HOW TO GET MORE OUT OF YOUR SCHOOL DOLLARS

State of California

Department of Finance

August 1, 1971

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WE HAVE WRITTEN THIS BOOKLET FOR:

Members of governing boards and superintendents of California school districts and other officials of the school system, with the hope that it will be of some assistance to them in the performance of their critical duties. The study would not have been possible without the able assistance provided by:

- The superintendents and business officials of the school districts visited during the study who, without exception, were cooperative, friendly, and unsparing of their time and attention. It is obvious that they are highly motivated toward fulfilling the responsibilities of their difficult and demanding positions.

- The private sector management consultants whose professional skills and knowledges were essential to the study; and to their employers, the public accounting and management consulting firms, who provided this time and talent as a public service.

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INTRODUCTION

EDUCATION'S PROBLEMS

We are all aware that it is increasingly difficult to fulfill the critical responsibility of educating California's five million public school pupils. Education, along with other major governmental programs, is affected by a complexity of interrelated social and financial problems and issues.

On the social side, we are faced with demands for enhancement of opportunities, for improved living conditions, and for protection and restoration of the environment. Ethnic relations and poverty are part of an interconnected web which makes K-12 education subject to great social pressures and high public expectations.

On the financial side, there have been large increases in educational expenditures over the last decade. Public resistance to educational tax overrides has also stiffened. Numerous appeals for additional state and federal aid are made, but there is little agreement about either the amount required or source of funds. No matter what level of government collects and distributes taxes, the funds ultimately come from the taxpayers. Voters, through their elected representatives, have given a high priority to holding the line or reducing all taxes--whether state, local, or federal.

We believe that the public places substantial value on both educational quality and tax reduction. It is a major responsibility of all those in leadership positions in public education to seek and implement alternatives for improving education's effectiveness and efficiency, with minimal increases in overall expenditures.

THE EXAMINATION'S GOALS

It was with this in mind that, in June 1970, Governor Reagan suggested to the Legislature a one-time, five percent, "cost-of-living" increase in state K-12 school aid. His objective: to help school districts meet their immediate financial problems.

Concurrently, the Governor instituted a large scale examination of California public education. It had two major goals:

Its first major goal was to provide the Governor with information to help resolve uncertainties about education and with options, alternatives and recommendations. These are being used to formulate educational policy and budgetary approaches in an all-out statewide improvement effort in cooperation with the Legislature, the Superintendent of Public Instruction, and other educational leaders.

Its second major goal was to gather information and generate suggestions for use by those persons with the authority and opportunity to make operational changes in California's schools,

i.e., the board member, the trustee, the educational administrator, and the professional educator. The most critical changes must be at the local level. It is only at the local level that hard questions can be asked and answered.

THE K-12 MANAGEMENT STUDY

A major target of the overall examination was K-12 business management, for there were strong indications that costs here could be controlled without reducing educational effectiveness.

For example, the California Taxpayers' Association, in a recently conducted study of business practices in one California school district, found many opportunities for improvement. These were achievable through changes in a variety of managerial and technical methods. Expectations that similar opportunities existed in a large number of other districts were founded on discussions with educators, board members, school business officials, and others knowledgeable about the inner working of districts, such as public accountants and management consultants.

Therefore, in July 1970, a business and management study was approved and responsibility was assigned to the State Department of Finance. Twenty-eight management auditors, experienced in studying governmental operations, spent six months examining district practices. In October, they were joined by 31 consultants representing 13 public accounting and management consulting firms with prior school experience. These firms donated their time and expertise as a public service. No fees or expenses were charged.

Those areas offering high potential for cost reduction were selected for study, such as management and organization; personnel practices including salary setting, tenure, and workload; purchasing, data processing, insurance and textbook management, pupil transportation, and food services. Curriculum, educational methods, educational outputs, and other instruction related functions were not examined.

While recognizing that wide differences exist between California school districts, the intent of the study was to obtain an overview. It was neither necessary nor feasible, within the time constraints, to look at all features in all districts nor to give detailed study to each. An average of four functional areas was reviewed in each district sampled.

In choosing the 127 districts to be studied, care was taken to achieve a valid sample. The sample included elementary, high school and unified districts, with at least one district in 80% of the counties. Districts chosen had characteristics that ranged from large to small, wealthy to poor, urban to rural, predominantly white to predominantly minority. Districts were not selected for reputations of being particularly "good" or "bad", nor for the existence of special problems. Several of

the PPBS pilot districts were included to gain a "feel" for the system's progress.

Features to be examined within each district were selected with care, to keep the sample representative. By these means, the study attempted to achieve an unbiased picture of business practices as they exist in the majority of districts.

ABOUT THE BOOKLET

The main purpose of the K-12 study was to see if school district resources could be used more effectively. If it is possible to spend less money on facilities, insurance, purchasing, and salaries and still maintain essential levels of service, then more money would be available for meeting education's main objectives. The study's main thrust, therefore, is on the maintenance of quality at minimal expense through improved cost control.

Some improvements will be difficult to achieve, as they go against established precedence and preference. Some will require concerted state-level actions; others can be achieved by the individual districts, either acting alone or cooperatively with other districts.

The more important observations and suggestions concerning possible district-level improvements are conveyed herein. While no one district is likely to find all of the suggestions helpful, every district should find something of use. The intention is to stimulate school board members, superintendents, and business officials to re-examine practices in their particular districts.

Each section presents an overview of the more important opportunities for improvement identified during the study--those which applied to a number of the districts visited and which seemed to have substantial potential for cost reduction. These are followed by suggestions for achieving this potential. The vast majority of the suggestions have worked in one or more of the districts visited. Some are applications of successful industrial techniques or those of other governmental jurisdictions.

Questions about district performance and practices follow each section. Where possible, guidelines to assist in the evaluation of the answers are given. We hope that board members will ask their superintendent to answer these questions as they apply to their district. Superintendents should also find these questions helpful in identifying problem areas.

SECTION 1

MANAGEMENT STYLE

LET'S QUOTE A FEW EXAMPLES:

Any organization, no matter how well managed, will evidence opportunities for cost improvement when examined by an outside source. K-12 school districts are no exception. For example, it was observed that:

- A district stores broken and scarred furniture to repair during the summer months "to keep staff busy." Repair costs exceed the cost of new furniture.

- A district does not know its custodial costs per square foot or by any other standard. It is not aware of its textbook loss ratio nor how its insurance premiums compare to losses and reimbursements.

- An architect specifies expensive birch cabinetry which is more costly and difficult to maintain than standard cabinets. Another specifies solid brass hardware--attractive but exceedingly expensive.

- A new warehouse is built when unused facilities could be inexpensively converted to additional warehouse space.

- One district makes no attempt to sell a large number of surplus buses while neighboring districts buy new buses.

- A district hires bus drivers on a full-time, year-round basis because "it is too inconvenient to recruit and train part-time drivers.

- A district buys gasoline from the local service station at retail prices.

- A district provides a telephone as well as a typewriter and calculator for each clerk.

- A district does only a two-day feasibility study on how to update existing computer capability. District personnel justifies the short study and overcomes board objections by pleading an emergency.

- A district prides itself on a self-supporting cafeteria but doesn't include all costs, e.g. space, utilities, maintenance, employee fringe benefits, etc.

- One district builds a model cafeteria suitable for preparing gourmet meals. Its main product is hamburgers.

- A district pays well above the prevailing wages for culinary workers. The cafeteria is run by a hard working local woman with no experience or training in institutional

cafeteria management. She doesn't know the per-serving cost of the meals she prepares nor how to adjust ingredient ratios and proportions for large batch preparations. She has no understanding of economic order quantities, convenience foods, or pre-mixes.

This list is neither extensive nor unique. Similar examples were found to a degree in all districts. In some districts substantial opportunities for improved management control exist in all operations. The statewide potential for better management control of K-12 expenditures is estimated to be millions of dollars. Board members and administrators can realize significant savings by discovering their own opportunities for cost reduction.

It is recognized that similar opportunities exist in other governmental jurisdictions and private industry. However, school problems are too pressing, and financing too critical, for K-12 officials to accept the status quo. Improved administrative control is a better alternative than the curtailment of educational programs and/or tax overrides.

A WORD ABOUT MANAGEMENT

Modern management is a systematic and logical endeavor which requires:

- Clear specification of needs and problems.
- Objectives designed to achieve measurable results.
- A determination of priority between objectives competing for limited resources.
- Development and consideration of all viable alternatives before selecting the best course of action.
- An action plan including schedules, accomplishment milestones, and contingency plans.
- A control system to guide the plan's implementation.
- Evaluation of the results in relation to the objectives.

Many school administrators contend that they instinctively follow such a management system. Examples, such as those cited at the beginning of this section, indicate that this is not the case. To assure adequate management control, important recommendations to the board or the superintendent from his subordinates should be formally presented, incorporating the principles suggested above.

ALTERNATIVES

Development of meaningful alternatives demands well-defined objectives and a willingness to think creatively. For example:

- If the objective is lower unit prices through bulk purchasing, and present warehouse space is inadequate, have you considered arranging for multiple-drop shipments or for better utilization of existing facilities?
- If more students must be accommodated, have you considered extended days, double sessions, or year-round schools rather than a new school building?
- If lunches must be provided, could they be catered? Could they be prepared in a central kitchen and distributed to the schools?
- Would convenience foods be part of the answer? Could several districts join together and solve the problem better than one district alone?

COSTS

When analyzing an alternative, only costs resulting from its adoption should be considered. If overhead costs do not change, they should not be included. For example, if accepting the alternative will not increase administrative overhead, this cost should not be added in.

However, all costs that the alternative <u>does</u> affect should be included. Frequently overlooked are:

- Increased custodial costs.
- Increased utility costs.
- Occupation of space which could be used otherwise.
- Increased insurance costs.
- Fringe benefits of employees.
- Increased administrative costs.
- Cost of supplies and equipment.
- Debt services.

Districts should project cost of alternatives not only for the initial year, but for several subsequent years. Past expenditures (sunk costs) should be ignored as a part of the cost decision. For example, if it proves less expensive to contract bus services than to operate the existing district-owned fleet,

the original investment in fleet and facilities should not be a factor in the analysis. If an administrative system is being considered for change, the costs of developing the old system should be ignored. The estimated costs of developing the new system, spread over its expected life, plus the anticipated costs of operating it, are compared to the expected costs of old system operation for the same time period.

OUTPUT CRITERIA

It is customary in the field of K-12 education to measure program results in terms of the dollars per ADA. The rationale appears to be that the more money spent the better the program. This type of information tells management nothing about program results (output), however useful it may be in comparing program costs between districts. It is an input measure, not an output measure.

To measure the output of an ancillary activity such as transportation or purchasing, two output measures are needed--a quantity factor and a quality factor.

- The quantity factor is the easier to determine. It includes items such as square footage of physical plant (for custodial and maintenance services) and pupil miles (for transportation). Few districts maintain records that allow a cost/work/time comparison within the district, with other districts, with other governmental jurisdictions, and with private industry.

- The quality factor is more difficult to develop and apply--but it can be done. It includes items such as purchase price for standard items compared to statewide averages, frequency of painting for certain types of buildings under given climatic conditions, degree of cleanliness expected or frequency of cleaning for custodial work, textbook loss ratios and/or textbook use life, etc.

It would be desirable to develop output measures or standards statewide. However, an individual district or districts working together, could develop their own quantitative and qualitative measures. Board members and superintendents need these measurements to objectively evaluate district business performance.

MANAGEMENT REPORTS

To establish better management controls, it is suggested that each district develop and implement a formal reporting system, so that the board and the superintendent will be able to evaluate more accurately what is happening in their district. Ideally, the system would be a statewide or regional system, so that interdistrict comparisons could be made. However, each district may do well to develop its own system, or one in cooperation with other districts.

The report system envisioned would require the following (applicable to business services area only):

- Cost information in dollars and man hours.
- Output information in quantity and quality.
- Standards against which to measure, including:
  - Performance (What did we achieve and at what cost?)
  - Objectives (What did we say we could achieve during the period with the given resource level?)
  - Other norms (What do other organizations achieve at what cost? What can we reasonably expect to achieve at what cost?)

It is believed that almost all business service areas lend themselves to a simplified reporting system. Many specific suggestions are provided further on in this booklet and in the questions which follow each section. When there are deviations from the suggested standards, the district should be able to analyze the reasons. Potential problems, such as individual cost increases, decreases in productivity, or unwanted lowering of standards could be pinpointed and timely action could be taken. In addition, the system would provide information of great value in choosing between alternatives.

Several levels of reports would be necessary; detailed reports to the supervisor of the area and to his supervisor, less detailed reports to the superintendents, and still less to the governing board.

ECONOMY

When district finances are strained, essential services are frequently eliminated or curtailed. Instead of this approach, districts should first examine the substantial opportunities for economies that are present within its programs. The trick here is to prune costs and still maintain essential services at a necessary quality level.

Purchasing is a good example. Not only should supplies and equipment be obtained at the lowest possible price, but items should be screened to eliminate those with a low priority or to substitute less expensive items for those initially considered. Quality can be too high or too low in terms of expected life and use. Some features of a product may be nice to have, but not essential:

- It may be unwise to order a transport type bus in lieu of a lighter model, if economic analysis shows the latter will be less expensive over the needed life.

- Paperback books may prove less costly in some instances, even though their life expectancy is less.

- An adding machine may be more appropriate than a calculator.

- Standard computer programs may be just as useful as those tailored for individual district use and may be less costly.

- The number of forms, kinds of paper stock, or types of janitorial supplies, may be curtailed with no essential decrease in quality.

Obviously, most boards or the superintendents do not exercise practical control over the smaller problems. However, leadership and direction must be asserted so that all employees know that economy is expected. Training is needed to promote attitudes of economy in those persons who can actually achieve it.

ORGANIZATIONAL STUDIES

Frequently, it is observed that an employee's conception of his job is significantly different than how it is conceived by his superior. This appeared to be particularly prevalent in some school districts. In addition, many K-12 managers appear to have a limited understanding of their role.

Throughout a district, there should be agreement between employee and supervisor on:

- Duties

- Objectives

- Restrictions

- Expected quality and quantity of output

- Authority

- Responsibility

- Priorities and areas of emphasis

Studies that effectively define job roles in terms of the above criteria should result in improved organizational performance. Such a study should begin with the governing board and superintendent and continue through all levels of the organization.

Accurate and detailed job descriptions would assist both the individual and his supervisor. But, they have an even higher value for the district as a whole. Through detailed analysis of all job descriptions, the following advantages will accrue:

- Major unassigned responsibilities and costly overlaps of duties and authority become apparent.

- Inconsistencies and illogic in the assignment of duties and in the formal organizational structure are clearly pointed out.

Periodic, in-depth studies of the nature suggested above should be performed by all districts.

IMPROVEMENT OBJECTIVES

Many of the managers interviewed during the study had ideas for improving their operations. These ideas were not developed and implemented because managers lacked the support or means to effect change.

One successful method used in many organizations is to have operational improvement objectives stated as a part of the annual budget process. Each subfunction manager formulates goals for improvements when he submits his budget. The goals are discussed, modified, and agreed upon by the next level manager. This process is repeated at each level of management.

To be successful, goals must be specific, measurable and achievable. There must be an achievement timetable, and progress should be monitored throughout the year.

Examples might be:

- Reduce textbook losses ____% by (date) through . . . .

