Pursuing Administrative Efficiency for Maine's Schools: How Our Past Can Inform our Current Decisions

A monograph intended to inform decisions in towns, districts, and policy circles about how to contain educational costs *and* enhance educational quality

by

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Executive Summary

Efforts to relieve the tax burden in Maine currently seek efficiencies in public school administration. Claims that Maine schools are "over-administered" cite high ratios of administrators to teachers compared to national averages. Indeed, Maine spent on average \$65 more per pupil annually than the national average for administration between 1999 and 2003.

Missing from the debate, however, is Maine's relatively low expenditure on other staff and services to support instruction and students. While Maine spent \$65 more per pupil on administration, we spent \$290 less per pupil for auxiliary student support staff and services in the 1999-2003 period.

Maine schools consistently spend a lower proportion of their budgets on administration and a higher proportion on instruction than other states' schools. In 2003-04, for example, Maine's percentage of expenditures for administration was fourth lowest in the country and our expenditures on instruction were second highest.

Historical trends demonstrate that growth in administrative numbers and expenditures parallels the growth in programs and services and the growth in school district size. Without the addition of auxiliary staff and services, administrators' work has expanded in both breadth and depth. Maine has faced for some time a "crisis" in leadership as talented teachers holding administrative certificates have chosen not to pursue administrative positions, in part because of the "many hats" and long hours required of these jobs.

Finding efficiencies is far more complex than cutting administrative positions and consolidating services and districts – two strategies that will likely exacerbate current stressors on school leadership practice. Four choices face us in this respect:

- 1. What services currently provided by administration are we prepared to "do without"?
- 2. What administrative services are most essential to high student performance and therefore should be given top priority?
- 3. How shall we restructure administration to attract superb educational leaders to administrative roles?
- 4. Who is best positioned to make the best choices regarding administrative efficiencies?

Maine's consistently high student performance belies claims that the quality of our public schools is "below national averages". Instead, it appears that we get what we pay for – better than the national average. Efforts to find administrative savings that ignore the whole picture risk subverting the support and leadership teachers, parents, and students currently have.

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The Challenge: Containing Cost While Enhancing Quality

Three reports issued in the fall of 2006 called for decisive changes in Maine's public education system (see GrowSmart Maine; Maine Children's Alliance; and Maine State Board of Education). A common observation – and the main impetus behind calls for urgent change – was that Maine's tax burden is among the highest in the country. Many label it "unsustainable". The solution to this problem advanced in all three reports was to cut public expenditures, allowing taxes to at least hold steady. Recommendations targeted a menu of education and municipal expenditure patterns.

Among them is the cost of administration for schools. Although all three reports claim that Maine schools have too many administrators and that administrative costs are substantially above "the national average", National Center for Educational Statistics data show Maine's percent of expenditures for administration to have been consistently *below* the national average (USDOE, 2006). While claims of this sort must be carefully scrutinized before policy decisions are made, expenditures on administration make an easy target in the current policy environment in Maine. They're not directly related to student learning. The public and others often aren't certain what "administration" includes. And they present a convenient solution: consolidation. Indeed, it has been common recently to hear in Augusta the call to "the eliminate superintendents and districts" by consolidating smaller schools and districts with those nearby.

This monograph is intended to inform discussions about *cost containment through administrative restructuring so that educational quality is enhanced*. Contemporary information for it comes from the National Center for Educational Statistics (USDOE) and the Maine Department of Education. Historical data were collected at the University of Maine from public documents (part of a project led by the author to document public education in Maine during the 20th century).

Does Maine "Overspend" for Educational Administration? Still an Open Question

As noted above, this past Fall's three reports agree that Maine overspends on administration. Data to support the claim generally make two cases: Maine has *too many administrators* per teacher or per student in relation to the national average; Maine *spends more* per student for administration than the national average (this claim leads one

report to conclude that, if our spending came down to the national average, we would realize a \$25 million savings).

When we consider administrative expenses in the context of all expenditures to support student learning, however, these high figures are offset by Maine's low spending figures in other non-instructional support staff and services. According to the most recent national data from the National Center for Educational Statistics at the US Department of Education (Table 2), from 1999 to 2003, Maine annually spent *slightly less per pupil* (\$2,527) for "Student Services" than the national average (\$2,578). ("Student Services" encompasses all costs other than instructional salaries, capital outlay, and debt service).

