


1-1-1999

## Essential Programs and Services: Equity and Adequacy in Funding to Improve Learning for All Children

Maine State Board of Education

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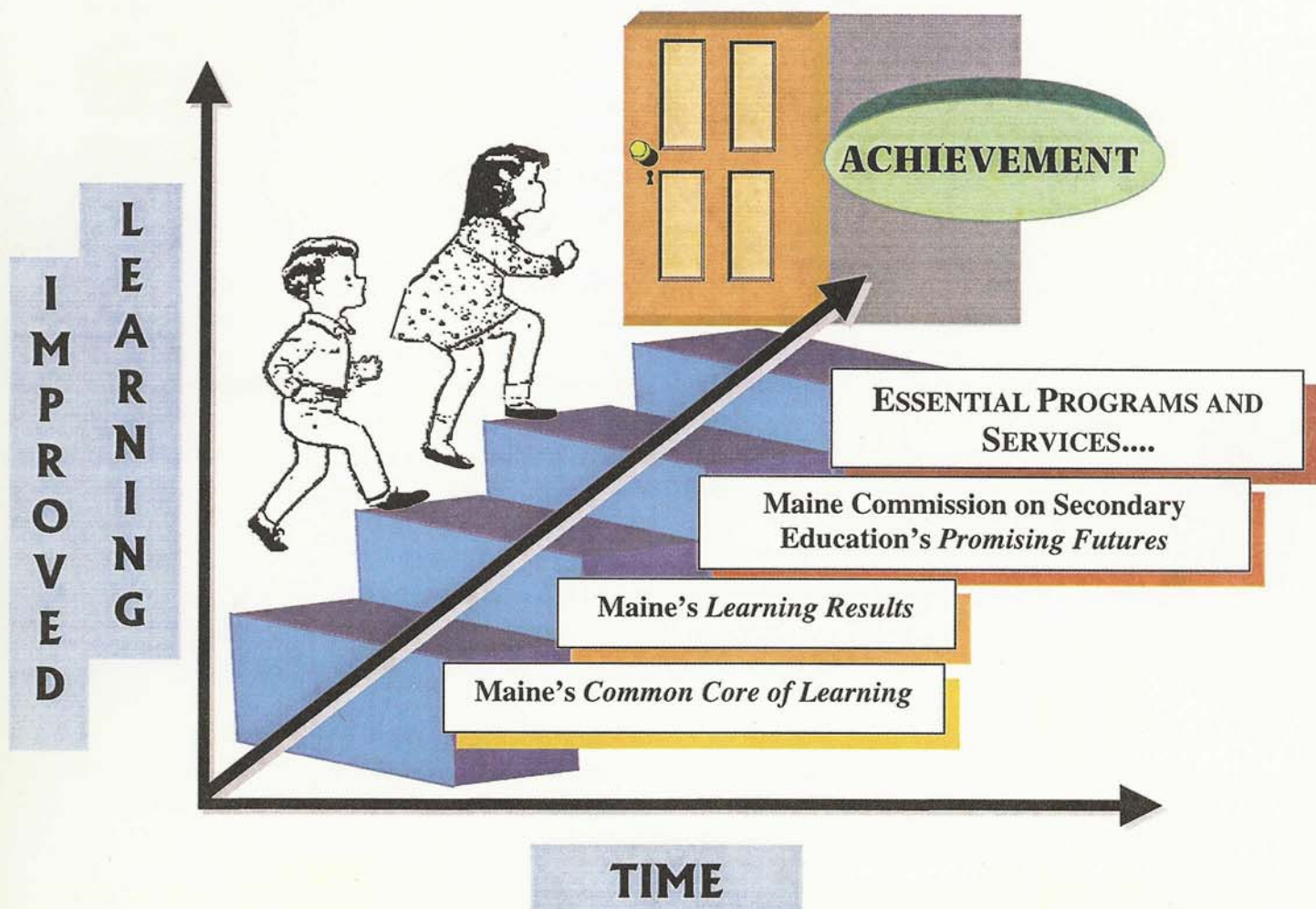
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### Recommended Citation

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# Essential Programs & Services



*Equity & Adequacy In Funding  
to Improve Learning for  
All Children*



STATE OF MAINE  
STATE BOARD OF EDUCATION  
AUGUSTA, MAINE  
04333-0023

Members of the 119th Maine Legislature

This report is submitted by the Essential Programs and Services Committee of the State Board of Education as directed by the 118th Maine Legislature. Beginning with Maine's Common Core of Learning completed in 1990, the state embarked upon a plan for helping all children achieve high academic standards. In 1995, the Legislature adopted the Maine *Learning Results*, identifying what all students should know and be able to do. This report identifies the resources needed for each child to meet those standards. If the people of Maine are to address their responsibility to offer all children an appropriate and adequate education, some funding practice such as that being recommended here must be adopted.

The educational funding recommendations contained in this report will accomplish several important objectives for education in the State of Maine. First, there will be significant improvement in the equity of opportunity to learn for *all* children regardless of where they live. An equitable share of resources would fund the educational opportunities for *each* child. Secondly, the resources identified are sufficient to permit each child to meet the standards set by the *Learning Results*. Though financial resources, in and of themselves, cannot guarantee the achievement of the *Learning Results*, inadequate resources can deter that achievement.

Currently there are significant variations in the amount of funds provided for the education of children, depending on where they live. The operating costs per pupil vary from a high of \$15,662 to a low of \$3,218. Even when the extremes are eliminated, there is a differential of more than 65% in the amount provided per pupil.

The current funding formula for education makes no attempt to identify what an adequate amount of resources is for achievement of the *Learning Results* standards. These recommendations of the Essential Programs and Services Committee identify the resources needed to "get the job done," that is, to permit *all* students to meet those standards.

These recommendations make *no* attempt to address the question of how many of the needed dollars should be provided by the state and how many should be provided by local communities. While that determination is an extremely important issue, the same issue exists with the current formula for distributing the state's share of education costs. However, several task forces and commissions have studied the issue over the past several years and to duplicate that work was beyond the scope of this committee's assignment.

In view of the disparities in the resources available for the education of children depending upon where they live, the committee is hopeful the Legislature will adopt the recommendations in this report.



Sincerely,

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Maine State Board of Education

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## EXECUTIVE SUMMARY

### **The Essential Resources Needed to Insure Student Equity in Achieving the *Learning Results* Standard**

This report has been prepared at the request of the Maine State Legislature. It is an attempt to define and quantify the resources that are necessary for each child in Maine to meet the standards set by the *Learning Results*. The recommendations provide an adequate and equitable amount of resources. The committee has defined "essential programs" to be the eight content areas of the *Learning Results*. The essential services are all those resources that would be required for each child to meet the standards.

The services deemed necessary for all students to achieve the *Learning Results* standards are categorized as follows: A) School Personnel, B) Supplies and Equipment, C) Resources for Specialized Student Populations, D) Specialized Services, E) District Services, and F) School Level Adjustments. A financial model was developed which contained the amount of resources necessary for each item under each of these categories.

The decision as to the appropriate amount of resources for each category was formed by data from various sources. Those sources included empirical information on Maine schools, a study of high and low performing schools, evidence from existing or proposed models, national literature on school resources and performance, a special survey of current practice in Maine schools, and expert testimony.

A key component of the recommendations is that most of the funding identified should be made available without any requirements as to how the funds are to be spent. The local school districts would make that decision. The recommendations identify an adequate and equitable amount of resources but are not meant to be a required template for spending. With three exceptions, the Committee has not prescribed how these resources should be used at the local level. (Several statewide commissions and task forces are identifying exemplary programs which local school districts may wish to adopt to help achieve the *Learning Results*.) These three exceptions are spending for early childhood development, technology, and student assessments. Funds for these

programs would be made available as targeted funds only if there were evidence that the funds would be spent on these programs.

Additionally, in accordance with the request from the Legislature, the committee makes some general recommendations covering accountability at the school level. School accountability is vital given the significant amount of resources provided by the state and the significant control that Maine has appropriately left with local communities. The recommendations are consistent with work that is being done by the *Learning Results* Steering Committee on the broader issue of accountability for all constituencies of education. Leaving the recommendations somewhat general is important until such time as the work of the *Learning Results* Steering Committee and others develop more specific detail relating to accountability.

The committee's work was limited to the issue of developing a recommendation for an adequate and equitable amount of funding necessary for *all* children to meet the *Learning Results* standards. The important issues of how much of the necessary funding should come from the state, how much from the local communities, and what is the appropriate tax policy for raising funds, were beyond the scope of its work.

A pro forma estimate of the total funds needed to implement the recommendations indicated that an additional \$131.5 million over the \$1.2 billion spent in 1996-97 would be needed. This is an increase of only a little over 10%. This is more than should be added to educational spending at one time. Accordingly the committee recommends that alternative programs for transitioning this increase in spending be studied by experts with a recommendation to be made to the Legislature as to the best method to be used in implementing the increase.

## **The Essential Resources Needed to Insure Student Equity in Achieving the *Learning Results Standards***

### **Overview**

*In 1997, the Legislature charged the Maine State Board of Education to name a committee to develop a plan for funding education which is based on the concept of essential programs and services. The plan was to include a system for measuring student achievement and for holding schools accountable for student learning.*

*The concept of essential programs and services is tied directly to Maine's Learning Results. Learning Results are the state standards, embodied in Maine law, which spell out what public school students should know and be able to do at various points in their K-12 education. Essential programs and services are the way to reach that goal; they are the educational programs and services which are essential if all Maine students are to have an equitable opportunity to achieve the Learning Results.*

### **Mission of the Committee**

This report describes the findings and recommendations of the State Board of Education Essential Programs and Services Committee. LD1137, Section 10-1, passed by the Maine Legislature in 1997, states in part:

Beginning July, 1997 the State Board of Education shall develop for the Legislature an implementation plan for funding essential programs and services. The plan must be based on the criteria for student learning developed by the Task Force on *Learning Results* and established in Public Law 1995, Chapter 649 and in rules adopted by the board and the Department of Education. The plan must include establishment of a system to measure and ensure that schools are held accountable for student *Learning Results*.