- Prepare and issue a _____ manual by (date) in order to . . . .

- Develop and test output measures for cafeteria services that will include the following considerations (list) . . . by (date).

- Reduce the number of forms used in the district ____% by (date).

- Reduce the number of persons involved in bus maintenance and repair ____% by (date) through the following methods (list) . . . .

- Cut costs of pupil transportation ____¢ per pupil mile by (date) through the following methods (list) . . . .

ANALYTICAL PERSONNEL

Few districts have well-trained personnel specifically assigned on a full-time basis to analyze costs and operations and to recommend improvements.

A good analyst will earn his salary many times over through cost savings and other improvements. The analyst need not be familiar with education or school business management, but he must know analytical techniques, management methods, systems analysis, and organizational theory. The ideal background of an analyst may be a Master's degree in Business Administration and extensive experience.

Most districts cannot afford to add such persons to their staff. It is possible that one analyst could serve several districts or that services could be obtained on a contract basis.

ECONOMIES OF SCALE

Economies of scale can be realized when several districts cooperate to achieve lower costs. Not all districts can, for example:

- Afford to conduct a training program
- Hire analytical personnel
- Have a safety engineer on their staff
- Purchase in sufficient quantity to get the best price
- Support a computer which will effectively process their records
- Prepare food in the most economical manner

Duplication of backup services and equipment such as spare buses, underutilized computers, etc., can be reduced by several districts combining to achieve economies of scale. The best solution appears to be closer cooperation among school districts on a voluntary basis.

COST REDUCTION

Formal cost reduction programs have proved effective in many private and public organizations but no school district was found to have one. An effective approach is:

- Form interdisciplinary teams
- Use outside help if necessary
- Examine each operation for cost saving opportunities
- Determine dollar objectives
- Establish deadlines

The keys to success of a cost reduction program are:

- Involvement of top management
- Participation by the supervisors and workers alike
- Periodic progress reports
- Prompt follow-up of suggestions
- Immediate decision and implementation of accepted recommendations
- Realistic estimates of savings
- Proper accountability of savings through budget reductions.

VALUE ENGINEERING

This is an industrial technique that helps develop less expensive methods or items with the same utility as more expensive ones planned. The team approach is normally used with this technique. If used in school construction, it would probably avoid such items as custom birch cabinetry, brass hardware, and "gourmet" kitchens. Districts should find out more about this technique.

PLANNING, PROGRAMMING, BUDGETING SYSTEM

One of the basic instruments for school administrators and decisionmakers is the budget. The problem is that the prescribed budgets are designed mainly to account for appropriations and expenditures. They are not designed to assist analysis, decisionmaking, and effective long-range planning, or relate resources required to establish goals.

The Planning, Programming, Budgeting System is intended to help overcome these shortcomings. While PPBS is no panacea, its philosophy and concept appear to be admirably suited to improving school district operations. Its essence is the systematic development, evaluation, and presentation of relevant information as to the full implications of the costs and benefits of major alternatives. It is a system which lends itself to the type of management discussed in this section.

There is actually little new in the concepts of PPBS. Its concepts have been applied by a number of governmental bodies for some time. The analytical methods, such as cost-benefit analysis, are familiar tools of the economic analyst. What is new is the integration of the concepts into a single management system and the orderly application of the system, in total, to district planning.

The implementation of a successful PPB system requires the active involvement of almost all district personnel. They should know what is happening, what their role is, what demands the system might make on their operations, and they should be encouraged to have a voice in the development of the system.

The state of implementation in most districts is such that there is little to evaluate.

- There is an apparent lack of understanding of the purposes and concepts of PPBS.

- There is a general lack of progress in the development of goals, objectives, program descriptions and other PPBS components.

The experience of pilot school districts as well as other governmental bodies indicates that the implementation of even a minimum PPB system should begin as early as possible. An early start is also recommended by the California Advisory Commission on School District Budgeting and Accounting in its PPBS manual. The implementation steps such as appointing a PPBS steering committee, developing an implementation plan, developing program goals, objectives, and descriptions are explicitly explained in this PPBS manual.

A significant shortcoming in almost all districts is the absence of system analysis capability which is an integral part of the PPBS process. System analysis in the PPBS context may be defined as an inquiry to assist decisionmakers in choosing preferred future courses of action by systematically examining and re-examining the relevant objectives and the alternatives, policies, and strategies for achieving them; and comparing quantitatively, where possible, the economic costs, effectiveness, and risks of the alternatives. It is a full systems approach more than a technique used in the narrower context such as that used in a stored inventory management system.

Analytical techniques utilized may include: (1) cost benefit analysis, (2) resources analysis, (3) cost sensitivity analysis, (4) an analytical model or a series of such models, (5) marginal analysis, (6) statistical methods, and other sophisticated techniques. Without this analytical capability, a district will not have a fully operational and effective PPB system.

At this point, a question may arise: Does my district need an expensive analytical staff? What is the most economical and efficient way to acquire the analytical capabilities?

The answer to the first question is "no", except for the limited analytical staff discussed earlier in this report.

- While statisticians and mathematicians designed and use the sophisticated techniques discussed, much analysis, some

highly complicated, is performed by people who have acquired the analytical capability as an adjunct to their major specialties.

- Analytical techniques and methods are management tools. Managers, department heads, and other senior officials should develop some degree of skill in this area as a part of their responsibilities.

- At any one time, it is expected that a district will have only one or two major programs requiring highly complex system analysis.

- The real gain from existing PPB systems has been that they stimulate a logical approach to problem solving. It encourages meaningful dialogue and interaction between the decisionmakers, and it requires program managers to ask and answer the right questions.

- Highly sophisticated analyses and techniques are important. But, more important are the quality and creativeness of the alternatives generated for study.

The most economical and efficient approach for the districts to acquire analytical capability appears to be:

- Take a direct approach and learn by actually doing the more routine level of analysis.

- Initiate a training program.

- Develop the simpler model building techniques. (More complex model building techniques should be developed at a regional or the state level.)

There are, of course, other alternatives, but the above approach is feasible and economical. It is also substantially in accord with the approach suggested by consultants from the Rand Corporation of Santa Monica and the team of PPBS consultants from the University of California.

MANAGEMENT STYLE

QUESTIONS

1. Does the board have a formal method of issuing all its policies? (Board policies are usually published in manuals and generally are complete and current.)

2. Does the board actively follow up to assure that stated policies are implemented by the administrative staff? (District boards usually have no formal follow up to assure that their policies are implemented. In one district, the superintendent and the board members held four seminars annually at which the superintendent's performance was discussed and evaluated.)

3. Does the board concern itself with detail matters which could well be delegated to administrative staff? (District boards appear to devote a large portion of each meeting to approving transactions which could be handled administratively.)

4. Is there a written statement outlining the authority of the administrative staff and delegating that authority from the board? (All districts visited had some statement of the superintendent's authority and responsibility included in board policy. These ranged from being very general to specific statements.)

5. Is there a detailed district organization chart and is it updated regularly and promptly? (Organization charts were available in all districts visited. In some districts, however, the charts were outdated.)

6. Does the board and the district maintain close contact with the county superintendent of schools' office and representatives of the State Department of Education?

7. Is contact with neighboring districts or overlapping districts maintained to cooperate in solving common problems?

8. Does the district have an accounting system which provides cost data on a timely basis to the board and to financial and program managers as an aid in administration of their programs? (Districts generally send cost data to schools and/or department heads on a monthly, although often not timely, basis. Some do not prepare periodic statements comparing estimated and actual revenues. A few do not prepare regular monthly statements.)

9. Does the board require periodic internal or external management audits of district operation? (With the exception of some specific studies, this is not a regular practice in school districts.)

10. Does the district formulate and adopt plans for allocation of its resources based on priorities? (Districts generally do not do any organizational or resource planning beyond the immediate budget year.)

11. Does the budget formulation process anticipate financial resources which will be needed for the budget? Does it include the following?

    a. Definition of responsibility for budget preparation at all organizational levels?

    b. Review and consolidation of budget preparation from all organizational elements?

    c. Time for full review, adjustment, approval, and dissemination prior to the start of a new budget period?

    d. Revenue and expenditure estimates based on trends established in the last several complete budget periods and general conditions of the economy?

    e. Written policies and procedures on budget formulation and administration?

    f. A budget message by the superintendent setting forth his budget policy, philosophy, and goals?

    g. A preliminary budget submitted to the board stating the major policy options facing the district, and the financial data interpreted, explained, and with recommendations?

    h. Program proposals cost analyzed and objectively evaluated in terms of district resources and priorities?

    i. Statements of justification?

    j. Participation in the planning and developing process by school principals, department heads, and classroom teachers?

    k. Budgets totaled by school and department and submitted as a package by each principal and department head?

    l. A reliable and thoroughly explained projection of salary costs?

    m. Cost analysis of proposed changes in personnel policies (salary levels, fringe benefits, leaves, etc.)?

(In general, districts do not have written budget policies although some have developed formulas for selected budget categories. Budgets are prepared by central office staff

with varying amounts of input from school personnel and department heads. The actual procedure used seems to depend largely on the philosophy of the administrator responsible for preparation. There is little written evidence of major budgetary options being presented to boards, although it appears that much data is presented orally by the staff when budget decisions are being made. It appears that districts in general are doing only a fair job of anticipating resources that will be needed within the financial limitations imposed on them, and carrying out the budget formulation process along the lines specified above.)

12. Has your district made the commitment to implement a PPB system?

13. Does your district have a written detailed implementation plan that identifies the tasks necessary for implementation, the persons or organizations responsible for the tasks, the date they must be completed with a specified end product?

14. Has your district developed statements of goals, objectives, program descriptions, and other elements of PPBS?

15. Has an evaluation system been developed?

16. Has a steering committee been appointed to provide the leadership and coordination?

17. Have training sessions been conducted for personnel who will be involved in developing PPBS elements?

18. Does your district have a written plan or strategy to develop system analysis capability necessary to an operational PPBS?

19. Has presentation been made to members of the community, students, administrators, school board members, teachers, and other school personnel about the concepts of PPBS, the requirements PPBS will place on the district and the benefits that will accrue to the entire educational process?

20. Does the district plan for future manpower needs and project the availability of personnel? (Although all districts are doing a fair job of projecting their manpower needs for the immediate budget year, little attempt is made to project beyond to future years. In one district, a five-year projection was made but it was found to be of little use because it was inaccurate. In general, it appears the districts find it difficult to plan beyond the immediate year.)

21. In projecting facilities requirements, does the district:

    . Identify the type and amount of space and equipment available, identify new facilities needed, and identify old facilities needing renovation or to be abandoned?

. Clearly assign responsibility for projecting district needs?

. Prepare a capital outlay budget which provides for these needs?

. Make projections based on planned program changes?

(In general, districts seem to be doing a better job of planning and projecting facility requirements over a multi-year period, as compared with the regular operating budget.)

22. Does the district have a management information system that meets its needs? Does the system include:

. Provision for identifying management needs and a method for getting the information? (Districts generally have no organized method for determining and updating management information needs. These are usually developed informally by the staff. Usually no one person is assigned the responsibility for projecting information needs. District management occasionally reviews its information system, but only on an informal basis.)

. Provision for timely and complete statistical and financial reports? (Management reporting requirements are generally not specified and persons responsible for preparing reports are not formally designated. Administrative staff seems to be generally satisfied that reports are complete, accurate, and timely. There could be duplication of reported information, but this is difficult to establish because of a lack of coordination in this area.)

. Provision for the collection, cataloging, storage, retrieval, distribution, and disposal of management information? (Responsibility is generally not assigned for retention and disposition of management information. There are few written policies in this area. Filing and storage facilities seem to be adequate, economical, and accessible. In general, improvement is needed in the area of record retention and disposition. Districts need systems which provide for systematic retention and disposition based on established guidelines.)

. Provision for adequate transmission of information to all levels of the organization? (Communications upward, downward, and laterally generally appear to be good. School district management as a whole appears to be very conscious of the value of good communication.)

23. Does the district have a system for formulating management improvement objectives? (Few districts have a formal system

for formulating improvement objectives for all facets of district management. Some districts have systems for evaluating management objectives in specific programs such as curriculum development or special education programs.)

24. Is there an organized and ongoing program for cost reduction? (No organized programs for cost reduction were noted. Any cost reduction that occurred is imposed by limited financial resources. Such cost reduction programs do not really consider all viable alternatives.)

25. Is the district administration receptive to and does it encourage change? (District administrators are more willing to accept change in the educational field than in the services functions since they are more apt to understand the ramifications. Administrators often express reservations about changing to PPBS which probably can be attributed to a lack of understanding of the system.)

SECTION 2

PERSONNEL MATTERS

One of the most frequent expressions from people contacted during the study was pessimism about meaningful K-12 cost control. Their reasons: major district costs are salaries, wages, and fringe benefits, particularly for teachers. These costs are considered uncontrollable, and other expenses are so minor that control will have only limited fiscal impact.

These premises should be rejected on two counts. First, real opportunities for better resource use do exist in nonsalary areas, and these can have a significant effect upon district costs and on administrators' ability to do a better job with the same resources. Second, cost control by the district is certainly possible in the personnel areas, including teachers' salaries and fringe benefits--even though existing precedents and legal constraints complicate the situation.

The present period in California is one of relatively high unemployment. Teachers in particular are available in numbers greater than there are open positions. While no one applauds this situation, it has impacts, both good and bad, on the school district employment situation.

RECRUITMENT

In some districts, recruitment continues at a barely slackened pace despite numerous job applicants. The reasons usually given are two: First, valuable contacts would be lost if recruitment activities ceased. Many employers have curtailed recruiting and have not been adversely affected; therefore this argument appears unsupportable. Contacts can be reestablished readily when the need arises. Second, a short supply of qualified personnel exists in specialty areas, e.g. bilingual teachers. While recruiting trips may sometimes be necessary, there are other alternatives which are less costly and still effective. Consequently:

- Recruitment activities should be cut to rock bottom.
- All out-of-state recruitment trips should be viewed initially as unnecessary.
- Recruitment trips should be authorized only when positions cannot be filled by means of letters to hiring sources, listings in professional journals, etc.
- Districts should utilize application files of other districts when appropriate.

HIRING PROCEDURES

There is also room for curtailment of activities related to job application review. These activities frequently include in-depth

application review, multiple interviewing, and an elaborate record system. If there are few present or future job openings, then a system based on yesterday's labor scarcity is not appropriate for today.

Many districts use multiple interviews by administrators. This practice appears to add little to the quality of selection, while substantially increasing costs. Under any condition, the hiring procedures should be examined closely. Therefore:

- If there are no foreseeable openings, don't interview, don't take an application, don't open a file.
- Applications should be screened to reduce the number of eligible applicants that will be interviewed.
- When there is only a probable opening, schedule no more than one interview per screened, qualified candidate.

SELECTION

One advantage of a tight job market is an employer's prerogative to be highly selective in whom he hires. Under these conditions, it is even more advantageous to specify clearly both job content and desired employee qualifications.

Qualifications should be relevant and neither too high nor too low. Directly related experience and training outside the educational field may well be of more value than marginally related school experience and education. Extensive outside experience is usually desirable as a qualification for many positions. For example:

- Food service supervisor (institutional food service education and experience).
- Director of Maintenance and Operations (including work measurement and related techniques.)
- Business Managers with a degree and experience in business management.
- Transportation Supervisor with managerial experience of a large public transportation fleet.
- Purchasing agents or buyers.