Contained within this large category of Student Services expenditures, Maine over this four year period annually:

- Spent \$22 more per pupil than the national average for "General Administration" (superintendents, special education administration, and associated district clerical)
- Spent \$43 more per pupil than the national average for "School Administration" (school-level administration, full-time department heads, and clerical)
- Spent \$104 less per pupil for "Student Support Services" (guidance, health, attendance, psychological & speech/audiology services)
- Spent \$98 less per pupil for "Other Support Services" (business support services, central support services, and other services not otherwise classified)
- Spent \$88 less per pupil than the national average for "Instructional Staff" Support Services (curriculum coordination and development, professional development, technology and media/library)

In other words, Maine averages \$290 less per pupil for staff services in support of students while averaging \$65 more per pupil for administration.

It is clear that, in the total package of "Student Services", **Maine provides fewer funds for many types of support to students, teachers, and administrators but more funds for administration itself.** This picture reinforces research showing Maine principals and superintendents, particularly in rural districts, to be under considerable pressure to "do everything that larger districts and wealthier schools are doing", but to do so with less auxiliary support assistance than administrators have in many other states. By the same token, it is quite plausible that, without auxiliary staff and offices, teachers and parents seek assistance directly from the principal and the superintendent for a wider array of needs than is the case elsewhere.

Further, NCES data indicated that in 2003-04, Maine's expenditure for administration ("general" and "school" combined) came to 9.3% of Current Expenditures (all expenditures, that is, except for capital outlay and interest on debt service). Maine's percentage expenditure for administration was fourth lowest in the United States (the US average was 11.0%). In this same year, Maine held the distinction of being second highest in the country in percentage of Current Expenditures spent on "instruction and instruction-related activities". These data show that Maine's patterns of administrative spending appear NOT to be as profligate as the reports claim and that they are not "robbing the instructional line" of vital dollars.

Clearly, the picture of Maine's expenditures on school administration is more complex than the three reports make it out to be. Just as clearly, the education and policy community need a fair, well-documented assessment of the costs and benefits of administrative structures and roles before decisions are made to cut administration or reorganize administrative structures. If the benefits bought by administration in fact are redundant or unnecessary, they represent a legitimate focus for reform and, perhaps, savings. If they are not – or, as the data above imply, administrators are carrying more of the student support burden in Maine than in many other states – reducing administration to reduce costs could have dire consequences for children, staff, and communities.

Trend Lines in the Administration of Maine Public Schools since 1950

To augment our knowledge of school administration patterns in Maine, I offer the following observations drawn from statewide data from the past five decades. Evidence for them is included here in two forms. First, Table 1 entitled "Growth of Services and Programs and of Administration in Maine Public Schools: 1950-2000" on page 4 summarizes policy events and trends in school spending and administration. Second, a series of charts depicting most data sources for the "Growth" table are included as appendices (most of these cover the entire century).

The "Growth" table reveals a number of trends describing administrative growth, the fiscal context, and growth in the regulatory and policy environment.

Numbers of Administrators & Costs of Administration

- The number of school administrative units increased over the 1950 2000 period by 68%. It grew faster between 1950 and 1970 (45%) than between 1970 and 2000 (16%). Most newly formed administrative units in the 1960s and 1970s were regional School Administrative Districts and Community School Districts. These replaced about half previously existing districts, all of which were School Unions, leading to a decrease in the numbers of school committees over the half-century by 43%. (see also Chart A)
- 2. The numbers of administrators increased over the 1950-2000 period by 111%. It grew by 22% from 1950 to 1970, but more rapidly between 1970 and the end

Growth of Services and Required Programs and of Administrators and Administrative Costs in Maine Schools: 1950 - 2000

