MAINE STATE LEGISLATURE

Professional Development in Maine K-12 Public Schools

A Report in Support of the

Commission to Study the Adequacy and Equity of Certain Cost Components of the Maine School Funding Formula

MEPRI FY2015 Report B6

Maine Education Policy Research Institute

FY2015 Report B6

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Professional Development in Maine K-12 Public Schools

A Report in Support of the
Commission to Study the Adequacy and Equity of
Certain Cost Components of the Maine School Funding Formula

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INTRODUCTION

The Commission to Study the Adequacy and Equity of Certain Cost Components of the School Funding Formula was created in legislation crafted by the Joint Standing Committee on Education of the 126th Legislature (the "Education Committee"). The legislation was enacted as Resolve 2014, chapter 114.

Creation of the Commission was the latest step in a multi-year process undertaken to review the state's education funding formula, the Essential Programs and Services (EPS) funding formula. That process began with the Education Committee of the 125th Legislature, which authorized the Legislature to enter into a contract with a qualified research entity to conduct an independent review of the EPS Funding Act. The Resolve required the research entity to provide an interim report of findings by April 1, 2013, and a final report by December 1, 2013. The project was described in Resolve 2011, chapter 166.

Lawrence O. Picus and Associates, a California research organization, was awarded the contract for the independent review. The interim report is available at http://www.maine.gov/legis/opla/EPSReviewPart1%28PicusandAssoc%20%294-1-2013.pdf and the final report is available at http://www.maine.gov/legis/opla/EPSfundingPart%202FinalReport.pdf
Following receipt of the final report from Lawrence O. Picus and Associates, the Education Committee scheduled weekly work sessions to discuss various aspects of the report, as well as to discuss other issues relating to the EPS funding formula. From those discussions, seven topics were identified as priority topics for action; those topics formed the list of duties for the Commission to Strengthen the Adequacy and Equity of Certain Cost Components of the School Funding Formula.

One of the seven topics dealt with **professional development** in Maine's K-12 public school systems. More specifically, the Resolve requested that the Maine Education Policy Research Institute (MEPRI):

Resolve 2014, Chapter 114

3. Professional development and collaborative time needed to implement proficiency-based learning. As part of the research and analysis of the cost components related to strengthening support for professional development, collaborative time to implement proficiency-based learning and spending data on teacher leaders or instructional coaches, including the following aspects of the cost components, the commission shall:

A. Collect school administrative unit spending data on professional development programs and collaborative time for teachers, as well as the school administrative unit spending data on teacher leaders or instructional coaches in order to update the staffing ratios in the essential programs and services funding formula;

B. Establish a dedicated funding mechanism and process, such as a supplemental professional development block grant program, that allows the Department of Education to provide funding to school administrative units that submit proposals to secure professional development funds;

C. Create a standards-based inventory of effective professional development programs and strategies from which school administrative units may select programs and strategies in order to receive supplemental professional development block grant funds; and

D. Develop an implementation plan for increasing the allocation of funds for professional development, collaborative time for teachers and teacher leaders or instructional coaches and include provisions in the implementation plan to monitor the use of these funds by school administrative units.

The following pages contain the information collected, analyzed and presented to the EPS Commission by MEPRI researchers in Fall 2014.

Teacher Professional Development - Costs & Expenditures

Highly effective teachers are a critical piece of a high quality education for Maine students. National literature and analysis of Maine data suggest that improving professional development opportunities for teachers would be beneficial to students and educators. Numerous models and characteristics of professional development structures and content have been proposed as best practice.

Picus & Associates (2013) suggest a model that includes:

- Ten days of dedicated (student-free) professional training *EB Cost ($): 28,239,415*
- Funding for related training costs (i.e. administration, materials, travel, fees, etc.) at $100/student *EB Cost ($): 18,966,849*
- Instructional Coaches (one coach/technology coordinator per 200 students) *EB Cost ($): 62,489,567*

National Literature Review

The following national literature scan (see Table 1 below) includes empirical studies, literature reviews and general analysis articles from education, economic and business sectors addressing professional training and development costs.

It is important to highlight that there is neither a common definition nor a list of characteristics included in the professional development expenditures used across most related research nor within the literature reviewed below, thereby accounting for significant variation in the estimated costs. It is also important to take into consideration the year of publication (or year of data, when provided) to account for inflation and economic contexts of the time period.

Summary of Key Findings:

- A consistent list of common key findings regarding costs and expenditure practices in professional training was not apparent across the literature.
- Challenge of research involving educational costs is the lack of an inclusive, common definitions or codes for expenditures.
- Rural and smaller districts reflect much different spending levels and trends than larger, urban/suburban districts.
- Wide variation by district in spending on teacher professional development: approximately 1% to 12% of operating district budgets, averaging approximately 3%.
- Districts regularly spend significantly more on professional development than is budgeted or forecasted.