In accordance with LD1137, the State Board of Education established an Essential Programs and Services committee and charged it to:

- . identify the school resources, financial and other, needed for all Maine students to achieve the *Learning Results* standards.
- . estimate the cost statewide of those essential resources.
- . develop a system for holding schools accountable for student achievement of the *Learning Results*.

describe a process for developing a transition plan for implementing the committee's recommendations.

### **Background**

Historically, the cost of educating Maine's children has been based on what is known as an expenditure-driven formula. Whatever was *spent* in any given year by the state and local communities was considered what it *costs* to educate our youth. The total cost for the next year was simply what had been spent in previous years (generally two year-old expenditures), plus an additional amount to account for inflation. In 1997, the formula was changed to a guaranteed-foundation program. In theory, the state guarantees a certain amount of funding, an equal foundation amount, for each child in a school district. However, this guarantee is adjusted downward based on the amount of state funds the Maine Legislature approves for education in any given year.

In actuality, then, educational costs in Maine have been based on past expenditures (prior to 1997) or an adjusted guarantee amount (after 1997), which over time have resulted in considerable disparities in educational funds available in different school districts across the state. Under the current state formula, a community's ability to pay for education is based on two key factors: real estate property valuations (85% weighting) and median household income (15% weighting). Per pupil valuations (total property value divided by the number of pupils) vary a great deal among communities in Maine, ranging from a low \$85,000 per pupil to almost 11 million dollars per pupil. Median household income ranges from approximately \$9,400 to \$55,000. As a result, some communities are far more able than others to provide financial support for their schools. The state distribution formula is designed to compensate for these differences, but because the state funds together with required local funds do not fully cover the cost of education, communities must supplement these funds. Some communities are able to provide far more funds per pupil than other communities. As a consequence, in 1996-97 some school districts were spending 2-3 times more per pupil than other districts. These disparities between communities result in significant student inequities across the state where some schools have many more resources than others for educating their children.

By passing LD1137, the Legislature signaled its wish to improve student equity throughout Maine; in essence, to level the education playing field. National research has found that over the

past two and one-half decades court ordered and legislative school finance reforms have had only modest success in reducing fiscal inequality (Schwartz & Moskowitz, 1988; Odden & Wohlsletter, 1992; Wykoff, 1992; Evans, Murray & Schwab, 1997). Although various methods of reducing spending differences across districts have been tried, including flat grants, minimum foundation programs (e.g., Maine), guaranteed tax base, percentage equalizing formulas and full state funding, all have failed to eliminate fiscal disparities. LD1137 requested the State Board of Education to devise a new approach for determining the cost of education, one that bases the costs on the amount of resources schools need in order to provide equitable core education programs for *all* students, regardless of where they live in Maine. More specifically, the Legislature requested an approach based on the programs and services deemed necessary for all Maine students to achieve the *Learning Results* standards. The committee believes that adoption of the recommendations contained in this report would be a major step in providing more equitable opportunities to learn for all children in Maine.

### **Approach**

The work described in this report began early in 1996. LD958 (1996) directed the State Board of Education to develop an implementation plan for the definition and funding of essential programs and services. At that time, the State Board established a committee which developed the conceptual framework for the plan described in this report. The work of this original committee ended in late spring because of insufficient funds to complete the plan. With the passage of LD1137 in 1997, the Essential Programs and Services (EPS) committee was reconstituted and resumed its work in July 1997. A list of the 17 committee members, representative of a wide range of education constituencies, appears in Appendix A. The committee, chaired by Mr. Weston Bonney, a member of the State Board of Education, contracted for research and consultative assistance with the University of Southern Maine office of the Maine Education Policy Research Institute.

### **Guiding Principles**

In fulfilling its charge, the committee was guided by one fundamental principle: the purpose of developing the new approach for funding K-12 education was to **insure that all schools have the programs and services that are essential if all students are to have equitable educational opportunities to achieve the *Learning Results***. This premise was a key one for several reasons. First, the legislation did not request a new funding approach for *all* the programs and services

schools may provide to meet the needs of children, but rather an approach for providing the programs and services necessary for achieving the *Learning Results*. Accordingly, while the committee identified some additional programs and services it believes should be available in all schools and communities (see the section beginning on page 27 covering Additional Education Programs), the Essential Programs and Services (EPS) Model developed by the committee focuses only on those resources it believes are needed for achieving the *Learning Results*.

Second, providing equitable opportunities in all Maine schools will require differing levels of resources in different schools. Some children have specialized needs (i.e., special education, disadvantaged youth, limited English proficiency children, and primary grade children). Schools will need more resources to insure that these children may achieve the *Learning Results*. Thus, the committee recognized that providing equitable opportunities requires more than just providing an equal amount to support each student.

Third, the legislative charge was to insure student equity. Taxpayer equity and the formula for fairly distributing the state portion of education resources are also important, but fall beyond the scope of the committee's work. The legislature will need to review the existing formula for distribution of the state subsidy in light of the new approach recommended here for insuring student equity.

Based on this fundamental principle, the committee also identified several premises which it used to guide its deliberations, findings, and recommendations. These were as follows:

- . Many of the *Learning Results* may be achieved within current resources, although some curriculum, instruction, and assessment practices may be subject to change. Where *Learning Results* cannot be achieved with current levels of resources, and with greater efficiency in the use of these resources, additional resources would need to be added.
- . Prototypical school models based on average school sizes found in Maine served as the basis for defining, describing, and recommending the essential programs and services. However, the committee felt very strongly that, with the exception of three areas, the state portion of school resources should continue to be distributed according to current practice.
- . It should be distributed as a lump sum of general purpose aid and local communities should decide how the resources will be distributed among programs and services. The

three exceptions are funds in the areas of special resources for K-2 grade students, technology, and student assessment. State funds for these three exceptions would be available only if there is evidence that the funds are being spent for these three particular purposes.

. The components of the new Essential Programs and Services (EPS) Model should be defined by the parameters of the legislative charge, and not by a pre-established total cost figure. Aggregate costs were only calculated after the model had been developed.

. The EPS components were identified and defined based on empirical evidence, actual costs, and best practices wherever available. Expert advice also was used in developing the EPS Model.

. The recommended EPS Model did not include provisions for capital investment, capital replacement, and technology hardware. These should be defined and funded under separate provisions and legislation.

. The accountability system should be based on a "steering from a distance" principle. The committee believes the prototypical schools presented in this report provide a good template for how resources may be distributed at the local level to insure equal educational opportunities. However, local conditions may suggest an alternative template. The committee believes the local community is in the best position to decide how to use school resources as long as these resources are used effectively in helping all students achieve the *Learning Results*. Unless student performance is substantially below state standards for a sustained period of time, local communities should continue to decide how general purpose aid is spent at the local level. The state should only intervene when there is substantial, sustained evidence that students are not being provided equitable opportunities. The state should then have an accountability plan in place with systems to assist local communities in improving student performance.

### **Methodology**

The committee used four key sources of information and data to inform it in defining and developing the essential programs and services model for Maine. Whenever possible, multiple sources were used in making decisions and recommendations. One source of evidence was **empirical information on Maine schools**. If available, information on current practices in Maine

was examined. These practices included staffing patterns, programs, resources and expenditure data. Unfortunately, this information was very limited in several areas. A majority of the data currently collected by the Maine Department of Education is for regulatory purposes. As such, it does not provide much of the information needed to examine specific resource allocations. Thus, when available, empirical information on current practices in Maine was used in the model building process.

In addition to this information, data describing high and low performing Maine schools were used in exploring the relationships between school resources and performance, and in defining proposed program and service levels. More specifically, resources and expenditures in schools performing at particularly high or low levels on the Maine Educational Assessments (MEAs) were examined for purposes of recommending resource levels. A description of the methodology and definitions used in this analysis appears in Appendix B.

Finally, in some areas under consideration by the committee, there was no empirical information currently available. Consequently, a survey study was conducted with all Maine school districts in order to collect the needed information. A copy of the survey appears in Appendix C.

A second source was **evidence from existing or proposed models**. The Education Commission of the States (ECS) has identified ten states (including Maine) which are attempting to define a “core” education and core education costs. Each of these states was contacted, and where available, models were collected. Three states, Massachusetts, New Jersey and Wyoming, have made substantial progress in developing prototypical models and these were reviewed in detail by the committee.

In addition, the committee reviewed data included in the reports from two previously proposed Maine models. The concept of school funding of essential programs and services was first introduced into the Maine policy arena by the 1994 report of the Governor’s Task Force on School Funding. This task force identified the components of an EPS model, and a subcommittee working with Department of Education staff developed the model, including specific staff and other resource categories and funding levels. A copy of this model appears in Appendix D. The 1995 report of the Committee to Study Organizational and Tax Issues in Public Schools, the so-called Rosser Commission, also included an EPS model. This model was very similar to the 1994 task force model, and a copy appears in Appendix E. Although both the task force and commission completed



their work before passage of LD1137, and, therefore, did not have the *Learning Results* standards as the target for recommending new funding levels, the present committee did find the earlier work helpful as it developed the proposed EPS Model.

