures to the Wyoming Department of Education. This study uses expenditure data regarding dollars used for instructional staff support services as an indication of district commitments to professional development for teachers over the course of three consecutive years, SY1997-1998 through SY1999-2000.

Research on teacher quality is quite clear about the need for increasing district investment in professional development for teachers. Teacher access to high-quality professional development is the foremost condition that schools can control to improve teacher expertise and student learning. Ferguson (1991) demonstrated that the single greatest school influence on student achievement is the quality of teachers' knowledge and abilities. Studies have shown that the impact of teachers' expertise on student achievement is only surpassed by student home and family factors (Ferguson, 1991; Greenwald, Hedges, & Laine, 1996).

In a national study of math teachers and student achievement, students whose teachers received professional development in working with special populations outperformed their peers by more than a full grade level (Wenglinsky, 2000). Similarly, students whose math teachers received professional development in teaching higher-order thinking skills outperformed their

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peers by 40% of a grade level (Wenglinsky, 2000). Increasing teacher expertise, what Darling-Hammond and Ball (1998) define as “what teachers know and can do” (p.1), affects the core tasks of teaching and student learning.

With the current focus of educational reform on increasing expectations for students and educational systems, there is a concurrent need to increase the resources devoted to improving teachers’ expertise. In 1994 the National Education Commission on Time and Learning reported that current education reforms have increased expectations for what teachers know and can do in terms of both amount and complexity. The National Governors’ Association noted in 1995 that systematic reforms place many demands on teachers to improve subject-matter knowledge and pedagogical skills; understand cultural and psychological factors that affect student learning; and assume greater responsibilities for curriculum, assessment, outreach, governance, and interagency collaboration (Corcoran, 1995).

For Wyoming teachers, the third most frequently cited issue in the 1999 Staff Development Needs Assessment Survey was their concern about workload (Sachse & Azin-Manley, 1999). In the same report, Wyoming administrators stated that the most overwhelming barrier to quality professional development was the lack of time. Most school schedules do not normally incorporate the amount of time needed to understand and implement reform efforts (Watts & Castle, 1993). The U.S. Department of Education (2000) has identified the three main barriers to providing high quality professional development as inadequate funding, insufficient time, and the lack of a results-driven approach.

Since 1997, educational reforms in Wyoming have included the Wyoming Content and Performance Standards, the Wyoming Comprehensive Assessment System (WyCAS), Body of

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Evidence graduation requirements, and other school improvement processes. These reforms have placed new demands on teachers and budgets to enhance the academic performance of all students. The following statement from one teacher is representative of the concerns faced by the majority of Wyoming's teachers:

*Another problem is the new standards and the assessment of the standards. We have all these new standards to teach. How is a person with five different preps supposed to develop lessons to teach the specific standards and develop assessments for each? We need time and staff development. (Sachse & Azin-Manley, 1999, p. 99)*

Professional development for Wyoming teachers is most often provided on in-service days and limited to one-to-four sessions per year (Sachse & Azin-Manley, 1999). In fact, just under 50% of the Wyoming teachers surveyed reported receiving three hours or less of professional development per month and close to 30% of teachers cited no specific time provided for professional development (Sachse & Azin-Manley, 1999). For schools, as is the case for most businesses, time for professional development requires resources.

The Wyoming Legislature through the Wyoming Department of Education provides over \$4.6 million in programming for statewide professional development focusing on reform efforts. The University of Wyoming also invests in teacher professional development programs. But given that professional development aimed at improving teacher quality has a direct impact on student achievement, the degree to which districts' invest in high-quality professional development is a critical indicator of their commitment to providing the time and resources necessary to improve both teacher quality and student achievement. The National Staff Development Council recommends that school districts dedicate 10% of their operating budgets to high quality professional development that addresses current reforms.