Year	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1980</u>	<u>1990</u>	2000					
Policies Programs	Me School Building Fund	National Civil Rights Act '64 School Lur	P.L. 94-142 (spec. Ed) '75 nch Program	A Nation at Risk '83 Effective School/	Maine Learning Results '92/'96 Techno	Safety: Columbine, Sept. 11 logy Initiatives					
and Services	Sinclair Act '56	Elementary/Sec Ed. Act '65	Vocational Educational Bills	Excellence Movement chool Reform Acts '84/'88	Accountability Curriculum Alignm't						
	Nat'l Defense Ed Act '58	Growth of Negotiated Contracts '69		(Salary/Certif/Sch Improveme	t/MEA's) New Funding Formula						
Superintendents (FTEs)	114	119	132	147	144	152					
Other Central Office (FTEs)	10	44	63	149	205	260					
Total Central Office	124	163	195	296	349	412					
Total Principals (FTEs)	425 est.	447	492	598	727	780					
\$ for Admin*/Pupil (2002 \$)**	\$58.93	62.58	138.29	298.37	576.34	649.22					
K-12 Per Pup Expend Tot (2002 \$)** (in 1,000s)	\$1,078	1,767	2,848	3,908	5,716	6,052					
K-12 Net Enrollment (1,000s)	158.3	195.3	241.2	227.5	208.2	207					
Total # of Pub E&S Schools	1,846	1,087	886	775	752	751					
Total # SAU's	114	141	165	179	184	192					
Total # School Comm'tees	594	550	294	319	313	337					
	* Includes General (central office) and School Administration, except possibly in the case of 1950. ** Based on Net Elementary and Secondary Expenditures										
	Note: Administrator count includes Full-time-Equivalent superintendents and Full-time Equivalent Other Central Office administrators (Assistant Superintendents, Curriculum Coordinators, and Special Ed Directors). Principal count is for full-time building-level administrators (principals, voc directors and assistants after 1980)										

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of the century (74%). Numbers of superintendents and principals grew steadily throughout the half-century. Numbers of "other central office administration", however, grew rapidly after 1970, representing the greatest relative growth in administrative positions over the period. (see also Chart B)

- 3. Per pupil expenditures on administration grew by 135% between 1950 and 1970 (6% in the '50s, 119% in the '60s). Between 1970 and 2000, administration expenditures grew by 370%, the steepest rises occurring in the '70s and '80s, then easing to 13% during the '90s. In 1960, administration costs were 3.4% of Current Elementary/Secondary costs in Maine and in the U.S. In 2000, they were 6.7% in Maine and 7.7% in the U.S. (see also Chart C)
- 4. The number of pupils per administrator in Maine peaked at 351 in 1970 and declined to 174 in 2000. Comparable figures for pupils per principal are 490 in 1970 and 265 in 2000.

In summary, Maine witnessed rapid rises in the numbers of full time administrators following 1970. Correspondingly, the ratio of administrators to pupils has fallen. Expenditures on administration clearly have risen as well over the period, most rapidly between 1970 and 1990. Ironically, these increases in administrators and costs coincided with a reduction in the numbers of local town school committees and with the formation of larger consolidated school districts. With one exception in 1980, Maine's percentage expenditure on administration (of total current expenditures) was lower than the national average.

The Fiscal Context

- 1. Total **K-12 per pupil expenditures** (excluding construction, transportation, and debt service) **grew by 461% over the half-century**. Unlike the above patterns, increases were **greater in the 1950 to 1970 period** (164%) than during the 1970 to 2000 period (113%). Interestingly, enrollments climbed faster during this early period than during the later one and the bulk of expenses were borne by local communities during the earlier period. (see also Charts C and F).
- Maine schools made large gains in "keeping kids in school" through grade 12 between 1950 and 1970. Gains in retention since then have been small by comparison. In addition, overall enrollment in Maine public schools has held steady or declined since 1970 (at about 83% of the eligible population). (see Chart D) [Note: Private school attendance and homeschooling, encouraged by the School Choice movement, contributed to the flattening of this curve.]
- 3. Average **teacher pay grew rapidly between 1950 and 1970, but has fallen or held steady** in the remaining three decades of the century (measured in constant dollars; see Chart E).

During the 1950 – 2000 half-century, the locally raised share of public school costs declined from 75% to 47%. The state share rose from 24% to 48%. The local and state shares "met" at 45% in 1980 and remained about even through 2000. (see Chart F)

In summary, school expenditures mirror somewhat the enrollment trends in the state. They grew faster when schools were taking in more students and making gains keeping those students in school through the end of high school (1950-1970). Rises in teacher pay also mirrored this pattern. Curiously, it was during this period that the bulk of the school bill was being paid by local communities.