Table 1. National Literature Review of Professional Development Costs and Expenditures Research

REFERENCE **Literature on Costs & Expenditures in Teacher Professional Development**	*2013 State of the Industry Report* American Society for Training & Development (2014)	*Descriptive Analysis... Massachusetts* Coggshall et al. - AIR (2013)	*School District Spending on PD...* Killeen, Monk & Plecki (2002)	*Cost Framework for PD* Odden et al. (2002)
KEY FINDING	spending avg = $1,195 per employee; avg 3.6% of payroll (consistent since 1996)	primary PD focus = core content & Common Core, using student data	districts spend approx 3% (1.8-11.8) of total general expenditures on PD; ~ $200/pupil	actual spending on PD is usually 20-50x more than budgeted funds
KEY FINDING:	11% = tuition reimbursement	districts with greater emphasis on using data to plan PD have more "HQT"s	modest level of PD investment compared to other sectors of economy	limitation of prior research: crude accounting codes
KEY FINDING	training avg = 30 hours/yr more productive industries avg = 58 hrs/yr	districts with greater emphasis providing PD re: instruction have higher hs grad rates	rural, smaller districts spend far less than larger, urban districts on PD	limitation of prior research: district level only (school augmented)
KEY FINDING	technology-based delivery = 39% (2011 = 37%)	biggest obstacle: time and $; gaps in PD: non-core subjects, differentiating instruction	opportunity costs: quality of instruction w/ substitute; loss of instruction w/ early release	6 essential cost elements: teacher time, training or coaching, admin, equipment or facilities, travel and tuition/conf fees

Table 1. National Literature Review of Professional Development Costs and Expenditures Research (cont.)

REFERENCE **Literature on Costs & Expenditures in Teacher Professional Development**	*What Makes PD Effective?...* Garet et al. (2001)	*Staff Development for Teachers...* Miller, Lord & Dorney (1994)	*Regression Analysis...* Orlich & Evans (1990)	*Staff Development in California* Little et al. (1987)
KEY FINDING	national survey of Eisenhower PD Program math/science teacher grantees (n=1,027)	interviews with district leaders re: PD spending in 6 categories	statistical analysis of PD costs reported in prior literature	analysis of district-wide PD costs by activity (vs budget or coded expenditures) - interviews, surveys & fiscal documents
KEY FINDING:	estimated cost of high quality PD = $512 per teacher	15% of principal time = PD	recommends: local cost analysis should include efficient model & potential inefficiencies	includes personal teacher spending outside contracted time & salary increases from acquired PD
KEY FINDING	best practice = sustained; intensive; active; coherent w/ daily work	% of operating budget: lg district = 1.8%, med district = 2.0%, sm district = 2.8	investment "costs" approx 3x more than original estimates (usually due to indirects)	avg spending = 5% of total classroom costs, aka $4,600/teacher
KEY FINDING	greatest efficacy & efficiency = collective participation by grade, subject or school	cost per teacher: lg district = $1,755, med district = $2,706, sm district = $3,528	per teacher funding varies by district size (economy of scale) - don't rec statewide dollar amount	excluding personal time & credit hours: 1.4% classroom expenditures, aka $1,360/teacher

Maine SAU Professional Development EPS Expenditures & Allocations

The 2013 Maine Essential Programs and Services model allocated $59 per student for professional development, and Maine SAUs reported a $54 per student expenditure in that category (see Table 2 below). The FY2013 EPS per pupil allocation is approximately 9.3% above actual per pupil expenditures. A majority of per pupil expenditures were in the $20-$100 range, with extreme amounts considered outliers.

(See Appendix B: Maine Statewide Professional Development Expenditures by Object FY2013 for full list of expenditures.)

Table 2. Professional Development Expenditures & Allocations by Maine SAUs

	FY2010	***FY2013***
Number of SAUs	146	162
Total Professional Development (PD) Expenditure	$7,992,374	$9,160,949
Total Attending Enrollment	172,132	170,286
Statewide Per-Pupil Actual PD Expenditure	$46	$54
Per-Pupil EPS PD Allocation Rate	$56	$59
Lowest Per-Pupil PD Expenditure	$0.07	$0.17
Highest Per-Pupil PD Expenditure	$417	$582

- $5,168,018.08 **(56%)** of total professional development expenditures was dedicated to Tuition Reimbursement for Professionals, Instructional Aides and Administrators. This was the most substantial area of expenditures.
- $1,863,847.75 (**20%**) of total professional development expenditures was dedicated to Salaries and Benefits. This was the second most substantial area of expenditures.
- Approximately $830,000 (**9%**) of total professional development expenditures was dedicated to purchased professional training and related resources (not including salaries or benefits).

Instructional Coaches

Maine Superintendent Survey

The use of Instructional Coaches has become increasingly popular in public schools in the United States and was a recommended element of the professional development model proposed by Picus & Associates. However, the Maine Department of Education (MDOE) does not currently collect information on the uses of instructional coaches.