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This study investigates Wyoming school district expenditures for professional development for the three consecutive school years, SY97-98, SY98-99, SY99-00. The MAP funding model was adopted in 1997 but was not utilized for school funding until SY98-99. This study examines districts' monetary investments in professional development for teachers for the last year of the old model (SY97-98) and the first two years of school funding under the MAP cost-based model (SY98-99 and SY99-00). District professional development expenditures from General Fund revenues/resources and from federal grants (Special Funds) were compared as a percentage of districts' total General and Special Fund revenues in relation to MAP's cost-based estimate for professional development for the prototypical school. Based on four variations or sets of analyses, this study reveals how many of Wyoming's school districts spent 1.5% or more of their local/state and federal budgets on professional development for teachers.

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### **METHOD**

The two major sources of public school funding are accounted for in General Fund expenditures (01) and Special Fund expenditures (02). For SY97-98, under the last year of the pre-MAP funding scheme, school districts were encouraged by statute to utilize “optional mills”—up to six optional mills per district—accounting for approximately \$30 million additional General Fund resources for that year only. In SY98-99, General Funds were based on a cost-based “guarantee” from the state in conjunction with local tax revenues, distributed to districts by the Wyoming Department of Education (WDE) from the Education Foundation Program. These General Funds were distributed to districts in a form of block grant, leaving expenditures for professional development and other district expenditures entirely to district discretion.

Special Funds were not included in the MAP model. They include all federal funds issued to WDE and dispersed to schools as well as funds issued directly to schools. Special Fund expenditures are reported to WDE, using the same accounting procedures and codes as for General Funds. Both General and Special Fund expenditures were included in this data set to account for local, state, and federal dollars.

The following accounting codes for “Support Services—Instructional Staff” (2200 series) were used to develop a total professional development expenditure for each district and each year:

1. Improvement of Instruction Services (2210);
2. Supervision of Improvement of Instruction Services (2211);
3. Instruction and Curriculum Development Services (2212);
4. Staff Development Services (2213);
5. Other Improvement of Instruction Services (2219);
6. Technology Integration (2240); and

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### 7. Other Support Services-Instructional Staff (2290).

For each of these target codes, sub-totals were determined for various kinds of expenditures: salaries and benefits to supervisors, service providers, substitutes, and instructional staff; purchased services; supplies and materials; capital outlay; and other objects. Total dollars spent on professional development services for teachers was then computed for each district from both General and Special Funds in SY1997-1998, SY1998-1999, and SY1999-2000. This study focuses on the total expenditures for professional development in four sets of analyses. Subsequent analyses of the sub-totals are needed to more closely examine the specific expenditures districts made for professional development.

The first set of analyses compared total professional development expenditures from district General Funds as a percentage of total General Funds. This percentage was then compared to the prototypical expenditure for professional development used in the MAP funding model. MAP estimated that the prototypical elementary school would spend approximately 1.5% of its budget or \$92/ ADM on professional development. The same was estimated for the prototypical middle school. The prototypical high school would spend a slightly higher proportion of its budget for professional development at 1.56% or \$100/prototypical ADM. For the purposes of comparison at the district level, rather than the school level, the percentage of General Funds a district spent on professional development was compared to the lower MAP estimate of 1.5%. If the higher percentage were used, the number of districts spending 1.5% or more of their budgets on professional development would have been lower for each year of analyses.

The second set of analyses was similar to the first set but focused on total professional development expenditures from federal funds, referred to as Special Funds, as a percentage of

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total Special Fund expenditures. However, expenditures from Special Funds for professional development are in some cases categorical. That is, certain federal dollars are designated for professional development, such as Title II Eisenhower Professional Development grants. For other federal programs—such as, Title I of the Elementary and Secondary Education Act, IV Safe and Drug Free Schools, VI Innovative Educational Programs, and Class Size Reduction Act (SY99-00 only)—funding for professional development is at the discretion of districts. In some cases, Special Funds are distributed on a competitive basis, unlike General Funds. Thus, for this set of analyses, there was no target criterion level for professional development expenditures or basis for comparing the proportion of Special Funds dedicated on professional development.