Since 1980 when the state's share of public education spending "met" the local share, administrative costs and numbers of administrators have grown but growth in enrollment, retention, K-12 per pupil expenditures, and teacher salaries have fallen off or even declined.

The Policy and Public Opinion Environments

The top row of the "Growth" table on page 4 charts the evolution of state and federal legislation and programs and national movements that has influenced practices, structures, and spending in Maine. Several observations have a bearing on the administrative profile in Maine schools and districts.

- 1. Demands on Maine's public schools, as indicated by state and federal requirements (both funded and unfunded), rose substantially in the post-World War II period and continued to "layer on" policies and regulations through the end of the century. These can be summarized as follows:
 - i. 1950 1970: Modernizing curriculum and consolidating old and rural schools to accommodate new requirements and initiatives; advent of collective bargaining
 - ii. 1975 on: Building a system for all children (specifically, special needs/abilities students and for vocational secondary education)
 - 1983 on: Crisis of quality and confidence. The Excellence and Accountability movements. Reform legislation brings learning standards, curriculum alignment, assessment, and sanctions. Emergence of electronic technologies.
- 2. Charter schools, home schooling, and the school choice and accountability movements spurred **competition between public and private schools**. With declines in student population since 1990, **competition among public systems** for secondary students has risen.

3. A growing concern with safety, first focused on drug and alcohol issues and later on physical and emotional safety after Columbine and 9/11, has placed unprecedented demands on every school in the state and nation.

A distinctive feature of the last 30 years in American education is the emphasis on meeting individual student needs. We know a great deal more about these needs and how they impact children's success in school than we ever have. Student safety has also emerged as a vital concern, as has the press to make our state's and nation's economy more competitive and "world class".

These forces have driven new legislation, new regulations, and new calls for improvement. They have spawned layers of programs, both funded and unfunded, and created demands on teachers and administrators and calls for new specialists in curriculum, assessment, and special student populations. Threats of sanctions and losing students to other districts or private schools have driven new investments in programs, teachers, and administration.

Formulating the Issues Facing Us

Six Forces Shaping The Current Administrative Picture

Clearly, the conditions that gave rise to the current administrative patterns in Maine school districts are complex. Although these data cannot demonstrate any cause and effect between conditions and administrative trends, my experience and reading suggest six major ways that these conditions shaped the structure, roles, and work of school administrators.

First, growing **federal and state programs and requirements have spawned administrative structures, personnel, and costs**. In some cases, federal and state funds supported this growth (e.g., Special Education, Vocational Education, Title I); in other cases, it did not (School Improvement Plans; Local Assessment Systems; Curriculum alignment with Maine Learning Results; Technology Coordinators, etc.).

Second, these increasing demands on schools since 1980 encouraged school districts to create **new central office positions** (especially Assistant Superintendents and Curriculum Coordinators/Directors in the 1990-2006 period).

Third, part-time principalships (or teaching principalship) were **converted to fulltime principalships and assistant principalships were created** to handle the increased demands in larger schools serving a wider array of student needs. This trend was driven by the emphasis on the implementation of new practices and greater accountability, on "strong instructional leadership" (the result of the Effective Schools and Excellence Movements), and on safety (school safety officers and School Safety Plans). Fourth, despite growing demands on educators and schools, Maine's tendency NOT to invest in "specialists" and "other student support" services at the same rate that many districts have in other states has **likely increased the number and variety of demands placed on school and district administrators, requiring them increasingly to "wear many hats".** This effect may be most pronounced in our small, mid-sized, and less wealthy units. Ironically, rising demands on administration continue even while enrollments have declined since the early 1990s.

Fifth, the creation of **larger administrative units** with less oversight by local town school committees, coupled with increased funding by the state to support them, likely **facilitated the addition of new "intermediate" administrative and clerical positions**. School funding procedures in the1970s and '80s passed these costs on to the state, likely enabling the addition of administrative roles and services.

Sixth, increasingly complex – and sometimes contentious -- **negotiated contracts** over the past forty years have **increased the demand for administrators** as contract managers at both school and district levels.