MEPRI conducted a survey of Maine superintendents to gather more information about the status of Instructional Coaches in Maine SAUs. Superintendents were asked about instructional coaches paid by salary or stipend. They were asked to provide the number of Full-Time Equivalent (FTE) instructional coaches at each grade level, along with the position title and funding source.

Summary of Responses:	
110	Responses (excluding duplicates)
less 27	Not Identified
83	Identifiable Responses
less 4	Responses with no attending regular students
79	**Responses with 121,173 attending students**
less 47	Responses reporting no instructional coaches
32	**Responses with 167.96 FTE instructional coaches and 55,129 attending students**

Table 3. Instructional Coaches Ratios by Grade Span

	Responses	FTE Instructional Coaches	Students	Ratio
FTE Coaches Paid by Salary:				
Grades K-5	28	90.72	24,538	270
Grades 6-8	17	29.10	8,268	284
Grades 9-12	11	10.55	6,891	653
Grades K-12 mixed	9	24.70	14,644	593
Total Paid by Salary	31	155.07	54,636	352
FTE Coaches Paid by Stipend:				
Stipend	10	12.89	15,438	1,198
Total Paid by Salary or Stipend	32	167.96	55,129	328

Table 4. FTE Instructional Coach by Salaried Position and Funding Source

All Grade Levels Total	General Fund	Title I	Grants	Other funding source	Total
1. Classroom teachers	33%	6%	1%	0%	40%
2. Literacy specialists	22%	16%	1%	0%	39%
3. Other position	14%	5%	1%	1%	21%
Total	69%	27%	4%	1%	100%

Table 5. Instructional Coaches Paid by Stipend

FTE	Stipend Title
0.01	Curr Design Team Co Chairs
0.10	Leadership Team (Proficiency Based Cmt.)
0.10	Leadership team Chair
1.00	Literacy Coach
0.01	Literacy Consultant
0.01	Literacy Consultant
0.06	Literacy Consultant
4.00	Literacy Specialists
0.10	LT Chairperson
1.00	Math Coach
1.00	Math Teacher
0.10	Mentors
0.10	Teacher Leaders
5.00	Teacher Leaders
0.05	Team Leaders (6)
0.25	Title I Coordinator
12.89	Total

Table 6. Estimated Cost of Instructional Coaches at Current and EB Model Ratios

	Maine Students	Student-Coach Ratio (General Fund*)	FTE Instructional Coaches	Salary & Benefits** ($millions)	State Share at 45%	Local Share at 55%
Estimated Current Ratio	182,000	462	394	23.6	10.6	13.0
EB Model Ratio	182,000	200	910	54.4	24.5	29.9

*Including positions paid by salary and by stipend in SAUs reporting instructional coaches

**Assuming average full time teacher salary of $50,243 and 19% benefits, excludes 16.15% teacher retirement payments (est. $3.2 million for current ratio and $7.4 million for EB model ratio) with a 100% state share.

MAINE TEACHER SURVEY - PROFESSIONAL DEVELOPMENT

MEPRI also conducted a statewide survey of Maine teachers about professional development experiences and resources. Preliminary Respondent Descriptives as of Nov 3, 2014 include:

***Sample**:* 674 Maine teachers from MEDMS 2013 publicly available email list completed one or more of the survey questions.
82% of individual respondents had 10 or more years experience in the teaching profession.

Schools and Districts Represented: "Responding Schools" = schools with at least one survey respondent
# of Responding Schools = 273 (47% of schools)
# of Responding School Districts = 113 (56% of districts)

Locations of Responding Schools:

Responding Schools' free/reduced-price lunch (FRPL) student eligibility rate range: 5% -100%
46% of responding schools FRPL student eligibility rate > 50%
17% of responding schools FRPL student eligibility rate < 30%

geographic locale of Responding Schools - percent (# of schools):

City -	4%	(11)
Suburban -	29%	(73)
Town -	11%	(29)
Rural -	52%	(142)

Responding Schools' enrollment range: 29 to 1,360

Responding Schools' configurations include:

K-12	PK-5	7-12
PK-3	Middle Schools	High Schools

Instructional Coaches

Maine Teacher Survey

Maine Teacher Survey respondents (n=674) were asked to identify if their district (n=113) or school (n=273) had *professional support personnel* (i.e. instructional coach, instructional specialist or instructional strategist). 324 respondents (48%) representing 81 districts indicated that there were professional support personnel in their school or district.

Table 7. Frequency of Meetings between Maine Teachers and Professional Support Personnel (Coaches)

Frequency of Meetings with Professional Support Personnel	Individual Meetings (percent of respondents)	Small Group Meetings (percent of respondents)
Never	46%	21%
Daily	1%	1%
Weekly	11%	19%
Monthly	13%	19%
3 to 5 times per Year	19%	28%
Annually	10%	12%

- 33% of respondents indicated that there were no professional support personnel in their school or district, and 17% of respondents indicated that they did not know if there was professional support personnel in their school or district.
- 46% of those respondents who indicated that there was support personnel in their school/district also said they had **never met individually with their professional support person.** 21% of those respondents who indicated that there was support personnel in their school/district also said they had never collectively (in small groups) met with a professional support person.
- Most commonly, teacher who had met with a professional support person did so in-person (94% of respondents) monthly or 3-5 times per year. 24% of respondents who had met with a professional support person indicated that they corresponded with that person via email, and less than 4% of respondents reported that they used virtual technology to meet.

