



A planning, programming, budgeting, evaluation system model of the Bozeman public schools
by John Barrett Deeney

A thesis submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree of
DOCTOR OF EDUCATION

Montana State University

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Abstract:

This study was undertaken for the purpose of developing a model for the implementation of a Planning, Programming, Budgeting, Evaluation System (PPBES) in the Bozeman Public Schools. It is proposed that a PPBES can enhance the decisionmaking process in the allocation of scarce resources.

In preparation for the writing of this paper, the author reviewed current literature on PPBES and he also attended two national level seminars concerning PPBES and one state level seminar. In the review of the literature, the historical development of PPBES was traced through the past several years to the present utilization in educational systems. A more detailed review was given to the four components of PPBES in relation to their use in educational systems today.

The development of a model for implementing PPBES in the Bozeman Public Schools is presented in two phases: I and II. Phase I depicts the preliminary procedures such as assessing the environment relative to the readiness of the community for PPBES. This phase ends with the securing of a commitment from the decisionmakers. Phase II sets forth the necessary steps for the development of a strategy. The first concern in Phase II is with the selection of staff and the training of such. In addition, this phase deals with the appraisal of the present Bozeman Public Schools, confirmation of the appraisal, communication of the PPBES to all concerned, and ratification of a specific strategy for implementation.

In order to give the reader further understanding of how the model for implementation may work, Phase III depicts the implementation of a hypothetical strategy in the Bozeman Public Schools. In this situation, a hypothetical need is stated and then followed by the various steps involved in the pilot approach to PPBES implementation.

On conclusion, it is highly possible that a PPBES can be implemented in the Bozeman Public Schools with many benefits to be derived.

It will be a process which will require specific resources and considerable planning time. In order for the Bozeman Public Schools to successfully implement PPBES, it is recommended that a cooperative effort be made between the State Department of Public Instruction, the Montana School Boards Association, the Montana University System, and the Bozeman Public Schools.

A PLANNING, PROGRAMMING, BUDGETING, EVALUATION SYSTEM MODEL
FOR THE BOZEMAN PUBLIC SCHOOLS

by

JOHN BARRETT DEENEY

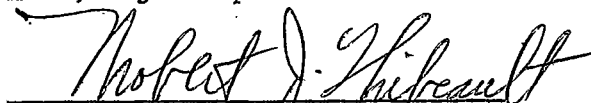
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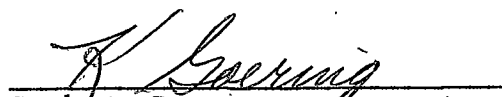
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To his wife La Vonne, and his two sons, Craig and Clark, the writer desires to dedicate this endeavor as a part-payment to them for their combined patience with a husband and father returning to graduate school.

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ABSTRACT

This study was undertaken for the purpose of developing a model for the implementation of a Planning, Programming, Budgeting, Evaluation System (PPBES) in the Bozeman Public Schools. It is proposed that a PPBES can enhance the decisionmaking process in the allocation of scarce resources.

In preparation for the writing of this paper, the author reviewed current literature on PPBES and he also attended two national level seminars concerning PPBES and one state level seminar. In the review of the literature, the historical development of PPBES was traced through the past several years to the present utilization in educational systems. A more detailed review was given to the four components of PPBES in relation to their use in educational systems today.

The development of a model for implementing PPBES in the Bozeman Public Schools is presented in two phases: I and II. Phase I depicts the preliminary procedures such as assessing the environment relative to the readiness of the community for PPBES. This phase ends with the securing of a commitment from the decisionmakers. Phase II sets forth the necessary steps for the development of a strategy. The first concern in Phase II is with the selection of staff and the training of such. In addition, this phase deals with the appraisal of the present Bozeman Public Schools, confirmation of the appraisal, communication of the PPBES to all concerned, and ratification of a specific strategy for implementation.

In order to give the reader further understanding of how the model for implementation may work, Phase III depicts the implementation of a hypothetical strategy in the Bozeman Public Schools. In this situation, a hypothetical need is stated and then followed by the various steps involved in the pilot approach to PPBES implementation.

On conclusion, it is highly possible that a PPBES can be implemented in the Bozeman Public Schools with many benefits to be derived. It will be a process which will require specific resources and considerable planning time. In order for the Bozeman Public Schools to successfully implement PPBES, it is recommended that a cooperative effort be made between the State Department of Public Instruction, the Montana School Boards Association, the Montana University System, and the Bozeman Public Schools.

CHAPTER I

INTRODUCTION

The Federal Constitution places the responsibility for educating our young people in the hands of the state, and the state shares the burden with the local citizenry. As the local school board is the prime controller of the local school district, this administrative unit with the superintendent of schools as the ex-officio officer, faces the responsibility of getting the best use out of the total resources that are available.

If the administrative unit is to be responsible, it must be accountable in terms of the quality of the educational output, our youth. As the funds for our educational system are obtained through a difficult process consisting primarily of property taxes, it is not feasible that educators just "administer" these monies. Educators must reach the individual student and give him a meaningful educational experience in line with his capabilities and interests. In this procedure, it is essential that a meaningful technique of measuring specific objectives for specific programs be developed if education is going to continue to deserve the support of the taxpaying public.

The overall picture of education relative to input and output is quite universal in the United States. Governor Daniel Evans of Washington concluded: (14:11)

The demands upon the educational system are infinite, and will continue to be, yet at the same time resources are limited and will continue to be and the difficult decision faced is the allocation of these scarce resources in a way which serves the more urgent and compelling needs of the students.

In a time when the citizenry is demanding more and more public services, yet somewhat reluctant to share in their total costs, educational leaders must find the best means to allocate its limited resources.

As rapid change and growth pushes educators toward larger and larger educational operations and responsibilities, the basic principles of management become more essential. Hartley (20:iii) described this growth as:

the monolithic educational complex grows to become the single largest 'industry' in this country, one can envisage the types of public demands that will be placed upon schools generally and upon leaders in particular.

The school systems of today are clearly faced with the problem of accountability; specific objectives and corresponding measuring techniques must be aligned with specific programs designed to meet the needs of the individual student. If this can be done, then administrators can more accurately correlate input and output with finances and thus be able to have more valuable information on which to make decisions and communicate school goals, objectives and achievements to the public.

STATEMENT OF THE PROBLEM

The cost of financing public education in Montana and the United States is becoming a heavy burden for taxpayers of today.

Buskin (6:64) described the situation in this manner:

The name of the money game in education today is communication and understanding. Taxpayers are no longer sitting still for the yearly 10 percent increase in educational expenditures. They are no longer willing to swallow the old cliché that more and more money is needed for quality education.

As mentioned by Winter (40:3), a record-setting number of general operational mill levies have been defeated by the taxpayers for a second time and third time this year in Montana. This seemingly indicates that there may be a need for a serious review of the input in education as it relates to the output. It also is apparent that a better selling job needs to be accomplished with the taxpaying public. To epitomize the situation, Schmidt (34:5) feels that educators need to increase their skill in accountability.

In a survey by the United States Office of Education in 1968-69, a changing picture in the support of education was revealed. Voters throughout the nation turned down 56.4 percent of all proposed school bond issues, in terms of dollar amount, and 43.2 percent, in terms of number of elections held. Just five years earlier, voters rejected only 20.9 percent in terms of dollar amounts, and 25.3 percent in terms of number of elections. The trend seems to be

continuing. (8:1)

The school districts of the State of Montana are required to use a line-type budget to formulate their requests for financing their school systems. This particular type of budget lists amounts of money needed for such items as administration, instruction or utilities. To the average layman, this does not tell him very much about the amount of money being spent in a specific program or part of the curriculum, let alone tell him what the specific objective of the expenditure is and how well it is being achieved. Also, the planning is quite short, usually for only one year; financing structure is a cause of this to some degree.

As mentioned previously by Schmidt (34:5), the school systems in the State of Montana are in need of an improved system of accountability. It is also felt by the Bozeman School Board Chairman that there is room for improvement in this area of accountability.

(Appendix A)

Generally, there appears to be a need to improve the procedure of educational planning, devising and stating objectives, and of measuring techniques for stated units or programs in the school curriculum. There is a basic need for improvement in the communication lines with the taxpaying public relative to how the dollar is spent and what is achieved. Long-range planning is also needed in all areas of expenditures in the school districts.

It is the intent of this study to examine procedures used for Planning, Programming, Budgeting and Evaluation systems in other states, then develop a model for the implementation of a Planning, Programming, Budgeting, Evaluation System (PPBES) in the Bozeman Public Schools. It is thought that a model which is viable for the schools in Bozeman, Montana will also have useful implications for other school districts in the State of Montana and elsewhere.

PROCEDURES

The development of the model in this study will require the following procedures:

1. Review of current literature relevant to the subject of PPBES.
2. Participate in three seminars pertaining to PPBES.
 - A. National Academy of School Executives Advanced PPBES Resource Allocation Decision System and Systems Analysis In Education, August 1970, Reno, Nevada.
 - B. Research Corporation of the Association Of School Business Officials Pre-Conference Seminar on Educational Resource Management Systems, October 1970, Seattle, Washington.
 - C. American Facilitators Incorporated, PPBES Seminar, December 1970, Helena, Montana.
3. Make a comprehensive review of the resources available to the Bozeman Public Schools.

4. Design a PPBES model for implementation in the Bozeman Public Schools which will include the following:
 - A. Plan for organizing and developing a strategy for the implementation process
 - B. Illustration of how a hypothetical strategy would work in the Bozeman Public Schools

NEED FOR THE STUDY

In our society today, accountability is being asked for at all levels of government and also in educational institutions. As the support resources are continuing to become more and more difficult to obtain, the accountability factor will undoubtedly become more critical.

School administrators are continually being faced with decisions relative to accepting new programs, dropping other programs, and increasing or decreasing allocations to various segments of the school system. It seems apparent that there is an increasing demand by society on the school system for a more adequate means of setting specific objectives and then following up with comparative measuring techniques in order that the input in education can be more easily compared to the output.

The void of accountability in school systems across the United States is being filled. RC/ASBO (Research Corporation of the American Association of Business Officials) (29:3) stated:

Program Budgeting in one form or another is receiving attention in forty of our state legislatures at this time. Ready or not, you will be involved; your boards of education and your public will expect knowledgeable answers from you.

The State of California's Legislature demanded PPBS in their educational systems by the year 1971, but with further knowledge as to the complexity of PPBES, the educational systems in California have been given an extension of the deadline to the year 1973.

Similar action toward the concept of accountability in the State of Montana has been quite slow. Four of the agencies which have been viewing PPBES concepts are the Montana Association of School Business Officials, the Montana School Boards Association, The State Department of Public Instruction, and the American Facilitators Incorporated. The ASBO of Montana recently held an organizational meeting at which time the subject of PPBES was discussed. This group also selected a member to attend the national two-day PPBES seminar in Seattle, Washington in October of 1970. The Montana School Boards Association is currently working toward the implementation of PPBES in the school systems in Montana. At their 1969 association conference, the MSBA passed a resolution asking that the Legislature authorize and fund the implementation of a model PPBES system in one or more Montana school districts. In 1971, the MSBA moved to the point of submitting a bill to the Legislature with similar requests. (34:5) The State Department of Public Instruction has been investigating the PPBES

concepts through representation at various national conferences. The American Facilitators Inc. sponsored a PPBES seminar/workshop in Helena, Montana, in December of 1970. Approximately 50 trustees, administrators and business officials were in attendance at this seminar/workshop.

LIMITATIONS OF THE STUDY

The implementation of PPBES is often said to be a technique or plan which is peculiar to each individual school system rather than a type of "cook-book" approach. This model will be designed with the Bozeman Public Schools as the prime target for the proposed implementation, but this should not be construed to mean that much of what is prepared for this design would not be of practical use to other Montana school districts.

This study developed the model design from the point of PPBES conception in the school district of Bozeman through the implementation of a hypothetical strategy. The hypothetical strategy is stated in terms of the characteristics of the Bozeman Public Schools. A timeline will be constructed to depict the events and activities set forth in the model design as well as the hypothetical strategy implementation.