The Choices We Now Face

One indelible impression that surfaces from this review is that current administrative structures and patterns in Maine grew from real *demands*. They grew, often, in response to governmental requirements and, sometimes, because funds were provided for them by state and federal legislation. It's not as clear that they grew from real *needs* – *a locally understood need for more leadership*. In this light, it is interesting to ponder the fact that when local communities were footing more of the bill (between 1950 and 1970), administrative services and costs were low (and schools' success at educating more students was increasing rapidly).

How might these observations inform the choices we now face? In particular, how might they shape our search for "greater efficiencies" – cost containments that won't hogtie our progress toward enhanced quality? I see four fundamental choices facing the public, the educator community, and policy-makers.

I. If we cut or restructure administration, what are we prepared to "do without"?

The story told by data in this monograph is that administrators (and I dare say teachers) in many Maine districts carry a great deal more of the "student support service" load than they do in other states. If we choose to alter administrative structures and roles, we will inevitably leave some services and responsibilities dangling in mid-air. If parents, students, and teachers continue to demand and need those services, the burden on those leaders who remain in schools and central offices will grow – on top of what is commonly understood to be an already unmanageable leadership load.

We now must ponder which of the requirements and the benefits we assign to administration will be sustained if administration is reduced and which will be eliminated. Who will see to management requirements? To MLR implementation? To communications with families and public? To personnel supervision? To school safety? To the implementation of state and federal initiatives?

II. What administrative and leadership services give us the best bang for the administrative buck?

Historical trends reviewed here suggest that administration expands, particularly at the intermediate levels, as districts grow in size. National expenditure data support the conclusion that auxiliary personnel and services grow with district size (NCES, 2006).

Clearly, Maine districts need to **review administrative benefits against costs**. Indeed, it's hard to imagine that most school committees haven't been doing this annually. In this effort, it will be vital to separate "need" from "demand": what benefits to children accrue from the administrative and clerical roles each school and district pays for (vs. which roles exist simply to fulfill statutory or regulatory requirements)?

Maine currently expends a lower percentage of its education budget (excluding capital outlay and debt service) on administration and a higher percentage directly on instruction than 45 other states (NCES, 2005). Under this pattern of expenditure, Maine student achievement has consistently been at the top of national comparisons on the National Assessment of Educational Progress (NCES). This pattern suggests that as a system we are realizing considerable "efficiency", despite our high per pupil administration expenditures and lower expenditure on other student services. What evidence indicates that Maine's current allocation patterns for leadership and administration are inefficient? That is, that they depress quality and/or inflate costs?

Rising proportions of public education expenditures in Maine have flowed toward special programs, toward technology, toward transportation, toward educational technicians, and toward the state's Department of Education. At the same time, teacher salaries have, in real purchasing power, declined since 1970 (as has the average pupil-teacher ratio). Which of these investments promises to yield the greatest impact on student learning, both in the immediate and long-term futures? What are the administrative responsibilities – and hidden administrative costs – that come with each new service or program?

Student enrollment projections are a major factor in determining what appropriate costs are. Two of this past fall's reports assume that enrollments will continue to fall. The third (GrowSmart Maine, 2006) not only states that downward projections of a few years ago are not bearing out but claims plainly that population will grow, particularly in the less populated areas of the state. **No decision about administrative, school, or district restructuring should be made without accurate demographic data to support it.**

III. How shall we restructure administration to attract superb educational leaders to administrative roles?

Maine schools appear heavy on administration but light on auxiliary services and service personnel. In comparison to national average expenditures, districts in other states spend substantially more for other student, curriculum, and instructional services than Maine "overspends" for administration (NCES, 2005). Our decisions to restructure administration must address "the many hats" that Maine principals and superintendents wear and the sustainability of these leadership arrangements in the future.

If we combine schools and districts into larger units, distancing administration from schools and communities, **how will we keep administrators whose major interest and talents lie in assisting students, parents, and teachers to optimize learning?** Recent research regarding teachers' aspirations to administration indicate that the growing "management" focus and "distance from kids and learning" is a major deterrent to talented teachers pursuing administrative careers (Mackenzie, Cook, and Morrell, 2004).