Characteristics of Effective Teacher Professional Development Practices

National Literature Review

It is evident throughout education research that it is not only the quantity of learning experiences but also the quality of learning experiences that lead to positive outcomes. This is true in the case of professional learning for educators as well. Time to engage in high quality learning is a critical characteristic of effective professional development, and six characteristics were identified by Picus & Associates (2013) as "structural features of effective [teacher] professional development" (p. 106).

MEPRI has conducted a review of research studies from the United States that meet rigorous methodology standards and include analysis of student academic achievement. The findings of each study have been organized into the six characteristics mentioned above with notes on minimum dedicated time when applicable. A table summarizing this review is on the following page (Table 8); the full scan can be found in Appendix A and full list of references is cited in Appendix C.

Summary of Findings from Literature Review:

- ***School-based and job-embedded*** PD was a characteristic identified in some literature, but not a vastly dominant theme.
- A large majority of studies finding increased student achievement included professional development models that included initial trainings as well as structured ***continuous, long-term*** learning and feedback structures through the school year.
- PD with ***collective participation*** among groups of teachers then the entire school/district faculty was a common finding in literature including rural schools as well as studies meeting the Institute of Education Sciences (IES) standards for research.
- PD that included a ***content focus on one or more subject areas*** and was sustained for the long-term was common among practices that correlated with an increase in student achievement, in both rural and non-rural school settings.
- PD that incorporated ***active learning*** experiences for participants and shared opportunities for teachers to learn new techniques in their instructional practice was a common characteristic for effective practice that correlated with an increase in student achievement in empirical research studies, although not necessarily within literature including rural school contexts.
- PD that was ***coherent with a comprehensive local process*** for improving student learning was evident in the literature including rural school contexts, but not a prevalent practice among the empirical research studies.

Table 8. Characteristics of Effective Teacher Professional Development Practices

National Literature Review

REFERENCES:	Empirical Studies of PD adhering to *What Works Clearinghouse* Standards	Experimental or Quasi-experimental Studies of Professional Development	Literature on Professional Development in Contexts including Rural Schools	Total # of Studies Including the Identified Key Finding
Avg Minimum # of Hours	57.5	25		
KEY FINDING: *Activity Form* School-based & Job- Embedded	4	4	2	**11**
KEY FINDING: *Duration* Continuous, Long-Term	6	8	3	**17**
KEY FINDING: *Collective Participation* Groups of Teachers then Entire Faculty	5	1	4	**10**
KEY FINDING: *Content Focus* Subject Area Learning	6	9	4	**19**
KEY FINDING: *Active Learning* New Techniques in Instructional Practice	5	11	1	**17**
KEY FINDING: *Coherence* Comprehensive Local Process for Improving Student Learning	2	1	4	**7**

Characteristics of Effective Teacher Professional Development

Maine Teacher Survey

The MEPRI Maine Teacher Survey asked teachers how often their professional development experiences reflected elements of the six structural characteristics of effective professional development identified in literature (as mentioned above).

(Number of survey item responses = 637)

Table 9. Summary of Findings from Maine Teacher Survey: Characteristics of Effective Professional Development

Characteristic of Professional Development	Never	up to 25% of PD	26-50% of PD	51-75% of PD	76-100% of PD
Connects Content to Instructional Strategies	19 %	**52 %**	17 %	10 %	2 %
Long-term, Sustained Learning	17 %	**46 %**	19 %	12 %	6 %
Common and/or Collective Experiences	11 %	**35 %**	22 %	17 %	15 %
Focus on Specific Subject Area Content	23 %	**45 %**	19 %	10 %	4 %
Engages Participants in Active Learning	22 %	**50 %**	16 %	9 %	2 %
Connected to Local Goals & Initiatives	7 %	26 %	**29 %**	23 %	14 %

- These six structural characteristics of effective PD were most commonly reflected in Maine teachers' experiences less than 25% of the time, except for the characteristic of being connected to local goals and initiatives, which as reflected 26% to 50% of the time. In MEPRI's survey of Maine teachers definitions of *collective, common* and *individual* professional development were explicated to help define how teachers' professional development time is organized and used.

Use of Time & Structure in Teacher Professional Development

Maine Teacher Survey

In MEPRI's survey of Maine teachers definitions of *collective, common* and *individual* professional development were explicated to help define how teachers' professional development time is organized and used.

Collective = learning or informational experiences for teachers involving an entire organizational group of professional staff.