While promotion from within has many advantages in motivation and morale, selective infusion of new skills, disciplines, and outlooks is often of much greater benefit to the district.

The probationary period must be considered a key part of the selection process. Many school administrators had examples of employees, certified as well as classified, who were advanced to

permanent status without adequate evaluation. This has almost always resulted in subsequent problems. Employees should be closely observed during their probationary period. Dismissal during this period is least harmful to the employee and less troublesome and costly to the district.

To summarize, districts should:

- Clearly define job specifications to insure that applicants will understand what would be expected of them, and that the district itself knows what it needs.
- Take a hard look at the stated qualifications to determine that they are relevant to the actual needs.
- Give greater consideration to outside experience and training.
- Scrutinize policies and practices which give substantial precedence to promotion from within the system.
- Strengthen evaluation procedures so that unsatisfactory probationary employees do not attain permanent status.

PAY

Superintendents and their assistants see salary negotiations as one of their most difficult and time-consuming jobs. Most school administrators feel that they are at a distinct disadvantage in pay negotiations. They find themselves meeting and conferring (as required by law) with increasingly powerful employee groups, who are armed with better information and who have more extensive bargaining experience and training than that possessed by the district.

Teacher groups are frequently successful in winning large pay and fringe benefit increases and liberalized rules regarding terms of employment, whether or not the district can afford it. Districts find themselves in competition with each other for the better employees which tends to spiral wages, causing them to rise faster than those of other comparably trained public employees.

The surplus of teachers and others in the work force should help the districts hold the line on excessive demands for more pay and fringe benefits. The oversupply will reduce turnover which will accelerate the growth in the number of employees at or near their maximum salaries. This will cause a built-in escalation of salary costs, even without changes in the pay scales themselves.

Basing teacher salary advancement on longevity and accumulation of college courses rather than performance effectiveness, is a major problem. Many districts do not do a comprehensive job of screening courses for relevance before allowing credit, many are

extremely liberal in allowing credit and some do no screening at all. Frequently, courses are accepted without regard to their relevance to the teachers' instructional field or benefit to the school or district.

Evaluation of teacher performance is subjective since wide differences exist in techniques, raters' approach, guidelines, and standards. Some districts do not provide for any evaluation of tenured teachers. Others evaluate them only every few years.

This system compensates the competent and the incompetent equally. As teacher turnover decreases, the problem of marginal and incompetent teachers in the system will become even greater. The proof needed to dismiss a tenured teacher is overwhelming and expensive. However, in the long run, the pupils, the district, other teachers, and the education system suffer if marginal and incompetent teachers are allowed to remain in the system. Continued compensation of incompetent teachers is much more expensive in terms of lost effectiveness than the administrative costs of removal.

In addition, there are other employees and managers in the school system who appear to be receiving wages which are relatively high when compared to other public employees. Without belittling the difficulty of the positions, some school business administrators and functional managers (personnel, purchasing, etc.) are compensated more than other public employees in comparable positions. Some cafeteria workers are paid higher than they would be for comparable private employment.

School employees in the building trades generally enjoy different working conditions than their peers in private industry and are frequently paid union scale. Painters, carpenters, electricians, etc., are assured steady employment and income. Serious consideration should be given to paying employees in this category less than union scale as does the State.

In setting salaries, the unique benefits of working in the school system must be considered along with the disadvantages. For example:

<u>All teachers and many other school employees work only 75% of the work year</u>. This is based on an average school year of 176 days compared to a normal work year of 234 days (249 less 15 days paid vacation). Thus, a $9,000 per year teacher is paid as much per workday as a $12,000 year-round employee; a $15,000 teacher receives the equivalent of $20,000.

<u>Fringe benefits are effectively used by employee groups to increase total compensation</u>. Cost of district paid group insurance varies from $16 to $1,041 per employee, per year. Observed coverage varies from a portion of employees' health premiums to full coverage for employees and dependents for health, drug, dental, optical, and life insurance, plus employee

income protection. Some districts do not recognize all insurance and retirement costs as part of the total salary package. Few districts recognize the twelve-month coverage of insurance as an additional benefit to the employee working only 75% of the year. Every school board member should acquaint himself with these costs and cost growth in his district. Many districts had employer-paid group insurance benefits far in excess of those offered by other public agencies and many private firms.

To summarize: Many of the problems associated with salary and wage setting are beyond individual district control. It seems logical that there should be statewide concern with the legal constraints, with the provision of wage and salary information, and with negotiating skills and practices. However, there are things which districts can do themselves to help maintain equitable wages, fringe benefits, and working conditions. Ideally, these should be fair to the employees and taxpayers.

Therefore, we suggest that:

- Districts make every attempt to hold the line on salary and fringe benefit increases.

- Negotiations be a two-way street. For any additional benefit granted, the district should seek a return, such as increased hours worked, inclusion of performance evaluation in the salary setting process, closer screening of college courses applicable to salary range changes, etc.

- School administrators be trained in salary negotiations or professional assistance be used in preparing for and conducting negotiations.

- Districts make provision for at least annual evaluation of performance for all employees; the evaluation process be strengthened, particularly in the area of norms and standards; and evaluations be used to the extent permissible in the granting or withholding of salary increases.

- Districts become familiar with pay scales, fringe benefits, and working conditions in other noneducational governmental jurisdictions as well as with those in other districts.

- Districts determine the total cost of fringe benefits, including retirement cost, and consider these as a part of employee compensation.

- The possibility of future insurance premium increases be considered when employee fringe benefits are negotiated.

- District insurance benefits be compared to the industrial average of 2.8% of salary (includes health, welfare, and life insurance).

HOURS WORKED AND PRODUCTIVITY

It has previously been noted that some school employees (e.g. bus drivers) are employed on a full-time rather than on a part-time basis. The reasons given for this seem inadequate to justify the extra costs.

Teachers' workload has eased in several ways over the last few years. The average pupil/teacher ratio has decreased from 28.8 to 1 in 1963-64 to 25.1 to 1 in 1969-70. While it is recognized that averages do not reflect what individual teachers are doing, and that special programs account for some of this drop, the ratio is considerably below the legislative limitation on maximum class size allowed without penalty.

At the same time, teachers have received greater assistance in the classroom and have been relieved of some peripheral duties such as noon supervision. Better facilities and equipment (language labs, audio-visual materials, teaching machines, etc.) are in wider use. The increase in use of teacher aids, counselors, and psychologists has lightened teacher responsibility. In addition, the hours of instructional time per teacher appear to be low in some districts. A small increase per teacher would have a large impact on costs.

We suggest that:

- Districts review their staffing patterns and use part-time and/or hourly help where this proves most advantageous.
- Districts attempt to maximize teacher utilization by striving toward an average pupil/teacher ratio of 30/1 where permissible.
- Teacher workload of 25 hours of instruction per week should be the district goal (the National Education Association suggested maximum).

TURNOVER AND ABSENTEEISM

Some turnover and absenteeism are normal parts of the work experience. Excessive turnover and absenteeism are expensive and are frequently symptomatic of serious problems. Morale may be low, supervision poor, working conditions unacceptable, job satisfaction missing, standards too loose, or (with absenteeism) the customs and mores of the work group may call for excessive use of leave privileges.

There is no accurate way of knowing if turnover and/or absenteeism are too high without summarizing and analyzing the necessary data. Wide variations in the turnover and absenteeism rates between individual schools or supervisors may be indicative of problems and should be investigated. Other government

jurisdictions (the State, for example) have developed statistical data on sick leave usage based on age group, sex, organizational unit, etc. Similar data could be developed by districts for comparison between their schools and departments and with other school districts.

Districts generally do not make any extensive analysis of absenteeism or turnover rates. This critical phase of personnel management requires top management interest and attention.

VOLUNTEER PERSONNEL

Noon supervision of students by volunteer help is permitted under present law, and some districts are making effective use of it to reduce costs. Further, districts may benefit from the increased involvement of members of the community through better acceptance by the students and through development of stronger feelings of identity between the community and the school.

Volunteers are permitted to be used in the classroom and to assume some custodial services provided the permanent work force is not reduced or positions left vacant because of this. For example, most districts could effectively use volunteers to relieve the custodians of errand duties.

TRAINING

The lack of relevant training programs for noninstructional personnel was disappointing. Districts should give more attention to training needs at all levels of the organization.

At the higher district levels, there is need for management to avail themselves of training in modern management methods and cost control. Management should not be preoccupied with courses designed primarily for educators. Management courses, conferences, and seminars sponsored by universities or by management associations for general (not educational) managers may be more useful.

At the functional manager level, specialized training is indicated. It is generally not "human relations" but solid management techniques that are needed. This would include planning, budgeting, scheduling, work methods improvement, control and evaluation, and also new developments in the managers' specialty area.

At the worker level, district personnel need job-related training.

To avoid duplication and expense, it is suggested that several districts work together to develop and implement the needed training. Outside expertise in determining needs, developing and conducting training, or in identifying appropriate courses may be less expensive and more efficient.

EMPLOYEE SAFETY

The reduction of on-the-job injuries has been a goal of progressive employers for many years. The first aim, of course, is the avoidance of human suffering and death. Also of major importance is the avoidance of the expense to both employees and employers resulting from industrial injuries.

Employee permanent disability payments rarely compensate for all loss of earning power, let alone the pain and suffering and the loss of productive status. A high accident experience record raises the employer's cost of workmen's compensation insurance. However, this is a small part of the actual, indirect cost of job connected injuries. Sick leave payments, substitute salaries, supplementary leave payments and administrative costs must also be considered. In addition, the loss of a trained employee from the work force reduces quality of output, even when replaced by a substitute. Frequent accidents will hamper employee morale and motivation and can affect output quality.

Considering the above, it is evident that all districts should have active safety programs. Districts who have such programs have made substantial and startling reductions in cost, far exceeding the expense of the program. However, few districts have such programs and, of these, a number covered only the classified employees and did not have all of the features that make employee safety campaigns successful.

In a successful safety program, responsibility is shared by manager, supervisor, and worker. It includes all of the following features:

- Accurate records of accident type, cause, responsibility, time lost, cost, and disposition.
- Careful analysis of these records to determine what preventive measures will reduce physical causes of accidents and modify the human causes.
- Training of all managers, supervisors, and employees to recognize safety hazards, to instill safe work habits, and to build understanding of their responsibility for safety.
- Reduction goals expressed in quantitative terms. Full support of management toward the achievement of these goals. Employee awareness of these goals and the progress toward their achievement.
- An award system for safe work groups (schools, units within schools, etc.).
- Investigation of work groups with a high incidence of accidents and initiation of remedial action with the supervisor.

- Frequent followup with the employee and his doctor for the purposes of showing concern and returning the employee to work as soon as possible.

- Possibility of a light workload or limited day if an employee is not capable of assuming full-time duties.

- The assignment of staff responsibility for the safety program to one individual who has training and experience in this area.

- The use of professional advice and assistance when needed to help reduce accidents. This frequently can be obtained free through the State Compensation Insurance Fund or through private firms (Pacific Telephone Company is an example of a firm with an outstanding safety record).

Adoption of a program such as described above will result in substantial dollar savings, alleviate suffering and improve employee morale. If a small district does not have the resources to support a program by itself, it is suggested that it join with neighboring districts for program staffing, development and implementation.

BENEFITTING FROM MANAGEMENT IMPROVEMENTS

The keys to controlled personnel costs include one set of factors that should result from the kind of effective management described in a later section. These factors insure that necessary work is done, in priority order, at needed levels of quality and quantity and using efficient and effective methods. They include adequate planning, control and evaluation of the work.

This kind of management minimizes the work force that is needed to achieve a given level of output or raises the value of output from a given size work force.

In order to realize significant cost savings, districts must adopt needed improvements and pursue opportunities. Consider the following:

- Priorities are changed so that certain work is eliminated, (e.g. the district discovers that the cost of recruiting and of filing and retaining applications is neither essential nor adequately beneficial to support its costs).

- Methods are improved so that fewer people are needed to do a job (e.g. custodial standards, work measurement, and scheduling reduces the need for custodians).

- Changed techniques make it possible to use employees with lower skills and corresponding lower pay (e.g. convenience foods are substituted for district-prepared food in the cafeteria).

- Work is rescheduled so that the use of part-time employees will be more economical (e.g. it is decided to put bus drivers on a split-shift, hourly basis).

- Interdistrict cooperation reduces the need for specialists in each district (e.g. purchasing is done jointly with one or more other districts).

- Contracting out proves less expensive than self-performed work (e.g. food preparation or transportation fleet maintenance are contracted).

- Organizational streamlining reduces the need for some supervisory personnel (e.g. separate personnel functions for classified and certified employees are consolidated).

To benefit from these opportunities, the district must be willing to make the needed changes in its work force, no matter how unpleasant and unpopular the task. To achieve maximum benefits, the district must take action at the earliest possible date, considering legal and other constraints. This must become a major facet of district personnel policy if cost control is to be achieved.

Therefore, we suggest that:

- The board request detailed district plans showing how surplus personnel will be identified and handled.

- Board policies be established to guide district management in those areas.

- A control system with periodic reports be implemented as a part of any cost reduction program.

PERSONNEL MATTERS

QUESTIONS

1. Are management's objectives periodically defined and evaluated for such activities as: staffing, recruiting, selection, dismissals, salary structure, negotiations, attendance accounting, and employee leave benefits (sick leave and other)?

2. Have recruitment activities been reduced to a minimum in view of the current surplus of teachers? Are recruitment trips, in and out of state, really necessary to fill vacant positions?

3. Has the district attempted to make cooperative arrangements with neighboring districts to jointly use application files?

4. Has there been a recent review of hiring procedures to eliminate unnecessary application reviews, interviews, and records?

5. Are applications screened so that only eligible applicants will be interviewed?

6. Are job specifications clear as to job content and employee qualifications to permit the highest possible selectivity in hiring?

7. Is related experience and training outside the educational field given proper consideration in hiring personnel?

8. Has the board taken a hard look at hiring policies to see whether preference is given to promotion from within the system as opposed to hiring the best man for the job?

9. What is the average salary paid teachers in your district? How does this compare with the statewide average? If it is above the statewide average, why? (The statewide average for 1970-71 is $11,022.)

10. Does the board policy regarding acceptance of college units for salary advancement require a comprehensive screening for relevance to the teacher's instructional field and benefit to the school or district?

11. What is the annual cost of sick leave to the district? What is the average annual sick leave usage per employee? (The nonmanufacturing industrial average for 1969 was 1.5% of total payroll. Paid sick leave for state employees for the same period was 3.1% of total payroll. The state's annual rate per twelve-month employee [249 days less vacation, or 234 days] for fiscal year 1969-70 was 7.8 days. The equivalent rate for a teacher's average work year is 5.8 days. We believe the State's rate could be improved upon.)

12. Are measures taken to readily identify misuse of sick leave? (Items such as excessive use, habitual use, repeated Monday or Friday absence, length of illness, etc.)

13. Are individual supervisors held responsible for enforcing the district's sick leave policies? (Supervisors should be concerned with the validity of the absence, proof of illness, and submitting justification to the district office.)

14. What leave benefits does the district allow, other than those mandated in the Education Code? Why?

15. Are sabbatical leaves granted on the basis of benefit to the district? (Particular attention should be paid to sabbatical leaves granted for travel to insure that they will provide direct benefit to the district. Courses of study should be carefully screened and allowed only if the employee's major or minor field specifically fits the needs of the district.)