By the same token, how will we structure the management of schools and districts so that they will be well supervised and efficiently run? In 2005, the average Maine principal supervised 38 adults working in all aspects of the school (Donaldson, Buckingham, and Marnik, 2005). Superintendents are responsible for financial management, transportation, plant and operations, instructional systems, and increasingly complex public relations. How will we redefine administrative roles and responsibilities to attract and support administrators with the talent and energy to blend efficient operations management and educational excellence?

IV. Who makes the choice?

We should, as well, consider the governance issues that are at play here. When town school committees were paying the tab, administrative costs were at their lowest point in the past half-century. But as state and federal shares of the tab grew, and as requirements by government grew, administration has grown both in numbers and in cost. We must examine whether administrative accountability and efficiency will be greater when answering to a local school board in local political arenas, to more distant regional district boards and arenas, or to the state and/or federal governments.

The three reports take quite different postures with regard to this question. Two encourage voluntary efforts at efficiency, counting on the free sharing of information and the wisdom of Mainers to make good choices (GrowSmart Maine; Maine Children's Alliance). Clearly, parents, school board members, citizens, and educators have valuable insights into the need for management and leadership in their own schools and central offices. Just as clearly, they need models, information, and support from their state leaders as they continue to maintain the delicate balance between high quality services for kids and what they and their neighbors can and are willing to pay.

References and Resources

- A Case for Cooperation: Making Connections to Improve Education for All Maine Students (Maine Children's Alliance, 303 State Street, Augusta ME 04330; 2006)
- Charting Maine's Future: An Action Plan for Promoting Sustainable Prosperity and Quality Places (GrowSmart Maine; Yarmouth, ME 2006)
- Donaldson, Gordon and Associates (2006) *From School House to Schooling System: Maine Public Schools in the Twentieth Century.* A Working Overview. Orono ME: College of Education and Human Development, University of Maine.

Donaldson, G, D. Buckingham, and G. Marnik (2005). *The Maine Principal Study: Change and Stability in School Leadership: 1997-2005.* Orono ME: College of Education and Human Development, University of Maine.

The Learning State: Maine Schooling for the 21st Century. State Board of Education Select Panel on Revisioning Education in Maine. Augusta, ME. 9/06

Mackenzie, S. V., Cook, S., & Morrell, B. (2004). *A View from the Inside: Continuing the Conversation about Teaching in Maine Schools*. Augusta, ME: Maine Educational Leadership Consortium.

National Center for Educational Statistics, U.S. Department of Education (<u>http://nces.ed.gov/programs/digest/</u>)

	4 Year Average		1999-00		200-01		2001-02		2002-03	
	ME	US	ME	US	ME	US	ME	US	ME	US
Grand Total	9,398	8,729	8,515	8,033	9,096	8,589	9,692	8,996	10,288	9,299
Current Year Expenditures	8,528	7,515	7,667	6,912	8,232	7,376	8,818	7,727	9,344	8,044
Instruction	5,695	4,624	5,127	4,268	5,506	4,539	5,877	4,755	6,269	4,934
Student Services Total	2,527	2,578	2,243	2,351	2,446	2,528	2,646	2,652	2,774	2,782
Students	276	380	236	342	262	368	290	393	315	415
Instructional Staff	262	350	225	312	251	337	277	364	294	385
General Administration	177	155	154	143	163	151	179	160	213	165
School Administration	466	423	428	392	455	415	479	434	500	452
Operation & Maintenance	813	720	724	666	798	719	862	731	866	764
Student Transportation	380	303	344	278	371	298	401	310	402	325
Other Support Services	150	248	132	217	146	241	158	260	163	275
Food Service	293	296	298	276	280	293	295	303	300	310
Enterprise Operations	0	17	0	17	0	16	0	17	0	19
Capital Outlay	691	997	678	925	679	998	680	1,048	728	1,016
Interest on Debt	192	217	170	195	185	215	195	220	216	239

Table 2. Per Pupil *Expenditures for Elementary and Secondary Education 1999-2003 Maine and the U.S.