Table 10a. Summary of Maine Teacher Survey - Collective Professional Development

Number of Days within Contractual School Year	Percent of Responses
None	1%
1 to 3	24%
4 to 6	43%
7 to 9	15%
10 or more	16%

- During the contractual school year, teachers most frequently (43% of respondents) spent **four to six (4-6) days engaged in collective PD**.
- Content and organizational structure of collective PD was most often determined by school and/or district administration, and **33% of this collective PD was structured for teachers to receive information** regarding administrative expectations or school/district/state initiatives.

Common = learning or informational experiences involving a small (approx. 2-15) organizational group of professionals.

Table 10b. Summary of Maine Teacher Survey - Common Professional Development

Number of Hours within One Week of the Academic Year	Percent of Responses
None	29%
1 to 3	61%
4 to 5	6%
6 to 10	2%
more than 10	2%

- During the academic year, teachers most frequently (61% of respondents) spent **one to three (1-3) hours per week engaged in common PD**.
- On average **40% of this common PD time was engaged in collaborative professional work**: 15% of time dedicated to collaborative curriculum or assessment development, 12% of time in collaborative discussion of student issues, 8.5% of time conducting collaborative review and/or analysis of student data, and 4% of time collaboratively assessing student work.

Individual = learning or informational experiences involving one person or one-on-one experiences with a mentor/expert.

Table 10c. Summary of Maine Teacher Survey - Individual Professional Development

Number of Hours within One Week of the Academic Year	Percent of Responses
None	48%
1 to 3	37%
4 to 5	9%
6 to 10	3%
more than 10	3%

- During the academic year, teachers most frequently (48% of respondents) had **no contractual time for individual PD**.

Table 11. Maine Teacher Survey Summary of Professional Development Time Structure & Use

	Collective Professional Development Time	***Common*** Professional Development Time	***Individual*** Professional Development Time
Proficiency-Based Education	21%	21%	15%
Administrative Information	18%	18%	
Subject Area Content	15%		14%

- During the academic school year, teachers most frequently spent their *collective* PD time engaged in work related to proficiency-based education (21% of time), receiving administrative information (18% of time), receiving information about school, district or state initiatives (15% of time) and subject area content learning (15% of time). 13% of time was dedicated to work regarding pedagogical or instructional strategies, and 9% of time was used for technology training.
- During the academic school year, teachers most frequently spent their *common* PD time engaged in work related to proficiency-based education (21% of time), receiving administrative information (18% of time). 8.5% of time was used meeting with students and/or students' families, and 13% of time was identified as "other."
- During the academic school year, teachers spent on average 40% of their *common* PD time engaged in collaborative professional work: 15% of time dedicated to collaborative curriculum or assessment development, 12% of time in collaborative discussion of student issues, 8.5% of time conducting collaborative review and/or analysis of student data, and 4% of time collaboratively assessing student work.
- During the academic school year, teachers most frequently spent their *individual* PD time planning curriculum or developing assessments (27% of time), working with elements of proficiency-based education (15% of time), engaged in subject area content learning (14% of time) or analyzing student data (12% of time). 9% of individual PD time was used reading professional literature and/or research, and 8% of individual PD time was dedicated to technology training.

Maine Teacher Survey

Common Attributes of Maine Teachers' Professional Development Time

- In an average week during the school year, teachers most frequently (52% of respondents) indicated that they spent **more than ten (10) contractual hours engaged in professional work other than teaching or professional learning** (i.e. lunchroom monitor duty, correcting papers, communicating with parents, etc.). 25% of respondents reported that they spent six to ten (6-10) contractual hours engaged in professional work other than teaching or professional learning, and 23% of respondents said they spent five or less contractual hours engaged in professional work other than teaching or professional learning.
- Teachers most commonly (56% of respondents) indicated that, during the academic year, they spent **one to three (1-3) hours per week of non-compensated time outside the contractual day engaging in professional development**.

Use of Time & Structure in Teacher Professional Development

International Literature Review

Comparing the United States to nations that are top-performers on the PISA, most top-performing nations' teachers spend less time supervising extracurricular activities, but other time varies among nations.

Table 12. OECD Teacher Time Survey

	PISA 2012 combined rank	Total working hours per week	Percent of working hours spent teaching	Collaborative Work with Colleagues (hrs per wk)	Assessing Student Work (hrs per wk)	Meeting with Students (hrs per wk)	Administrative or Managerial Work (hrs per wk)	Communicating with Parents/Families (hrs per wk)	Extracurricular Roles (hrs per wk)
Singapore	2	47.6	31%	3.6	8.7	2.6	7.2	1.6	3.4
Korea	4	37.0	35%	3.2	3.9	4.1	8.2	2.1	2.7
Japan	5	53.9	31%	3.9	4.6	2.7	8.5	1.3	7.7
Finland	7	31.6	57%	1.9	3.1	1.0	1.6	1.2	0.6
Estonia	8	36.1	48%	1.9	4.3	2.1	3.1	1.3	1.9
Canada	11	48.2	46%	3.0	5.5	2.7	5.4	1.7	3.6
Poland	12	36.8	44%	2.2	4.6	2.1	3.5	1.3	2.4
Netherlands	13	35.6	42%	3.1	4.2	2.1	3.5	1.3	1.3
Australia	18	42.7	37%	3.5	5.1	2.3	7.3	1.3	2.3
Belgium	19	37.0	48%	2.1	4.5	1.3	3.3	0.7	1.3
UK	21	45.9	39%	3.3	6.1	1.7	6.2	1.6	2.2
Czech Rep	23	39.4	42%	2.2	4.5	2.2	3.7	0.9	1.3
France	24	36.5	46%	1.9	5.6	1.2	2.0	1.0	1.0
Denmark	26	40.0	44%	3.3	3.5	1.5	3.0	1.8	0.9
Norway	27	38.3	38%	3.1	5.2	2.1	4.1	1.4	0.8
Latvia	28	36.1	44%	2.3	4.6	3.2	3.4	1.5	2.1
United States	**29**	**44.8**	**44%**	**3.0**	**4.9**	**2.4**	**4.9**	**1.6**	**3.6**