16. Do administrative personnel represent the governing board in salary negotiations with employee organizations? Are salaries of these administrators linked to the teachers' salary schedule?

17. Has the board attempted to hire professional negotiators to assist school administrators in preparing for and conducting negotiations?

18. In conducting salary negotiations, does the district:

    . Seek a specific benefit in return for salary or other benefits increases granted?

    . Obtain information as to pay scales, fringe benefits, and working conditions in other, noneducational governmental jurisdictions as well as those in school districts?

    . Determine the total cost of fringe benefits, including retirement cost paid by the district and the State, and consider these as part of employee compensation?

    . Consider the possibility of future insurance premium increases when fringe benefits are negotiated?

    . Compare district insurance benefits to the national industrial average?

19. Does the district administration provide definite performance standards and evaluation guidelines? If so, are they made known to all employees of the district? Are they applied consistently throughout the district?

20. How often is the performance of permanent and probationary employees evaluated? (In many districts, evaluations are made infrequently after employees are granted tenure. All employees should be evaluated at least annually to assure that district performance standards are being attained.)

21. Are employees informed of the results of performance evaluations? Are the evaluations effectively used by administrative and supervisory personnel to assist the employee in improving his performance? (The employee could be given assistance in developing improvement objectives to be attained within a specified time. He could be encouraged to attend workshops or college classes in subjects in which he is deficient. Consideration should be given to not granting credit toward salary advancement for this remedial work.)

22. Have job performance standards and evaluation procedures been made strong enough so that unsatisfactory probationary employees will not gain permanent status? Are employee evaluations used in the granting or withholding of salary increases?

23. What is the cost per employee for insurance coverage provided by the district? How does your cost compare with the cost per state employee? With other districts? (State cost is $120 annually for partial medical coverage on the employee. The average statewide cost in school districts offering insurance coverage is $273. Figures for 1970-71.)

24. Is part-time and/or hourly help used where this proves economically most advantageous?

25. What attempts are being made to maximize teacher utilization by striving for the highest permissible pupil/teacher ratio? What is the actual pupil/teacher ratio by grade level? Is it below the legislative limitations? If so, why? What is it costing the district? Can you justify the additional cost? (The average pupil/teacher ratio has decreased from 28.8 to 1 in 1963-64 to 25.1 to 1 in 1969-70. There does not appear to be substantial evidence that quality of education has been improved by this reduction.)

26. Has the district attained a teacher workload of 25 hours of instruction per week, as the National Education Association suggests.

27. Is there a periodic audit or review of the district's staffing pattern and appropriateness of position classifications? (Without a review, you may be paying for people working out of classification.)

28. What study and analysis has been made of employee absenteeism and turnover? Are comparisons made with other districts, governmental jurisdictions, and private enterprise?

29. Are volunteer personnel used to the maximum extent possible under present law?

30. Is there a relevant training program for other than instructional staff? Are there attempts to cooperate with other districts to set up and implement such a training program? Is consideration given to obtaining outside help for this purpose?

31. Is the district's Workmen's Compensation Insurance experience modification factor known to the board? What percentage of premium does the district receive as a dividend? (As employee accident rates and severity decrease, insurance premiums decrease. Districts who have active and effective safety programs have substantially reduced their net Workmen's Compensation Insurance premium cost.)

32. Is there a specific and ongoing safety program in which responsibility is shared by administration, supervisors, and all staff? Is staff responsibility for the safety program assigned to an individual who has training and experience in this area?

33. Has the district sought professional advice and assistance in setting up a safety program and reducing accidents? (Assistance can be obtained free through the State Compensation Insurance Fund or through some private firms.)

34. How much employee time is lost due to accidents? Do district records show all costs of employee accidents including salaries of employee and substitutes, and administration and investigation costs?

35. To what extent do employees use the 60-day industrial accident leave? Can such costs be reduced through restrictive policies? (Policy should include light or limited duty provisions to encourage early return to work, and provide for follow-up contact with an injured employee. A district doctor may be used to follow up on injured employees.)

SECTION 3

THE PHYSICAL PLANT

POTENTIAL FACILITY COSTS

The costs of constructing, operating, and maintaining school buildings and grounds are second only to those of instructional salaries. Despite a projection of decelerated ADA growth, many districts face the prospect of new construction or extensive reconstruction.

Pressures will continue to mount for constructing or updating facilities. The nature and location of needed school facilities will change as population shifts occur and as the ratio of students changes between grade levels. New educational concepts and techniques will render some space obsolete.

The Los Angeles earthquake will accelerate demands for enforcement of school building safety laws and probably cause tightening of building regulations. Statewide reconstruction costs will likely increase above the conservative estimate of $671 million by June 30, 1975.

Construction of new school facilities is expensive. In addition to the actual construction cost of buildings, there are other costs that have significant impact, such as:

- Land acquisition
- Architect and other fees
- Site preparation and development
- Testing and inspection costs
- Purchase and installation of furniture and equipment
- Utility installation
- Interest expense on debt

Further, many other district costs are a function of plant size. Included are custodial and maintenance services, utilities, insurance, transportation, food service, supply warehousing, administrative costs (more principals and supervisors) and possibly instructional costs resulting from duplication of special curriculum offerings at several schools. With this in mind, the potential for increased usage of existing facilities is discussed below.

YEAR-ROUND SCHOOLS, EXTENDED DAYS, AND DOUBLE SESSIONS

Greater use of existing facilities through double sessions, extended days, or year-round school operation is potentially rewarding and worthy of full consideration.

A realistic and analytical approach is necessary when studying the feasibility of extended operations. It should include cost benefit analysis and most important, an honest appraisal of possible effects on educational quality. College and university practices are an example of where both extended days and year-round instruction have increased educational opportunities and facility usage.

District management has generally frowned upon use of year-round operations, double sessions, and extended days. Although a few districts use extended days, only one California district is known to be experimenting with year-round operations. Objections were seldom on the grounds that the quality of education would suffer. However, they did expect parental resistance and they were reluctant to change school operating methods and staffing.

The cost reduction potential of double sessions must not be overlooked. In theory, existing facilities could accommodate up to 100% more students. Given the current situation of tight money for both construction and operations, double sessions may be an acceptable and viable alternative.

Extending the six-period day to eight would accommodate one-third more students. Either extended days or double sessions would result in lower operating costs, compared to those that would be incurred if additional facilities were constructed.

A year-round school operation holds high potential for cost avoidance. Most year-round proposals entail a four-quarter school year with one-fourth of the pupils alternately on vacation. This allows one-third more students to be accommodated without additional facilities. Based upon reports of experience elsewhere, educational opportunities can be enhanced by this system. The traditional length school day could be retained, or extended days/double sessions could be instituted to achieve the fullest possible use of existing facilities.

The Valley View Elementary District in Illinois, is operating a year-round system called the "45-15 Continuous School Year Plan." Each child is assigned to one of four groups. Group A begins its school year June 30 and each of the three other groups start at 15 class-day intervals thereafter. Groups attend school for 45 class days (about nine weeks) and then have a 15 class-day vacation. Thus, each group attends class 180 days per calendar year, with three months' vacation, plus holidays. There have been no serious objections reported from parents, teachers, or pupils. Children of the same family and neighborhood are placed in the same group, enabling friends and families to enjoy their free time together.

Such plans offer promising opportunities for substantial cost savings. The Valley View Elementary District needs only three-fourths as many buses, textbooks, and items of classroom equipment as compared to districts with a traditional nine-month school year.

Year-round schools, extended days, and double sessions should not be considered only as a means of avoiding new construction. They are also meant for closing existing schools with the following potential benefits:

- Sale price of buildings and grounds
- Real property returned to tax rolls
- Avoidance of reconstruction costs (Field Act)
- Lowering maintenance and operations costs
- Less property to insure
- A reduction in administrative costs (principals, supervisors, school staff personnel)
- Fewer targets for vandalism and theft
- Reduced debt service
- Potential economies of scale, such as fewer libraries, fewer drop points for textbooks and supplies, fewer special education classes and teachers through consolidation into larger classes, fewer food service facilities, less equipment to maintain, etc.
- Possible educational enrichment by serving a larger student body (better selection of courses may be offered).
- Access by more students to better facilities (libraries, multi-purpose rooms, adequate gyms, swimming pools, etc.), if the schools with the least modern facilities are closed.

The disadvantages to closing schools might include disruption, cost of changing operations, and disposing of facilities, public pressure, need to modify the facilities which remain open to accommodate more students, increased transportation costs, etc.

<u>However, it is urged that</u>:

- Every district make an in-depth study of the feasibility, advantages, and disadvantages to their district, of year-round operations, double sessions and extended days.
- The analysis include a full consideration of all potential cost savings and cost avoidance, additional expenses, and educational and social advantages and disadvantages.
- Districts use outside assistance when beneficial.

OTHER MEANS OF EXTENDING FACILITY USE

Some districts have avoided new construction by changing the grade levels assigned to elementary, junior high, and high schools, so that as age of student population changes, existing schools remain near capacity. For example, as the total high school population increases, the ninth grade students are reassigned to a junior high school that has excess space.

Changes in school attendance boundaries are a consideration in coping with population shifts within the district. More difficult, but still worthy of consideration, are district consolidations to insure optimum use of physical plant and possibly better educational opportunities.

Opportunities for better use of nonclassroom facilities were found. For example:

- Better inventory management would have eliminated the need for additional warehouses in several instances.
- Contracting for bus maintenance and repair or all transportation services to release space for other uses is frequently overlooked.
- Catered food can eliminate needs for kitchen facilities.
- Multiple use of cafeterias, assembly rooms, etc., should receive more consideration in some districts.

It is suggested that:

- Each district faced with the prospect of new construction do an in-depth analysis of existing space utilization before starting building plans.
- Other alternatives be analyzed, such as changes in school boundaries and in the break points between elementary, junior high and high school.
- Consolidation with other districts be given full consideration.

LAND ACQUIRED FOR FUTURE DISTRICT USE

Not all districts acquiring land for future expansion have made adequate cost/benefit analyses. Most land is increasing in value. Development of surrounding land will often cause the price of a parcel to skyrocket. Some land will generate rental income in the period before the district builds. Each of these benefits should be considered when determining whether to buy land in advance.

On the other hand, there are costs involved. These include:

- Tax losses on the land and improvements
- Interest expenses, if the land is not paid in full
- The loss of the use of capital invested. (At a minimum, this would equal the highest interest cost the district is now paying for borrowed capital.)

It is therefore suggested that any district holding or considering acquisition of land for future use make a cost/benefit analysis.

- The analysis should consider all of the factors enumerated above.
- It should also include an estimate of the probability of eventual need and when.
- The analysis should be updated every few years.

RELOCATABLES

After the above alternatives to new construction are exhausted, relocatables should be considered.

Relocatables are ordinarily not an ideal substitute for permanent buildings. Many substantial long-term advantages of permanent classroom facilities are by-passed for the short-term advantages of relocatables. The use of relocatables is best justified to meet frequent, temporary, or unpredictable shifts in population within the district.

If relocatables are decided upon, then the district must choose between purchasing a commercially available prefabricated model, or designing and building a district-specified model. Districts choosing commercially available models often find them unsuitable and expensive. Some standard features exceed district needs while other necessary features are not available. The cost of commercially available models usually exceeds district-designed models by 10% or more.

In selecting relocatables, districts should base their decision on cost analysis. The total cost (design, base, interest, site preparation, etc.) of each alternative should be determined. The expected life of the building types should be estimated and compared with the needed life, and the cost per year, per pupil, computed. Only then should the district reach its decision.

We suggest that:

- Relocatables not be considered as a substitute for permanently needed space.

- Districts consider designing and bidding their own relocatables.

- Other districts be queried regarding their experience with relocatables. Designs may be borrowed from these districts or their evaluation of commercial models obtained.

- Careful cost analysis be made before a final decision is reached.

CONSTRUCTION

When new construction is the best alternative, districts should get the most value for each construction dollar expended. Based on observation and discussion with knowledgeable professionals in the school building field it is apparent that substantial opportunities for economy do exist.

Frills in school construction warrant a thorough examination. For example:

- Tile covered walkways, birch custom cabinets, overly expensive hardware, and gourmet kitchens were all noted in districts visited.

- Finger plan construction is expensive; there are alternative plans with the same advantage at less cost.

Overestimating the useful life of a school building will initially result in additional construction costs and ultimately leave the district with obsolete but usable facilities.

Flexible designs, such as more multi-purpose rooms, can be built in at little or no additional cost.

More attention should be paid in school design to reducing future maintenance costs, vandalism, and threat of fire. While this may not reduce construction costs, it will minimize future district custodial, maintenance, and insurance costs.

We suggest that:

- When new construction is being planned, a small multi-discipline district team should be appointed including members of the public with appropriate backgrounds. This team should be familiar with the concept of or receive training in value engineering. It would work with the governing board, the administration, and the architect to assure that plans meet district needs and provide full value for construction dollar.

FACILITY MAINTENANCE AND OPERATIONS

The most significant opportunity for cost control in the areas of facility operations and maintenance is through the use of better management techniques. Shortcomings were noted in the planning, methodology, control, and evaluation of these functions. For example:

- Many districts have no rational staffing standards for the custodial and maintenance work forces.

- Few districts have adequate cost and workload data for management of the functions. Among other things, cost per square foot is not known; consequently, comparisons cannot be made. There are no recognizable quality standards; this makes control and evaluation difficult.

- Many districts lack adequate standardized work procedures and techniques. Better equipment or supplies may also be needed.

- Workload tends to fluctuate causing scheduling problems in many districts. More time is spent reacting to emergency situations than is spent on planned work. Work of low economic value is used to fill in slack time. Work is not scheduled to efficiently utilize the employees' time by combining jobs, reducing travel, etc.

- Evaluation of job performance is not based on measurable standards.

- Many districts minimize maintenance because of financial problems. In the long run, correction of resulting deterioration could cost the district much more than appropriate and timely care. At the same time, they are missing opportunities to reduce expenditures in other areas with lower priority.

- Many day custodians perform low-priority work that should be done by others (e.g. errands for teachers and principals).

Districts that have installed a modern custodial and maintenance management system have alleviated most of these problems and reduced custodial costs from 15-25%, as well as realizing significant improvement in preventive maintenance.

Maintenance management systems can take many forms. A comprehensive package, described below, has proven highly valuable in at least one school district, other governmental jurisdictions and private industry. There are eight steps to the process:

Physical Inventory. An inventory is taken of all features in the district requiring custodial care and/or preventive maintenance. The inventory is quantified in terms of so many square feet of

each kind of surface, so much lawn, so many desks, etc. The detail of the inventory and breakdown by location of items is determined by its proposed usage. Generally, inventory detail and location breakdowns are used as a budgeting/scheduling/control tool.

Level of Service. Level of care standards, expressed in measurable terms, are developed for each major inventory item. For example: "Mow the lawn when it reaches 'X' inches in height"; "clean blackboards daily." Standards may vary by school location. Some washrooms may need cleaning twice a day, others once a day; some lawns may be allowed to grow higher than others before mowing.

Several levels of service will be needed to correspond to the availability of funds in the budget; "A" level being the ideal--"B" level being lower, but adequate--"C" level being the minimum acceptable.