* Based on Fall Enrollments Source: NCES Digest of Educational Statistics

Student Support Services Š staff providing attendance and social work, guidance, health, psychological services, speech pathology, audiology and other support services

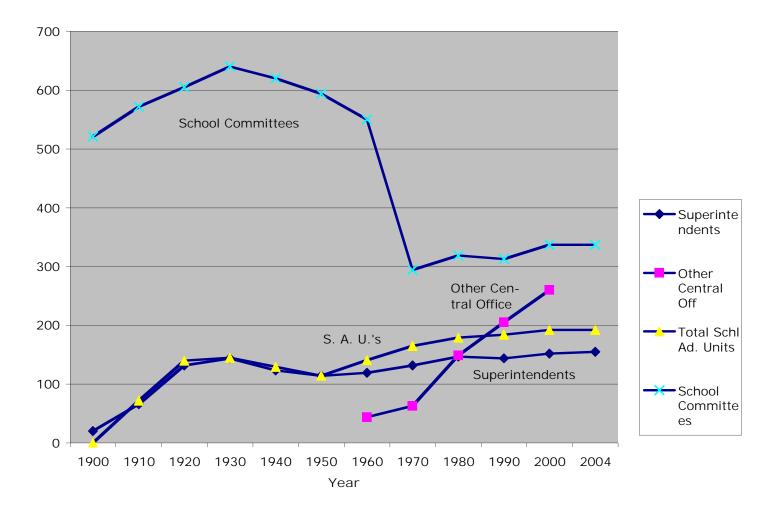
Instructional Staff Š positions that are in the nature of teaching or in the improvement of the teaching-learning situation, including consultants or supervisors of instruction, guidance personnel, librarians, psychological personnel and other instructional staff

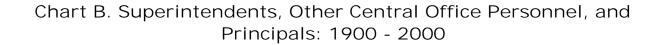
Other Support Services - business support services, central support services, and other support services not otherwise classified

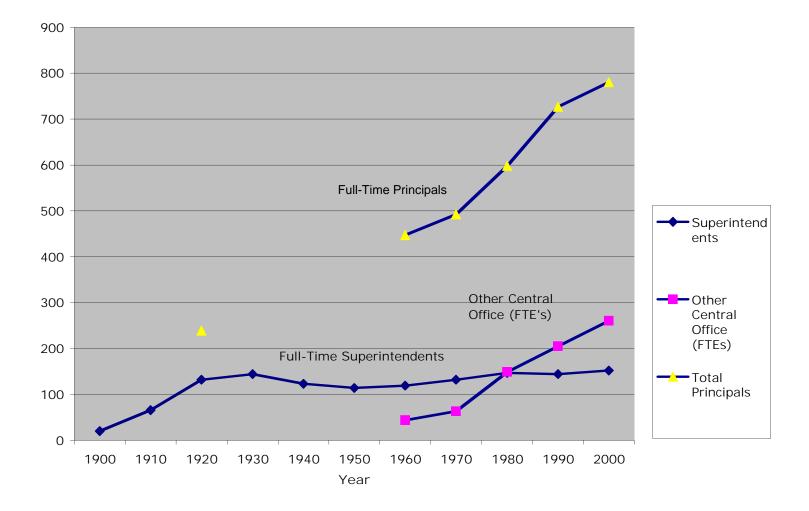
School Administration – staff for the office of the principal, full-time department chairpersons, and graduation expenses