Because it is possible, especially for small districts, to commit enough Special Funds to professional development, whether categorical or discretionary, to free up professional development General Funds for other expenditures, the third set of analyses combined sets one and two. In this set, a composite professional development expenditure based on both General and Special Funds was computed to account for the majority of district funds available for professional development. These composite professional development expenditures were compared as a percentage to a composite of total expenditures from General and Special Funds combined. This percentage was compared to the 1.5% MAP estimate as a more accurate view of districts real professional development expenditures.

The fourth set of analyses was conducted as a “best-case” view of districts commitment to professional development. It involved comparing composite professional development expenditures to total expenditures from the General Fund only. Again, this percentage was compared to the lower MAP estimate of 1.5% to see how many more districts met the 1.5%

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criterion<sup>2</sup> by comparing the majority of district professional development expenditures to General Fund budgets only.

These four sets of analyses also included a multi-year analysis of professional development expenditures by dividing the total dollars spent on professional development by the total expenditures for the three-year period. These multi-year analyses provide a more stable picture of districts' professional development expenditures for the three-year period than is possible when making single year comparisons. For any given year, a district might, for example, spend more for a particular professional development program and then not require a similar investment in subsequent years to maintain the program. Thus, this multi-year average compensates for variable professional development expenditures over the course of the three years.

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<sup>2</sup> While this could be viewed as providing an inflated percentage of professional development spending, the attempt in this analytical set is to be as fair as possible in determining districts' willingness to support professional development.

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### **FINDINGS**

#### First Set—General Funds

For SY97-98, average professional development expenditures from General Funds by all Wyoming districts was 0.96% of total General Funds. Twelve districts or 25% spent 1.5% or more of their General Fund budgets on professional development. For these districts, the average total professional development expenditure was 2.53%, well above the MAP estimate, and the maximum a district spent was 5.8% of its General Fund budget. However, for the 36 districts not investing the 1.5%, the average percentage of General Funds spent on professional development was 0.44%, less than one third of the cost-based amount MAP estimated. Four districts did not devote any of their General Funds to professional development in SY97-98.

In SY98-99, the first year of utilizing the MAP funding model, the number of districts devoting 1.5% or more to professional development dropped by four districts. Eight or 16.6% districts spent 1.5% or more of their General Funds on professional development. Three of the four districts that did not spend any General Funds on professional development in SY97-98 continued this pattern of spending in SY98-99. The state average percentage of district General Funds dedicated to professional development decreased slightly as well.

For SY99-00, the average percentage of General Funds committed to professional development by all districts again fell slightly to 0.93%. However, the number of districts that spent 1.5% or more of General Funds increased by two since SY98-99 to ten districts, still less than SY97-98 high of 12. Although total General Fund expenditures increased by \$64,059,413, district commitment to professional development (as a percentage of district total General Funds spent) decreased.

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These year-to-year analyses reveal that only five districts consistently provided 1.5% or more of General Funds to professional development for all three school years. The average percentage of General Funds spent on professional development in these districts ranged from 1.53% to 5.81% and averaged 2.65%.

In addition to year-to-year analyses, this first set included the computation of three-year composite figures for districts' professional development General Fund expenditures as a percentage of total General Fund expenditures. For SY97-00, the average percentage of General Funds spent on professional development was 0.947%. In this multi-year analysis, ten districts devoted 1.5% or more of General Funds to professional development, averaging 2.24% of General Fund budgets. For the 38 districts that dedicated less than 1.5% to professional development in this analysis, the average percentage for professional development was 0.61% of General Funds. This multi-year analysis helps account for the variability in professional development spending from year to year. Table 1 summarizes the findings from the first set of analyses.

Table 1

<b>Year</b>	<b># Districts above 1.5%</b>	<b>% Districts above 1.5%</b>	<b>% Districts below 1.5%</b>	<b>Average % of PD from GF for districts above 1.5%</b>	<b>Average % of PD from GF for districts below 1.5%</b>	<b>State average % of PD from GF</b>
<b>1997-1998</b>	12	25.0%	75.0%	2.53%	0.44%	0.959%
<b>1998-1999</b>	8	16.6%	83.3%	2.63%	0.61%	0.945%
<b>1999-2000</b>	10	20.8%	79.2%	2.35%	0.55%	0.928%
<b>1997-2000</b>	10	20.8%	79.2%	2.24%	0.61%	0.947%

When MAP devised Wyoming's educational funding formula, it provided estimated costs for determining per pupil funding or ADM (average daily membership) based on the

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expenditures of a prototypical elementary, middle, and high schools. Although MAP estimated professional development spending to hover at 1.5% of schools' General Fund budgets, only one quarter of Wyoming districts reached this mark for professional development funding from General Funds. However, the MAP formula does not account for federal education dollars that districts receive.