Use of Technology in Teacher Professional Development

Maine Teacher Survey

In the MEPRI survey about professional development, Maine teachers were asked to respond to three survey items directly inquiring about methods for using technology in professional development experiences that were evident in some implementation models discussed in national literature: virtual communication with instructional coach or support personnel, video recording of teaching practice, and general use of technology to engage in professional learning experiences.

Table 13. Maine Teacher Survey - Use of technology (video conferencing, webinars, online courses, online chat sessions, etc.) to participate in professional learning experiences

Frequency Per Year	Percent of Respondents
Never	29 %
Daily	3 %
Weekly	11 %
3 to 5 times per Year	31 %
Once per Year	25 %

- 2% of respondents that met with support personnel indicated that they used virtual audio or video meeting formats. 0% of respondents indicated that they used live virtual written chat applications to communicate with support personnel. 24% of respondents indicated that they used email to communicate with support personnel.
- 80% of respondents indicated that they had never used video recording of their instructional practices for professional learning and/or instructional training.
- 17% of respondents indicated that they used video recording of their instructional practices for professional learning and/or instructional training one to five times per year.
- 3% of respondents indicated that they used video recording of their instructional practices for professional learning and/or instructional training weekly or monthly.

Sample Policy Proposal

Supplemental Professional Development Block Grant Program

The purpose of this professional development block grant program is to provide supplemental funds to school districts implementing statewide mandated education reforms.

Funds may be used to (1) conduct professional development activities, or (2)support an instructional coaches program.

A. School districts electing to secure supplemental funds to conduct ***professional development activities*** or **support instructional coaches** must submit a proposal (no longer than 6 pages) that includes the following:
    1. Description of how the proposed professional development program or instructional coaches' support adheres to and /or facilitates the following evidence-based effective PD strategies:
        a. Long-term, sustained learning
        b. Common and/or collective experiences
        c. Focus on specific subject content areas
        d. Engages Participants in active learning
        e. Connects to local goals and objectives
        f. Connects content to instructional strategies
    2. Timeline for completing professional development program.
    3. Target outcomes and benchmarks aligned with goals of the statewide mandated education reform.
    4. Evaluation plan, including the collection of pre and post program evidence of impacts.
    5. Description of how the professional development activities and/or instructional coaches program will be sustained beyond MDOE grant funding.
    6. Budget

B. School district must submit third quarter reports.

C. Continued funding will depend upon MDOE approval of third quarter reports.

D. Funding may be received for 1-3 years, with the opportunity to secure more than one grant.

EPS Commission Actions

The EPS Commission received and reviewed materials from the Maine Education Policy Research Institute (MEPRI) regarding professional development. Based on the review of materials, the commission made the following recommendations:

1. **Provide $39 million for block grants to all SAUs to fund collaborative time that meets best practices. Grant conditions include:**
    a. **Provide funding on a per-pupil or per-teacher basis with a minimum funding level for small programs.**
    b. **Require reporting procedures to ensure that SAUs continue to qualify for block grants.**
    a. **Continue funding to SAUs as long as programs conform to specified research-based best practices.**

2. **Fund the block grants outside of the EPS formula until such time as the state achieves funding 55% of the cost of education. At that time the state should determine how to include such funding inside the EPS formula.**
3. **Constitute a stakeholder group, in collaboration with the Maine Department of Education, to establish best practice guidelines, including best practices for the inclusion of leadership in collaborative professional development time.**
4. **Make block grants available to all SAUs for two years to be used to provide professional development for school and district leaders to support professional development best practices. The amounts of the block grants to be determined based upon a recommendation of the Maine Department of Education and research evidence provided by the Maine Education Policy Research Institute (MEPRI).**
5. **Constitute a stakeholder group, in collaboration with the Maine Department of Education, define qualifying leadership and establish guidelines of best practice.**
6. **Request the Maine Department of Education to recommend to the Joint Standing Committee on Education and Cultural Affairs processes and procedures to increase the accountability for current SAU professional development expenditures in terms of best practices, and charge MDOE to establish ways for sharing SAU best practices.**