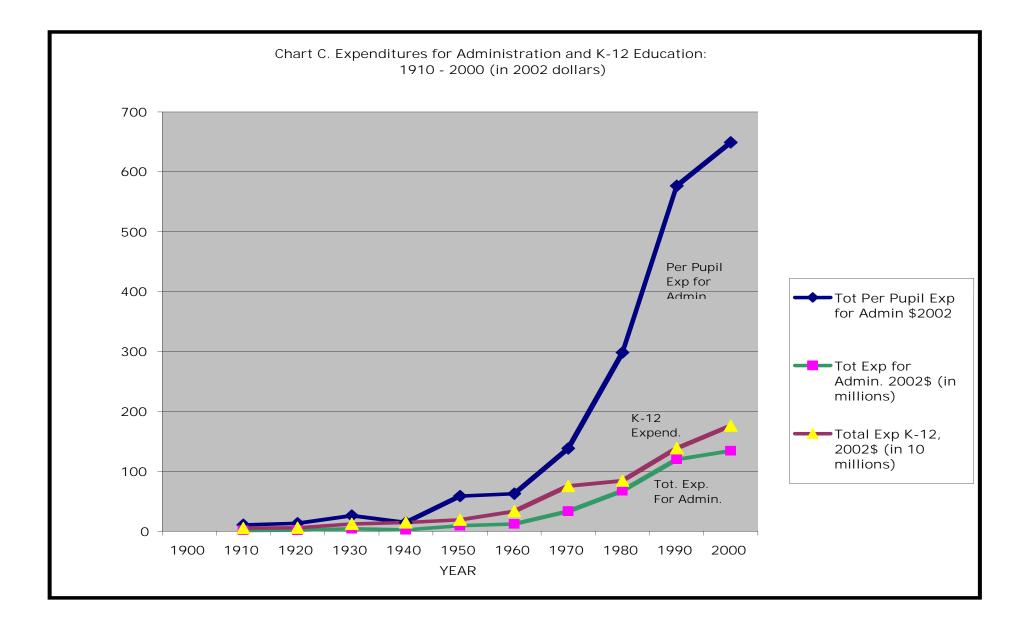
General Administration - staff for boards of education and executive administration

Chart A. School Administrative Units, School Committees, Superintendents, and Other Central Office Personnel: 1900 - 2004

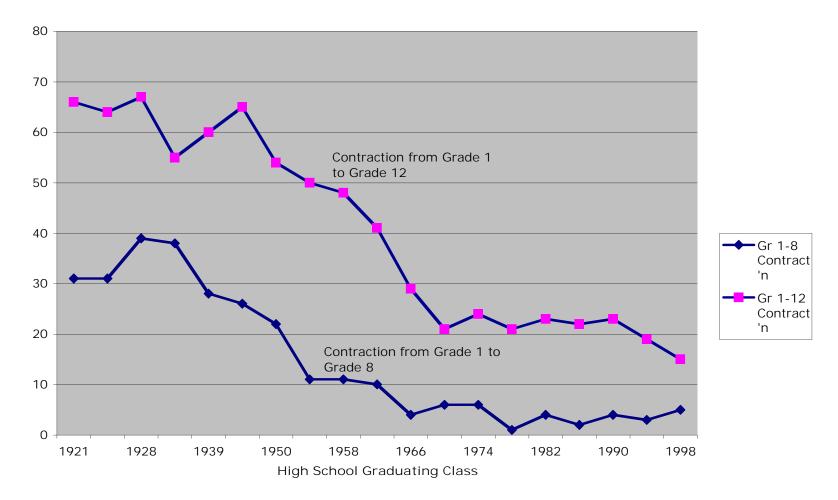












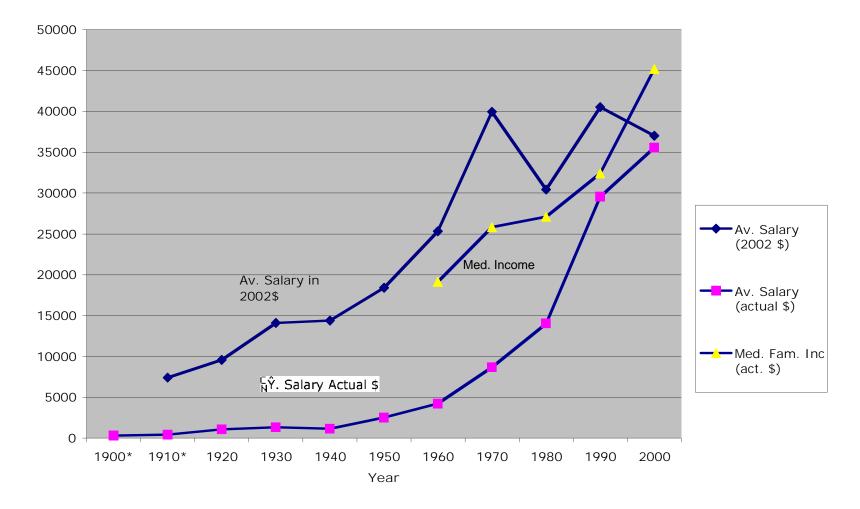


Chart E. Average Maine Teacher Salary and Median Family Income: 1900 - 2000 (Actual \$ and 2002 \$)