DEFINITIONS

The title, "A Planning, Programming, Budgeting, Evaluation System Model For The Bozeman Public Schools" is considered to encompass the concepts contained within the following:

1. PPB (Planning, Programming and Budgeting)
2. PPBADERS (Planning, Programming, Budgeting, Analyzing, Deciding, Evaluating, Recycling System)
3. RADS (Resource Allocation Decision System)
4. ERMD (Educational Resource Management Design)
5. ERMS (Educational Resource Management System)

As terminology has been found to be one of the major concerns in dealing with PPBES, it is necessary that some basic terms be defined at this point. The following terms and definitions are stated as they apply to this study:

AASA
American Association of School Administrators

ASBO
Association of School Business Officials

DOD
Department of Defense

MSBA
Montana School Boards Association

NASE
National Academy for School Executives

RC/ASBO

Research Corporation of Association of School Business
Officials

SDPI

State Department of Public Instruction

USOE

United States Office of Education

ALTERNATIVES

Different ways or methods or approaches to achieving the
same objective

BUDGETING

The arranging of programs in relation to the resources
and objectives of the system. The anticipated costs of
various programs are set forth for the operating year and
usually for the estimated ensuing years (5 or more)

COMPONENT

Four components of the system: planning, programming,
budgeting and evaluation

COST EFFECTIVENESS ANALYSIS

A method of comparing the cost of an alternative and the
anticipated or proven effectiveness of the alternative

CRITERION

A particular test for standard of measurement for assessing
the performance and effectiveness.

CROSSWALK

A method of translating the traditional line-item type
budget to a type of program budget. Usually the tradi-
tional budget is depicted on the left and the various
programs spread out to the right with the breakdown of
allocations for expected expenditures.

CODE SYSTEM (Accounting)

The assignment of digits to specific functions, levels, or
sub programs according to the program structure. It
includes the object, location and district also.

CONSTRAINT

A limitation or restricting factor imposed upon the organization in the process of selecting alternatives for meeting the needs of the organization. A constraint may be internal or external. It may take the form of a financial, facilities, staff, political, legal, time element, or social constraint.

DECISIONMAKERS

Those individuals or groups of individuals who are responsible at certain levels in an organization for the final approval or disapproval of alternatives for solving the problems of the organization.

GOAL STATEMENT

A broad statement derived from a need. It usually is not concerned with specific achievement in the sense of a criterion or element of time. It states a general intent or direction.

INFORMATION SYSTEM

A manual or computer system of collecting vital information, and disseminating such information for specific programs or special requests in a manner which is meaningful to the individual making the demand for information. A single system would include the information necessary for all phases of the school system operation and management.

INPUT

All the ingredients in the form of resources which are needed to produce the output.

MODEL

An abstract representation of reality through which problems can be simulated for analysis of input and output.

OUTPUT

The end product produced by a particular process or alternative. Payoff is a synonymous term.

OBJECTIVE

A specific statement of intent, which is measurable by a specific criterion under specific conditions.

OPTIMIZATION

To obtain or select the best possible course of action or alternative available.

PLANNING

That component concerned with the development of goals, the statement of objectives, and the generation of alternatives for meeting needs.

PROGRAMMING

A component which includes the review of goals and objectives as they relate to stated needs. From this point, alternatives are analyzed, programs are developed and worked into a program structure.

PROGRAM STRUCTURE

A classification design to organize all the functions, programs, and sub programs in order to aid in the analysis and comparison of programs.

SYSTEM ANALYSIS

A study directed at the entire perspective of a problem. It involves an analysis of the goals and objectives as related to the alternatives. Alternatives are then compared on a quantitative and non-quantitative basis relative to the effectiveness of a given alternative.

TRADE-OFF

The trading off of one benefit in the analysis of an alternative for another benefit because both, for some reason are not obtainable at the same time.

In order to gain the proper perspective for developing a model for implementing PPBES, a review of literature was deemed to be necessary. The majority of the literature on this subject is contained within various periodicals and reports. The following chapter relates the summary of the literature reviewed.

CHAPTER II

LITERATURE CITED

HISTORY

At first glance, PPBS may appear to be a relatively recent process, but further research indicates that the historical background of PPBS concepts have some common threads as far back as the year 1915. A team from the University of Iowa (6:1A) stated:

In industry, PPBS has been traced back to 1915 when the DuPont Corporation invested in General Motors. At this time DuPont introduced into General Motors its concepts of establishing objectives, forecasting, planning for the future, and developing standards and output measures. All of the above characteristics are components of PPBS.

This same University of Iowa team (6:1A) traced the federal government concepts of PPBS back to 1942 when it was introduced as part of the War Production Board's wartime control system. The Control Materials Plan identified major goals, established program objectives, divided program objectives into program elements, projected over a period of time, and examined and analyzed various plans.

Murphy (Appendix E) states that the concept of budgets has had a wide and varied meaning on the federal level since 1789. For a period of about 132 years after 1789, budgets on the federal level were primarily concerned with expenditures and usually had a surplus of money left at the end of the fiscal year. By the close of World War I, our country's involvement in international affairs began to take care of

any possibility of a surplus in the federal budget.

As the budget surplus became an unknown on the federal level, a reform began to take place. The University of Iowa Team (6:1A) describes this reform in this manner:

Budget reform in the United States has evolved through two stages and is now entering the third stage. The first stage of budget reform re-emphasized central control over spending and objects of expenditure. The second stage emphasized efficiency in performance of work and prescribed activities. The performance budget, recommended by the Hoover Commission, was oriented toward management and cost effectiveness. The third stage of budget reform, introduced by the Department of Defense, emphasized long-range planning. Such planning has its basis in economics and systems analysis and measures future costs heretofore overlooked or underestimated. This third stage of budget reform is PPBS.

In a speech given by Levine (25:1), an attempt was made to trace some of the historical developments which have led to the emergence of PPBS in education.

The probable beginning of the modern attempt to integrate movements in budgetary practice, management science and computer technology was in 1950. The Rand Corporation was particularly influential at this time in translating the performance budget recommendation of the Hoover Commission into a new preliminary framework for 'program' or output budgeting. A growing literature on program budgeting emerged, but this literature was largely concerned with non-educational topics. Although the literature made it clear that applications of PPB in non-educational areas could not be applied easily to the educational domain, it did make important contributions to the theory of program budgeting.

Within the last year, though, many articles have been written on the value of PPB for education. For the most part, these articles have been expository pieces on the bare bones of the technique and do not take up more technical questions relating to the

methodology of applying PPB to education. The literature on PPB and education is still in its very early and formative stage.

Some of the earliest budgetary analysts grasped the possibilities of the budget as a planning instrument, and a succession of thinkers has grappled with the problems set by this role since the early days of the New York Bureau of Municipal Research.

Levine (25:2) also mentioned that the larger businesses with pragmatic budgetary practices advanced more quickly than the Federal Government, thus critics of the government looked to business for a model or way to improve the administration on a governmental level. By about 1950, the governmental level leaders were willing to lend an ear to the words and advice of the systems analysts, operations and resource analysts, program budgeters, and other experts.

In moving forward in the historical development, Levine (25:4) stated that:

It was under the aegis of the New York Bureau of Municipal Research that the most systematic concepts of public budgeting were aired if not realized. A measure of the gap between the methods of private business and the slower processes of public bodies is shown by the Bureau's propaganda to business men: 'Would the city's system of cost records satisfy you in your business? Or do you have to keep track more clearly of what each unit and each specification costs?' These methods, long practiced pragmatically in business, were almost unknown in the sluggish process of public administration.

The principal aim of the Bureau was to establish proper accounting systems to regulate the resources allocated, and especially to separate the accounting from the auditing process.

According to Levine (25:4), the Bureau developed a special budget, the "functional Budget," whose distinctive feature was the measuring of each unit and activity of a public body in terms of its benefits and costs, with a separate accounting system to gather data useful for general policy decisions. Due to the lack of an opportunity, the idea did not get far. Thus, the budgetary reform before 1930 concentrated on means to control expenditures and left out the concepts dealing with processes and planning objectives in relation to resources.

Levine (25:4) discussed the second period, roughly from 1921 to 1955, as being characterized by both the development of budgetary ideas of economists and by the budget experiments of business and government. During this period, there was still lacking the consideration of analytical techniques to formulate rational budgets. Only during the fifties did the analytical methods come into being as the techniques of mathematics, logic, and statistics began to impinge on budgeting.

Toward the end of this second period, the concept of "systems" came on the scene as a new race of managers trained in new business schools or educated in business methods by schools of management began to make their presence known. New techniques of systems analysis arose with the American Armed Forces war time operations research.

In his review of PPB, Levine (25:6) cited various other techniques for relating resources to objectives:

The real revolution in budgeting came only with the application of techniques of operations research, techniques which depended on far more sophisticated logical and mathematical analysis. The catalyst of operations research was the Second World War, its vehicle, the armed forces of Britain and the USA. Operations research grew out of traditional military skills. Its first application was near the border line of engineering - to the problems of integrating radar detection of planes with observation and to those of co-ordinating anti-aircraft guns with coastal command and anti-submarine deployment.

Operations research, for instance, was not conceived in terms of money, but of resources. Thus, not only income, but other measurable resources such as time could be incorporated into the budget.

After the war, operations research began to enlarge its scope to include the study not only of particular problems but of whole organizations with multiple functions, and in this form it has been known as systems analysis. Finally by 1950 most great American companies had operations research teams working for them. It was, therefore, in business and not in government that systems analysis first came into contact with budgetary techniques.

Rand Corporation is given much credit by Levine (25:7) for the application of systems analysis to budgeting. The bringing together of economists such as Charles Hitch, head of the Rand Economic Division, and David Novick, head of the Rand Cost Analysis Division, was part of the general development from tactics to strategy, from quantitative (or mathematical) to qualitative (or logical) analysis. The Rand team attempted to get the Air Force to adopt their procedures, but they experienced considerable difficulty. A change of attitude took place when Robert McNamara took over the position of Secretary of Defense in

1961 and at the same time employed two Rand analysts. PPB was thus implemented throughout the DOD and Armed Services. The reaction to this implementation was so impressive to the government that President Johnson ordered the adoption of PPB on August 25, 1965.

Knezevich (22:28-9) viewed the development of PPB in this way:

A new chapter in the use of systems techniques in government began when Robert McNamara became Secretary of Defense (DOD). In 1961, in collaboration with his assistants A. C. Enthoven and Charles Hitch, the new decision technology was applied to a number of defense problems. It was believed that the systems approach ('systems analysis' as preferred term in DOD) could overcome many existing planning inadequacies within the Defense Department. It was in DOD that the term 'planning-programming-budgeting-system' (PPBS) had its origin. This was the more or less official designation for a process of rational decision making.

Exton (15:39) stated that in the drive to apply the concepts and procedures of the DOD's Planning-Programming-Budgeting System to all of the federal agencies, President Johnson made this statement to his Cabinet and federal agency heads:

1. Identify our national goals with precision and on a continuing basis.
2. Choose among those goals the ones that are most urgent.
3. Search for alternative means of reaching those goals most effectively at the least cost.
4. Inform ourselves not merely on next year's costs--but on the second, third, and subsequent year's costs of our programs.
5. Measure the performance of our programs to insure a dollar's worth of service for each dollar spent.

It was stated by Knezevich (22:31) that it was during this period that the concepts of PPBS were first implemented in regional offices and local projects. Large aerospace corporations serving as consultants on governmental problems served as a stimulus to state and local agencies. From this point on, objectives, multi-year planning, and evaluation began to be emphasized in projects connected with government funds. School administrators working with ESEA (Elementary Secondary Education Act) Title I programs became aware of this trend toward planning and accountability.

Exton (15:43) quoted Alexander Mood, the office assistant commissioner for the National Center For Educational Statistics, as saying: "Congress put the Office of Education on notice that it expects federal educational programs to be evaluated in terms of achievement data." There is a broad fundamental requirement that the Office engage in a substantial program of analysis. Mood acknowledged that this demand was an important aspect of the scientific management movement which has been thriving for a long time in the business world, but which did not have large impact on Washington until Secretary McNamara brought its methods in full force to the DOD.