APPENDIX A: National Literature Review - Effective Characteristics of Teacher Professional Development

REFERENCE: Empirical Studies of PD adhering to *What Works Clearinghouse* Standards	*Overview of Research...* AR Bureau of Legislative Research (2012)	*Teacher Professional Learning...* Jaquith et al. (2010)	*PD in US...* Wei et al. (2010)	*Effects of Teacher...* Blank & de las Alas (2009)	*Improving Impact...* Desimone (2009)	*Professional Learning...* Wei et al. (2009)	*Reviewing the Evidence...* Yoon et al. (2007)
Minimum # of Hours				91	40	50	49
KEY FINDING: *Activity Form* School-based & Job-Embedded	**X**		**X**	**X**	**X**		
KEY FINDING: *Duration* Continuous, Long-Term	**X**	**X**	**X**	**X**	**X**	**X**	**X**
KEY FINDING: *Collective Participation* Groups of Teachers then Entire Faculty	**X**		**X**	**X**	**X**		**X**
KEY FINDING: *Content Focus* Subject Area Learning	**X**	**X**	**X**	**X**	**X**	**X**	**X**
KEY FINDING: *Active Learning* New Techniques in Instructional Practice	**X**		**X**	**X**	**X**		**X**
KEY FINDING: *Coherence* Comprehensive Local Process for Improving Student Learning		**X**			**X**		

APPENDIX A: National Literature Review - Effective Characteristics of Teacher Professional Development (cont.)

REFERENCE: Experimental or Quasi-experimental Studies of Professional Development	*A Multistate District...* Carlson et al. (2011)	*Effect of Staff Development* Tienken (2003)	*Thinking Mathematics...* Burkhouse et al. (2003)	*Beginning Literacy...* McCutchen et al. (2002)	*Enhancing Students...* Saxe & Gearhardt (2001)	*Putting Books in Class...* McGill-Franzen et al. (1999)
Minimum # of Hours						30
KEY FINDING: *Activity Form* School-based & Job-Embedded	**X**	**X**	**X**	**X**		
KEY FINDING: *Duration* Continuous, Long-Term	**X**		**X**	**X**	**X**	**X**
KEY FINDING: *Collective Participation* Groups of Teachers then Entire Faculty	**X**					
KEY FINDING: *Content Focus* Subject Area Learning		**X**	**X**	**X**	**X**	**X**
KEY FINDING: *Active Learning* New Techniques in Instructional Practice		**X**	**X**	**X**	**X**	**X**
KEY FINDING: *Coherence* Comprehensive Local Process for Improving Student Learning						

APPENDIX A: National Literature Review - Effective Characteristics of Teacher Professional Development (cont.)

REFERENCE: Experimental or Quasi-experimental Studies of Professional Development	*Direct Instruction...* Sloan (1993)	*Effects of One Year...* Cole (1992)	*Effects of the Learning...* Marek & Methven (1991)	*An Analysis of Effects...* Bahr, Kinzer & Rieth (1991)	*Using Knowledge...* Carpenter et al. (1989)	*Relationship Between...* Duffy et al. (1986)
Minimum # of Hours		40	20			10
KEY FINDING: *Activity Form* School-based & Job-Embedded						
KEY FINDING: *Duration* Continuous, Long-Term	**X**	**X**				**X**
KEY FINDING: *Collective Participation* Groups of Teachers then Entire Faculty						
KEY FINDING: *Content Focus* Subject Area Learning		**X**	**X**		**X**	**X**
KEY FINDING: *Active Learning* New Techniques in Instructional Practice	**X**	**X**	**X**	**X**	**X**	**X**
KEY FINDING: *Coherence* Comprehensive Local Process for Improving Student Learning						

APPENDIX A: National Literature Review - Effective Characteristics of Teacher Professional Development (cont.)

REFERENCE: Literature on Professional Development in Contexts including Rural Schools	*High Quality Teaching...* Howley & Howley (2005)	*Investigating Science...* Annetta & Shymansky (2005)	*Providing PD & Team...* Haar (2003)	*Using Research...* Scribner (2003)	*Quality Teacher in Rural...* Holloway (2002)
Minimum # of Hours					
KEY FINDING: *Activity Form* School-based & Job-Embedded	**X**				**X**
KEY FINDING: *Duration* Continuous, Long-Term	**X**		**X**		**X**
KEY FINDING: *Collective Participation* Groups of Teachers then Entire Faculty	**X**	**X**	**X**	**X**	
KEY FINDING: *Content Focus* Subject Area Learning	**X**	**X**	**X**	**X**	
KEY FINDING: *Active Learning* New Techniques in Instructional Practice		**X**			
KEY FINDING: *Coherence* Comprehensive Local Process for Improving Student Learning	**X**		**X**	**X**	**X**

APPENDIX B: Maine Statewide Professional Development Expenditures by EPS Object FY2013