### Second Set—Special Fund

In addition to district General Funds, professional development dollars come from a variety of other sources. Another major source is federal grants, especially those designated for professional development, such as Title II grants, or those providing funding for professional development at district discretion, such as Titles I, IV, and VI grants. District expenditures from federal funds, called Special Funds, are reported to WDE using the same accounting codes as for General Funds. These data helped provide a more complete picture of districts' professional development investments<sup>3</sup>.

For the second set of analyses, expenditures for district Special Fund professional development expenditures were compared to districts' total Special Fund expenditures as a percentage. Since there is no specified target for professional development spending from federal funds, the percentage of these funds dedicated to professional development varied widely. Special Fund professional development expenditures for SY97-98 by all districts ranged from 0% to 92.8% of total Special Funds; one district spent no Special Funds and another spent

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<sup>3</sup> Other sources for professional development funding are private foundations, non-profit organizations, and community donations. Resources provided by these organizations could play an important role in funding district professional development opportunities for teachers; however, these data are not reported to WDE and not accounted for in this study. Subsequent studies will be needed to examine external funding sources.



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almost all of its Special Fund dollars on professional development. The average percentage of Special Funds used to support district professional development in SY97-98 was 13.9% of Special Fund budgets.

For SY98-99, expenditures for professional development ranged from 0% to 70.72% of district Special Funds and averaged 12.84%. Six districts spent no Special Funds on professional development. For SY99-00, seven districts spent no Special Funds on professional development. For the 41 districts using Special Funds to support professional development, expenditures ranged from 0% to 37.6% and averaged 9.2%. These analyses are summarized in Table 2.

Table 2

<b>Year</b>	<b># Districts w/ \$0 spent on PD from SF</b>	<b>Lowest PD % from SF</b>	<b>Highest PD % from SF</b>	<b>Average PD % from SF for all Districts</b>
<b>1997-1998</b>	1	0.7%	92.8%	13.9%
<b>1998-1999</b>	6	0.78%	70.72	12.8%
<b>1999-2000</b>	7	0.19%	37.6%	9.2%
<b>1997-2000</b>	0	0.29%	58.4%	11%

The average percentage of district Special Funds spent on professional development decreased from 13.9% in SY97-98 to 9.2% in SY99-00, a difference of 4.7 percentage points or a 33.8% decline. While total Special Fund expenditures for professional development increased by \$1,377,570.50 from SY97-98 to SY99-00, the proportion of Special Funds spent on professional development actually went down during this time frame. Additionally, from SY97-98 to SY99-00 the number of districts not spending any federal funds on professional development rose from one to seven districts.

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### Third Set—General and Special Funds

For third set of analyses, total district professional development expenditures from both General and Special Funds were combined and compared as a percentage to total district budgets based on both General and Special Funds for each year (SY97-98, SY98-99, and SY99-00). By combining district professional development expenditures and total expenditures from General and Special Funds, the number of districts spending 1.5% or more of their combined budgets on professional development increased for each of the three years in comparison to the first set of analyses.

For SY97-98, 21 districts supported professional development above the 1.5% mark with General and Special Fund expenditures combined, nine more districts than in the first analytical set. Twenty-five districts in SY98-99 (17 more than in the first set of analyses) and 22 districts in SY99-00 (12 more than in set one) dedicated 1.5% or more of General and Special Funds to professional development.