Although standards usually begin as a quality factor (wax vinyl floors whenever scuff marks are apparent), they should be translated into frequency terms (wax vinyl floors every ___ days).

Methods and Materials Improvement. The ways in which the major job procedures are done should be analyzed for cost improvement. This includes: looking at how individuals and teams go about their jobs; developing and installing better work methods; examining the equipment used to see if the job would be less costly by using other equipment; determining if newer industrial products might do a better job at less cost.

Organization. The method analysis may lead to reorganization. For example: The team approach may be used; supervision may be strengthened or diluted; and employee reporting relationships may be changed so that work crews are deployed on a district-wide basis rather than by school.

Work Measurement. When improved methods, equipment, supplies, and organization are implemented, the time required to do the major jobs is determined by a work measurement analyst. Allowances for travel between jobs, scheduling friction, jobs not measured, emergencies, etc., are added to measured time for purposes of budgeting and scheduling.

Budgeting. Budgets for the operations and maintenance function are computed based on the inventory, level of service, and measured time required plus the allowances. Custodial and maintenance crews are staffed according to this budget. Should the budget level not be approved, the detailed analysis provides a sound basis for fallback to an alternate level.

Scheduling. Functional managers now have a basis for scheduling work daily, weekly, monthly, and annually for the best use of available forces and equipment.

Controls and Evaluation. A reporting system is developed to monitor quality, time, and cost performance. If performance does not meet standards, either adjustments should be made to the standard or steps should be taken to improve performance.

Adaptability to districts. Not all districts have physical plants large enough to profit from all of the above steps or have trained staff available to do the needed analysis. However, all districts would benefit from improved methods, scheduling, budgeting, and control. These four steps can be accomplished in even the smallest districts.

Therefore, it is suggested that:

- All districts improve their records and reporting system in custodial and maintenance areas so that superintendents and governing boards will know what value they are receiving for the money spent and will be able to make cost comparisons with historical data and with other districts.
- A concerted effort be made to improve methods, equipment, and scheduling.
- Quality standards and staffing guidelines be developed.
- Controls be established and performance evaluated.

If districts wish to go further than their resources permit in developing a custodial and maintenance management system they could cooperate with other districts or contract for these services.

PERIPHERAL USES OF FACILITIES

Opportunities for increased revenue are available by controlling and charging for use of facilities. This includes facilities which are used for civic center or community recreation purposes and parking facilities for pupils and employees.

In the community service areas, few, if any, districts have adequate records indicating who used the facilities, how frequently, etc. Cost records are not sufficiently detailed to allow determination of the full costs, including utilities, custodial costs, and the share of overhead that should be charged to these programs. The amount of district general fund support cannot be determined.

Several options are open to the districts after they gather adequate cost/benefit data:

- Control community use of facilities to a level which is wholly supported by the special tax and fees charged.
- Establish fees to recover all direct and indirect costs.

- Formulate district policy to require user groups be charged.
- Explore the possibility of a joint program with other jurisdictions (city, county, park, and/or recreation districts) paying program costs which exceed revenue from the permissive tax override and user fees.

Parking privileges for students and staff are provided by most schools at no charge. Maintenance and operation costs of such facilities are approximately $20 per parking space, per year. Most districts have not identified costs connected with their parking facilities. Some don't even know the number of spaces they maintain.

The costs of land, construction, control, and maintenance of parking spaces make this an expensive employee and student benefit. A fee to offset the expenses and at least some of the initial costs would raise considerable revenue. Precedents have been established in the state colleges ($13.00 per semester), the University, and in state government ($7.00 per month in downtown Sacramento).

Therefore, it is suggested that districts:

- Determine the cost of providing parking at the schools and district offices.
- Take whatever steps necessary to charge employees and students a reasonable parking fee.

REAL PROPERTY INSURANCE

Many of the problems now facing districts in providing real property insurance require state assistance for optimal solution. Several recommendations have already been proposed at the state level. However, there are steps that districts can take now to relieve their insurance problems and reduce costs.

Better records are the first requirement. It is surprising that so many districts have neglected to analyze premium costs, losses, and recoveries. Insurance management is impossible without such information. Also needed is data on probable cause, type, and frequency of loss incidences.

With better records, districts would be in a position to eliminate coverage that is either unnecessary or too expensive, and to take other actions to reduce losses and premiums. All districts should consider the following:

Extended coverage endorsements increase fire insurance premiums by about one-third and insure against damages caused by such things as windstorms, hail, and explosions. Districts should review their loss histories to see if the risk justifies the added premium. Also, extended coverage should be re-evaluated periodically for potential adjustment of insured property value.

Frequently, extended coverage far below the total value of the plant may be a "best buy".

Vandalism insurance also needs careful evaluation. Endorsements nearly always exclude glass breakage from vandalism coverage. Most other damage, short of arson, is in effect excluded by imposing a deductible on each incident. Arson is usually covered under the basic fire insurance policy. Therefore, many districts who have analyzed the cost/benefit ratio no longer carry vandalism insurance.

Campaigns can be effective in reducing personal and property losses. For example, some districts used campaigns to reduce vandalism by involving students, parents, interested groups and local news media. Wasted dollars, parental responsibility, and civic pride are stressed.

Other districts are successful in reducing insurance premiums and losses by removing hazards, adding safety features, and implementing safety standards. Improved sprinkler and alarm systems are one answer. Fire prevention engineers can pinpoint unsafe features and practices and suggest improvements. Free help is generally available from insurance carriers and through appropriate city and county officials.

Insurance companies include administrative and sales expenses in their rates. Consequently, large districts consistently negotiate lower rates than small districts. By insuring several small districts on one policy, the insurance "buying power" of the large district can be achieved and the individual districts could expect lower premiums. Hiring an insurance specialist to negotiate for the pooled districts should assure premium savings.

As an example of insurance management, the state insurance placement program has been developed along the following lines:

- Policies have been consolidated wherever possible, to reduce administrative costs.
- Qualified brokers are placed on an eligible list based upon the following standards:
  a. Demonstrated ability based upon volume of insurance sales.
  b. Depth and specialization of professional staff.
  c. Experience in public entity business.
  d. Past performance in submitting bids for state business.
- Specifications are provided and a maximum is set on commission payable to a broker at the time bids are solicited.

- Joint brokers are named only when a single broker cannot reasonably be expected to place the desired coverage for an unusually large policy.

This program produced savings for a major state department of 40% of its premium for fire and liability insurance coverage.

THE PHYSICAL PLANT

QUESTIONS

1. Has the district analyzed, in-depth, alternative ways to make the fullest usage of its facilities?

   Double sessions?

   Extended days?

   Year-round school sessions?

   Changing grade levels housed in existing facilities?

   Boundary changes?

   Consolidation with other districts?

   (There is little evidence that districts seriously consider these alternatives. Traditional objections are seldom based on quality of educational output. Indications are that parents, teachers, and administrators resist change and are reluctant to take a clear look at the possible benefits of change.)

2. Has consideration been given in the above suggested analysis to:

   All advantages and disadvantages of each alternative?

   Cost savings and cost avoidance versus added costs?

   Educational and social advantages and disadvantages?

   (Double sessions, extended days, year-round operations, etc., may not hurt quality of education. In the absence of clear evidence to the contrary, cost reduction potential should receive priority consideration.)

3. Has the district considered using independent sources for assistance in making these analyses?

   (Many districts lack staff expertise to perform needed analyses. There could also be advantages to an unbiased and independent approach to the issues involved.)

4. What efforts have been made to consider better use of non-classroom facilities?

   (There may be opportunities through improved business management, multiple usage of facilities and contracted services.)

5. When was the last cost/benefit analysis made of land now held for future use? Should it be updated? Did the analysis consider <u>all</u> costs involved, including the costs to the

general taxpayer? Is the last analysis still applicable today? Have the population estimates and building trends assumed then been reinforced by subsequent events?

6. What type of analyses and data does the board require when considering acquisition of land for future use?

   (State and local planning agencies and other sources should be consulted for population, zoning, and building trends.)

7. What factors influence the choice of obtaining relocatables versus permanent structures? Are they realistic?

   (Many districts, 77% of those visited, lease rather than buy relocatables; some because of the lack of construction funds, and others because of lack of consideration of alternatives.)

8. How are economies maximized when relocatables are considered? Is reuse of plans and design given maximum consideration?

   (Of the districts visited, 12% had self-designed reusable plans and had realized savings in excess of 10% over pre-fab structures.)

9. To what extent are plans for permanent structures reused?

   (Statewide, 64% of the districts had engaged in limited reuse of plans and had saved 25 to 50% on architects' fees.)

10. Has the district communicated to its architects the desire for low-cost designed features?

    (Less than 10% of districts have adequate architectural guidelines. Districts having such guidelines realized construction cost savings of approximately 10%.)

11. Are the district's custodial and maintenance operations characterized by:

    Updated staffing standards?

    Cost and workload data adequate to control and evaluate performance?

    Standardized work procedures, techniques, and equipment?

    Scheduled workload with built-in flexibility to handle emergency situations?

    (Only 24% of districts visited had meaningful custodial staffing standards. Costs (including overhead) were not allocated to various services in a manner that would allow comparisons and useful performance measurements. Performance standards insure an adequate level of service and minimize unnecessary services.)

12. Does the district maintenance management system include:

    Inventory of facilities and features to be serviced?

    Specified levels of service?

    A methods and materials improvement program?

    Organization designed for the most effective approach to provide the desired level of service?

    Workload measurements and standards?

    A budget based on facilities to be serviced, level of service, and workload standards?

    Advance work scheduling to best utilize forces and equipment?

    A reporting system to control and evaluate performance?

    (A good management system can materially reduce costs (15 to 25%) or provide substantially improved service at the same cost. A few districts have engaged outside help for research and development of modern methods and tools. This approach has been reported to save some districts 20% of maintenance costs.)

13. Have training programs been effective in increasing quality and quantity of service?

    (Generally, training programs in districts are inadequate. However, training is vital to successful implementation of modern methods and tools.)

14. Have district costs and performance been compared with those available on contract, with other districts, or outside contractors?

    (Some districts have good success with contracted services. If hidden costs, such as employee fringe benefits, personnel expense, equipment expense, etc., are included, then contractual services may be the least expensive and most desirable alternative.)

15. What type of community recreation program is used in your district? Does it include a well-defined and directed program of activity?

    (Approximately one-third of the districts visited have well defined programs. Not all of these include implementation of program measurements, etc.)

16. Have possibilities been explored for joint operation of a program with cities, counties, and park and recreation districts?

    (A few districts have shared facilities with local government entities while improving the quality of the program.)

17. Have opportunities been investigated for increasing revenues by controlling and charging for use of facilities for other than district purposes?

    (Districts should be sure that they account for all costs, direct and overhead, that arise from community service activities, and recover all such costs from user charges and the special tax. Most districts visited did not have such records, thus boards did not know to what extent their general fund subsidized these activities.)

18. Are facility usage reports adequate for management evaluation?

    (Most districts do not have such reports.)

19. Are facility usage reports used in decision making?

    (Most districts who prepare reports do not effectively use them. These reports can be used to determine additional workload and staffing requirements.)

20. What is the cost of providing parking facilities?

    (Indications are that maintenance and operations of parking areas may run over $20 per space per year--6¢ per square foot.)

21. What fee would be required to recover the cost of providing parking facilities?

    (Most schools provide parking at no charge. A reasonable fee would recover costs in most cases.)

22. Has the deductible amount on your property insurance increased recently? How much is the current deductible for fire? Extended coverage endorsements? Vandalism?

23. Do district records show any substantial losses caused by wind, storm, or hail that would justify full replacement value insurance under Extended Coverage Endorsements? Would insuring 25% of the district's value have covered each loss at less than half the premium? 10% of the value?

24. Does vandalism insurance include glass breakage? What other acts are not covered? Civil commotion? Riot?

25. What do district records show regarding the cost of vandalism incidents? With the current deductible amount, would

recoveries be received on enough incidents to justify paying the current premium?

26. What type of anti-vandalism activity does your district engage in? Does it involve all local entities that might aid its effectiveness? Does the district vigorously seek restitution from vandals' parents? Or other liable persons?

27. Has the district investigated cooperative efforts with other districts to secure insurance?

    (Benefits would accrue from the combined buying power and the ability to hire specialists to negotiate the coverage.)

SECTION 4

PURCHASING

Does increased volume result in lower prices? In the study, 80 districts of varying size reported prices paid for standard items. These districts were grouped by ADA, as follows:

Group 1 - 1 - 2,500 ADA

Group 2 - 2,501 - 20,000 ADA

Group 3 - 20,001 - 50,000 ADA

Group 4 - 50,001 - 750,000 ADA

The prices paid by the larger districts were invariably much lower than those paid by smaller districts. For example:

		Average Prices			
Issue	Unit	Gp 1	Gp 2	Gp 3	Gp 4
Tissue	roll	$.259	$.205	$.191	$.181
Handtowels	case	4.28	3.85	3.74	3.13
Blackboard Erasers	doz.	4.58	3.88	3.61	2.21
Mimeo paper	ream	.867	.819	.705	.679
100W Lamps	each	.255	.169	.119	.104

The larger districts also had, on the average, a lower purchasing overhead per purchase dollar than the smaller districts. Clearly, there are advantages in forming larger economic units through cooperative purchasing or other means.

In purchasing it is axiomatic to say greater volume brings lower prices. Yet only relatively few districts have attempted to consolidate purchasing power. For example, the extent of statewide cooperative purchasing between school districts and other public agencies is less than 5% of total purchase dollars. In some districts cooperative purchasing is nonexistent, in others it involves only the purchase of bulk gasoline through the county. The few districts that are active in cooperative purchasing reduce prices 12% to 35%.

To be most efficient, districts should spend about half of their purchasing dollars in cooperative programs with other districts, the counties and the State. This would include almost all supplies for classrooms, offices, shops and maintenance, most items of equipment and bulk fuel products. Construction, capital outlay, low volume supplies, petty cash type items and emergency purchases would be excluded.

Cooperative purchasing offers the following ways to stretch purchasing dollars:

- Use state or county contracts whenever they give a clear price advantage and comparable service.

- Be familiar not only with State Office of Procurement, Local Assistance Program contracts but also with other state contracts that permit the participation of public agencies.

- Cooperate with other districts in your region in the bulk purchase of standard school supplies. Contract terms, such as delivery, payment, etc., can be tailored to particular needs. A good starting point would be the annual paper bid. This could be followed by consolidation of instructional, art, science, athletic, food, transportation, custodial and maintenance supply bids. Each of the larger cooperating districts could assume responsibility for the purchase of one or more commodity classes.

Competition also reduces prices. Board policy generally encourages competition but there is often a subtle form of discrimination present. Some purchasing agents solicit quotations only from business firms in the local area when wider market area solicitation is desirable and feasible. While appearing to be buying competitively this type transaction usually results in poor to mediocre prices. Possible remedies are:

- Develop bidders' lists that include sources from inside and outside the local area.

- Rotate bidders' lists so that new bidders are constantly added that will challenge historical prices.

- Review vendor files to determine if and why the same vendors are consistently low.

- Scrutinize any board policies that give preference to local suppliers and determine what these policies cost the district taxpayers.