During this period of implementation in the DOD, Knezevich (22:85) pointed out that PPBS did not gain acceptance from all of the personnel. It took time to design and even more time to gain some

degree of operational effectiveness. In the spring of 1968, former Secretary of Defense McNamara concluded his budget request to Congress with this comment:

One of the first things we had to do in 1961 was to design a new mechanism which provides this information (on choices of major military forces and weapon systems needed to carry out tasks and missions related to national security objectives) in the form desired, and to integrate it into a single coherent management system. The product of this effort was the Planning-Programming-Budgeting System (PPBS), which is now being applied widely throughout the U.S. Government and which is being introduced in foreign governments as well.

Since the 1965 directive by President Johnson, a wide range of PPBS projects have been initiated in this country. Hartley (20:101-114), in his text cites the following examples of involvement with concepts of PPBS:

Non-educational projects

1. The 5-5-5 Project attempted to demonstrate the feasibility of PPB systems for state and municipal governments. It was financed by the Ford Foundation through the George Washington University. Those involved were: 5 States (California, Michigan, New York, Vermont, and Wisconsin), 5 Counties (Dade, Florida; Davidson, Tennessee; Los Angeles, California; Nassau, New York; and Wayne, Michigan), and 5 Cities (Dayton, Denver, Detroit, New Haven, and San Diego). The concepts of PPBS were dealt with as they related to each group. The design developed was presented to a U.S. Senate subcommittee that was studying inter-governmental relations between and among the federal, state and local levels.
2. Since 1964, the state of New York has been developing a PPBS format that systematically relates the expenditure of state funds to the accomplishment of carefully stated goals.

3. Using the basic principles of PPBS, the state of California embarked upon a mission to establish a Programming and Budgeting System, (PABS). In 1966 the state contended that the concepts underlying PABS were not new, although the total integrative package was new.
4. The Commonwealth of Pennsylvania, using a private consulting firm, ordered a four-month, first-phase assessment of their current management and decision making processes and capabilities. From this study, a plan including the basic concepts of PPBS were evolved which would provide a basis for the rational allocation of resources considering various alternative courses of action.
5. The Rand Corporation was hired by the City of New York to assist them with PPBS studies involving police, housing and health agencies in 1968.

Educational projects

Many school districts throughout the country claim to be operating under at least a modified program budget structure. Close observation of their procedures often reveal that they have simply continued their traditional planning and budgeting approaches but under a different name or title. The number of schools are too numerous to mention, but the following schools were cited by Hartley: (20:115-123)

1. Baltimore City Public Schools developed 12 general programs with 97 activities as components of the basic program. All costs associated with a given program or activity were categorized into the same program. It was found that the task of developing a program budget was a difficult task. Caution should be taken against developing too much detail in the program budget design.

2. Chicago Public Schools have made progress in reclassifying accounts with broad functional areas so that emphasis is placed on the programs rather than on the traditional objects of expenditures. Effort is under way to find ways to compare costs to expected outcomes in terms other than simply quantitative methods.
3. Los Angeles City School District developed a plan that would permit it to move into program budgeting and accounting on a 'phasing-in' basis. In 1968, this district was only in the preliminary stages of program budgeting and was awaiting more definitive guidelines from the state level. The structure is based upon grade level and support services.
4. The Memphis School District has a hybrid planning system that combined elements of functional budgeting and performance budgeting. The financial coding structure was designed around functions. Teachers are involved in determining the priorities. Cost-effectiveness methods are used. An information system is being developed as well as a specific student data bank which will relieve the teaching staff from much clerical work.
5. The New York City Public Schools early in 1967, announced first-phase plans for the development of a comprehensive PPBS, promising that . . . 'this will be the first such installation in a large-city school district.' The School Board hoped that this new budgeting system would provide better accountability and improve decision making. Long-range planning was another goal being sought. The first step was a feasibility study with the goal to develop a plan for implementing PPBS.
6. In 1966, the Philadelphia Public Schools initiated a program budgetary system which presented the expenditures of the school district in these thirteen functional areas: early child education, elementary education, junior high, senior and technical, special education, community education, health, transportation and attendance, operational and maintenance, administration/planning and staff development, fringe benefits, debt, and contingencies for wages.

7. The Public Schools of Sacramento are operating within a program-budget framework. Their three program areas are: administrative services, instructional programs and services, and supporting services. Further division by grade level into 12 programs expands the program structure. The budget is computerized and prepared in three ways: presentation format, working format and the state budget code format.
8. In 1968, The Seattle Public Schools were beginning to develop program budgeting. It was hoped that program budgeting would encourage school personnel to consider all related costs when proposing a change or experimental project. The initial purpose was to show the public and staff what was being produced with the tax dollar provided to the school system.

In the field of education, The RC/ASBO (Research Corporation of The Association of School Business Officials) has been and currently is a leader in the area of PPBES. As related in the ASBO journal, a joint proposal by the RC/ASBO and Dade County, Florida Board of Public Instruction was made to the U.S. Office of Education for a three-year project in 1967. The individual initiators were Dr. E. L. Whigham, then Deputy Superintendent of the Dade County Board, and Dr. Charles W. Foster, the Research Director of ASBO. (36:8) The purpose of this project, which began in 1968, was to develop the design for an integrated system of programming-planning-budgeting-evaluation for local school systems in the United States. The goal was to provide an improved method for determining the quality and cost of the products of education as a means toward improved management of education financial resources. In a summary report by RC/ASBO (30:1), the three

major outcomes expected were listed as:

1. Develop and disseminate a conceptual model of programming-planning-budgeting-evaluation for use at the system-wide level of local school administration.
2. Demonstrate an operational system in the Dade County Schools.
3. Stimulate other local school systems across the nation to investigate and use the model developed.

As depicted by ASBO (36:7-8), this joint venture into PPBES was deemed to be of considerable size, thus additional school districts were needed to assist in testing materials and providing feedback. Across the country, eight school districts, in addition to the Dade County District, cooperated with the project by testing some of the conceptual designs and providing feedback on problems which were encountered in applying the system. These pilot school districts were selected for their variability in size and political structure:

1. Clark County, Nevada: This county school district serves all of southern Nevada and over 50 percent of the school-age population of the state. The district has done considerable work in PPBS during the past several years.
2. Douglas County, Colorado: This county ranges over 900 square miles in southern Colorado. It serves nearly 100 percent of the school-age population of the area; its size provides a healthy contrast to the other large districts in the project.
3. Herricks-New Hyde Park, Long Island, New York: This district is located in Nassau County and the system has approximately 6000 students.
4. Memphis, Tennessee: This is a very large school district with approximately 135,000 students.

5. Milwaukee, Wisconsin: This school system was somewhat different from the other districts in that the business manager answers directly to the Board of Education.
6. Montgomery County, Maryland: This district is located adjacent to the District of Columbia and serves approximately 106,000 students.
7. Peoria, Illinois: This school system has a student population of approximately 27,000 students.
8. Westport, Connecticut: This school district is considered a moderate sized system with its 5000 students.

Early in 1969, RC/ASBO (36:8) began to view PPBES as a design for ERM (Educational Resource Management). A little later, the term "design" was added....ERMD. RC/ASBO made the first public presentation of their work at a National Conference on Education in Denver in June of 1969.

Although the Research Corporation's Educational Resources Management Design is not scheduled for completion until June, 1971, preliminary decisions have been made to the extent that the basic format of the final document has been prepared. Nine chapters are being considered in the proposed publication. (35:112)

The National ASBO convention in Seattle, Washington, October 18-22, 1971, was summarized in the periodical, Education U.S.A. (13:2) as follows:

William H. Curtis, project director for the Research Corp. of the Assn. of School Business Officials, once estimated that three to five years were needed to implement a form of a Planning, Programming, Budgeting, Evaluation System (PPBES), or, as ASBO more accurately tags it, Educational Resources Management System (ERMS).

Now he forecasts five to 10 years. 'Many school officials tend to oversimplify the process,' Curtis said. 'A budget accounting system results when a district is forced into ERMS, not program planning, which is the essential part of the whole idea.'

The Research Corp. responsibility is to develop a conceptual design for an integrated system of planning, programming, budgeting, and evaluation. Dade County is working on the operational design. Curtis hopes to hand the final report to USOE next spring with an August publication goal. Meantime, the Corporation will hold a midwinter session with curriculum experts from state education departments and a leadership conference next spring with state superintendents and other instructional leaders.

In a question and answer session published in Nation's Schools (9:42-3), Dr. William Curtis, Research Corporation Director, was asked: "Outside of your project, have other attempts at setting up a PPBS design been fruitful?" He replied:

California has, as far as we can determine, the largest and most comprehensive single project in this field going on a state-wide basis. It has been funded by the state legislature and also carries federal funds. We're working cooperatively with the state of California, and have set up a commission for this purpose.

In the state of Washington, the Department of Education has been placed under a legislative mandate to develop a program budgeting system for education. And Oregon has been working on a related project known as OTIS: Oregon Total Information Systems.

Then there are 13 midwestern states, with Ohio on the east and Colorado on the west, which banded together two and one-half years ago to start what they call the Midwestern States Education Information Project, dealing with the technologies of PPB systems.

Others that could be mentioned include Texas, has a total program directed by the State Department. Florida's state department is becoming increasingly interested. I also know that Maryland has done some work in this area, and New York has several extensive studies underway.

Dr. Curtis went on to add:

Although we have not documented this point precisely, we have fairly good evidence that somewhere between 60 and 75 per cent of the states either have mandated or are considering the possibility of mandating the adoption of a PPBE system.

In 1969, Knezevich (22:68) noted that there was evidence of considerable interest in applying PPBS to school operations. A growing number of management consultant firms, special divisions of selected industries, and special projects funded by the U.S. Office of Education demonstrated an interest in studying the problems of adapting PPBS to education.

The AASA has just recently developed a new post-graduate institution entitled NASE (National Academy for School Executives). This development is dedicated to the continuing professional development of school administrators. It was designed by administrators to help them cope with the problems generated by the knowledge explosion, technological revolution, and the social and economic ferment in contemporary society. (24:1) During the past year and one-half, NASE has held several seminars on the subject of PPBS and related topics. Some of the seminars have been for target groups such as university professors, state department personnel, and school administrators.

Dr. Sam Bliss (1:170), a professor at Northern Arizona University and also a writer on the RC/ASBO team, indicated that almost everyone concerned with the field of administration, whether in federal,

state or local government, business and industry, and educational institutions has heard about PPBES in one way or another. PPBES has received the attention of many contemporary writers who have for the most part extolled the system's many virtues. Those who have attacked the PPBES concept have met with little or no success. Judging from the "ground swell," quite visible even to the unskilled observer, some form of PPBES will find its way into the local school districts across this nation. How soon seems to be the basic question. Although it is difficult to forecast exactly, it seems relatively safe to assume that the time is shorter than most people are prone to believe.

On the local scene in Montana, the concepts of PPBES are just recently beginning to trickle through to the attention of some educators. A few groups and organizations have picked up the topic for periodic discussion and study.

The Montana School Boards Association (34:5) passed a resolution within their organization in 1968 which called for funding from the Legislature for one or two pilot schools to work with PPBES. Similar action again has resulted in a bill in the 1971 Legislature.

As of November 24, 1970, The State Department of Public Instruction (Appendix D) of Montana indicated that their office has initiated a modified planning, programming, budgeting-management system for use within their department. It was also stated that the SDPI was in the process of training several staff members in the application of

planning, programming, budgeting management systems. Further developments concerning the management systems for local school districts will ultimately depend upon the funding provided by the 1971 Legislature.

The MASBO directed attention to the topic of PPBES at their charter meeting in Helena, Montana, October 8-9, 1970. All of the officers of MASBO have attended at least one seminar on PPBES. In general, this group appeared to be near the top of the list in the state insofar as interest and knowledge of PPBES was concerned.

In December of 1970, a private consultant firm, The American Facilitator's Inc., held a seminar/workshop for approximately 50 school trustees, administrators, and business officials. As a result of a pre and post questionnaire evaluation, the two-day session was deemed to have achieved the objective which was: to establish a positive concept of the overall view of PPBES and to stimulate the participants in further study of their own individual districts and PPBES. As a result of the participation in this seminar/workshop, some schools have already shown signs of continued interest and application of the concept of PPBES in their localities.

The next section of this paper is directed toward the examination of the components of PPBES as used in private businesses, the military and education.