Object Code	Object Description	Total Expenditure Statewide FY13
1010	Salaries - Professionals	$150,909.51
1020	Salaries - Aides or Assistants	$52,988.38
1040	Salaries - Administrators	$88,389.15
1050	Salaries - Assistant Administrators	$400,944.50
1180	Salaries - Regular Employees	$21,220.03
1200	Salaries - Temporary Employees	$27,372.80
1230	Salaries - Substitutes	$259,814.70
1233	Salaries	$2,902.04
1234	Salaries	$337.50
1310	Salaries - Overtime for Professionals	$20,016.64
1320	Salaries - Overtime for Ed Techs	$1,676.33
1500	Salaries - Stipends	$520,404.29
1510	Stipends - Department Head	$55,145.68
1560	Stipends - Teacher Leader	$4,500.00
1570	Stipends - Teacher Mentor	$99,205.57

APPENDIX B: Maine Statewide Professional Development Expenditures by EPS Object FY2013 (cont.)

Object Code	Object Description	Total Expenditure Statewide FY13
2000	Employee Benefits	$8,114.19
2010	Employee Benefits for Professionals	$176.18
2030	Employee Benefits for Substitutes and Tutors (Temporary Employees)	$8,821.29
2040	Employee Benefits for Administrators	$5,445.31
2080	Employee Benefits for Regular Employees	$2,737.35
2110	Group Health Insurance for Professionals	$11,162.70
2111	Group Insurance for Professionals - Other	$607.72
2120	Group Health Insurance for Instructional Aides or Assistants	$26,369.64
2140	Group Health Insurance for Administrators	$9,688.22
2150	Group Health Insurance for Assistant Administrators	$69,845.21
2200	Social Security/Medicare	$3,924.32
2201	Social Security/Medicare Contributions - Stipends	$117.60
2205	Social Security/Medicare Contributions - Stipends	$10.87
2210	Social Security/Medicare Payments for Professionals	$1,102.27
2211	Social Security/Medicare Payments for Professionals	$7.12
2220	Social Security/Medicare Contributions for Instructional Aide/Assistant	$662.11
2221	Social Security/Medicare	$12.57
2230	Social Security/Medicare Contributions for Substitutes and Tutors	$2,658.33
2231	Social Security/Medicare	$18.49
2240	Social Security/Medicare Contributions for Administrators	$773.65
2250	Social Security/Medicare Contributions for Assistant Administrators	$4,502.74

APPENDIX B: Maine Statewide Professional Development Expenditures by EPS Object FY2013 (cont.)

Object Code	Object Description	Total Expenditure Statewide FY13
2280	Social Security/Medicare Contributions for Regular Employees	$157.78
2300	Retirement Contributions	$702.86
2310	Retirement Contributions for Professionals	$32.38
2330	Retirement Contributions for Substitutes and Tutors	$12.46
2380	Retirement Contributions for Regular Employees	$357.27
2510	Tuition Reimbursement for Professionals	$4,938,733.96
2520	Tuition Reimbursement for Instructional Aides or Assistants	$204,023.16
2540	Tuition Reimbursement for Administrators	$25,260.96
2600	Unemployment Compensation	$58.95
2610	Unemployment Compensation Paid for Professionals	$97.76
2630	Unemployment Compensation Paid for Substitutes and Tutors	$258.08
2640	Unemployment Compensation for Administrators	$16.07
2680	Unemployment Compensation Paid for Regular Employees	$3.93
2700	Workers' Compensation	$800.31
2710	Worker's Compensation Paid for Professionals	$524.01
2720	Worker's Compensation Paid for Instructional Aides or Assistants	$215.67
2730	Worker's Compensation Paid for Substitutes and Tutors	$773.60
2740	Worker's Compensation Paid for Administrators	$228.40
2780	Worker's Compensation Paid for Regular Employees	$97.08
3000	Purchased Prof & Technical Services	$41,483.17
3300	Professional Employee Training & Development	$708,721.63

APPENDIX B: Maine Statewide Professional Development Expenditures by EPS Object FY2013 (cont.)

Object Code	Object Description	Total Expenditure Statewide FY13
3306	Purchased Professional & Technical Services	$3,482.55
3310	Employee Training on Student Assessment	$2,855.40
5000	Other Purchased Services	$258.83
5310	Other Purchased Services - Postage	$167.04
5320	Other Purchased Services - Telephone	$52.50
5800	Other Purchased Services - Travel	$15,770.18
5810	Travel - Professional Development	$59,846.62
5900	Other Purchased Services	$2,825.00
6000	General Supplies	$23,439.94
6100	Instructional Supplies	$22,286.30
6400	Books and Periodicals	$22,729.18
6420	Books and Periodicals - Softcover	$250.80
6500	Technology-Related Supplies	$7,495.00
6600	Audiovisual Supplies	$1,800.24
7341	Technology Hardware	$4,000.00
7350	Equipment - Technology Software	$2,062.50
8000	Debt Service & Miscellaneous	$100.00
8100	Dues & Fees - Membership	$45,380.35

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