The average percentage of General and Special Fund budgets dedicated to professional development by all districts in SY97-98 was 1.59%. In SY98-99, this average rose to 1.67%, and in SY99-00, it dropped to 1.56%. In these year-to-year analyses, 13 districts or 27% spent 1.5% or more of their General and Special Funds combined on professional development for the three consecutive years. In multi-year analyses, 25 districts or 52% dedicated 1.5% or more of General and Special Funds to professional development. For the 23 districts spending below 1.5% of their General and Special Funds on professional development in multi-year analyses, the average percentage of General and Special Fund professional development expenditures was 0.73%. These multi-year calculations for General and Special Funds from SY97-00 revealed that

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the state average percentage for district General and Special Fund expenditures for professional development was 1.62%. The multi-year analyses revealed that, realistically, about half of Wyoming districts spend 1.5% of their budgets on professional development for teachers. The third set of analyses are summarized in Table 3.

Table 3

Year	# Districts above 1.5%	% Districts above 1.5%	% Districts below 1.5%	Average % of PD from GF & SF for districts above 1.5%	Average % of PD from GF & SF for districts below 1.5%	State average PD % from GF & SF
<b>1997-1998</b>	21	43.75%	56.3%	2.66%	0.77%	1.59%
<b>1998-1999</b>	25	52.00%	47.9%	2.59%	0.67%	1.67%
<b>1999-2000</b>	22	46.00%	54.0%	2.60%	0.68%	1.56%
<b>1997-2000</b>	25	52.00%	47.9%	2.44%	0.73%	1.62%

### Fourth Set—General and Special Fund Professional Development Spending Compared to General Fund Only

Comparing total district professional development expenditures from General and Special Funds to total district expenditures from General Funds only was expected to be a “best-case” scenario. Yet, the total number of districts spending 1.5% or more of General Funds changed only slightly from the third set of analyses. For both set three and four, 21 districts devoted 1.5% or more to professional development in SY97-98. For SY98-99, one (1) additional district spent 1.5% or more when comparing set three to set four results. For SY99-00, the number of districts at or above 1.5% rose by two from 22 in set three to 24 in set four. Combining district professional development expenditures from both General and Special Funds revealed that one district in both SY97-98 and SY99-00 did not spend any money on professional development. Yet, in SY98-99 this small district dedicated 50% of its Special Funds to professional

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development, possibly compensating for its lack of support the year before and after. The fourth set of analyses is summarized in Table 4.

Table 4

<b>Year</b>	<b># Districts above 1.5%</b>	<b>% Districts above 1.5%</b>	<b>% Districts below 1.5%</b>	<b>Average % of PD (GF&amp;SF)/ GF only for districts above 1.5%</b>	<b>Average % of PD (GF&amp;SF)/ GF only for districts below 1.5%</b>	<b>State average % for PD (GF&amp;SF)/ GF only</b>
<b>1997-1998</b>	21 (21)	43.75%	43.75%	2.78%	0.82%	1.68%
<b>1998-1999</b>	26 (25)	54.16%	45.83%	2.72%	0.70%	1.79%
<b>1999-2000</b>	24 (22)	50.00%	50%	2.60%	0.68%	1.56%
<b>1997-2000</b>	26(25)	54.16%	45.83%	2.58%	0.76%	1.75%

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### **IMPLICATIONS**

This study raises questions about which of the analyses used presents the most accurate picture of district monetary commitments to professional development. Since the General Fund does not include federal funds, the first set of analyses indicated district commitments to investing in professional development from local and state revenues only. These analyses reveal that despite increases in total General Fund revenues over the three-year period, the percentage of these revenues dedicated to PD actually decreased. The second set of analyses for federal revenues only exposed a similar trend. Yet, given that certain federal funds are designated specifically for professional development and some federal grants require matching General Funds, the third set of analyses appears to provide the most accurate picture of district professional development investment. These analyses suggest that half of WY school districts have a limited commitment to support teachers professional development by spending less than 1.5% of their General and federal funds for this purpose.