Efficient use of warehouse space was rarely encountered. Before building a new warehouse or expanding present facilities, district management should first consider all other alternatives, for example:

- Arrange for more frequent delivery of warehouse stock.
- Use empty school facilities and part-time help to temporarily store and handle summer deliveries.
- Make more intensive and efficient use of existing facilities, e.g., adjustable shelving, higher stacks, narrower aisles and better lift equipment.
- Cooperate with other entities that have surplus space.
- Lease instead of buy.

An effective purchasing staff more than earns its salary. Districts that indiscriminately cut their purchasing staff to save budget dollars will invariably lose dollars through less effective purchasing. On the other hand, overstaffed purchasing offices become inefficient and bureaucratic. Approximately one-half of the districts visited were in one category or the other. Districts with optimum staffing are the most cost-effective. Districts selecting applicants with outside buying experience generally are the most professional and innovative. Some items for consideration are:

- Staff the purchasing function on the basis of cost-effectiveness.
- Select staff members who have outside purchasing experience.
- Encourage membership in professional purchasing organizations and an interchange of communication between staffs of neighboring districts.
- Keep the purchasing staff aware of new developments in their field through participation in appropriate training courses.

Reducing the variety of items purchased is another method of lowering purchase costs. In most districts there are unnecessary refinements and minor variations in supply items. Standardization of school supplies is most effective in districts that are able to establish rapport between faculty and administrative staff. The benefits of standardization are:

- Development of accurate specifications.
- Increased volume of fewer items, resulting in lower prices.
- Lower purchasing, warehousing, inventory and handling costs.
- Good bidder response.
- Fewer errors in the purchasing process.
- Higher potential for cooperative purchasing arrangements.

Requests for high cost equipment and supply items should receive careful analytical review. Justification should be required and the final decision should be made by someone at a higher organizational level than the requester.

First, a decision is required as to whether the item will fill an essential or high priority purpose; if not, the request should be rejected. Efforts should be made to determine whether the item specification exceeds the minimum needs of the user or whether they will limit competition to a particular brand name product.

There are many other aspects of purchasing which need attention. These include order quantities, order points, timing of orders, discounts, freight, warehousing, delivery, inventory turnover rates, security, stock obsolescence and deterioration, etc. An effective purchasing agent uses modern management techniques to determine what course of action is best for the district. Districts should be sure they have these skills available.

The study of purchasing included a price survey of standard school supplies and equipment. Prices were requested on fifty items. Of the one hundred districts invited to participate, eighty-one responded. Prices reported by twenty-four districts were substantially verified through field visits by the purchasing team. Twenty-five of the fifty items were excluded from the final results because descriptions were determined to be inadequate, quality differences were reported or the quantity reported was too low. Following are the twenty-five items remaining:

PURCHASING
California K-12 School Districts
Price Survey Results - 1970

	Unit	Price Range in Dollars & Cents			
		Low	Average	Median	High
Folder, manila, letter size, 100/box	Box	1.240	1.410	1.540	2.370
Paper, adding machine 2¼ x 200'	Roll	.088	.120	.128	.180
Tissue, facial, box of 300	Box	.136	.189	.200	.320
Unprinted newspaper, 8½ x 11"	Case	4.150	4.320	5.040	7.200
Straws, reg., 6½, unwrapped, 25M/case	Case	9.100	11.940	12.520	16.050
Cups, hot and cold, styrofoam, 6 oz.	M	5.880	6.690	7.490	10.000
Toilet paper, roll, 4½ x 4½"	Case	9.100	11.010	11.550	16.450
Paper hand towels; single fold	Case	3.001	3.290	3.820	5.350
Binder paper, ruled, sub 16, 8½ x 11"	Ream	.700	.804	.787	1.170
Paper, mimeograph, sub 20, 8½ x 11"	Ream	.580	.724	.800	1.170
Ruler, 12", 1/16 scale, wood, steel edge 24/bx	Box	.908	1.430	1.440	2.400
Blackboard erasers, 5 x 2 x 1¼"	Doz.	1.820	2.900	3.780	6.700
Pencils, classroom, w/eras, 1/2 gross/box	Box	.934	1.230	1.250	2.230
Book, teacher class record	Each	.540	.795	.850	1.800
Basketball, leather	Each	8.350	11.050	11.900	25.500
Softball, 12", 6¼ - 6 3/4 oz.	Doz.	9.240	11.800	13.440	18.000
Tennis balls, 3 to a can	Can	1.370	1.620	1.650	2.375
Cards, data processing, basic card	M	.910	.927	.935	1.110
Lamp, incandescent, 120 volt, 100 watt	Each	.100	.115	.135	.420
Lamp, fluorescent, F40 TIZCW	Each	.381	.513	.540	1.120
Spark plugs	Each	.430	.539	.625	1.000
Chalk, 3 1/8" x 7/16", all colors	Doz.	.071	.147	.222	.530
Crayons, pressed, 16 color assort.,3½x5/16	Box	.062	.136	.150	.340
Ink, waterproof black, drawing, India	1 oz.	.170	.216	.310	.400
Paint, liquid tempura, nontoxic, all colors	Pint	.282	.340	.420	.600

PURCHASING

QUESTIONS

1. Do key members of your purchasing staff have outside purchasing experience?

   (Personnel in two out of three districts do not.)

2. What is the average dollars spent per purchasing staff member (include both professional and clerical personnel)?

   (Statewide average is $137,061.)

3. Does your district pay more or less than the median unit prices reported previously in this section?

4. What is the extent of cooperative purchasing with neighboring districts? The county? The State?

   (Approximately 50% of your purchasing dollars can be spent in cooperative programs. Some districts have saved as much as 35%.)

5. Does your county use a "unit price list"?

   (These prices are approximately 30% higher than those obtainable by moderate sized district /7,500 ADA/ using bulk purchasing methods.)

6. Are unnumbered purchase orders used in lieu of the requisition form where feasible?

   (One district reported that 70% of the requisitions survived critical review without change and were subsequently converted to purchase orders with the simple addition of a number and date.)

7. Does the requester of the item and those responsible for reviewing requisitions ask the most obvious questions: Do we really need this item? Does the specified quality exceed minimum needs?

8. Are demands made on the purchasing staff for emergency purchase of equipment at year end on a "spend it or lose it" basis?

   (This was found to be true in most districts.)

9. Is your district cramped for warehouse space? Do you have plans to expand or build additional facilities?

   (There are several alternatives which should be considered first, such as: more frequent deliveries, storage in school facilities during the summer, more efficient use of existing facilities, and borrowed space from other governmental entities.)

10. Has your district standardized school supplies and developed accurate specifications?

    (Lower prices can be obtained by eliminating unneeded refinements and minor variations in the most commonly used supply items.)

11. Does your purchasing agent use modern management techniques in his operations?

SECTION 5

ELECTRONIC DATA PROCESSING

Districts are faced with difficult decisions regarding computerization. Some of the major questions are:

- What should be computerized?
- What and how much should be done by the district, by several districts working together, by regional centers, by other governmental units or by contract?
- What machine configuration and generation will best serve the districts' needs and how should it be obtained?
- Which part of the required systems analysis and programming must be done by the district; which part can be obtained from other sources?

Computer assisted instruction was not examined. Emphasis was on pupil personnel services, and business and management uses of the computer.

The study revealed a proliferation of systems indicating inadequate planning. For example:

- Equipment and systems work is often duplicated.
- Equipment is not always compatible with long-range goals.
- Equipment potential is not effectively utilized.
- Workload is often insufficient to fully utilize equipment capacity.
- Sharing of equipment, software and technology is not maximized to avoid cost.
- Some districts are exercising poor judgment in selecting the method of acquiring equipment (lease vs purchase), ultimately leading to greater costs.

<u>What to automate</u> is the most important EDP question for district management. There must be a net benefit to justify automation:

- Lower cost (unlikely)
- Faster and better service

- Improved quality of education

- Resolution of problems not otherwise possible.

Two principal areas which can be computerized are:

- Pupil Personnel Services (e.g., attendance accounting, student scheduling, test scoring, grade reporting, California guidance record, etc.)

- Business Services (e.g., general ledger, payroll and appropriation accounting, accounts payable, inventory and stores control, etc.)

Who should perform the work is a second major question. There are advantages for districts having their own computer installations:

- Control over priorities, data bank and outputs

- Ability to experiment

- Complete control over report formats

- Availability of the computer for instructional purposes, etc.

These advantages are costly. Districts with their own installations have the expense of equipment acquisition, space, staffing, supplies, peripheral equipment, etc. In addition, the district may not be able to afford the type and size of equipment, and a staff with the level of competence it needs to fully realize the advantages. A comprehensive study may be needed to determine the extent a district should go it alone, cooperate with other organizations or contract for outside services.

Opportunities to share computer time with established computer centers at less cost are often overlooked. Some local governmental agencies have underutilized computer centers in close proximity. Usually larger installations offer not only cost advantages but more sophisticated equipment with greater flexibility and potential.

Selection of exactly the right computer hardware requires a precise definition of district objectives, needs and workload. Generally, the choice is between second and third generation computers, with options of peripheral and remote equipment.

Second generation computers have limited capability and may be inadequate even for smaller districts. With the rapid introduction and acceptance of third generation models, second generation models have become available at substantially reduced prices. Their average annual cost for lease of hardware and for labor and supplies is approximately $150,000 to $170,000.

Third generation computers have greater capability and are more flexible. IBM and Honeywell computers are compatible for both CEIS subsystems. The minimum annual cost to use these computers with CEIS subsystems is $300,000. The cost of adding other peripheral equipment, such as remote terminals for computer assisted instruction, is extra.

Purchase of obsolete equipment that will meet the district's needs may be less costly. However, some districts have purchased second generation computers that meet short-term needs but later realize they are inadequate for future needs. A second generation computer places an absolute limit on expansion. Districts that select a third generation model in order to add other applications, such as computer assisted instruction programs, must insure that it has remote terminal capability.

Districts typically develop their own systems and programs at great cost even though they may be available free from other sources. The California Education Information System (CEIS) provides standardized programs, documentation and hardware specifications to school districts free of charge. Presently, CEIS offers only a pupil personnel subsystem. This subsystem is being revised and a new business subsystem is being developed. The new programs will be designed in modular form, adaptable to third generation IBM and Honeywell computer configurations.

Pre-developed systems are also available from other sources such as the Regional Educational Data Processing Centers, other school districts (especially the larger districts), private data centers, and city and county government centers. These sources should be contacted before funds are spent developing duplicate information systems. Too often, the advantages of self-developed systems and programs are not worth the extra costs.

ELECTRONIC DATA PROCESSING

QUESTIONS

1. If all data is processed manually, have you investigated the cost/benefits of having any part of the work done by:

   . A neighboring district?

   . The county office?

   . A regional center?

   . A private service center?

2. Does your district have only EAM (Electronic Accounting Machines) equipment? If so, do you know its total cost (including utilities, space, etc.) as compared with having the work done by someone with computer capability?

   (Tabulating equipment is often slow, cumbersome and more costly than automatic data processing.)

3. Are you planning to acquire EDP capability? If so, will it:

   . Do the work needed at equal or lower cost?

   . Give faster and better service?

   . Solve problems not otherwise possible?

4. Does your district have EDP equipment? If so, do you know its total cost (including utilities, space, etc.) as compared with having the same work done by some other unit?

5. Did district management thoroughly investigate the feasibility of automating information systems? Did they consider all alternatives? Were they costed and presented to the Board?

   (Unless all alternatives were thoroughly investigated and costed, you may be paying much more than necessary.)

6. Have you investigated the availability of pre-developed systems from the Department of Education (CEIS), Regional Educational Data Processing Centers, other school districts, and other public or private data centers?

   (A committee for the California Association of School Business Officials (CASBO) is preparing an inventory of existing systems which may be available in 1971.)

7. Have you considered an independent review of your EDP system and management?

   (Districts often develop and acquire computer systems without taking advantage of the expertise available from consulting firms specializing in this area. They would help assure that all possible alternatives are considered and the most effective system is developed.)

8. What is the current percentage of utilization of your computer as compared to a 7-day week, 3-shift basis? If low, are there plans to expand computer usage or work out a sharing arrangement with others?

   (There are local plans in the developmental stage to establish new regional centers for all levels of local government including school districts.)

9. If present equipment is outdated should you update existing equipment or acquire new equipment?

   (Some districts use manufacturer supplied converters which permit the use of existing programs while receiving only a nominal increase in computer capability at a significant increase in operating cost.)

10. Are long-term EDP objectives compatible with long-term educational goals?

    (For example, does your computer operation plan allow for adoption of a computer assisted instruction program?)

SECTION 6

TEXTBOOKS

A frequent observation during the study was the absence of adequate records. It is hard to see how districts can manage their resources effectively without better information on costs, workload, output, use, etc. Textbook management is no exception.

Most districts simply do not have information systems that enable them to evaluate their current textbook management policies and procedures. These districts are not aware of the value of their textbook inventory, the use of specific books, the number and value of textbooks lost annually or the amount recovered for lost or damaged books. Without this type of information it is difficult to achieve significant improvement in management effectiveness.

Districts order and distribute state furnished textbooks centrally. This provides the foundation for effective control. It is recommended that central control be extended to cover all district purchased textbooks, including high school. Benefits of a central control system include:

- Reduction of costs by consolidating purchases.
- Reduction of purchases by identifying and redistributing surplus textbooks.
- Better scheduling of use so that fewer copies are required.
- Easy identification of unused texts or copies so that estimating and ordering can be improved.
- Greater assurance that an information system, as described above, will be developed and used.

Recoveries for lost or damaged textbooks are often overlooked by many districts. Some suggestions are:

- Determine annual textbook losses, compute recoveries, and compare losses to recoveries for each school. This information will tell district management where to concentrate its efforts for control.
- Make students and parents aware of their liability.
- Consider requiring that students make arrangements for reimbursement before replacement books are provided. Districts who practice such a policy recover 90 percent of losses in addition to reducing overall losses.

. Charge full replacement costs for lost books.

Inefficient textbook management is a frequent teacher complaint. For example, in one district teachers did not have enough workbooks for most of the semester; toward the end of the semester an announcement was received offering more workbooks that had been in storage all semester. If this is a common occurrence it is symptomatic of the need for better controls.

Textbook repair is sometimes an economical alternative to replacement. Life can be extended through minor district-made repairs or through commercial rebinding. This may offer larger districts significant opportunity for cost savings.

Use of paperbacks should receive more consideration. The cost of texts in paperback form may be low enough to outweigh the additional life of hardbound copies, particularly if control expenses are considered.

TEXTBOOKS

QUESTIONS

1. Are meaningful reports prepared on textbook management?

   (Reports should contain data on actual usage versus estimated usage, loss rates, recovery rates, etc. Data should be identified to users' schools, department, teachers, etc.)

2. Is there centralized control of textbooks?

   (Under a system of centralized control, school or department surpluses are quickly identified for district-wide redistribution in lieu of purchasing new books.)

3. Do you have effective policies and procedures for reimbursement of lost or damaged textbooks? Are they uniformly enforced at all schools in the district?

   (Districts reported recovering as little as 10% of the assessed charges for loss or damage.)

4. Is valuable warehouse space utilized to store obsolete textbooks?

   (Districts are sensitive to public criticism from dumping, burning or indiscriminately giving away obsolete textbooks. One district resolved the problem by writing letters to parents explaining the reasons for obsolescence and inviting them to accept the obsolete books for their home libraries. The books were put to good use, warehouse space was freed for profitable utilization and the district avoided public criticism.)