COMPONENTS OF THE SYSTEM

Each of the components of the system shall be examined in a detailed manner. The components of concern are:

1. Planning
2. Programming and analysis
3. Budgeting
4. Evaluation

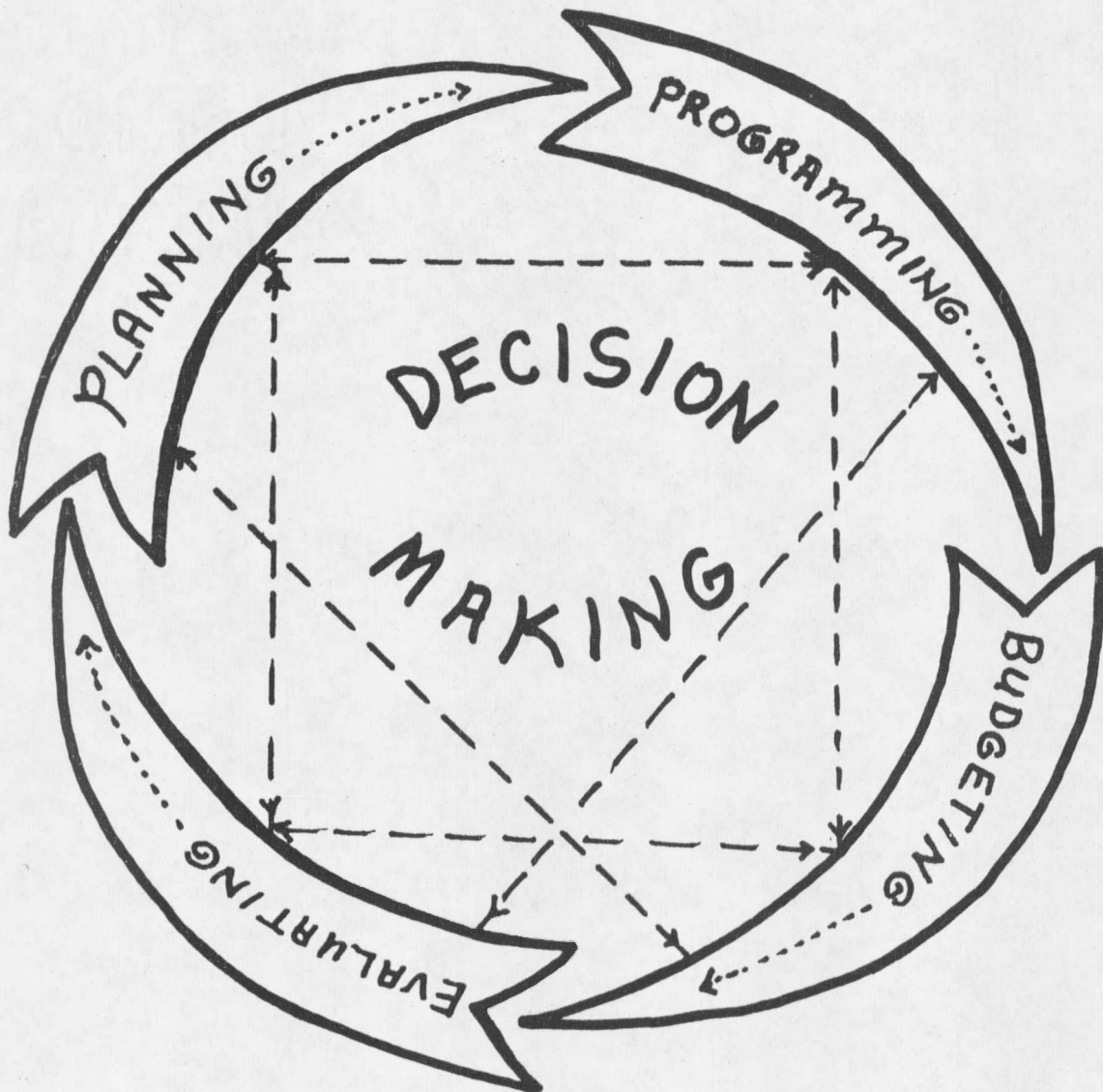
As each component is discussed, it is essential that the reader keep in mind that PPBES is a complex system involving the continuous interactions of all components with each other. This interaction generates information which is passed on to the decision-making body.

In addition to the interactive nature of PPBES, the components are often described as being cyclical. The RC/ASBO (32:44) has often depicted the cyclical and interactive nature as being similar to the illustration in Figure 1, page 31.

The systems picture is drawn from the mutual dependency of each component upon the other, the mutual interaction of one component upon the other, and the cyclical process of the four components.

FIGURE 1

THE DECISION MAKING PROCESS



Note: Dotted lines indicate the type of interaction possible between the various components.

PLANNING

The subject of planning will be confined to its use as a component within the system of PPBES. The planning phase necessary for the school district implementation of PPBES will be considered in the final chapter.

In defining the term planning, the Research Corporation of ASBO gave this definition in 1969: (32:45)

It is those acts devoted primarily toward qualifying the school system to meet its responsibility to society. In effect, it is decision-making concerned with guiding internal change to the end that the school as an institution adapts effectively to the dynamic society of which it is a part. Planning, then, is directed toward keeping the school doing what it is supposed to do, and we say specifically and briefly that it is generating objectives.

H. J. Hartley (20:256), in his glossary, defined the term planning as:

Relating means to ends; formulating rationally feasible courses of action through a systematic consideration of alternatives; planning may be unilateral or participatory in nature; it also applies to settings where objectives and ends are not predetermined.

In the PPBADERS (PPBS) Cycle of Activities, Knezevich (22:73) thought planning to include: clarification of goals, specification of long and short-range goals, and the formulation of a future course of action. Knezevich added this on planning: (22:74)

Planning is a means of coping with uncertainty. Its focus is on future events. It is concerned with the attainment of a hierarchy of objectives within certain time constraints and available resources. Through the planning process goals are clarified

and priorities are specified. It is the continuous activity of relating organizational activities to goals.

For the purpose of this particular study, planning will be considered to include these four divisions:

1. Identification of the needs of the community
2. Goal statements
3. Development of objectives
4. Generation of alternatives

Needs--of the community must first be identified. These needs will be those of students, adults, business and industry, and all other segments of the community. The needs identified should attempt to be as comprehensive as possible.

Goal statements--will be derived from an analysis of the needs which have been identified in the community. The translation of needs into general goal statements should be viewed in a type of hierarchical structure starting with broad, and moving toward the more specific statement. Duke (12:2) defines goal as "a statement of broad direction, general purpose, or intent. A goal is general and timeless and is not concerned with a particular achievement within a specified time period." It is also mentioned by Duke (12:2) that each school district should maintain a set of goal statements which provide direction, guidance and foundation for all district activities. It is maintained that goals reflect the approach taken by a district to

fulfill the educational needs of the community it serves. Goals, therefore, represent community desires which are carried out through all facets of district school operations.

Development of objectives--is the next requirement after goals have been stated. It is essential that the objectives be a lineage of the broad goal statements. It is expected that objectives will be organized into a type of hierarchical structure proceeding from broad to specific.

Mager (26:3) describes an objective as:

an intent communicated by a statement describing a proposed change in a learner--a statement of what the learner is to be like when he has successfully completed a learning experience.

Three characteristics of behavioral objectives as mentioned by Mager are: (26:52)

1. It describes the action to be performed by the student when he is demonstrating competence.
2. It describes the existing conditions.
3. It states the criteria of acceptable performance.

Duke (12:5) summarized a performance objective as being "a desired accomplishment which can be measured within a given time and under specifiable conditions. The attainment of the objective advances the system toward a corresponding goal." Duke (12:5) further stated:

Objectives are written to describe the results which are strived for through the performance of a particular activity or group of activities within the school system. Objective statements specify the method of measurement and criteria to be used in evaluating the success of the activity, as well as the period of time within which the objective is to be achieved.

Because all activities of a district are guided by formal district goals, objectives are in effect a restatement, clarification, quantification and further definition of goal statements. By specifying a time frame, an objective becomes a check point in the progress toward a goal.

A common method of stating objectives for instructional programs is to specify the desired performance or behavior of students, although this may not always be possible or desirable. Objectives may deal with minimums, averages, or terminal performance and can measure performance either of the student or of the total educational program. A common classification scheme for such objectives describes the cognitive, affective and psychomotor domains of behavior.

In stating the performance objective, the type of criteria test must be kept closely in mind. These four characteristics are often evidenced in the criteria test:

1. It should simulate as closely as possible the performance desired.
2. It should only test the behaviors that you set forth in your objective.
3. It should be able to precisely tell the instructor where the student has failed.

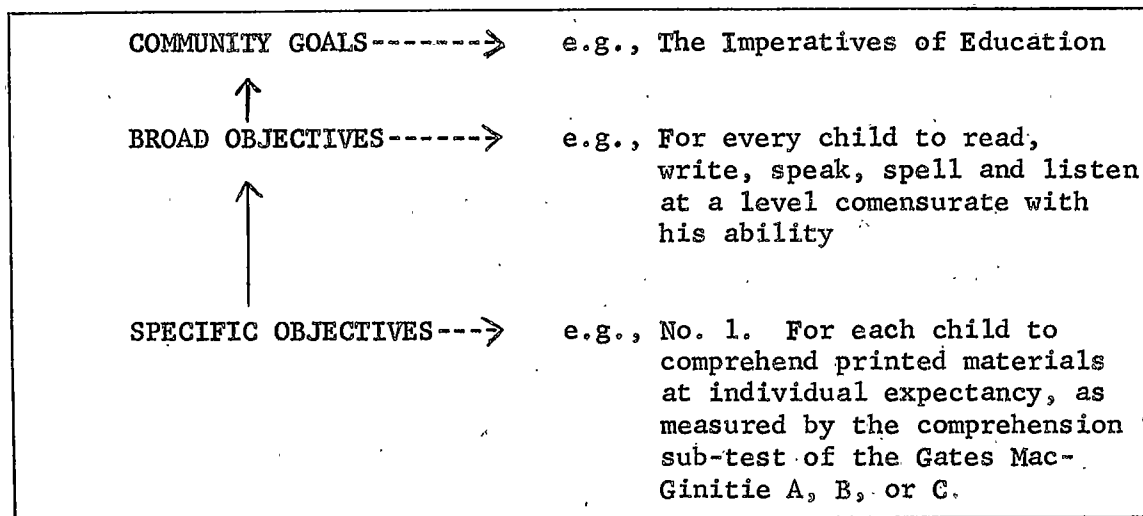
Generation of alternatives--is concerned with the identification of various programs which may accomplish the objectives which have been developed. The alternatives may also be viewed as various options or strategies which will fulfill the objectives which have been stated.

The PPBS staff of New York City Schools (2:3) define alternatives as "different ways or courses of action, different programs or different approaches to achieving the same objective. The term suggests comparisons and substitutions of different kinds of inputs."

In an attempt to arrange the community goals, the objectives, and the generation of alternatives in an understandable perspective, illustrations in Figure 2, and Figure 3, page 37, are set forth as examples used by RC/ASBO (32:50-2).