Although the fourth set of analyses was expected to provide a “best-case” portrait, it turned out to reveal only a slightly more encouraging view of district professional development investments compared with the third set. Still, in this best-case view, only half of Wyoming school districts funded professional development at the 1.5% level or above. Additionally, for SY97-98 four districts or 8.3% reported spending no General Funds and one used no Special Funds on professional development. For SY98-99, three of the four districts from SY97-SY98 dedicated no General Funds, and six districts committed no Special Funds to professional development. For SY99-00, two of the three districts from SY98-99 still spent no General Funds on professional development, and seven districts devoted no Special Funds to professional development.

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In a state with only one University and a state department of education supporting professional development to its capacity, district- and school-level professional development services are essential for improving teacher quality and student achievement. With the current demand for teachers to improve standards-based learning, standards-based professional development is an especially critical need for improving student achievement. This study suggests that despite the increase need to provide standards-based professional development since the adoption of student Content and Performance Standards and WyCAS in SY98-99, districts' commitments to providing such training have remained limited. The marginal investments in professional development on the part of at least half of Wyoming's school districts does not bode well for the current reform efforts to improve student achievement of standards.

Even for those districts spending the most on professional development from their General and Special Fund budgets, the highest percentage invested in professional development was 6.08% in SY97-98, 5.64% in SY98-99, and 5.68% in SY99-00. When expenditures from General Funds alone were considered, the highest percentage for professional development was less, with 5.81% in SY97-98, 3.84% in SY98-99, and 4.62% in SY99-00.

The National Staff Development Council recommendation that districts devote at least 10% of their budgets to professional development is apparently a lofty goal for Wyoming districts. No matter which set of analyses is considered, the highest proportion of any district's budget devoted to professional development was almost half as much as the National Staff Development Council recommends in order to provide adequate support for teachers. However, a 10% goal for professional development should be considered unrealistic if the funding formula maintains a 1.5% estimated cost for professional development.

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These data suggest that currently a three-quarters of Wyoming's districts are spending block grant funds MAP estimated for professional development in other areas. District General Fund balances (reserves) have increased by almost \$30 million from SY97-98 to SY99-00 (WDE, 2001). The Education Coalition led by the Wyoming Education Association (WEA), the Wyoming Association of School Administrators (WASA), and the Wyoming School Boards Association (WSBA) has suggested that the need to increase teacher salaries to ward off out-of-state competition for Wyoming teachers has overburdened district budgets. Although the state appropriated \$48 million to districts to increase salaries for SY01-02, research suggests that improving teacher salaries alone will not improve teacher quality or student achievement.

Higher salaries raise the prestige of the profession, encourage more qualified individuals to enter teaching, and help retain veteran teachers. However, little evidence exists to suggest that higher teacher salaries improve student achievement. In a study of factors affecting student achievement, Greenwald, Huges, and Laine (1996) found that using district funds for increasing teacher education, ability, and experience, along with small schools and lower teacher-pupil ratios, were more often associated with significant increases in student achievement than raising teacher salaries. Darling-Hammond (1999) found that the percent of teachers with full certification and a major in the field they are assigned to teach is "by far the most important determinant of student achievement," even when compared to teachers' education level (i.e. master's degrees), student background, class size, levels of spending, and teachers' salaries.

Without adequate support for the continuous development of entry- and career-level teachers' knowledge and skills for standards-based instruction, both groups of teachers may be more likely to leave the profession. In fact, despite increasing salaries on average 30% to 50% of new teachers continue to leave the profession within their first five years.

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Another possible drain on district budgets may be the cost of educating students from lower socioeconomic backgrounds. When WyCAS scores from 1998-2001 are correlated with the 3-year percentages of district expenditures for professional development, there is only a slight relationship between the percentage of dollars districts spend on professional development and student achievement on WyCAS. This may indicate that even districts spending higher percentages on professional development are not increasing standards-based achievement as measured by WyCAS. See Table 5 below for correlations among achievement, professional development spending, and socioeconomic status (SES) variables.