5. Does your district have a program to repair damaged textbooks?

   (Many districts do no rebinding at all. Repair is a viable alternative to buying new books when, after considering useful life, the cost of repairing is less than a purchase.)

6. If your district has a material number of surplus or obsolete textbooks do you know why? Can this be avoided by judicious planning and ordering? If so, what has management done to prevent future surpluses?

   (Some districts order state-furnished books with little, if any, intention of using them since they cost the district nothing. Some surpluses result from lack of control over the textbook inventory.)

SECTION 7

PUPIL TRANSPORTATION

Several alternatives are available to districts for providing pupil transportation services. Good management principles dictate that each alternative be fully analyzed before selection is made. Possible alternatives are:

- Consolidating all or a part of transportation services with adjacent districts to achieve economies of scale and avoid duplication.
- Contracting for transportation services or a part thereof (certain routes, bus maintenance, bus repair).
- Using municipal or other bus lines to provide all or a part of the transportation needs.
- Lowering level of transportation service on regular runs.
- Reducing or eliminating use of the fleet for field trips and other special activities.
- Changing fleet size and composition to serve district needs most economically.

Inter-district cooperation offers substantial opportunities for savings. In addition to consolidating overlapping routes, other possibilities include:

- Sharing repair and maintenance facilities.
- Reducing the number of "spare" buses.
- Scheduling improvements and more direct routing.

The decision of whether or not to contract for transportation services requires cost-benefit analysis. The costs of operating a fleet include employee salaries and fringe benefits, maintenance, garage facilities, utilities, overhead, equipment replacement, the cost of invested capital, etc.

Sunk costs (dollars already invested in plant and equipment) should not be a factor in the decision to contract or not. If contracting will provide satisfactory service at less future cost, it may be the best alternative regardless of sunk cost.

Contracted transportation services are sometimes excessively expensive because of inaccurate specifications or shortcomings in district control over contractor's scheduling and costs. Some districts accept inflated costs and inefficient operations without challenge to the contractor.

Rolling stock could be purchased at less cost in most districts through objective analysis of the size and type of bus needed and of the methods of purchasing and financing. For example:

- Transit type buses should not be purchased when lighter equipment would be satisfactory and less costly.

- Buses acquired through volume purchasing such as through State contract, usually cost less than by direct district purchase. While the former does require more advanced planning, the savings may be well worth the extra effort. Thorough economic justification should be required before purchases are authorized at other than the lowest cost.

- Vehicle replacement scheduling to allow orderly funding would increase the opportunity for paying cash and result in interest savings.

- Used buses are often available at low cost.

Supplies such as fuel, lubricating oil, tires, batteries and spark plugs may be more economically purchased in bulk. For example, one district paid for newly installed fuel storage tanks in two years through bulk delivery savings.

District employment practices may be changed to reduce costs. For example:

- Employment of transportation personnel on a nine- or ten-month basis instead of twelve. Eliminate summer "make work" projects.

- Use of hourly employees when more economical than full time.

- Schedule mechanics' work hours to minimize overtime in the event of a breakdown, and to insure full utilization of skills during the work day.

District policies and practices that prescribe the level of transportation service should be reviewed periodically to determine if operating costs can be reduced. Examples of opportunities for cost reductions:

- Minimum distances for transporting students may be changed and still provide adequate service.
- Summer school transportation might be eliminated or a minimum number of pickup points could be established.
- Special activity trips could be limited to a reasonable number.
- If special activity trips are desirable perhaps charter of a commercial bus may be less expensive.
- Re-examination of safety hazards may indicate alternatives to transporting students, (e.g., road crossing guards, attendance boundary changes).
- Determine more accurately the pupils who require transportation after normal school hours to minimize the number of buses needed.

TRANSPORTATION

QUESTIONS

1. Have you objectively considered consolidating your transportation system with neighboring districts?

   (One district formed a standing citizens' committee from all participating districts to work out problems, set priorities, etc. The results were excellent.)

2. Have you considered consolidating your vehicle repair and maintenance operation with other school districts or a local governmental agency?

   (One district contracted with a city to provide fuel and to repair and maintain its vehicles. The cost to the district was less than building and maintaining its own facility and much less than a private firm.)

3. Do you join with other public agencies in negotiating prices for fuel and other supplies or do you negotiate separately based on another agency's low bid?

   (Some do the latter, thereby sacrificing the opportunity to gain still lower prices through combined volume.)

4. Have you considered installing larger fuel storage tanks to take advantage of quantity discounts?

   (One district said the savings paid for the tanks in two years.)

5. Do you know how much time your bus drivers spend driving and how much time they spend at other duties?

   (If you provide little or no summer school transportation but employ drivers on a 12-month basis, they are driving less than 75% of the time.)

6. Have you considered a training program for prospective drivers so that a supply is always available?

   (Most districts prefer to rely on permanent drivers who also have other duties.)

7. Have you reviewed your transportation policies regarding minimum distances, safety problems, summer school, late afternoon or activity runs to see whether benefits justify the cost? Have alternative actions been considered and fully evaluated?

8. What is the district's minimum and maximum distance criteria for transportation of regular pupils? Has it been critically evaluated for necessity and economy?

   (Consider changing attendance boundaries or schedules or even changing district boundaries to reduce the distance pupils are transported. Consider whether it would be more economical to pay parents to transport pupils from sparsely populated areas.)

9. Do you provide transportation for pupils attending summer school?

   (Many districts do not provide any summer school transportation while others establish only a minimum number of pick-up points at strategic locations.)

10. Do you use school buses for special activity trips?

    (It may be less expensive to charter a commercial bus for long trips when all costs, such as driver's non-productive time, insurance, depreciation, operation, etc., are considered.)

11. Has your district formally defined what constitutes a safety hazard?

    (One district included a definition of safety standards in the transportation policy manual. This made it easier to define transportation needs and weigh the costs of alternatives to busing, e.g., road crossing guards.)

12. Do you provide transportation service for pupils who stay after normal school hours?

    (Determine number of pupils who require this service in advance of each trip so that a minimum number of buses of the proper size are used.)

SECTION 8

FOOD SERVICES

The philosophy and legislation related to the feeding of children in our schools must be considered in providing any school lunch service. Federal programs seek to provide increased nutrition and nutritional education. Federal requirements and other pressures are such that by the middle of this decade, it may be necessary for districts to provide facilities and funds to serve all children at least one balanced meal a day, either free or at a reduced charge. Should this happen, it is estimated that student participation may increase as much as two and one-half times. Districts must be prepared to provide a school lunch program organized and operated on sound management principles to meet such growth demands.

Administration

Organization and responsibilities of food service management differ from district to district. Most large districts have professionally qualified food service directors and managers; generally medium sized districts have less qualified directors and a less sophisticated organization; small districts usually do not have a qualified director and most of the administration and operation is left to kitchen managers. It is estimated that not more than 25% of school districts have fully qualified food service directors.

The present organization for administering school lunch programs often restricts the quality, participation, efficiency and success of food services. As a result there is limited quality control and a loss of significant economy in the areas of planning, purchasing, food preparation and cost control.

Operations

There are several characteristics that are indicative of an effective and efficient food service operation:

- A centralized district menu service that provides for analysis of nutritional content and food cost per meal. Such menus should provide alternative selections to meet cost, facility and other limitations of individual schools.

- General market knowledge and use of competitive bidding. Buying decisions should be based not only on price but on quality and service as well.

- Development of written detailed specifications for all regularly purchased foods and supplies. This should assure that only the quality actually needed is acquired.

- Use of open purchase contracts on a county or regional basis. Food and supplies could be acquired at a lower cost on this basis.

- Adequate facilities to accommodate increasing pupil participation in the program and requests for a greater variety of food. Some districts have adequate, attractive and efficient facilities. In others, the kitchen and cafeteria facilities are old, inefficient and inadequate for current participation. It is the latter schools that often experience the greatest expansion because of programs that provide free or low price meals for needy students.

  Some assistance is available through new federal legislation that has increased grants to school districts for food service facilities. Through these grants the federal government will fund 75% of the cost of equipping schools having no present facilities. Unfortunately, the districts who need this assistance have difficulty raising their 25%. Even when funds are secured, there is a critical time lag between immediate needs and the completion of new facilities.

- There is little recognition of the advantages to standard plans for new and remodeled facilities. In fact, a highly individual approach appears to be the rule. While there is a need for various facility designs, generally a standard approach would generate better facilities at a lower cost.

An aggressive and continuing exploration of alternative food production methods is needed to deal with the many problems of inadequate facilities, increased participation of students, and rising costs. Among alternatives available are central commissaries, cluster kitchens, convenience foods, outside contractors and a variety of food transport systems. There are no simple answers with any of these alternatives; however, failure to seek viable answers may well result in economic disaster and an inability to serve present and future growth.

Districts might investigate the advantages and opportunities available for the use of private contractors. Federal regulations have been modified to permit use of private contractors in the national school lunch program; districts should initiate an impartial evaluation of using such companies.

Management Procedures

Meaningful evaluation of school lunch programs requires a thorough analysis of financial statements, control techniques and information systems. These are necessary for the effective management of any food service systems. In larger districts there is considerable use of such techniques; in smaller districts there appears to be little or no understanding of the need for and the benefits to be derived from such data.

A number of factors contribute to a lack of effective management procedures in the school lunch program:

- The historical background of considering the feeding of school children as a charity program.
- The presence of a large number of independent districts and of small school units operating on a decentralized basis.
- The philosophical emphasis on nutrition and nutritional education without comparable concern for sound business management procedures.
- The involvement of a number of different programs, regulations and financial subsidies from federal, state and local authorities.
- The lack of any central direction, of any requirement for sound management operations, or of any measured financial results of the school lunch programs.

Accounting methods vary between districts; published procedures are suggested, not mandatory. The absence of common definition of accounts and accounting treatment prevents realistic comparisons between schools, as well as between districts, or development of financial standards. The situation is further complicated by failure to charge the food service operation with cost items such as directors' salaries, fringe benefits, utilities, storage expenses, custodial help, transportation, warehousing and accounting services.

This means that a district board has no way of knowing what its food service program costs, what portion is recovered through meal charges, and to what extent the program is being subsidized by the district general fund.

Another major problem caused by the lack of uniform accounting and financial information lies in the area of state and federal funding. The amount of funds needed and the financial impact of reimbursement programs cannot be determined by the state and federal agencies or by the districts themselves unless the actual cost of lunches can be accurately determined.

A significant development in business management has been the increased use of management information systems. Enlightened management now recognizes the advantages of receiving financial and operating information on a timely basis and in a usable form. This has encouraged the development of operational budgets and standards, against which current operating results can be measured. In a food service operation the principal performance indicators are reports of sales, costs of sales, labor and general expenses. In addition certain ratios such as food costs per meal, labor costs per meal, and meals per labor hour can be developed. Actual results should be frequently compared to such standards.

In most districts there is only limited understanding, use and interest in these essential management tools. Financial results for many districts are not available to management for thirty to sixty days after the end of the month. Some districts only develop financial information on an annual basis to satisfy state and federal requirements.

Additional Studies

In addition to the matters discussed above, the study indicates that districts, individually or in concert, could benefit from information as to:

- Current patterns in student eating habits, including evaluation of the popularity and economics of full lunch service versus snack bars.

- Simple, yet efficient procedures for determining those students entitled to free and reduced price meals.

- The feasibility of eliminating on-premise baking in each school cafeteria by using a central bakery or outside vendors.

- The economic advantages of using disposable ware versus permanent ware in school feeding.

Interdistrict Cooperation

Additional economies and operational improvements may be realized by districts working together. A joint arrangement might not cover all schools in each district, depending on their population and geographical character.

In one instance, for example, two districts employed a consulting firm with expertise in this area. The scope of the study included:

- Review of existing cafeteria operations, policies and techniques.
- Evaluation of advantages and disadvantages of multi-district facilities and services.
- Formulation and evaluation of alternative food facility models.
- Recommendations both as to the most viable facilities and improving existing operations.

The recommendations to the cooperating districts reflect many of the concepts discussed in this report section.

FOOD SERVICE OPERATIONS

QUESTIONS

1. Is menu planning centralized? Are menus analyzed for nutritional content?

   (The best menus were found in districts which had formalized and centralized this function.)

2. Are there definitive specifications for food and regularly purchased supplies?

   (There was little use of specifications in most districts visited.)

3. Does purchasing practice include competitive bidding? Are there cooperative arrangements with other districts, the county or other local governmental entities?

   (There was a noticeable lack in this area. This will improve quality and lower costs.)

4. Are alternative food production methods explored? For example:

   . Central commissaries?

   . Cluster kitchens?

   . Food transport systems?

   . Use of convenience foods?

   . Use of outside contractors?

   (There are many problems with inadequate facilities, increased student participation, rising wage scales, distribution and logistic problems and requests for greater variety. Failure to find adequate answers will compound problems arising from expected growth.)

5. Where new food service facilities are being planned is consideration given to a standard design?

   (A standard design can generate better facilities at lower cost.)

6. Do staffing and labor utilization practices include:

   . Adequate time records?

   . Scheduling workdays and hours?

   . Use of labor standards (meals per labor hours, percent of total income)?

   . Consolidation of production activities?

   (One district reduced labor costs 10% in one year after adoption of schedules and standards. It improved efficiency of small cafeterias by consolidation and use of cluster kitchens.)

7. Are accounts and financial reports useful to food service management?

   (Such accounts and reports make possible meaningful comparisons between schools and districts, and provide data for future planning.)

8. Do food service operation charges include all applicable costs:

   . Salaries, including the director?

   . Fringe benefits (including retirement contributions)?

   . Utilities?

   . Custodial help?

   . Transportation?

   . Warehousing?

   . Accounting services?

   (Knowledge of all costs is necessary in setting meal prices and in budgeting.)

9. Are cash collections reported on a regular basis and reconciled with meals served? Has consideration been given to feasibility of weekly, monthly or semester payments to limit daily sale of meals for cash?

   (Numerous weaknesses and omissions were noted in cash control techniques. Without adequate control, losses cannot be prevented or detected.)

10. Does control over inventories of foodstuffs and supplies include:

    . Locked storage areas?

    . Inventory records?

    . Periodic physical inventories?

    (In some districts food service directors and managers acknowledged significant inventory losses but indicated they did not know how to improve the situation.)

11. Are reports timely and do they provide performance indicators such as:

    . Sales?

    . Cost of Sales?

    . Labor and general expense?

    . Ratio of food cost per meal?

    . Ratio of labor cost per meal?

    . Ratio of meals per labor hour?

    . Comparison of actual results to standards?

    (Timely and useful financial information is essential to development of budgets and standards against which operations can be compared. Only one district visited uses cost analysis and standards as management tools.)