The third source of evidence was **national literature on school resources and performance**. The relationships among school resources, funding, and student performance have been the subject of empirical research for over 25 years. Although this research historically has produced mixed findings and considerable debate, more recent studies (e.g., Achilles, Finn & Bain, 1997; Wenglinsky, 1997; Ferguson & Ladd, 1996; Murnane & Levy, 1995; Hedges, Laine, & Greenwald, 1994; Verstegen, 1994) have yielded better understandings of the connections between resources and student performance. This more recent information was used by the committee in its deliberations.

The fourth key source was **expert testimony** from individuals who had particular knowledge and experience covering the topics under consideration. The committee solicited expert advice and testimony from a wide spectrum of individuals and groups. These included experts from Massachusetts, New Jersey, Ohio, and Wyoming, the Maine Department of Education, and various educational organizations in Maine. A listing of the experts consulted appears in Appendix F. Finally, the committee held over 25 public forums and meetings at which comments on the draft report were heard from over 420 individuals.

### **Definition of Essential Programs and Services**

Based on the legislative charge, the committee developed definitions for essential programs and services. These are:

**Essential Programs** are those programs and courses Maine schools need to offer **all** students so that they may meet the *Learning Results* standards in the eight *Learning Results* program areas of:

- |                                |                                   |
|--------------------------------|-----------------------------------|
| a. Career Preparation          | e. Modern and Classical Languages |
| b. English Language Arts       | f. Science and Technology         |
| c. Health & Physical Education | g. Social Studies                 |
| d. Mathematics                 | h. Visual and Performing Arts     |

**Essential Services** are those resources and services required to insure that each Maine student is offered an equitable opportunity to achieve the *Learning Results* standards contained in the eight essential programs. These resources and services were categorized into the following components:

- A. School Personnel
  - 1. regular classroom and special subject teachers
  - 2. education technicians
  - 3. counseling/guidance staff
  - 4. library staff
  - 5. health staff
  - 6. administrative staff
  - 7. support/clerical staff
  - 8. substitute teachers
- B. Supplies and Equipment
- C. Resources for Specialized Student Populations
  - 1. special needs pupils
  - 2. Limited English Proficiency (LEP) pupils
  - 3. disadvantaged youth
  - 4. primary (K-2) grade children
- D. Specialized Services
  - 1. professional development
  - 2. instructional leadership support
  - 3. student assessment
  - 4. technology
  - 5. co-curricular and extra-curricular student learning
- E. District Services
  - 1. system administration
  - 2. maintenance of operations
- F. School Level Adjustments
  - 1. vocational education
  - 2. teacher educational attainment
  - 3. transportation
  - 4. small schools
  - 5. debt services

### **Prototypical School Models**

The committee developed three prototypical schools and grade configurations to facilitate the EPS model building process. These three prototypical schools are:

<u>School Level</u>	<u>Number of Students</u>
Elementary School (Grade K-5)	250
Middle School (Grades 6-8)	400
Secondary School (Grades 9-12)	500

The number of students assigned to each school level was based on actual average school sizes found in Maine schools. Using these three grade-configured prototypical schools, the committee defined the levels of resources and services needed in these schools to ensure that all students have equitable opportunities to achieve the *Learning Results*.

It is important to reiterate one of the guiding premises noted earlier. The next section of this report provides descriptions of each EPS component, as well as the recommended resource levels, in terms of the three prototypical schools. These recommendations reflect the best judgment of the committee of the types and level of resources needed in each Maine school. While these descriptions may provide a template for allocating resources, they are not intended to dictate practice. Local school district personnel, in consultation with their local communities, are in the best position to determine the specific level of resources, programs, and services necessary to meet the needs of their children in achieving the *Learning Results* standards.

The EPS model components and their associated costs were used in determining a per pupil operating cost for different types of students. Under this model, each school district would receive a total state subsidy based on a yet-to-be determined portion of these expenditures. For the most part how this total state subsidy is distributed among schools, programs and services within each school district is a local decision.

### **Description of Essential Programs and Services Components**

The model components and their costs are described in this section. Copies of the three prototypical schools appear in Appendix G.

#### **A. School Personnel**

1. Regular classroom and special subject teachers (not including special education teachers)

Unquestionably, classroom teachers and special subject teachers (e.g., visual and performing art teachers, physical education teachers, etc.) are the essential component in any EPS model. It is these regular classroom teachers and subject specialists who will develop the curriculum, provide the instruction, and administer and interpret a vast majority of the assessments used in helping all students achieve the *Learning Results*. (A separate discussion of special education resources appears in Section C.1).

The committee believes a large portion of the content and standards in the *Learning Results* may be achieved within current staff levels. In other words, the committee believes a substantial amount of the knowledge and skills embedded in the *Learning Results* is already being taught in Maine schools. However, portions of the curriculum, instruction, and assessments found currently in schools will require significant re-alignment to ensure *all* students are successful. One method of describing the amount of teacher resources in a school is in terms of teacher to student ratios. A 1-18 ratio means one teacher for every eighteen students (**Important note: This is a teacher-student ratio, not a class size**). At present, average teacher-student ratios found in Maine schools are approximately 1-18 for grades K-8 and 1-16 for grades 9-12. This means that on average, there is one teacher for every 18 students in Maine's elementary schools and one high school teacher for every 16 secondary students. Both the 1994 Governor's Task Force and the 1995 Rosser Commission recommended teacher-student ratios higher than current practice (with one exception, i.e., 1-20 for grades K-8 in the Rosser Commission Report). However, as discussed earlier, the committee concluded that in order for all the *Learning Results* to be achieved by all students, additional resources are needed. The committee chose the common practice of converting these additional resources into *lower* teacher-student ratios. The committee has concluded that the EPS Model FTE (full-time equivalent) teacher-student ratios (excluding special education) should be as follows:

<u>Grade Level</u>	<u>FTE Teacher-Student Ratio</u>
	(Regular classroom teachers and subject specialists)
Grades K-5	1-17
Grades 6-8	1-16
Grades 9-12	1-15

Resource recommendations in the area of special education appear in section C.1.

## 2. Education Technicians

Classroom teachers will need additional instructional assistance in helping all students achieve the *Learning Results*. The importance of education technicians was recognized both by the Governor's Task Force and the Rosser Commission and included in their models. Classroom-based education technicians may provide specialized assistance to teachers by working with small groups of children, and by providing specialized one-on-one instruction. The committee used information from the school district survey, and the previous task force and commission, in establishing the proposed EPS model ratios. There is one FTE classroom instructional support education technician for every 100 K-8 elementary students (1-100) and one FTE technician for every 250 secondary students (1-250). Provisions for other types of education technicians (e.g., library, media, special education, etc.) are included in other components of the EPS model.

## 3. Counseling and Guidance Personnel

Guidance and counseling staff demands are growing dramatically. Fewer and fewer children are entering school ready to learn, and children of all ages are facing new, complex social issues daily. Guidance personnel play an important role in influencing the personal and social development of children, which are essential to academic development. Furthermore, achievement of the Career Preparation component of the *Learning Results* will require additional guidance services, particularly at the high school level. Both the Governor's Task Force and the Rosser Commission recommended guidance staff-student ratios of 1-400 for grades K-8 and 1-250 for 9-12. The current

ratio of counseling/guidance staff to students statewide is approximately 1-400. However, the committee concluded the current ratios are too high to meet the *Learning Results*. The recommended counseling/guidance staff-student ratios for the EPS Model are : 1-350 for grades K-8 and 1-250 for grades 9-12.

#### 4. Library Personnel

Adequate library staff, including librarians and library and media assistants, must be available to insure students have equal access to learning resources, including print and non-print materials, technological resources, and virtual libraries. The Maine Educational Media Association and the Maine State Library (1996) have recommended a librarian-student ratio of 1-600 and an assistant/aide-student ratio of 1-300. Current statewide practice in Maine is 1-975 for librarians and 1-680 for assistants/aides. The committee concluded that current practice is insufficient to support the *Learning Results* achievement and recommends the ratio be one FTE certified librarian for every 800 students (1-800) and a 1-500 ratio for library/media assistants.

#### 5. Health Personnel

Nurses and health staff must be sufficient in number to ensure students health and safety, prerequisites for students to be ready and able to learn. At present, many schools do not have sufficient health staff, leading to numerous instances of medical procedures and the administration of prescriptions being done by school secretaries and other non-certified personnel. In addition, given the health and physical education standards in the *Learning Results*, health staff will undergo significant expansion in roles and responsibilities. The Maine State Board of Nursing does not recommend a specific nurse-student ratio, but current practice in Maine schools is approximately one FTE nurse per 1000 students. The committee concluded that the current ratio is too high and recommended a ratio of 1-800 students for all grades K-12 in the EPS model.

#### 6. School Administrative Staff

Quality education rests in no small degree on strong, capable school leadership. Research has found that strong school level administration is an important component in effective schools. Current *school level* administrator (FTE principals and assistant principals) to student ratios in Maine are a little over 1-300. While the committee concluded that school administrators will need additional **instructional leadership** support to achieve the *Learning Results*, it believes current ratios are sufficient to provide for the overall administrative and management roles in schools. Thus,

the recommended ratios in the EPS model are 1-305 students for grades K-8 and 1-315 students for grades 9-12. The committee's recommendation for additional instructional leadership support appears in Section D-2 of this report.