FIGURE 2

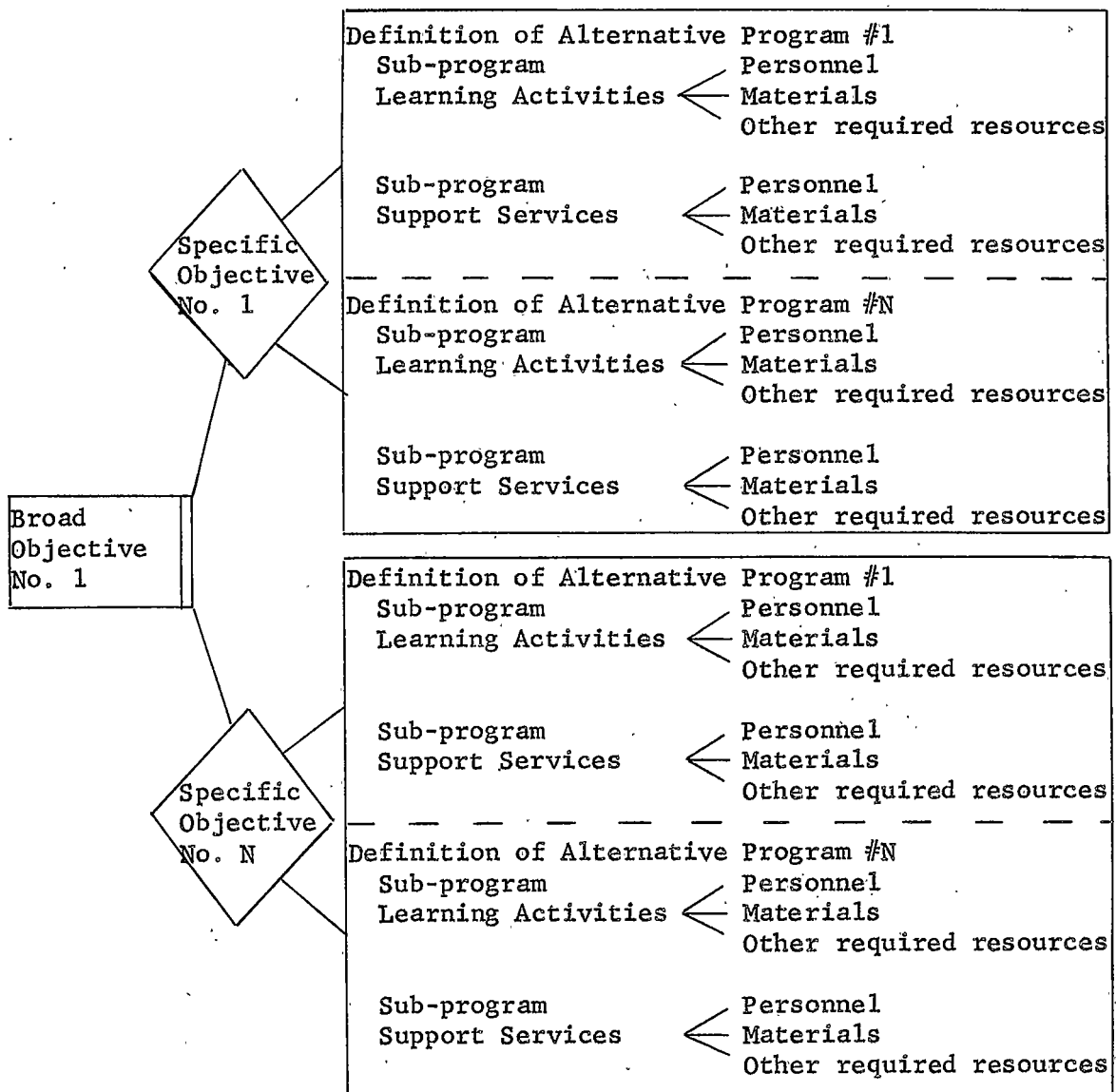
EXAMPLES OF GOALS AND OBJECTIVES



In the statement of the Community Goal, the general parameters of the school's responsibility and capacity must be taken into consideration. It is evident that for each Broad Objective stated, there will be several Specific Objectives developed to achieve the Broad Objective.

FIGURE 3

ALTERNATIVES IN RELATION TO OBJECTIVES



Likewise, the achievement of several Broad Objectives may lead to the accomplishment of a Community Goal.

With the Community Goal, Broad Objectives and Specific Objectives in mind, Figure 3, page 37 carries the process forward to the development of alternatives for fulfilling the Specific Objectives. The alternative is described as sub-programs of learning activities and sub-programs of support activities. In the consideration of each of the alternatives, mention is made of the inputs required such as: personnel, materials, and other required resources.

PROGRAMMING

This component of the system begins with a review and analysis of the goals and objectives as they relate to the stated need. Programming also includes the analysis of the alternatives which have been generated. Upon completion of the analysis of the alternatives, programs are developed and organized into a program structure. This structure includes all the activities and events of the school system.

Various specialists, consultants and school systems have a variety of opinions as to what actually is involved in the programming process, but the variance is usually slight. Hartley (20:256) defines programming as "the determination of the manpower, materials, and facilities required to support a program; inputs are related to outputs by lines of action through an information system." The PPBES process

as used by the Alberta Department of Education (27:12) starts out with the component of programming in this manner:

1. Generating alternatives
2. Time phasing of activities
3. Developing operational plans
4. Clustering activities
5. Relating specific parts to total plan

Knezevich (22:74) relates that the term "programming" is used in the noncomputer sense. He viewed programming as this:

It is the further refinement of planning. The accepted plans are translated into more specific functions or series of output-oriented activities. It might help to think of it in terms of the verb 'to program,' that is, clustering operations aimed at serving the same broad mission within the institution. Programs in this sense are time-phased plans and include relating resources to stated objectives. Program categories are activities grouped on the basis of the objectives served. Program sub categories are breakdowns on the basis of more detailed or refined objectives. Program elements are specific products, goods, and services, combined with personnel, equipment, facilities, and other services organized to fulfill or support program activities.

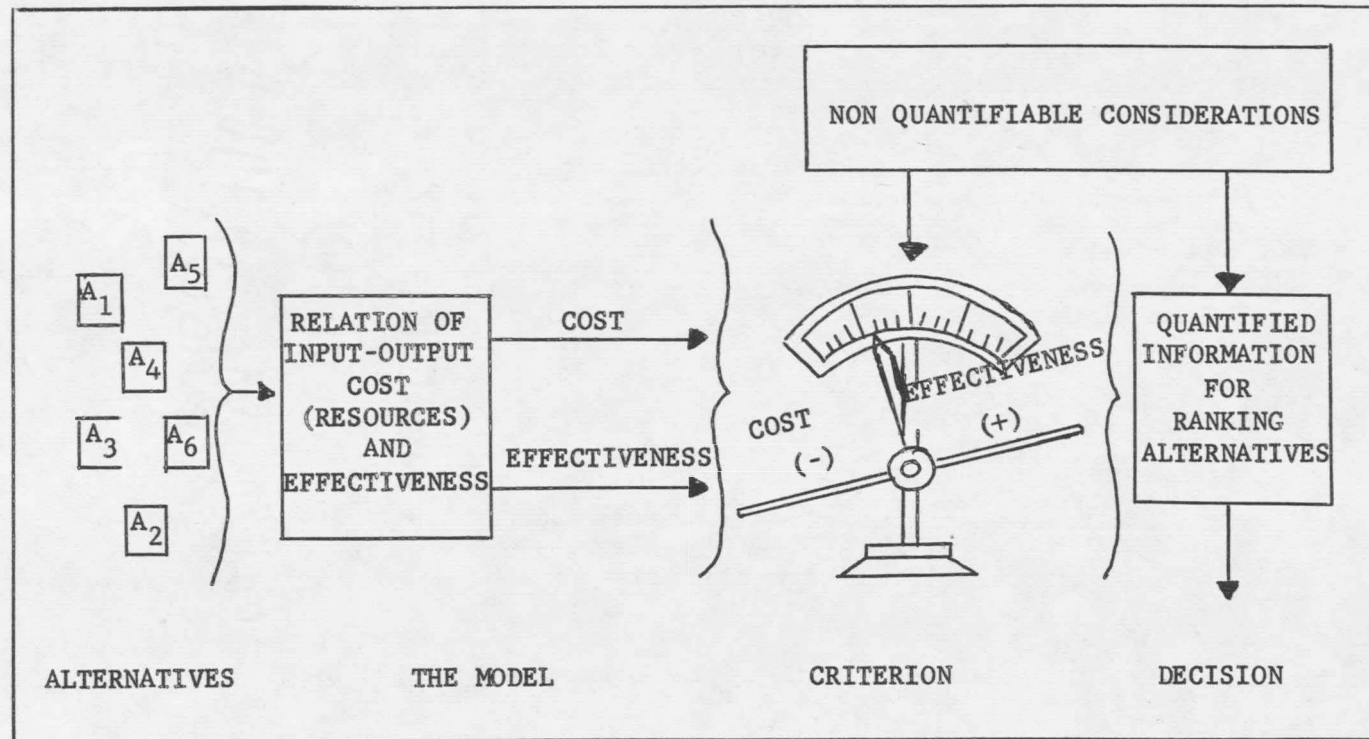
The New York City system (2:29) views programming as "the process of assigning resources and schedules to plans to make them achievable as the next level of detail after planning." From the accountant perspective, Perkins, Cross and Sicuro (28:6) also see programming as the next step after the process of defining the goals and objectives. This next step, programming, is thought of as grouping interrelated activities directed toward accomplishing objectives which have been set

forth.

The role of analysis--in the component of programming plays an extremely important part in the system of PPBES. The analysis of the alternatives which are developed is a key point in assisting the decisionmaker in making the most rational decision possible. Duke (12:8) feels that the alternatives should be compared on the basis of the criteria established for the performance objectives. In this manner, the alternative or the set of alternatives which are judged to come the closest to achieving the criterion measures, or exceeds them by the greater margin, is then chosen as the optimum. In the analysis of each alternative presented, it is of prime concern to consider the cost, effectiveness, other resources, intangibles or uncertainties, and all possible constraints. At this point, the analysis should be considered for a multi-year period, such as a five or six year span. It is expected that for the second year and on, approximation will be relied upon to a greater degree by the analyst. The sophistication of the analysis of the alternatives may be relatively simple in design or it may become quite complex in the use of highly detailed models and various tools in the field of system analysis.

Haggart (17:154) uses the illustration in Figure 4, page 41, to depict the process of analysis. Quade (31:3322) developed this illustration for the Rand Corporation in 1966. Figure 4 starts with a group

FIGURE 4
THE PROCESS OF ANALYSIS



of alternatives which have been generated to meet the needs of a particular objective. Through the analysis process a particular alternative finally arrives at the point of optimization when the decision makers have decided upon a particular method or alternative for meeting the need of the given objective.

At this point in her discussion of analysis process, Haggart (17:154-55) interjected a note of caution by quoting Gene Fisher:

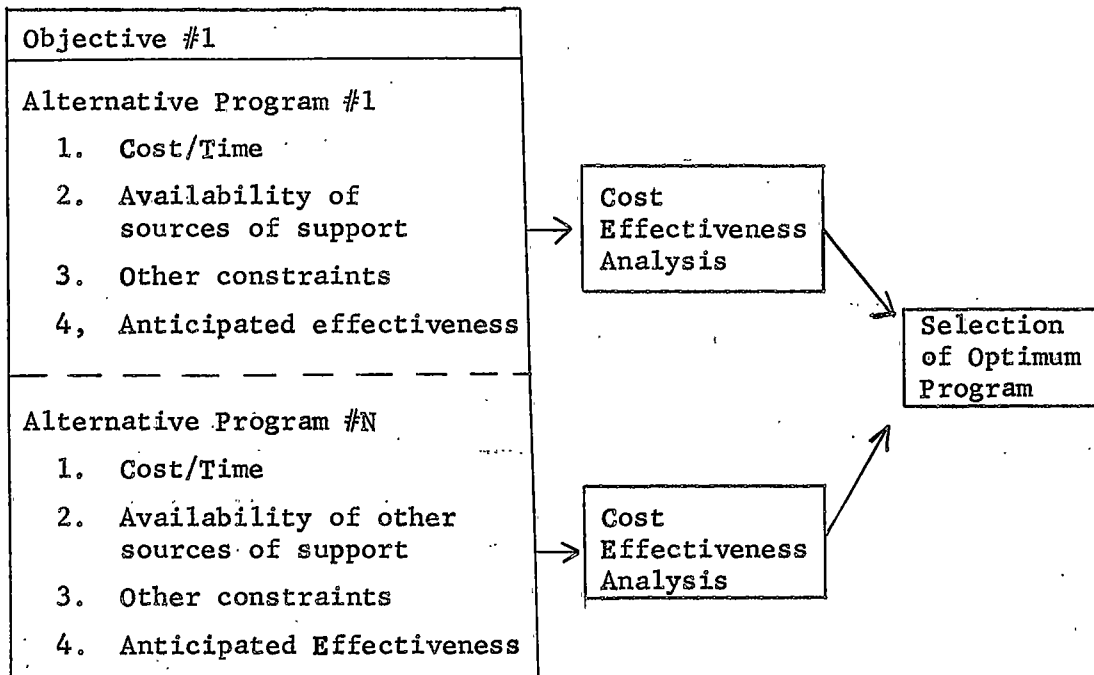
First of all we must be very clear about what the purpose of analysis really is--particularly in a long-range planning decision context. Contrary to what some of the more enthusiastic advocates of quantitative analysis may think, I tend to visualize analysis as playing a somewhat modest, though very significant, role in the overall decision making process. In reality most major long-range planning decision problems must ultimately be resolved primarily on the basis of intuition and judgment. I suggest that the main role of analysis should be to try to sharpen this intuition and judgment. In practically no case should it be assumed that the results of the analysis will 'make' the decision. The really interesting problems are just too difficult, and there are too many intangible (e.g., political, psychological, and sociological) considerations that cannot be taken into account in the analytical process, especially in the quantitative sense. In sum, the analytical process should be directed toward assisting the decision maker in such a way that his intuition and judgment are better than they would be without the results of the analysis.