Table 5. Correlations among Achievement, Professional Development Expenditures, and SES

	WyCAS 3-yr composite average	WyCAS change	% F-R Lunch	% Gen Fund PD	% Gen + Sp Fund PD
WyCAS change	0.02				
% F-R Lunch	<b>-0.62</b>	0.09			
% Gen Fund PD	0.19	0.03	-0.28		
% Gen + Sp Fund PD	0.18	-0.12	<i>-0.35</i>	<b>0.74</b>	
3-yr average pct of Spec Fund on PD	0.15	-0.23	-0.25	0.10	<b>0.71</b>

**Bold**—statistically significant,  $p \leq .01$

*Italics*—statistically significant,  $p \leq .05$

However, when a measure of socioeconomic status (free-and-reduced lunch) is controlled for in these correlations, the relationship between percentage of professional development expenditures and WyCAS scores drops to zero, and the correlation between the percentage of students receiving free and reduced lunch services and professional development spending is slightly negative. That is, teachers in districts whose students have the highest need for quality teachers are receiving less professional development services district wide than teachers with students of higher socioeconomic backgrounds and higher WyCAS achievement. However, district expenditure data do not account for per teacher spending on professional development.



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Thus, a limited number of teachers in lower-socioeconomic districts may be receiving the bulk of the professional development resources.

The 1999 Staff Development Needs Assessment Survey of teacher, staff, and administrator professional development experiences indicated that they most often received professional development that was lecture-style, included no follow-up, and occurred infrequently (Sacshes & Manley, 1998). Yet, research indicates that the most effective professional development for improving student achievement is responsive to individual district, school, and especially teacher needs; imbedded in the daily work of teachers, and an on-going effort. These findings, viewed in relation to this study, indicate that even those districts that are spending 1.5% or more of their budgets on professional development may not be providing the kind of high quality experiences that most often influence the improvement of instructional practices and student achievement.

This study raises the question of whether districts' resources are accurately accounted for and reported to the Wyoming Department of Education. This study also suggests that district resources may be expended out of habit rather than need. Districts need to take a critical look at budgets and expenditures to expose how they are reporting expenditures and if expenditures reflect district priorities. Each district in Wyoming should be able to spend at least 1.5% on professional development, especially with the recent \$48 million cost adjustment for increasing salaries. If a district is not allocating adequate funds to supporting improvement of instruction and instructional leadership, it is unlikely that significant improvements in student achievement will occur. It will not matter how good the Content and Performance Standards are or how effective a curriculum is elsewhere, if teachers do not know how to effectively teach in a standards-based environment or with a particular curriculum, or if principals and superintendents

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do not understand how to be strong instructional leaders (in addition to managers) in a standards-based environment.

This study also raises the question of what is adequate professional development investment. As state policymakers undertake the current recalibration of the MAP funding model, this study and the most recent WyCAS scores indicate that districts will need to spend more on professional development in future years to bring their teachers and students up to speed in terms of teaching and learning in standards-based classrooms. The first three years of WyCAS revealed that in all but two of the nine areas tested (three content areas at three grade levels), the majority of students did not score at the proficient level or above. The two areas for which more than half of the students performed at the proficient level were 8<sup>th</sup> and 11<sup>th</sup> grade writing, with 51% of 8<sup>th</sup> graders and 56% of 11<sup>th</sup> graders scoring at least at the proficient level. This may not be surprising given that writing is the one content area that has been addressed over the last ten years through focused, statewide professional development by the Wyoming Writers Project.

Increasing district investments in high quality professional development focused on increasing teacher expertise and student achievement in standards-based environments will require effective policy decisions. Various policy options for addressing this need should be considered, including:

- Development of state standards for professional development based on national models;
- Requiring districts to design comprehensive local professional development plans that align with standards and to which districts are held accountable;
- Consideration of categorical funding for professional development in the MAP funding model to ensure that all districts dedicate an appropriate amount of their budgets to professional development;

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- Increasing the cost-based estimate for professional development to support the increased need for professional development in reforming to standards-based environments; and
- Creation of a comprehensive statewide system for the delivery and evaluation of high quality professional development services for teachers, staff members and administrators.

Whichever direction policymakers choose, strengthening teacher and administrator expertise in standards-based educational practice has the greatest potential for improving the academic achievement of Wyoming's children. To do so will require a strong commitment to supporting professional development by districts and the state.

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