#### 7. Support and Clerical Staff

Schools require reasonable levels of support staff in order to function effectively and efficiently. These personnel are critical to the day-to-day operation of schools, for administrators, teachers, and other professional staff. The committee concluded the Task Force and Rosser Commission recommendations in this area were appropriate, and thus, recommends a FTE ratio of 1-200 students for all grades K-12.

#### 8. Substitute Teachers

Substitute teachers are important for the smooth operation of schools. They provide continuity of instruction when teachers are absent. Results from the school district survey indicated that, on average, teachers are absent because of illness the equivalent of one-half day per pupil over the course of the school year. Thus, the proposed EPS model includes provisions for substitute teachers at the rate of 0.5 days per pupil.

### Personnel Costs

Statewide average salaries for 1997-98 have been used in establishing personnel costs. For the school personnel described in the previous section the figures are:

<b>FTE Personnel</b>	<b>Costs</b>
1. Regular classroom and special subject teachers (based on all qualified teachers with baccalaureate degrees)	\$32,291
2. Classroom instructional support education technicians	\$12,024
3. Counseling/guidance staff	\$38,267
4. Library staff:	
a. Librarians	\$36,759
b. Library/media aides	\$12,879

5. School nursing personnel	\$31,567
6. School administrative staff (principals and assistant principals)	\$51,212
7. Support/Clerical staff	\$18,621
8. Substitute teachers (0.5 day @ \$50 per day)	\$25.00

A report by the Maine School Management Association (March 1998) indicates that the average health insurance benefits package for teachers is approximately 15% of teachers' salaries for 1997-98. Accordingly, the committee recommends that 15% of all salaries be used in calculating health benefits costs in the proposed EPS model. More information on total benefits is needed before a determination of total benefits cost can be made. Once this information is available and analyzed, the committee believes the 15% figure may need to be adjusted.

#### **B. Supplies and Equipment**

Supplies and equipment are required to support curriculum and instruction, student services, and staff and administrative functions. Current expenditure levels in Maine schools are \$235 per K-8 pupil and \$375 per 9-12 pupil. However, because of funding constraints in recent years many Maine schools have been forced to cut their supplies and equipment budgets to levels which the committee concluded fail to meet current needs and are totally inadequate to meet the additional needs in implementing the *Learning Results*, including the need for computer software. The recommended levels are \$285 per pupil in grades K-8 and \$430 per pupil in grades 9-12.

#### **C. Resources for Specialized Student Populations**

In order to insure that **all** students have equitable opportunities for achieving the *Learning Results*, additional resources will be required to support programs for specialized student populations. These specialized populations are children with special education needs, Limited English Proficiency (LEP) students, disadvantaged youth, and primary grade children.

Each of these specialized populations is described in this section. There are many ways to allocate additional resources for these children. The committee has chosen to use a weighting procedure. According to Gold, Smith and Lawton (1995):



Weighting procedures, in effect, adjust the pupil count to provide a better reflection of a school district's educational need....Weights are assigned in relation to the costs of educating the "regular" school pupil. The "regular" pupil is given a weight of one (1.0). Other pupil populations are given weights relative to the "regular" pupil weight of 1.0 to reflect the additional cost of educating these pupils. For example, if a particular category of student has a weight of 1.5, that implies that it costs 1.5 times as much to educate that student as it does the "regular" student (p.25).

A description of each specialized group is followed by the committee's recommended weighting of these groups. Weightings are cumulative for children qualifying for more than one specialized group.

#### 1. Special Education Children

The *Learning Results* standards apply for all children, including children with special needs. Currently, the State of Maine and local school systems combined spend approximately \$140 million above regular education expenditures to provide the necessary programs and services for approximately 33,050 special education students. This represents approximately 15% of the total K-12 children in Maine's schools in 1996-1997. The state portion of these expenditures is reimbursed to local school districts two years after the local system has incurred the expenses based on the general purpose aid subsidy distribution calculated for each school district. High state subsidy receivers receive a larger portion of their special education expenditures than do low state subsidy receivers. The concept is designed to create special education student equality across the state. However, a recent study (Gallaudet, 1998) of Maine's special education data indicates that the current application of the identification criteria and the percent reimbursement formula may actually be creating greater student inequities across school districts.

Analysis of special needs identification figures suggest inconsistencies in the application of identification criteria. In some communities, a majority of special education students are identified as having a particular type of special need (e.g., learning disability) while in other communities with similar characteristics a majority of students appear to have a different type of special need (behavior problems or speech problems). In addition, analysis of the data reveals districts that are higher receivers of state aid have more identified special student needs, but less local funds available for providing the programs and services necessary to meet these special education needs. Low receivers, on-the-other-hand, generally have fewer children identified as having special needs, but

many have greater local financial ability to provide special education programs and services. Consequently, fewer students are receiving more comprehensive services in low receiving districts while more students are receiving less comprehensive programs in high receiving districts. The committee believes this is inappropriate and creates barriers for some children to achieve the *Learning Results* standards. The committee believes this may be alleviated by: 1) allocating the state's portion of special education expenditures on a year-to-year basis (without a two-year delay); 2) by implementing more consistent and standardized procedures for identification of special needs; and 3) by distributing state and local funds using a weighted formula. Specifically, the committee recommends a 2.1 weighting for each special education student, a weighting that reflects current total state and local expenditures, but one which will increase special education student equity throughout the state. Further, the committee recommends implementing a waiver and appeals process by which local school districts may receive additional state subsidies for exceptional instances where the 2.1 weighting is insufficient to insure that special individual students receive equitable school programming. Finally, the committee recommends that implementation of this weighting formula be monitored closely to insure that the new standardized identification procedures are implemented in a consistent and equitable manner throughout the state.

## 2. Limited English Proficiency (LEP) Students

In 1997-98, there were 2547 identified LEP students in over 94 schools spread across Maine. Data collected by the Bilingual Education and ESL office in the Maine Department of Education indicate there are several Maine school districts which have a substantial number of LEP students in their schools, and that the types of services provided these students vary widely depending upon the number and variety of LEP students located in a particular school district, and the manner in which these districts have chosen to provide services. This suggested to the committee there is no single best way to assist LEP students in achieving the *Learning Results*, but that additional resources will be needed. Unfortunately, the Maine Department of Education has neither complete nor reliable data on the cost of providing additional services for LEP students. The same appears to be the case in many other states. Information provided by the Education Commission of the States (ECS, 1997) reveals approximately 25 states provide extra LEP funds, ranging from a fixed, flat amount per pupil to per pupil expenditure weighting as high as 1.25. Little empirical research is available on the actual costs, but two studies (Parrish, Metsumoto, & Fowler,

1995; Parrish, 1994) have calculated the cost as approximately 15% above average costs. The committee concluded the national research findings were the most reliable source of information and, thus, recommends a 1.15 per pupil expenditure weighting for each LEP student (i.e., 115% of the state average per pupil expenditure for each LEP student). The committee also believes effective programs should enable LEP students to gain English proficiency and become fully mainstreamed into regular classrooms. However, it is unclear how long this process should take. Once this evidence is available, the committee recommends setting a limit on the number of years this 1.15 weighting is applied to individual students.

### 3. Disadvantaged Youth

Research has demonstrated that additional resources are needed in order to help many disadvantaged youth achieve higher levels of performance. The level of resources needed is not completely clear. In a majority of the states, free and reduced lunch counts are used to determine how much a school district will receive in additional funds. The Education Commission of the States (ECS, 1997) reports some states set these resources at a flat amount of funds (e.g., \$70 per pupil) while others use a weighting system (e.g., 1.11 to 1.25 for the number of students who qualify for free & reduced lunch **above** a state average). After reviewing the practices in other states, the committee concluded the Maine EPS Model should have a weighted cost for **all** students who qualify for free and reduced lunches, not just the number above the state average. The committee recommends a 1.02 per pupil cost factor in the model for all students who qualify for either free or reduced lunches.

The committee recognized the limitations of using free and reduced lunch eligibility as a definition of disadvantaged youth. In theory, once the *Learning Results* are implemented, disadvantaged youth might be more appropriately defined as those not reaching the standards. Maine's Comprehensive Assessment System Technical Advisory Committee (MCASTAC) is attempting to develop a system for assessing what it means for schools to be making adequate progress in helping students achieve the *Learning Results*. Once this system is developed and implemented, the committee recommends re-examining the definition of disadvantaged youth to be used in determining costs and funding of school programs.

### 4. Primary (K-2) Grade Children

There is substantial evidence documenting the critical importance of the early years of

schooling. For example, Slavin (1993) has found that academic failure in the primary grades is a reliable indicator of academic failure in the remaining school years. In addition, longitudinal studies consistently reveal that students who are reading below grade level after grade three often do not complete high school, even with the later interventions of remedial programs (Lloyd, 1978; Kennedy, Birman & Denaline, 1986; Slavin, 1993). There also is an equal body of evidence indicating extra resources used wisely in the early grades increase the academic achievement and social development of students, and prevent academic failures (Burt, 1993; Thompson, Bunnell, Foye, 1997; Achilles, Finn & Bain, 1997). Thus, the committee concluded extra resources spent on the early grades will enhance the capabilities of schools to help *all* children achieve the *Learning Results* standards by the time students complete high school, and the committee has included in the proposed model a 1.10 weighted per pupil cost factor for each child in grades K-2. These additional funds would be available as a targeted grant to any school district submitting an appropriate plan describing how the additional resources will be used to enhance K-2 grade programming.

#### **D. Specialized Services**

Local school units must provide several types of specialized support services for successfully implementing the *Learning Results*. The Committee identified five categories of support services.