The RC/ASBO (32:54) used an illustration such as in Figure 5, page 43, to depict the analysis process. Although this Figure deals with analysis of alternatives in terms of cost and effectiveness, some analysts are attempting to analyze educational alternatives in relation to the utility or benefit. This latter method of analysis has been found to be a very difficult technique because of the lack of the

immediacy of known results of a particular alternative. Many intangibles are involved in working with a benefit or utility analysis.

FIGURE 5

COST EFFECTIVENESS ANALYSIS



In the above illustration a model cost effectiveness is set up to analyze one or more alternatives generated for meeting the specific needs of a stated performance objective. As the cost and effectiveness analysis is completed, the alternatives are then ranked for review by the decisionmakers. It is then the decisionmakers' responsibility to select the optimum alternative at that given time. Quite often the analysis of alternatives process of itself generates other feasible

alternatives for achieving the same given objective.

As the decisionmakers receive the information from the analysis of the alternatives, the process of selecting the optimum program becomes a reality. Upon the selection of various programs, a type of program structure begins to form.

Program structure--has many similar definitions. Duke (12:1) gives this definition:

A program structure may be defined as a classification plan for showing the hierarchical arrangement of programs within the institution; it shows the interrelationship of programs and subprograms as well as the interrelationship of activities, goals, and objectives. It facilitates analytic comparisons of the costs and the effectiveness of alternate programs.

Hartley (20:257) views program structures as:

the organization of the general program areas, sub-programs, elements, components, and tasks; it facilitates analytic comparisons of the costs and effectiveness of alternative programs; programs may cut across existing departments and agencies.

Program structure comprises the outputs, programs, program elements, human and material resources, and strategic missions or activities of the organization (20:97).

The New York City school system (2:28) defines program structure in a similar manner to those previously mentioned:

The program categories of an organization grouped in terms of objectives. Major programs are normally subdivided into subprograms or aggregations and are further subdivided into program elements. The program structure is a classification scheme for grouping all the functions, activities and outputs of an organization and their associated resources in a rational manner.

A key concept in programming is that the process is directly related to the objectives. It must be output orientated rather than subject or content centered. As this criterion is necessary in the development of the program structure, the form of the structure will follow the individual school district's output desires as they have been set forth in goals and objectives. In addition to the definitions of a program structure given previously, Duke (12:2) believes the structure should have these characteristics:

1. All activities of the organization should be included in the program structure. This includes management activities, instructional activities, auxillary or support activities, and community activities.
2. The hierarchical classification schema infers that the programs, few in number, be broadly defined and related to the goals which are likewise broadly defined and that each successive program level becomes more narrowly defined in parallel with the successive, more narrowly defined objectives.
3. The design of the program structure should be such that it will remain relatively stable over a span of years, since long-range planning is vital to the PPBS process.
4. The program structure should lend itself to a classification of other related factors such as the target groups, location, grade level, curriculum areas, and descriptions of the methodology or process as related to various activities.
5. The program structure should provide for an arrangement of programs, program categories, program elements, and activities that facilitates and supports the analytic procedures fundamental to PPBS.

Program structures vary in appearance from school district to school district. In order to provide the reader with a few sample

illustrations, some examples have been taken out of a collection made by Curtis (10:6-8). Figures 6 and 7 on pages 46 and 47 depict the variations among some school districts which are working with the concepts of PPBES. Additional examples are in Appendix G, H and I.

FIGURE 6

SHORELINE SCHOOL DISTRICT NO. 412, KING COUNTY, WASHINGTON

RESPONSIBILITY AREA

32 Schools

27 Managerial
Positions

LEVEL A

EDUCATIONAL AREA

Elem, J.H.,
S.H., Summer
School, Vocat.

9 Support
Programs

Federal and
other Programs

LEVEL B

PROGRAM

Curricular and organizational level
(e.g., music and maintenance of plant)

LEVEL C

SUBPROGRAMS

Limited to selected curricular areas
(e.g., within music=band, orchestra,
and chorus)

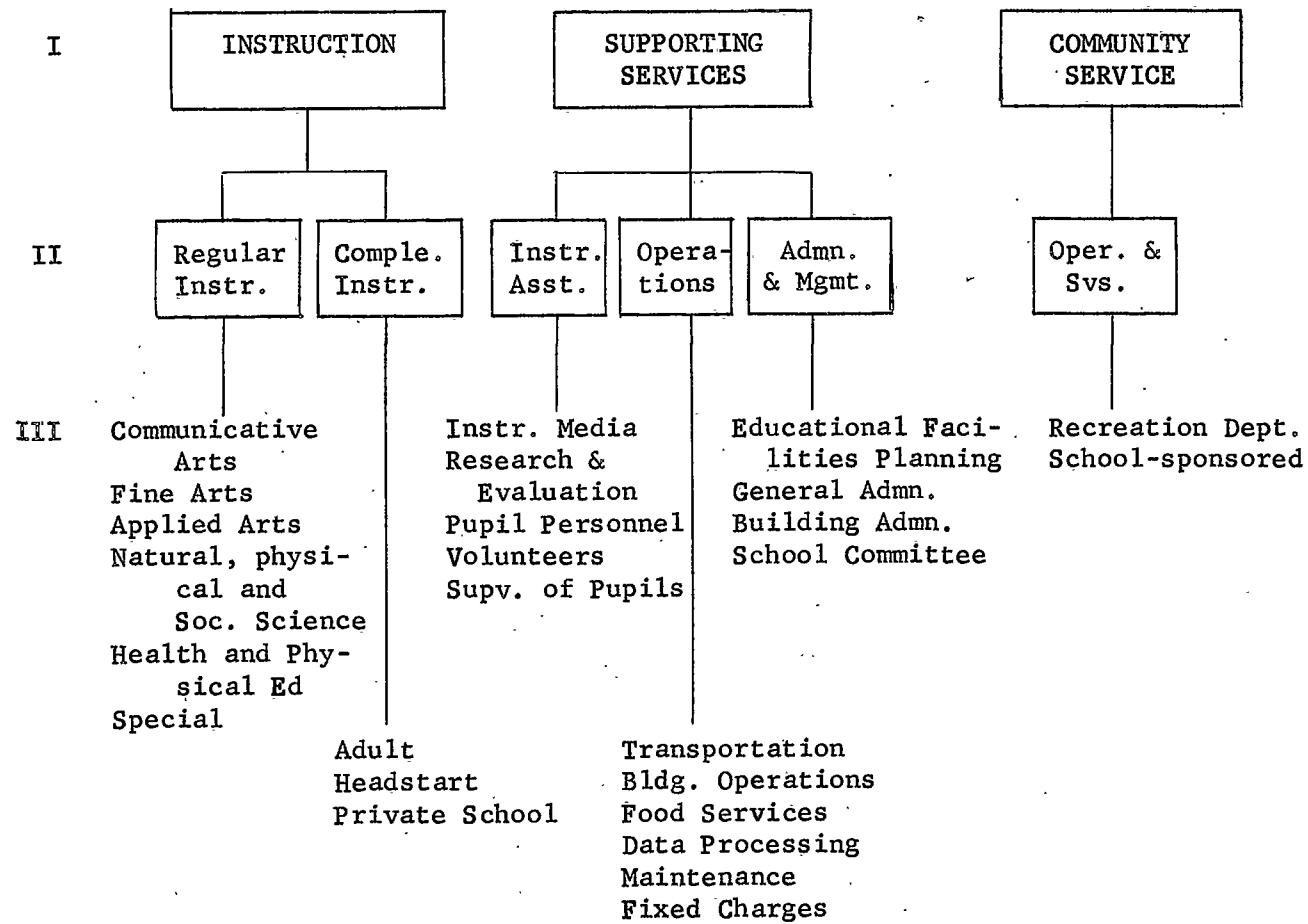
LEVEL D

OBJECT OF EXPENDITURE

FIGURE 7

PORTLAND, MAINE PROGRAM STRUCTURE

LEVEL



The examples of program structures cited have many varied characteristics, but there are some common threads among program structures. Some of the common points can be viewed in the program structure characteristics as set forth by Haggart (16:6) of the Rand Corporation.

1. Structure should relate to the objectives and activities
 - A. Identifies objectives
 - B. Provides measurable objectives
 - C. Includes all activities
 - D. Allows for growth (flexibility)
2. Structure should support decisionmaking
 - A. Illuminates priorities
 - B. Highlights trade-off areas
 - C. Promotes realistic analysis
 - D. Provides for imaginative change
 - E. Is manageable

A position paper by RC/ASBO (35:112) cautions against the building of the structure around existing programs, thus creating a "locked in" effect. It was also stated that:

The search for the universally accepted program structure may be both a fortunate and unfortunate happen-stance. The preoccupation with structure may detract from the higher priority facet of planning. Nevertheless, each implementation of PPBES will require a program structure uniquely adapted to the school district.

PROGRAM BUDGETING

The component in the systems process known as program budgeting is generally thought of as the arrangement of programs and elements in relation to resources and objectives which have been set forth.

Levine (25:12) views budgeting as "the translation of program cost elements into the specific funding and time requirements identified in traditional terms such as object class, function, and organization." He felt that the analysis of objectives and alternatives is reflected in the program budget. In relationship to the traditional budget, Levine had this to say:

The program budget is significantly different from the traditional budget which is used almost universally by school systems across the country. The traditional budget is organized around a line-item system which focuses on costs or expenditures. Within education, traditional line-items might be debt service, instructional costs, board of education costs, and administration costs.

The program budget is basically output-oriented rather than cost-oriented. The program budget is organized around the chosen program structure. The items within the program budget itself are related to major program categories. Under these program categories occurs a listing of the contributing cost components and their sub-elements.

Hartley (20:96) thinks of program budgeting as "a planning and management device; the program budget process is more comprehensive than the existing fragmented process of constructing incremental administration budgets. Relative to the traditional line-item type of budget, Hartley believes that it is probably not desirable to abolish the

budget, but rather to keep it to accompany the newer program budget so as to show a more complete breakdown of an organization's expenditures on the basis of both inputs and outputs. Due to the capacity of data processing he feels that the workload would not be doubled. Hartley (25:177) feels that the program budget will provide an array of estimates of expenditures for school districts, and it will promote a more efficient allocation of scarce school revenues. The program budget emphasizes not only what is to be spent, but of more importance, what is to be achieved.

Wilsey (39:19) states that the program budget is the end product of the planning process in the alignment of objectives, designing the program structure and making the analysis. All of these activities should involve faculty, administrators, elected school officials, and the general public. Unless this type of process is complete, a program budget cannot be formalized to show cost and predicted effectiveness over an extended time horizon.

Knezevich (23:11) speaks of both inputs and outputs in his definition of program budgeting:

Program budgeting is a program-oriented categorization of budget and expenditure accounts. Program budgeting deals with restructuring budget presentations to reveal outputs as well as inputs and to attempt to better relate to objectives.

Buskins (4:65) believes that there is no one best way to design a program budget, so a district has the option of choosing any method

which is easier to implement and translate to the public. He stresses the importance of producing a document that the public can understand. People should be able to see exactly how money is being spent, why it is allocated in a certain way, and how successful the expenditure is in helping to attain a specific educational goal.