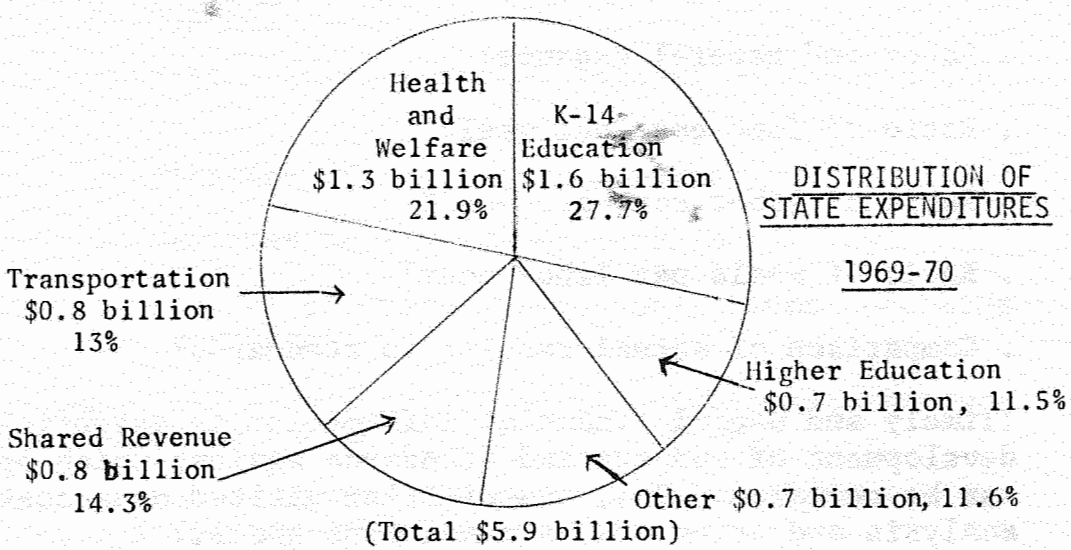
SECTION 9

FACTS AND FIGURES

HOW MUCH DOES IT COST?

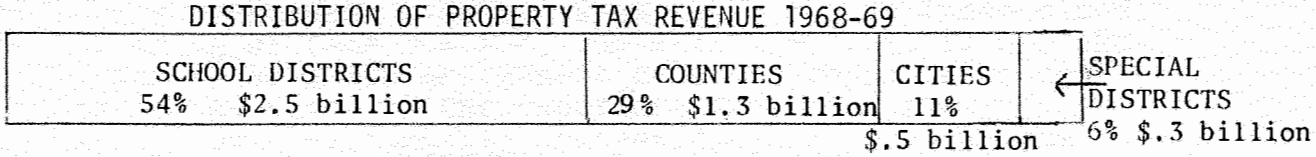
Major state and local programs have been plagued by financial problems in the last few years. Most informed sources indicate that under existing tax structures, state and local funds are inadequate to meet the increasing demands for public service by traditional means. This is true not only in California but in almost all states.

Education, particularly grades K-14, uses a large share of both state and local revenue. State expenditures in California for the fiscal year 1969-70 were distributed as follows:



In the 1968-69 fiscal year more than one half of all local property tax revenue was used to finance K-14 education:

DISTRIBUTION OF PROPERTY TAX REVENUE 1968-69



TOTAL - $4.6 BILLION

Over 90% of all K-14 revenue is derived from local property and state taxes:

TOTAL - $4.0 BILLION

LOCAL PROPERTY TAXES $2.2 BILLION 55%	STATE TAXES $1.4 BILLION, 36%	$0.4 Bill 9% ← FEDERAL AND OTHERS

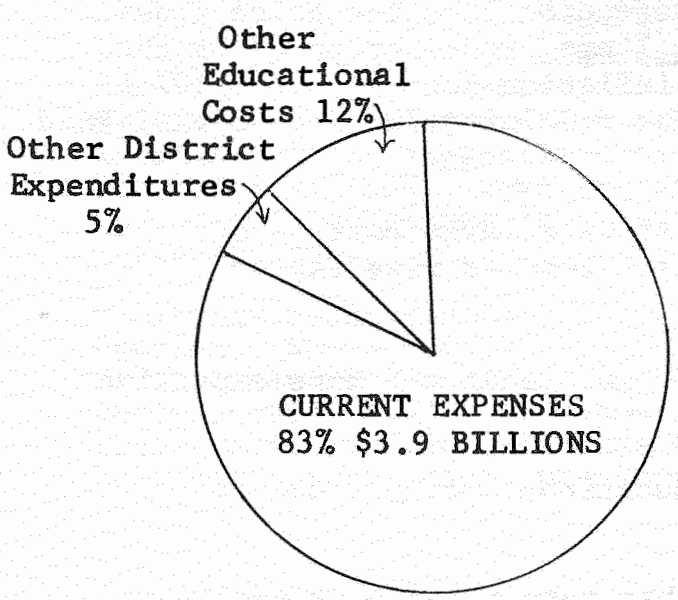
K-14 EDUCATION - REVENUE SOURCES 1967-68

Two points are apparent from the above: first, any attempt to hold the line or reduce taxes must consider K-14 education; second, shifting expenditures from local levels to the State would have equalization advantages, but would not in itself reduce taxes or raise more revenue. Almost all state and local programs, including education, are in financial jeopardy making re-allocation of available funds very difficult.

IT'S BECOMING MORE EXPENSIVE

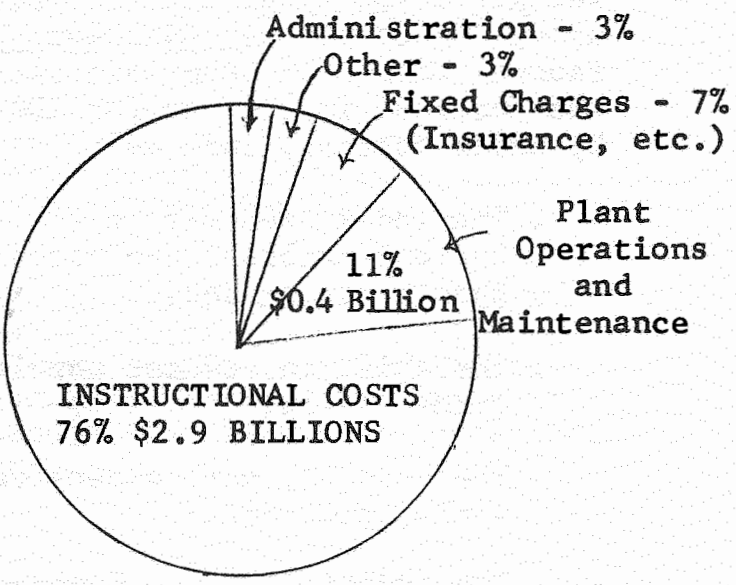
A dramatic growth in the overall costs of K-14 education has been seen in the past ten years. One of the most significant cost items is district "current expenses," representing about 83% of the total:

TOTAL - $4.7 BILLION



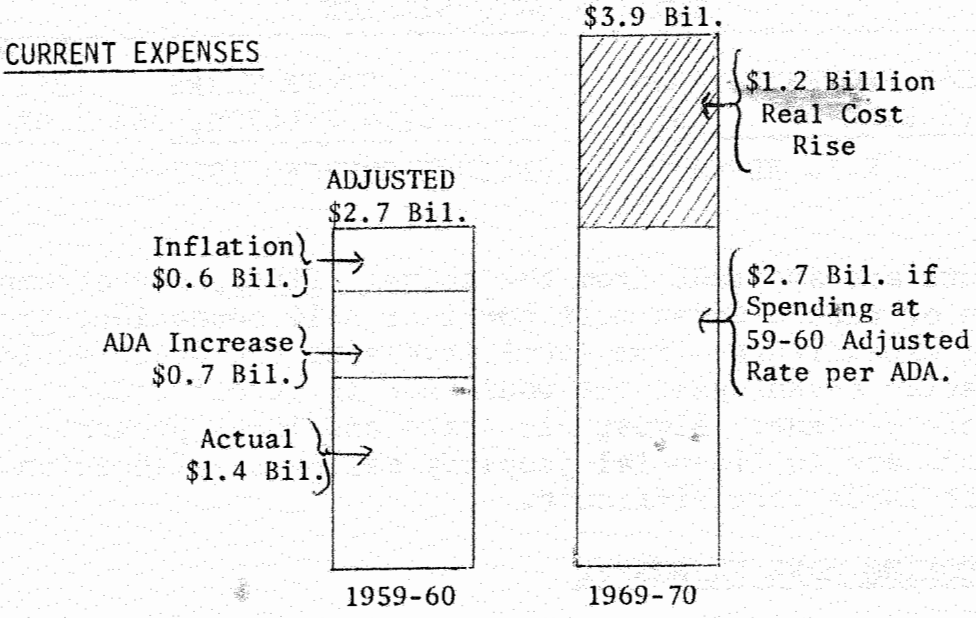
DISTRIBUTION OF TOTAL K-14 COSTS
1969-70

TOTAL - $3.9 BILLION



DISTRIBUTION OF K-14 CURRENT EXPENSES
1969-70

District "current expenses" have climbed from $1.4 billion in 1959-60 to $3.9 billion in 1969-70, a 180% increase.



There were many contributing factors. The largest was the student population explosion from 3.4 million ADA in 1959-60 to 5.1 million in 1969-70, a 50% increase. However, during the same period, current expenses per ADA climbed from slightly under $410 to slightly over $764, an 87% increase.

The inflationary effect will vary depending upon the price index used. Based on the "Consumer - All Items" index prepared by the Federal Bureau of Labor Statistics inflation accounted for 30% of the increase in expense per ADA. The remaining 70% may be explained by other factors, such as:

- The index used may be too low since a large portion of current expenses are wages, which tend to rise faster than other prices.
- The shift in student population to higher and more expensive grade levels.
- The need for more expensive educational methods due to social problems.
- The addition of new programs that result in lower pupil-teacher ratios.
- Increased concentration of teachers at the higher salary steps.

The important point is that even after adjusting for inflation, current expenses per ADA increased significantly. Districts have more purchasing power behind every student than they had a decade ago. This lends credence to the hypothesis that there is a high potential for improved costs control.

WHAT IS THE MONEY SPENT FOR?

The following is the average cost per ADA for each class of expenditure and the percentage of total current expense:

CURRENT EXPENSE PER ADA- FISCAL YEAR 1969-70

Class of Expenditure	Type of District					
	Elementary		High School		Unified	
	Amount	Rate	Amount	Rate	Amount	Rate
Instruction	$509.81	75.9%	$672.51	74.9%	$580.36	75.7%
Plant Operation and Maintenance	72.85	10.8	105.04	11.7	88.18	11.5
Fixed Charges	39.38	5.9	63.13	7.0	52.84	6.9
Administration	24.86	3.7	28.42	3.2	24.16	3.2
Other (1)	24.96	3.7	28.51	3.2	20.93	2.7
Totals	$671.86	100.0%	$897.61	100.0%	$766.47	100.0%

(1) Includes pupil transportation and health services.

How does your district compare? If there are significant differences in the expenditure percentage, what is the cause? Although averages are not ideal, this type of comparison may indicate areas to district management that need further review.

SOME COSTS ARE RISING FASTER THAN OTHERS

Some categories of current expense are rising at a faster rate than others. For instance, "Instruction" expenses have a high growth rate since they are subject to most of the contributing factors mentioned above. The fastest growth rate is in "fixed charges." These are comprised predominantly of two types of

expenses: employee fringe benefits such as group insurance, and physical loss insurance such as fire and vandalism. Both are problem areas. On the other hand the growth in "Plant Maintenance" costs has been quite slow, possibly because districts are not spending enough money in the upkeep of their physical plant.

The following table shows costs and cost increases per ADA by class of expense for the last 10 years. Districts can use this data to make comparisons and analyze their own performance.

CURRENT EXPENSE INCREASES PER ADA - ADJUSTED FOR INFLATION
BY CLASS OF EXPENSE AND TYPE OF DISTRICT
FROM FISCAL YEAR 1959-60 THROUGH 1969-70

CLASS OF EXPENSE	Costs per ADA		Percent Increase per ADA	
	59-60	69-70	Before Adj. for Inflation	After Adj. for Inflation (2)
Elementary Districts				
Instruction	$249.34	$509.81	104.5%	37.9%
Plant Operations and Maintenance	44.43	72.85	64.0	30.4
Fixed Charges	15.80	39.38	149.2	98.2
Administration	14.33	24.86	73.5	37.9
Other (1)	17.41	24.96	43.4	14.0
Totals	$341.31	$671.86	96.8%	56.5%
High School Districts				
Instruction	$367.98	$672.51	82.8%	45.3%
Plant Operations and Maintenance	78.26	105.04	34.2	6.7
Fixed Charges	28.01	63.13	125.4	79.2
Administration	19.14	28.42	48.5	18.0
Other (1)	26.01	28.51	9.6	(12.9)
Totals	$519.40	$897.61	72.8%	37.4%
Unified Districts				
Instruction	$311.68	$580.36	86.2%	48.0%
Plant Operations and Maintenance	58.49	88.18	50.8	19.8
Fixed Charges	21.88	52.84	141.5	92.0
Administration	14.15	24.16	70.7	35.8
Other (1)	16.62	20.93	25.9	0.1
Totals	$422.82	$766.47	81.3%	44.1%

(1) In 1959-60 "Other" included Pupil Transportation and Auxiliary Services. In 1969-70 "Other" included Pupil Transportation and Health Services.

(2) Adjusted for inflation using "Consumer - All Item" index of Federal Bureau of Labor Statistics.

Probably the major potentials for cost control are in those expense classes that have the largest total expenditure per ADA, that have increased at the higher rates, or that have climbed faster than the statewide average.

HOW IS YOUR DISTRICT DOING?

Statewide data shows that costs per ADA vary inversely with the size of the district and directly with its wealth. Economies of scale partially explain the variations in unit cost for different size districts. Differences by wealth may be explained in at least two ways: wealthier districts may be meeting their needs more thoroughly, or they may be exercising less control over expenditures. The study tended to show that both factors were involved.

Whatever the reason, it is important that a district know how its expenses per ADA compare with those of similar districts. If a district's expenses are out of line, it is essential to determine why.

The 1968-69 mean, median, and quartile costs for districts of various types and sizes are shown on the following table to enable the district to make comparisons with other districts their size.

CURRENT EXPENSE PER ADA BY DISTRICT TYPE & SIZE

FOR FISCAL YEAR 1968-69

ADA Range	Mean	Lower Quartile	Median	Upper Quartile
Elementary Districts				
1 - 25	$1,070.17	$721.81	$1,028.38	$1,498.33
26 - 50	897.25	591.68	749.52	1,033.30
51 - 100	732.51	560.18	654.01	834.45
101 - 200	709.44	530.85	614.26	835.05
201 - 300	621.85	505.93	551.53	655.12
301 - 500	589.46	500.95	532.75	615.87
501 - 900	573.21	495.30	542.21	602.49
901 - 2000	607.67	531.70	569.76	638.65
2001 - 5000	629.69	545.64	586.37	688.81
5001 and up	603.38	553.41	596.41	630.31
High School Districts				
1 - 300	1,180.47	899.95	1,194.59	1,550.61
301 - 500	1,007.79	862.57	985.08	1,183.13
501 -1000	920.65	793.36	884.21	964.85
1001 -2000	903.59	808.79	867.16	982.30
2001 -5000	838.27	782.09	832.01	879.64
5001 and up	829.60	746.62	830.95	894.26
Unified Districts				
1 - 400	1,052.60	885.69	972.09	1,123.07
401 -1500	795.39	659.74	760.72	866.79
1501 -3000	742.01	644.47	718.41	766.52
3001 -5000	712.44	654.22	659.69	770.74
5001 -10000	682.65	615.05	676.12	716.11
10001 -20000	712.64	642.17	682.28	723.69
20001 and up	703.80	640.86	682.50	725.60