##### **1. Professional Development**

Sustained professional development is key to helping staff acquire and maintain the new skills and knowledge necessary for continually improving curriculum, instruction, and assessment practices. The committee believes some types of professional development programs and activities may be most effective if they are developed and delivered at the state or regional level. These should be funded apart from the EPS Model. But many other types of professional development must take place at the local level, and funds for these should be included in the EPS Model. Few studies have examined the amount districts spend on professional development activities, with findings from these studies indicating that the amount of funds range from 2.0% - 3.6% of a school district's operating expenditures (Little, et al, 1987; Miller, Lord, & Dorney, 1994; Education Commission of the States, 1997). At present, the Maine Department of Education does not systematically collect data on district level professional development expenditures. The committee attempted to obtain this information through the school district survey, and the evidence from this survey indicated that the reporting districts are currently spending approximately \$50 per student on

professional development, an amount equivalent to approximately 2% of a district's professional staff salaries in the proposed EPS Model. The committee believes this amount is appropriate, and included a \$50 per pupil cost factor in the EPS Model. Further, the committee believes local districts should decide specifically how these funds are used, but the committee recommends districts focus their professional development on the time and resources teachers need to help them achieve the *Learning Results* standards.

## 2. Instructional Leadership Support

As noted earlier, the committee believes current levels of school level administration are appropriate for providing the administrative and managerial support in schools. But additional resources are needed for instructional leadership. Implementing the *Learning Results* will require leadership in developing coordinated curriculum not only within classrooms, but across grade levels and across schools within a district. In addition, developing and implementing comprehensive local assessment systems which certify achievement of the *Learning Results* standards will require coordination, guidance and leadership. Local systems are in the best position to know what type of leadership is needed and at what grade and school levels (e.g., team leaders, department heads, curriculum and assessment coordinators, etc.). The committee recommends a \$20 per pupil amount in the EPS Model to provide the funds necessary to support schools instructional leadership needs in implementing and assessing the *Learning Results* and standards of achievement.

## 3. Student Assessment

Implementing and documenting achievement of the *Learning Results* will require schools to create comprehensive local assessment systems which contain multiple assessments and measures of student performance. In some cases, this will just involve re-tooling existing assessments, particularly those classroom level assessments designed for diagnostic purposes and those designed to inform the teaching and learning process. However, local school districts will also be responsible for certifying that all students have achieved the *Learning Results* standards. The new Maine Educational Assessment (MEA) may be used in certifying achievement of the *Learning Results*, but only in a very few academic subject areas. Student achievement of a majority of the *Learning Results* standards will need to be certified at the local district level. Thus, it will be imperative that the local assessment systems are valid, fair and defensible. National studies have found that the cost of developing and maintaining these types of assessment systems may vary a great deal depending

upon levels of local expertise, availability of appropriate commercially developed tests, and the time and staff resources needed to develop and validate new local assessment tools. Some estimates range from \$37 per pupil to \$298 per pupil (Monk, 1997; Picus, 1997; Stecher & Klein, 1997 ). The Committee reviewed the available data and has concluded a \$100 per pupil cost factor should be included in the proposed Maine EPS Model. The committee also believes this should be viewed as targeted funds. That is, school districts should develop a program for using these assessment funds, and once approved, the district may receive the state portion of funds allocated within this EPS component.

#### 4. Technology

Quality technological resources are essential in implementing the *Learning Results*. Coupled with library resources, technology resources are key to equalizing access to worldwide learning resources for all Maine schools and students. Providing this access will require technology, on-going maintenance of the technology, and, most importantly, the personnel and on-going training support for teachers and students in the effective use of technology. Teachers, in particular, will need on-going training and support in integrating the curriculum and their instruction with worldwide technological learning resources. Students will need to be able to access these learning resources and use them effectively in achieving the *Learning Results*. The committee believes the initial and replacement costs of the technology hardware should be considered capital investments, and like new building construction, should be funded under a separate category of funding apart from the EPS Model. The committee, on-the-other-hand, does believe on-going training costs and support personnel should be part of the EPS model. A subcommittee of the full committee studied these resource and personnel needs, and recommended that a \$175 per pupil cost factor be included in the EPS model. The full committee endorsed this recommendation and has included this cost factor in the proposed model. Further, although the specific technology support needs may vary across districts and schools, the committee believes the technology funds in the Maine EPS Model should be targeted for technological support of achieving the *Learning Results*. Accordingly, the committee recommends that school districts should develop an appropriate *Learning Results* technology plan in order to receive any state funds in this component of the EPS Model.

#### 5. Co-curricular and Extra-Curricular Student Learning

Co-curricular and extra-curricular participation by students is important to their academic,

physical and social development. Although some of the empirical evidence is inconclusive, Marsh (1992) reports that participation in extra-curricular activities has positive effects on academic performance, and Barker and Grump (1964), Otto (1975), Goodlad (1984), and Coladarci and Cobb (1997), report more positive self-esteem and academic self-concepts on the part of participants. Additionally, Mahoney and Cauns (1997) found a positive relationship between extra-curriculum participation and reduced dropout rates. Furthermore, both co-curricular and extra-curricular programs may provide more equitable opportunities for *all* children throughout Maine to achieve the *Learning Results* standards, particularly those standards in the visual and performing arts, and health and physical education.

Data collected from the school district survey revealed the following net costs for the 1996-97 school year for co-curricular and extra-curricular activities in the schools that completed and returned surveys:

**Average Net Cost of Co- and Extra-Curricular Programs in Maine  
1996-97 School Year  
(net cost = expenditures - revenues)**

Activity	Grade level	
	Grade K-8	Grade 9-12
Co-Curricular	\$4.80	\$11.02
Extra-Curricular	\$19.67	\$46.15
Totals	\$24.47	\$57.17

The committee concluded current practice is adequate to meet the needs of this EPS component. The best information currently available regarding costs appears in the chart above. Thus, the committee has included a \$25 per elementary pupil and \$58 per secondary pupil cost/factor in the EPS Model. The committee also recommends that a more comprehensive study be completed which identifies the actual costs of co-and extra-curricular programs which support achievement of the *Learning Results* and, that once these programs and costs are identified, the cost factors recommended in this EPS Model be adjusted accordingly.

## **E. District Services**

### **1. System Administration Support**

Management of essential programs and services requires district wide administrative resources and services. Currently, approximately 4% of local school district expenditures are devoted to system wide administrative and management services. The Committee believes this percentage is appropriate for what is needed to support the EPS Model. Thus, the Committee recommends the current statewide average per pupil central administrative expenditures in the proposed model. This amounts to \$225 per pupil for grades K-8 and \$270 per pupil for grades 9-12.

### **2. Maintenance of Operations**

The Committee concluded that the current level of expenditures statewide in this category is sufficient to support implementation of the proposed EPS Model. Therefore, the proposed model includes \$625 per K-8 pupil and \$825 per secondary pupil for maintenance and operation of school facilities.

## **F. Specialized School Adjustments**

The committee believes five types of school level adjustments should be included in the EPS Model. These adjustments, where applicable, would be based on school and/or school district characteristics and would not be distributed on a per pupil basis.

### **1. Vocational Education**

The committee believes that vocational programs are essential, because in offering a hands-on, real-world approach to learning they offer an alternative avenue needed by some students for achievement of the *Learning Results*. Such an approach serves many students, regardless of their post-high school destination. The committee understands that vocational programs should no longer be considered as the end of formal education, but rather, as offering an alternative path to additional learning. Currently, approximately 12% of students in grades 9-12 take some form of vocational program, and this type of education and the knowledge and skills students acquire provide important support to the economic development of the state.

There are a wide variety of such programs being offered throughout the state, and there is considerable variation in the manner in which these programs are delivered. The programs range all the way from logging to culinary arts to health related fields. While there are no definitive data or cost analyses available, it is clear that the cost of providing the wide range of programs varies



considerably. In addition, all the programs are not available to all students. This means there is not an equitable opportunity for all students across the state to access vocational education programs related to their own career interests.

The committee sees a need for a major study of vocational education, a study which would examine such issues as the equity of vocational opportunities across the state, and the most effective organizational structures for program delivery. A diverse group of citizens including representatives from the technical college system, educators and administrators from secondary education institutions and vocational schools, employers and potential employers of vocational students, parents of secondary vocational students, and members of the Department of Education and the State Board of Education should be appointed to undertake this major and important study. The committee believes that such a study will be a useful adjunct to the recent study of the funding, undertaken at the request of the Legislature, by the Task Force to Review the Applied Technology Centers and Applied Technology Regions. The Department of Education is beginning work on the recommendations of this Task Force and this work should help inform the study recommended by the EPS Committee. Until the new study is completed, the committee recommends vocational education continue to be funded as a program cost.

## 2. Teacher Educational Attainment

One of the major findings from the analysis of high and low performing schools on the Maine Educational Assessment is in the area of teacher education. The evidence indicates a significant difference in the education levels of teachers in the two groups of schools. A significantly higher percent of the teachers in the high performing schools have earned a masters degree as compared to their colleagues in the lower performing schools. The committee recognizes that pursuing an advanced education degree is just one among many useful approaches to continuing professional development, but the committee believes the evidence supports the value of formal, advanced education in improving the abilities of teachers in helping students achieve a high learning standard. Accordingly, the committee recommends an adjustment for school districts for the educational attainment of their teachers. Analysis of current data on Maine teachers indicates that, on average, master's level teachers earn approximately 16% more than bachelor level degree teachers. The committee recommends school districts receive 1.16 times the average teacher salary in the EPS Model for every teacher in the district who has earned a masters degree from an

accredited higher education institution.