Jungherr (21:1) states that the program budget is the essential transitional step between the old line function-object budgeting and the complete implementation of a PPB program. He sees the benefits as such:

1. It moves the budget from existing function-object coding to a program coding basis.
2. It can be prepared without the addition of such eventual PPB complexities as evaluation criterial and alternative activities.
3. It can be effectuated within the one-year budget cycle, thus providing an immediate payoff in programming benefits with a minimum of effort.
4. It provides a basis for examining the adequacy of the program structure, and a format for beginning program analysis.
5. It provides decision makers with a framework for allocating resources on a program basis.

To accomplish the goals of program budgeting, Thomsen (38:284) states that some revision must be made in the accounting system. The basic changes which are necessary as a step toward readiness in the budgeting component are in the nomenclature of the chart of accounts.

Jungherr (21:2) views the change over from the traditional to the program system as the implementation of these steps:

1. Program coding procedures for state and local requirements
2. Budget form preparation for each program
3. Allocation of staff by program
4. Preparation of a cross walk translation
5. Preparation of the program budget document

Levine (25:12) admits that budgets can be organized in many different ways. He feels that the way in which the school program is analyzed will be the determining factor as to the type of program structure that is used. An analysis of the school program may include such categories as these:

1. Subject matter
2. Grade level
3. Service performance
4. Operating units
5. Target populations such as low income
6. Combination of some of the above categories

Levine further stated that it is possible to determine the relationship of performances with respect to the allocation of resources to any of the particular programs. Levine calls attention to the distinct advantage of being able to incorporate long-range planning into the program budgeting component.

The RC/ASBO budget specialist, Sabine (33:203), has completed a comprehensive review of literature pertaining to program budgeting. She

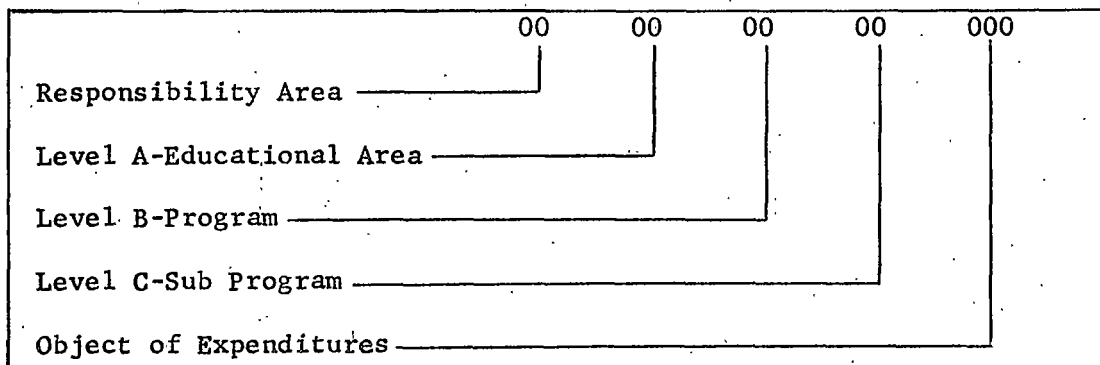
constructed a model budget which was later evaluated in the state of Arizona. In summary this document included the following:

1. Program Analysis Memorandum: This device is used to set forth the educational objectives of a proposed program, along with a detailed itemization of the total costs of the program. It allows a comparison of costs if the specific program had been in operation the prior year. This form is used for presentation of the program to the governing board and to the public, and later for accounting purposes.
2. School District Summary Budget: This device is used for immediate reference.
3. Revenue Receipts: Itemized report covering a five-year span.
4. Expenditures: Itemized proposed budget expenditures starting with the actual cost, the adopted budget and then three years ahead on an estimated basis.
5. Expenditures: A detailed breakdown of the budget expenditures which give the costs of each element and the total of a specific classification.
6. Student and Staff Accounting: This form includes basic information of student and staff accounting as well as the proposed per capita costs and the computation of the total district tax levy is included for the benefit of the public.

To illustrate the program budget coding, some examples of current practices now in use may aid the reader in understanding the overall process. Shoreline School District No. 412 (37:22) is using this design given in Figure 8, page 54. This code is designed to correspond with the program structure depicted in Figure 6, page 46.

FIGURE 8

SHORELINE SCHOOL DISTRICT PPBS ACCOUNT CODING STRUCTURE



The Department of Education in Alberta (27:34) is currently experimenting with three levels of coding in their pilot schools. The first level called minimum includes the function, the preferred level includes the sub program, and the maximum level includes the element. Figure 9, page 55, illustrates the total range of all three levels.

Croft editors (21:3) cite an example of account coding used by the Pearl River School District in New York. It is thought that their system of coding will enable them to provide financial reports by program for each school and total program which includes K-12 levels. Figure 10, page 55, is the example used by Pearl River.

Upon adapting a coding system which can be flexible enough to work with the present program structure, much work is now necessary to gather information for constructing a program budget. An interim

FIGURE 9

ALBERTA PROGRAM ACCOUNTING CODING SYSTEM

<u>Code Numbers</u>	<u>Dimension</u>	<u>Code Sections and Digits</u>						
		X	XXX	XX	XX	XX	XX	XX
1 - 9	Fund _____							
01 - 99	Type of Account)							
100 - 199	Revenue) _____							
200 - 999	Object) _____							
01 - 99	Function _____							
01 - 99	Program _____							
01 - 99	Sub Program _____							
01 - 99	Element _____							
01 - 99	Facility _____							

FIGURE 10

PEARL RIVER CODING SYSTEM

<u>Fund</u>	<u>Program</u>	<u>Location</u>	<u>Function</u>	<u>Object</u>
AO	62	02	220	200
General	Math	Evans	Teaching	Equipment
Fund		Park		

*The code is written AO-62-02-220-200

program budget form is often used to secure the needed information. This form will vary according to the individuality of each school district's PPBE system, but the basic information asked for in this type of form includes areas such as:

1. Fund, program, department, function, object, and similar breakdowns.
2. Description of resources needed for reaching objective.
3. Approval by appropriate individuals or departments.

When such information is collected by all program and sub program directors, it can then be turned over to the business department for incorporation into a system wide program budget.

Haggart (16:14) has developed an example program budget as depicted in Table 1, page 57. This particular example incorporates the step of allocation of staff and the multi-year planning process. An example of Pearl River's budget (11:4) is given in Table 2, page 58-59.

A translation from the traditional budget to the program budget is sometimes desirable in the early stages of implementing a program budget system in order to provide an initial frame of reference and to clarify the relative quantitative importance of various programs and program elements. Rossi (17:46-7) discusses this transition in this manner:

TABLE 1

PROGRAM BUDGET EXAMPLE

Program No.	Program Description	Year				
		1	2	3	4	5
		(\$ thousands)				
1	Learning Intellectual Skills	4,655	4,905	5,265	5,630	6,025
2	Learning About the World	4,445	4,785	5,130	5,484	5,875
3	Developing the Individual	2,700	2,920	3,135	3,350	3,590
4	Preparation for Employment	805	865	930	995	1,070
5	Preparation for Higher Education	665	720	765	820	880
	Subtotal--Direct Instruction	13,270	14,195	15,225	16,280	17,440
6	Assessment, Guid. & Counseling	990	1,035	1,105	1,185	1,275
7	Development & Evaluation	425	455	490	525	560
8	Inst. Resource & Media Service	250	240	260	275	295
	Subtotal--Instructional Support	1,665	1,730	1,855	1,985	2,130
9	Auxiliary Services	1,085	1,185	1,310	1,445	1,595
10	Community Services	700	110	110	115	120
11	Operations & Maintenance	2,840	3,050	3,190	3,480	3,750
12	Capital Outlay	450	725	1,325	1,695	2,195
13	Administration	2,560	2,805	3,010	3,215	3,445
	Total	22,570	23,800	26,025	28,215	30,675
Physical Data		(number of units)				
Students						
	Elementary	20,000	20,510	21,510	22,180	23,070
	Junior High	7,500	7,780	8,090	8,415	8,750
	Senior High	6,500	7,070	7,355	7,650	8,155
	Total	34,000	35,360	36,775	38,245	39,775
Teachers		1,260	1,310	1,365	1,416	1,473
Total Personnel		1,900	1,975	2,055	2,135	2,220
Schools		45	46	47	49	51
Square feet, in thousands		3,250	3,285	3,320	3,450	3,570

TABLE 2

PEARL RIVER SCHOOL DISTRICT
1969-70 General Fund Budget by Program (PPB)

<u>Programs</u>	<u>Budget Total</u>	<u>\$ per Student (whole dollars)</u>	<u>Percentage of Total (rounded)</u>
INSTRUCTIONAL PROGRAMS			
Basic Education			
60 Eng., Lang. Arts, K-12	\$ 780,253	\$ 213	
61 Sci., (includes Health), K-12	379,669	104	
62 Mathematics, K-12	431,364	118	
63 Social Studies, K-12	373,258	102	
64 Physical Ed., K-12	308,152	87	
65 Business, 9-12	54,760	146	
66 Foreign Lang., 7-12	137,365	140	
67 Unified Arts, 6-12	131,548	119	
68 Art, K-12	97,212	37	
69 Music, K-12	131,896	48	
00 Nonprogram	41,599	11	
Total Basic Education	\$2,866,976		55%
76 Special Education	\$ 52,628	\$1,385	
77 Vocational Education	\$ 43,130	\$ 479	
74 Continuing Education	\$ 13,721	\$ 18	
Total, Inst. Program	\$2,976,455		57%
INSTRUCTIONAL SUPPORT PROGRAMS			
71 Learning Resources, Libraries	\$ 128,192	\$ 35	
Pupil Personal Services			
72 Guidance & Psych Services, K-12	\$ 154,525	\$ 42	
73 Health Services, K-12	95,508	21	
Total, Pupil Pers. Serv.	\$ 250,033		
Facilities			
83 Acquisition & Improvement	\$ 439,333	\$ 120	
81 Operation & Maintenance	551,145	150	
Total, Facilities	\$ 990,478		

Table 2 (continued)

<u>Programs</u>	<u>Budget Total</u>	<u>\$ per Student (whole dollars)</u>	<u>Percentage of Total (rounded)</u>
District Management			
85 School Management	\$ 344,999	\$ 94	
86 Central Office			
Management	<u>331,133</u>	90	
Total, District			
Management	\$ 676,132		
80 Transportation	\$ 161,394	\$ 92	
84 Food Service	<u>\$ 27,300</u>	\$ 7	
Total, Institutional			
Support Programs	\$2,233,529		43%
COMMUNITY SERVICE PROGRAMS	<u>\$ 4,149</u>		
GRAND TOTAL	<u>\$5,214,133</u>		100%

The expression of the relationship between the program budget and the traditional budget is generally referred to as a 'crosswalk.' A crosswalk is basically a tabular array with the columns showing the traditional budget cost categories and the rows showing the program budget cost categories.

Rossi (17:48) uses the example in Table 3, page 61, to represent the program budget crosswalk.

The budget document is usually thought of as a printed report of estimated expenditures and revenues of a school district for a given multi-year period. The volume of the document will depend upon the complexity of the breakdown of the program structure and the desirability of specific information in the reporting service.

In relation to the concept of program budgeting, Handy and Willey (19:145) pointed out that:

Program budgeting will not necessarily bring about a monetary savings for the operation of a school. Nor does it insure that the quality of teaching will be upgraded. But it does establish a direction badly needed in education--simply stated, the program and the teachers who attempt to change pupil behavior and attitudes will be in a position to list curricular priorities according to team-determined needs.

Cost benefits can accrue to each area within the curricular array. Budgets will then be requested upon a rationale of the product to be purchased. Teaching is moved nearer the status of a scientifically based profession.