### 3. Transportation

The cost of transporting children to and from school must be included in any EPS Model. In fiscal year 1997, expenditures statewide for school transportation were approximately \$65.5 million, with an average cost per mile of approximately \$1.83, and an average per pupil cost of approximately \$330.00. However, a review of individual district profiles reveals considerable differences in transportation costs across the state, and even within the same regions and counties. Costs per mile range from a low of \$.64 to a high of \$3.83 per mile, and per pupil costs range from \$50 per pupil to over \$1,200 per pupil. In some cases, one district may be spending twice as much as another transporting the same number of students equal distances. Preliminary interviews with a sample of these districts suggest several reasons for these differences, some of which may be related to efficiency in use of resources. The committee concluded these efficiencies need to be examined and documented before any new method of funding transportation is implemented. Thus, the committee recommends a systematic, thorough study of school transportation be conducted in the near future. This study should include a study of Maine districts, but also an examination of transportation practices found in other states (e.g., those using fixed mileage rates, density rates, distance eligibility rates, etc.). Until this study is completed the committee recommends continuing the current practice of funding transportation as a program cost.

### 4. Small Schools

The committee believes the resources described in the EPS Model are sufficient for schools to achieve the *Learning Results*, and that the conversion of these resources into a per pupil operating cost calculation is the most appropriate way to insure greater equity. The committee also recognizes that for some very small schools the per pupil allotment may be insufficient. Economies of scale theory suggest these small schools may need additional resources to achieve the *Learning Results*. However, how many additional resources are needed is unclear. Little statewide data is available for analyzing even the present cost of these small schools. Available data suggest that not all small schools will require additional resources. Thus, while the committee recognized that some school financial adjustments may be needed in the EPS Model, it was unable to determine the amount as part of the present project. The committee recommends a separate study of Maine's small and isolated schools and small school districts to determine what, if any, adjustments should be made in

the new funding model. Further, the committee recommends this study be patterned after a similar study conducted in Wyoming, in which along with analyzing expenditures, the study examined the actual use of resources in providing quality educational programs. Both expenditures and resource allocations should be examined before creating any small school or small district adjustment to the new EPS Model.

#### 5. Debt Service

Debt service is a necessary cost of providing education in safe, healthy physical environments. The committee endorses the program of capital investment and replacement described in LD2252, An Act to Implement the Recommendations of the Governor's Commission on School Facilities (1998). Further, the committee recommends that debt services costs continue to be funded and administered as a program cost.

#### **EPS Prototypical School Profiles**

Appendix G contains copies of the three prototypical schools with resource levels based on the EPS Model components described in the previous pages. These prototypical schools should only be viewed as examples. Actual resource levels for Maine schools would depend upon student enrollment counts.

#### **Accountability System**

LD1137 requires that the essential programs and services plan include a process for ensuring...“that schools are held accountable for student *Learning Results*”. The committee supports this requirement. Once certain conditions are in place, the committee sees an accountability system as a key to ensuring that all students are receiving equitable opportunities to achieve the *Learning Results* standards. These conditions include a clear definition of the standards, sufficient resources for achieving the standards, and a realistic and fair system for measuring progress.

The new statewide tests, the Maine Educational Assessments (MEAs) are being designed to measure a portion of the *Learning Results* standards. They will provide a state-wide picture of student achievement across all schools and districts, and they will provide each district with information on how well their students are performing relative to an external standard held across the state. The committee believes performance on the new MEAs should be central to the accountability system. The committee recognizes that the MEAs will be limited to assessing only a

portion of what an individual student may know and be able to demonstrate, and that they will not measure all subjects and grade levels; however, the new MEAs will be the only statewide, standardized, and equitable indicator for assessing schools and school districts. Other indicators, such as performance on local district assessments, dropout rates, etc., will also be important, but the MEA should be the primary indicator for initially determining if a school is making adequate progress in helping *all* children achieve the *Learning Results* standards.

Development of a detailed accountability system is beyond the time, resources, and technical expertise of this committee. Such a system will require substantial time for development and implementation, and it will require providing schools assistance and time for demonstrating performance on the statewide standards. However, the committee believes the system should include at least a three phase mechanism which supports local control while insuring statewide accountability. The committee recommends that if a school fails to show adequate progress in achieving the *Learning Results* over a three-year period, the following accountability plan be activated:

- Phase I: The local school system is provided an opportunity to provide additional evidence from the local assessment system which, when combined with the MEA evidence, provides a more comprehensive assessment of achievement and performance of their students. If the comprehensive local assessment system has been validated, the district may use performance on these local assessments as complementary evidence of achievement of the *Learning Results*.
- Phase II: If the local comprehensive assessment system has not been validated, or student performance on these local assessments is still below acceptable standards, the state will form a 3-5 member Assistance Team to conduct a thorough study of the local school. This study will include an analysis of resource allocation and recommend a plan for improving the use of these resources to support achievement of the *Learning Results*.
- Phase III: School districts should be given time to implement the recommendations of the Phase II Assistance Team. However, if over time school level performance does not show adequate progress, the state must increase its level of involvement with a corresponding decrease in local control and autonomy. This state involvement

may be in the areas of resource utilization, budget management, school administration, curriculum organization, etc.

The committee believes the proposed system reflects one of the committee's guiding premises; that is, that the accountability system be based on a "steering from a distance" principle. The state should insure that the statewide *Learning Results* standards are clear, are fairly measured, and that the resources are available for achieving these standards. Local communities should be free to decide how they will help all children achieve the standards, and only when it is clearly demonstrated that the standards are not being met should the state intervene and insure equity.

### **Additional Education Programs**

The committee believes additional education programs are needed to support the EPS Model and help all children achieve their full potential. These programs are early childhood education, parental involvement, and gifted and talented programs.

#### **1. Early Childhood Education (ages 0-5yrs)**

The committee believes that quality early childhood education is essential to the future success of every Maine child. New research and knowledge about child development in the pre-school years provides strong evidence that the quality of each child's care and experience during this period is a key determinant of future development and success. Research has revealed that educational interventions before the start of formal K-12 schooling improve academic performance and social development (McKey et al, 1985; Slavin et al 1994; Marcon, 1995). Additionally, these interventions result in fewer special education placements and grade retentions, and in higher high school graduation rates (Palmer, 1983; Gotts, 1989; Fuerst & Fuerst, 1993; Schweinhart, 1994). Thus, the committee recommends that school districts consider early childhood education as an essential pre-school program and invest more resources in the instruction and curriculum of young children. One suggestion is that districts consider the development of new four year-old programs or the expansion of other early childhood programs, such as full day kindergarten. Maine Law (Title 20-A) already permits the costs of such early childhood programs to be subsidized through the current school funding formula.

#### **2. Parental Involvement Programs**

A second program the committee believes is essential to the success of all children in achieving the *Learning Results* is parental involvement programs. Anderson and Berla (1995) have

documented over 85 studies that report the benefits of parental and family involvement in their children's education. When parents are involved, students achieve more, have higher test scores and better attendance records, and complete homework more consistently. In addition, students whose parents are more involved with their education are more likely to graduate from high school and to enroll in post secondary programs. Thus, the committee encourages school districts to develop more comprehensive programs for helping parents and parent groups become more active partners in the education of their own children and in the education of all children in the school district.

### 3. Gifted and Talented

The committee believes comprehensive school systems should provide additional programs and services to help children achieve their full potential. One such program is Gifted and Talented. These types of programs provide children and young adults opportunities to grow and develop beyond what is required in the *Learning Results* standards. As Fetterman (1988) states:

Gifted programs prepare future leaders, scientists, and artists. In addition, these programs help meet the individual needs of gifted children. The loss in unrealized potential of underserved gifted children is incalculable - in lost inventions, cures, discoveries and dreams. Gifted programs help gifted students maximize their potential and increase the probability that they will make a productive contribution to society (p.1)

Thus, the committee believes the current programs for gifted and talented students are very important for those students who participate in them. Because the programs are important the current funding should continue. Further, the committee recommends that efforts be made to expand the programs so they are available to a larger number of students needing such programs.

### **Cost Estimate for All School Programs**

Table 1 on the next page provides a summary cost estimate of the EPS Model, and the costs of all three components of the comprehensive education system the committee believes should be present in Maine. The EPS model costs were calculated by converting the costs of the services identified in Sections A, B, D, and E above into a per pupil operating cost. Added to this amount were the specialized student population weighting calculation (Section C) and the Specialized School Adjustments (Section F). The figures in the table indicate that implementation of the

proposed EPS Model, along with the additional programs, would cost approximately \$132 million, a 10% increase over the total of state and local expenditures for 1996-97, the most recent year for which there is complete and comparable data available. Costs for an individual school district would be determined by multiplying the student population in the district by the applicable per pupil operating costs in Table 1, adding the appropriate weighting factors, and adding the specialized school adjustments. Determining what portion of a district's total education costs would be paid for by the state and what portion by the local community is beyond the purview of the Essential Programs and Services committee, but an important next step in implementing the proposed EPS Model.

**TABLE 1**  
**Estimated Cost of All School Programs**

**A. COST OF ESSENTIAL PROGRAMS AND SERVICES**

**REGULAR STUDENT PER PUPIL OPERATING COSTS**

Level	No. of Students		Per Pupil Operating Cost	
K-5	99,988.5	x	\$4,407	\$440,649,320
6-8	54,227.5	x	\$4,543	\$246,355,533
9-12	62,780.0	x	\$5,081	\$318,985,180
			Total	\$1,005,990,033

**SPECIALIZED STUDENT POPULATIONS ADJUSTMENTS**

K-12 costs for weighted student populations (i.e., special needs pupils, LEP students, disadvantaged youth, and primary grade children)	\$198,501,477
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**SPECIALIZED SCHOOL ADJUSTMENTS (based on 1996-97 financial information)**

Vocational Education	\$23,363,885
Adjustment for Masters	\$25,586,252
Transportation and Buses	\$63,652,488
Small School Adjustment	To Be Determined

Debt Service	\$71,676,207
Total Adjustments	\$184,278,832
<b>B. ADDITIONAL EDUCATIONAL PROGRAMS</b>	
Gifted and Talented	\$7,362,845
Other Statewide Adjustments	\$26,249,817
Total Adjustments	\$33,612,662
<b>C. TOTAL ESTIMATED EXPENDITURES</b>	\$1,422,383,004
<b>D. TOTAL 1996-97 GENERAL FUND BUDGET EXPENDITURES</b>	\$1,290,898,443
<b>DIFFERENCE:</b>	\$131,484,561
<b>% increase over 1996-97</b>	(10.2%)

### **Updating Procedures**

The proposed EPS Model will require cost adjustments. An initial adjustment will be needed to reflect the most current costs once the model is adopted by the Legislature. In addition, the model will require regular cost adjustments which reflect changing costs of personnel and services across the state. The method of calculating these adjustments will require legislative action.

### **Transition Plan for Implementing the EPS Model**

When the concept of Essential Programs and Services is implemented as a basis for funding education in Maine, it is important that there be a gradual transition from the current method of funding to the new method. There will be changes in the way educational resources are allocated, and it is important that no school district have a dramatic change over a short period of time in the amount of funds available to it. School administrators need time for advance planning to make effective use of different levels of funding. A diverse group of citizens familiar with school funding should be asked to study alternative methods for transition and make recommendations to the Legislature as to the best method of transitioning educational funding from the current method based on historical expenditures to a new method based on what it costs to get the job done.

A careful and thoughtful study of the impact of such a change on each community in the state should be completed. The study should examine several different alternatives for the transition. One method that may have some merit would be to limit the amount of change in state



reimbursement that any school district would receive to some modest amount in any given year for a period of years to be specified. During that time period perhaps no high-per-pupil-spending school district should have increases in state reimbursement so there could be more equalization of resources behind each student in Maine. In this way, improved student equity of opportunity to learn through more equal funds supporting each student's learning could evolve over a period of time without causing any undue hardship for any school district. A logical length of time for the transitioning would be the amount of time until the standards for the *Learning Results* are to be fully implemented ( i.e. the fiscal year 2002-03). The issue is so important, however, that other alternative ways and time periods for accomplishing the desired result of better equity for all students should be explored.

### **Summary**

LD1137 requested a new approach for calculating educational costs in Maine, one based on what it costs to implement the *Learning Results* rather than what has historically been spent on education. The committee believes the Essential Programs and Services Model described in this report fulfills this request. It provides the foundation for funding the true costs of achieving the *Learning Results* standards by all of Maine's children, it connects costs to specific achievement outcomes, and it outlines a plan for insuring schools are held accountable for achieving the *Learning Results*. Furthermore, it provides the foundation for insuring that all children, regardless of where they may live in the state, are provided equitable educational opportunities to learn and develop into well-educated Maine adults.

The committee recognizes that additional work needs to be completed before we can guarantee the equitable opportunities embodied in the Essential Programs and Services Model. This work includes conducting the studies described in this report, and the development of a fair and equitable transition plan.

In addition, while the committee believes the recommendations made in this report are vital for improving learning opportunities for all children throughout the state, it also believes greater efficiencies can be found in the use of existing resources. Thus, the committee believes steps should be taken to identify and adopt statewide some of the program and service efficiencies currently found within and among a few school districts in Maine.

The committee also believes a critical piece of the additional work that needs attention is

current tax policy. The committee believes there is room for significant improvement in the current practice. As long as the local share of educational funding has to rely on the property tax, the state should honor its 1985 commitment to pay at least 55% of the state and local funds calculated in the funding formula. It is also apparent that the current subsidy reduction method exacerbates the inequity of local tax effort for education, which in turn influences the lack of equity of resources behind students across the state.

Furthermore, the important and related issue of the appropriate tax policy for funding education in order to provide the maximum taxpayer equity across the state needs to be addressed. Currently, educational funding relies on the property tax to raise about 50% of the total. The average local tax effort for education is about 10.8 mills of property valuation. Some communities' effort is as low as about 1 mill while some communities are raising about 23 mills. Such a variation of tax effort does not provide a comfortable level of taxpayer equity.

The committee hopes the people of Maine and those who govern them realize there is no painless way to achieve the high standards and student equity called for in the *Learning Results*. These standards cannot be achieved by wishing for them. If we do not put the needed resources for children and for schools behind our efforts we will have short changed our children and all who are dedicated to a better education for them.

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## **Appendix A**

### **Essential Programs and Services Committee Membership**

## Members of Essential Programs and Services Committee (current and past members)

\*Weston Bonney  
Committee Chair  
State Board of Education

\*Duke Albanese, Commissioner  
Department of Education

\*Alice Cates, Teacher  
Eastport, ME

\*Terry Daigle, Principal  
Stearns High School  
Millinocket, ME

\*Denison Gallaudet  
Consultant  
Milbrook Advisors

\*Connie Goldman  
Former Superintendent  
Cape Elizabeth, ME

Jean K. Gulliver, Member  
Maine State Board of  
Education

\*Harvey Hayden, Former  
Assistant Superintendent  
MSAD 9  
Farmington, Maine

\*Betty Jordan, Superintendent  
Union 102  
Machias, ME

Prof. Josephine LaPlante  
University of Southern Maine

\*Terry McCabe, Director  
Member Services  
Maine School Management

Blythe McGarvie, SVP &  
CFO  
Hannaford Brothers

\*William J. McKee, Member  
MSAD 58 Board of Education

\*Joyce McPhetres, Member  
State Board of Education

\*Elinor Multer, Member  
State Board of Education

\*William Nave  
Research Associate  
Annenberg Institute for School  
Reform

\*Deborah Stuart  
Superintendent, MSAD 70  
Houlton, ME

\* Current Members

**Consultant:** David L. Silvernail, Co-Director,  
Maine Education Policy Research Institute  
University of Southern Maine Office.

**Staff:** Gary Leighton, Maine Department of Education

## **Appendix B**

### **Methodology for the Study of High and Low Performing Maine Schools**

## Methodology for the Study of High and Low Performing Maine Schools

A study was conducted to identify the types of programs and services offered in high performing Maine schools as compared to those offered in low performing Maine schools. High performing schools were defined as schools where a majority of the students were performing better than predicted. More specifically, a school had to meet three criteria to be identified as a high performing school. These criteria were:

1. A three year average Maine Educational Assessment (MEA) composite scale score (average of six content area scale scores) at least *standard deviation above the state average*;
2. A three year average MEA composite scale score at least *standard deviation (residual z-score) above a predicted score* based on community characteristics; and
3. *75% or more* of the students scoring at the *Basic or above proficiency level* on the MEA writing, reading, and mathematics sub-tests.

In contrast, low performing schools were identified as those schools with:

1. A three year average MEA composite scale score at least *standard deviation below the state average*;
2. A three year average MEA composite scale score at least *standard deviation (residual z-score) below a predicted score*; and
3. *Less than 75%* of the students scoring at the *Basic or above proficiency level*.

Analysis of the 1994-1997 MEA data using the criteria described above resulted in the identification of the following numbers of schools:

	<u>High Performing</u>	<u>Low Performing</u>
Elementary Schools	78	71
Middle Schools	34	28
High Schools	21	21

An analysis of the programs and services offered in these schools was used by the Essential Programs and Services Committee in its deliberations.



## **Appendix C**

### **Copy of Survey of Selected School District Services for the Essential Program and Services Committee**

## **Appendix D**

### **Essential Program and Services Model from the Governor's Task Force on School Funding 1994**

## **Appendix E**

### **Essential Program and Services Model**

**from**

### **Final Report of the Committee to Study Organizational and Tax Issues in Public School 1995**

**Appendix F**

**Consultants Providing Information**  
**to the**  
**Essential Programs and Services Committee**

## **Consultants**

Tina Baker, Representative, Maine State Legislature.

Christine Bartlett, Division of Special Services, Maine Department of Education.

Barney Berube, ESL/Bilingual Education Specialist, Maine Department of Education.

Robert Boose, Executive Director, New Jersey School Boards Association.

Suzan Cameron, School Finance and Statistics, Maine Department of Education.

Theodore Coladarci, Associate Professor of Education, University of Maine.

Leon Duff, Superintendent, School Union 52.

Mark Eastman, Superintendent, Maine School Administrative District #17.

Jean Gulliver, Maine State Board of Education.

Rodney Hatch, Business Manager, Maine School Administrative District #47.

Richard Hinkley, Bureau of Information Services, Administrative and Financial Services.

Joanne C. Holmes, Maine Department of Education.

Rayette Hudson, Executive Director, Maine Association of Pupil Transportation.

Robert T. Kennedy, The Spurwink Institute.

John Kierstead, Division of Special Services, Maine Department of Education.

Dennis Kunces, Maine Department of Education.

Jean Lavigne, Associate Professor of Public Administration, University of Maine.

Gary Leighton, School Finance and Statistics, Maine Department of Education.

Linda Lord, Maine Department of Education.

John Lunt, Freeport Middle School.

Frank McDermott, Superintendent, Maine School Administrative District #6.

Carol Jo Morse, President, Maine Parent and Teachers Association.

Edward Moscovitz, Consultant, Massachusetts Business Alliance for Education.

John Pierce, Maine Science and Technology Foundation.

John Rosser, Chairman, The Spurwink Institute.

Susan Savell, Executive Director, Communities for Children.

Valarie Seaberg, Regional Education Services, Maine Department of Education.

James Smith, Chief Executive Officer, Management Analysis and Planning, Inc.

David Stockford, Director, Division of Special Services, Maine Department of Education.

A. Mavourneen Thompson, Research Associate, Maine Education Policy Research Institute, University of Southern Maine office.

Patricia Tiernan, Research Associate, Maine Education Policy Research Institute, University of Southern Maine office.

James Watkins, Director of Division of Management Information, Maine Department of Education.

Wayne Warner, President, Maine Association of Pupil Transportation.

Susan Weatherbie, Director of Community Services, Cape Elizabeth School District.

Jeff Wulfson, Chief Finance Officer, Massachusetts.

## **Appendix G**

### **Essential Programs and Services Prototypical School Profiles**

## MAINE ELEMENTARY SCHOOL PROTOTYPICAL MODEL

**Grades K-5      250 Students**

### Description

### Resources in Prototypical Elementary School

#### **A. FTE Personnel (ratio)**

1. Teachers (1-17)	14.70 FTE (Full-Time Equivalent) Teachers
2. Education Technicians (1-100)	2.50 FTE Education Technicians
3. Guidance/Counseling Staff (1-350)	.70 FTE Guidance/Counseling Staff
4. Library Staff:	
(1) Librarian (1-800)	.30 FTE Librarian
(2) Media Assistant (1-500)	.50 FTE Library/Media Assistance
5. Health Staff (1-800)	.30 FTE Health Staff
6. Administrative Staff (1-305)	.80 FTE Administrative Staff
7. Clerical Staff (1-200)	1.25 FTE Clerical Staff
8. Substitute Teachers	.50 day per pupil

#### **B. Supplies & Equipment**

1. Instructional support, and student, staff, and school administration support	\$285 per pupil
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#### **C. Specialized Student Populations**

1. Special Needs pupils	2.10    weighted per pupil operating costs for each pupil
2. Limited English Speaking Pupil (LEP)	1.15    weighted per pupil operating cost for each pupil
3. Disadvantaged Youth (% free and reduced lunch)	1.02    weighted per pupil operating cost for each pupil
4. Primary Grade Children	1.10 weighted per pupil operating costs for



each K-2 grade level pupil.

**D. Specialized Services**

1. Professional Development	\$50 per pupil
2. Instructional Leadership Support	\$20 per pupil
3. Student Assessment	\$100 per pupil
4. Technology Resources	\$175 per pupil
5. Co-curricular & Extra-curricular Student Learning	\$25 per pupil

**E. District Services**

1. System Administration/Support	\$225 per pupil
2. Maintenance and Operations	\$625 per pupil

**F. Special Adjustments \***

1. Vocational Education	Current practice (program costs)
2. Educational Levels	16% of regular teacher salary for all teachers with masters or higher degree.
3. Transportation	Current practice (program cost)
4. Small Schools	To be determined
5. Debt Service	Current practice (program cost)

\* **Note:** Costs for these special adjustments would be based on school and/or district characteristics, and not on a per pupil basis.

## MAINE MIDDLE SCHOOL PROTOTYPICAL MODEL

**Grades 6-8      400 Students**

Description	Resources in Prototypical Middle School
<b>A. FTE Personnel (ratio)</b>	
1. Teachers (1-16)	25.00 FTE (Full-Time Equivalent) Teachers
2. Education Technicians (1-100)	4.00 FTE Education Technicians
3. Guidance/Counseling Staff (1-350)	1.15 FTE Guidance/Counseling Staff
4. Library Staff:	
(1) Librarian (1-800)	.50 FTE Librarian
(2) Media Assistant (1-500)	.80 FTE Library/Media Assistance
5. Health Staff (1-800)	.50 FTE Health Staff
6. Administrative Staff (1-305)	1.30 FTE Administrative Staff
7. Clerical Staff (1-200)	2.00 FTE Clerical Staff
8. Substitute Teachers	.50 day per pupil
<b>B. Supplies &amp; Equipment</b>	
1. Instructional support, and student, staff, and school administration support	\$285 per pupil
<b>C. Specialized Student Populations</b>	
1. Special Needs pupils	2.10 weighted per pupil operating costs for each pupil
2. Limited English Speaking Pupil (LEP)	1.15 weighted per pupil operating cost for each pupil
3. Disadvantaged Youth (% free and reduced lunch)	1.02 weighted per pupil operating cost for each pupil

**D. Specialized Services**

1. Professional Development	\$50 per pupil
2. Instructional Leadership Support	\$20 per pupil
3. Student Assessment	\$100 per pupil
4. Technology Resources	\$175 per pupil
5. Co-curricular & Extra-curricular Student Learning	\$25 per pupil

**E. District Services**

1. System Administration/Support	\$225 per pupil
2. Maintenance and Operations	\$625 per pupil

**F. Special Adjustments \***

1. Vocational Education	Current practice (program costs)
2. Educational Levels	16% of regular teacher salary for all teachers with masters or higher degree.
3. Transportation	Current practice (program cost)
4. Small Schools	To be determined
5. Debt Service	Current practice (program cost)

\* **Note:** Costs for these special adjustments would be based on school and/or district characteristics, and not on a per pupil basis.

## MAINE SECONDARY SCHOOL PROTOTYPICAL MODEL

**Grades 9-12      500 Students**

	<b>Description</b>	<b>Resources in Prototypical Secondary School</b>
<b>A.</b>	<b>FTE Personnel (ratio)</b>	
	1. Teachers (1-15)	33.30 FTE (Full-Time Equivalent) Teachers
	2. Education Technicians (1-250)	2.00 FTE Education Technicians
	3. Guidance/Counseling Staff (1-250)	2.00 FTE Guidance/Counseling Staff
	4. Library Staff:	
	(1) Librarian (1-800)	.60 FTE Librarian
	(2) Media Assistant (1-500)	1.00 FTE Library/Media Assistance
	5. Health Staff (1-800)	.60 FTE Health Staff
	6. Administrative Staff (1-315)	1.60 FTE Administrative Staff
	7. Clerical Staff (1-200)	2.50 FTE Clerical Staff
	8. Substitute Teachers	.50 day per pupil
<b>B.</b>	<b>Supplies &amp; Equipment</b>	
	1. Instructional support, and student, staff, and school administration support	\$430 per pupil
<b>C.</b>	<b>Specialized Student Populations</b>	
	1. Special Needs pupils	2.10    weighted per pupil operating costs for each pupil
	2. Limited English Speaking Pupil (LEP)	1.15    weighted per pupil operating cost for each pupil
	3. Disadvantaged Youth (% free and reduced lunch)	1.02 weighted per pupil operating cost for each pupil
<b>D.</b>	<b>Specialized Services</b>	

1. Professional Development	\$50 per pupil
2. Instructional Leadership Support	\$20 per pupil
3. Student Assessment	\$100 per pupil
4. Technology Resources	\$175 per pupil
5. Co-curricular & Extra curricular Student Learning	\$58 per pupil

**E. District Services**

1. System Administration/Support	\$270 per pupil
2. Maintenance and Operations	\$825 per pupil

**F. Special Adjustments \***

1. Vocational Education	Current practice (program costs)
2. Educational Levels	16% of regular teacher salary for all teachers with masters or higher degree.
3. Transportation	Current practice (program cost)
4. Small Schools	To be determined
5. Debt Service	Current practice (program cost)

\* **Note:** Costs for these special adjustments would be based on school and/or district characteristics, and not on a per pupil basis.

## **Appendix H**

### **Acknowledgements**

## **ACKNOWLEDGEMENTS**

A report such as this requires a considerable amount of work on the part of many contributors. As Chairman, I would like to acknowledge that work and thank the many participants for their contributions to this final document.

There is the danger that I may miss some who should be included. If that happens, it is, of course, not intentional, and please accept my apologies.

First, there are the committee members who have attended innumerable meetings over the past two and one-half years, shared their expertise, done immeasurable reading to inform themselves concerning the large number of educational issues that have been considered, and endured countless hours of debate over those issues. My thanks for their patience and good humor while the committee worked its way through many difficult issues.

Second, thanks go to David Silvernail of the Maine Education Policy Research Institute. The Committee contracted with the Institute to do research to help inform the Committee in making many difficult decisions which needed to be based on facts and data. David was a steadying influence in keeping the Committee's deliberations objective and grounded in data. He also did yeoman's work in meeting with many different groups to explain the concept of Essential Programs and Services and to solicit comments and questions from interested parties.

Third, J. Duke Albanese, Commissioner of Education, and many members of the Maine Department of Education made many valuable contributions to the Committee. Duke was an active participant in our planning, in our discussions, and in helping to bring about consensus on many issues. Many members of the department gave testimony covering areas of their expertise. Gary Leighton and Jim Watkins acted as staff support for the project and thanks goes to them.

I would also like to thank all those who gave expert testimony. These individuals are listed in Appendix F.

Pamela Taylor of the Maine Education Association was a faithful attendant at most of our meetings and contributed much through her familiarity with issues from the teachers' point of view. She added much to the richness of our discussions.

Lastly, I would like to acknowledge the generosity of the Maine School Management Association for allowing the Committee to use its facilities for many of its meetings.

Weston I. Bonney  
Committee Chairman