Hartley (20:96) concludes that there is a fairly wide variation in approaches to the budgeting process, and each planner is truly an architect of a unique program design for the individual school district. He sees the program budgeting as a move from simply a

TABLE 3

CROSSWALK EXAMPLE (in \$ thousands)

ACCT NO.	ACCOUNT	TOTAL	INSTRUCTIONAL PROGRAMS*					NONINSTRUCTIONAL PROGRAMS							
			1	2	3	4	5	Assessment, Guid/Counsel	Development & Evaluation	Instructional Res. & Media	Auxiliary Services	Community Service	Operation and Maintenance	Capital Outlay	Administration
100	Admin.	580	----	----	----	----	----	----	50	----	----	----	----	----	530
200	Instruction	15,945	4410	4210	2560	760	630	915	355	215	----	----	----	----	1890
300	Health	290	----	----	----	----	----	----	----	----	290	----	----	----	----
500	Trans.	280	----	----	----	----	----	----	----	----	280	----	----	----	----
600	Operation	1,760	----	----	----	----	----	----	----	----	----	----	1760	----	----
700	Maintenance	715	----	----	----	----	----	----	----	----	----	----	915	----	----
800	Fixed Chgs.	1,100	245	235	140	45	35	50	20	10	15	----	165	----	140
900	Food Serv.	500	----	----	----	----	----	----	----	----	500	----	----	----	----
1100	Comm. Serv.	700	----	----	----	----	----	----	----	----	----	700	----	----	----
Total Current Exp.		22,070	4655	4455	2700	805	665	965	425	225	1085	700	2840	----	2560
1200	Cap. Outlay	500	----	----	----	----	----	25	----	25	----	----	----	450	----
	TOTAL	22,570	4655	4455	2700	805	665	990	425	250	1085	700	2840	450	2560
Percentage of Current Expense		100.0	21.1	20.1	12.2	3.6	3.0	4.5	1.9	1.1	4.9	3.1	12.9		11.6
*Instructional Programs: 1. Learning Fundamental Intellectual Skills 2. Learning About the World 3. Development of the Individual Physically, Socially, Emotionally 4. Learning Knowledge and Skills in Preparation for Employment 5. Learning Academic Subjects to Prepare for Higher Education															

justification-control-constraint function to an analytical framework for total organization planning.

EVALUATION

The evaluation component is an essential step for a successful PPBE system. As the goals are set, objectives determined, alternatives generated and analyzed, program structure and budget formats designed, a test run is given the program and elements. It is at this time, that the evaluation steps come on the scene to determine how successful the particular operation was in relation to the expectations.

Generally speaking, this term evaluation is a comparison of something to something; the actual output to the expected output. Hartley (20:254) defines evaluation as "the comparison of desired outcomes or objectives with actual accomplishments; based upon educational performance indicators, such as indices that measure changes in pupil cognitive development.

Some of the most recent thinking of RC/ASBO (35:113) feels that the component of evaluation will re-emphasize the accountability factor through such questions as:

1. Are the programs producing the output specified in the adopted plans?
2. Are the programs producing according to the schedule projected by programming?
3. When the programs have been completed for a given group of learners, how well have they worked?

Clark County in Las Vegas (7:66) uses this definition of the evaluation component:

The process by which through the use of various measurement devices or of judging through subjective reaction, the desired outcomes or objectives of a program can be compared with the actual accomplishments.

At the National Conference of the ASBO on June 10, 1969, Dr. Curtis, Director of the Research Corporation of ASBO, described the evaluation as a process of measuring the degree of attainment of the objectives. He felt that evaluation should describe the learner and then the decisionmakers should decide the appropriateness. Both objective and subjective measures should be involved in this type of evaluation; cognitive, psychomotor skills and the affective domain must be included in the process.

Hartley (20:98) views evaluation as a year-round process concerned with revising objectives, performance and costs. The planning-programming-budgeting system should be developed into a dynamic procedure to aid the decision makers at all levels within the school system.

In addition to the close relationship of evaluation to the goals and objectives, Rapp (17:165-68) delineates some of the more important variables for consideration as such:

1. The kinds of changes to be effected
2. The timing of the assessments
3. The criteria to be established

Rapp further states that in the development of the evaluation process, it should include a philosophy of assessment which is oriented from the outset toward program improvement rather than toward making a judgment at an early stage. He summarizes the component of evaluation as including information about an objective, an innovation, expected changes, and the total resource allocation for the particular innovation. In light of this type of information, the decisionmaker is then able to assess the new innovation relative to effectiveness and cost.

RC/ASBO (32:61-7) has approached the comparison of the learner condition and the objectives for the learner condition through the use of a graphic model technique. In Table 4, page 65, this type of model depicts the comparisons.

TABLE 4

EVALUATION MODEL

	Y	I	Z
X=Pupil description at initiation of program operation (entry characteristics)		$I=X$	$Z=Y$
Y=Proposed pupil description at end of program (objective)	$Y=X+C$	$I=X+U$	$Z=Y+U$
I=Pupil description at any interim point of process	$Y=X-C$	$I=FY+X$	$Z=FY$
Z=Pupil description actually obtained at end of program	$Y=X+C_1-C_2$	$I=X+FY+U$	$Z=FY+U$
U=Unexpected outcomes	$Y < X$	$I < X \neq Y$	$Z=X$
F=An unknown fraction		$I=X^+ - C=Y$	$Z=X-U$
C=Change			

The "Y" is representative of the objective, the "I" is representative of a measure of the pupil's progress toward the attainment of an objective at a particular interim point, and the "Z" is representative of the pupil's description that is actually attained at the end of the given program.

The above Evaluation Model is geared toward the instructional program, but a similar model could be used to evaluate the non-instructional support in order that the decisionmakers would have complete information upon which to make the decision pertaining to a

given program.

The next unit, Chapter III, contains the model design for implementing PPBES in the Bozeman Public Schools. A hypothetical situation is illustrated in the latter part of this chapter to show how an implementation strategy would work.

CHAPTER III

PPBES MODEL FOR BOZEMAN PUBLIC SCHOOLS

On the basis of the knowledge achieved through the review of literature in Chapter II and the experience gained by attendance at three PPBES seminars, the writer feels that the model described in this Chapter is a feasible approach to implementing PPBES in the Bozeman Public Schools. It is felt that many features of the model could be adapted to other school districts of similar size in Montana.

The arrangement of this model is divided into three phases. Phase I includes the necessary preliminary procedures of assessing the environment, securing the commitment and taking an initial inventory of the resources of the Bozeman Public Schools. Phase II includes the process for developing the implementation strategy. Personnel needs are determined for a PPBES director and a task force. An inservice program concerned with the concepts of PPBES is directed toward the members of the task force. It is also necessary for the task force to complete an analysis and evaluation of the present status of the Bozeman Public Schools. Phase III, with the Bozeman Public Schools in view, proceeds through the implementation of a hypothetical PPBES strategy.

PHASE I: PRELIMINARY PROCEDURES

STEP 1: ASSESSMENT OF ENVIRONMENT

The initial step in this Phase is to assess the environment in which the Bozeman Public Schools function. This environment is considered to include the society within the boundaries of the school district. To a lesser degree, the parameter of the environment is considered to include the governmental levels of the state and nation.

The assessment of the environment pertains to the feelings, attitudes, and actions of the society in the environment toward the following:

1. Willingness to supply adequate resources
2. Degree of satisfaction with quality of output
3. Attitude and involvement in participative management
4. Readiness and willingness for change
5. Degree of accountability existing and the degree desired

It is of prime importance that the individuals who are desirous of planting the seed of PPBES, make a comprehensive assessment of the environment. If the environment depicts a highly satisfied society relative to input and output, then it will likely be quite difficult to get PPBES started. An attitude reflecting strong support of unilateral administration will also deter the implementation of PPBES. If an opposite expression in a varying degree exists, the chance for

success with PPBES is much greater.

Through the review of literature, it is quite evident that the majority of school districts in the nation have favorable environments in which some degree of PPBES is welcome. As mentioned in Chapter I, various factors which create a favorable environment for PPBES are coming into being in Montana. Dollar resources are becoming more and more scarce as the demands for output are moving in the opposite direction. The ability to secure additional facilities as well as operational funds is becoming more difficult.

The environment surrounding the Bozeman Public Schools appears to reflect a concern over accountability in terms of costs and the measurement and evaluation of outputs. (Appendix A) The society at the state level of government is becoming more concerned with the dollar and what output is derived. Heavy emphasis is being placed upon goals, objectives, budgeting and evaluation of federal projects such as Elementary Secondary Education Acts.

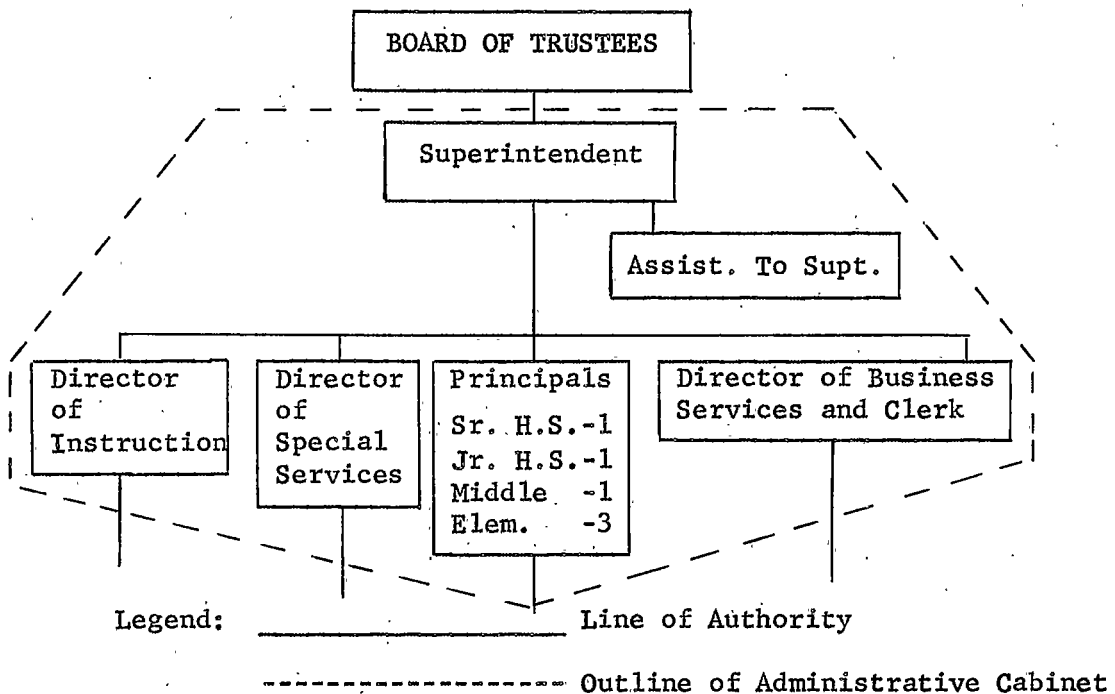
When a complete comprehensive assessment of the Bozeman environment has been completed, consideration should next be given to securing a commitment from the school administration. The environment assessment findings will affect the points to be emphasized in approaching the school administration.

STEP 2: SECURE COMMITMENT

This particular step is a crucial point to be achieved before any further consideration of PPBES implementation is made. The commitment must be obtained from the decisionmakers of the school system. In Bozeman, the decisionmakers are usually thought of as the school board, the superintendent, and the administrative cabinet. This arrangement of decisionmakers is illustrated in Figure 11.

FIGURE 11

DECISIONMAKERS OF THE BOZEMAN SCHOOLS



At this point, it is assumed that a favorable environment has been assessed as such and that a person or group of persons is desirous of seeing PPBES implemented in the Bozeman Public Schools. This particular group of persons may include teachers, school administrators, school board members, lay citizens, legislators, state department officials, or any other individual.

Regardless of how the movement arises, the chance for securing a commitment from the decisionmakers is best achieved if all of the decisionmakers become knowledgeable and involved at this time with the group presenting the proposal for commitment. If a choice were available, it is advisable to secure a PPBES administrator who has capabilities and experience in both administration and curriculum. This type of selection will enhance the opportunity for success in obtaining the commitment as well as success later on in the implementation phase.

Of the three levels of the decisionmakers, the concept of PPBES should first be sanctioned or given tentative approval at the level of the superintendent of schools. Upon passing this mark, sanction and approval should next be achieved at the level of the administrative cabinet; the proposal for commitment to PPBES should next be submitted to the school board. Active support on the part of the decisionmakers is a necessity.

PPBES is a complex, but not necessarily difficult, decision-making tool and it is of prime importance that it be understood and desired if it is to be used successfully. There are several salient points of concern in the preparation of a plan to obtain a commitment from the decisionmakers.

First, the decisionmakers must be given a general background of PPBES; both non-educational and educational information should be included. An explanation of the elements and their interrelationships needs to be presented in a simplified manner. In general, the purpose and nature of the elements and their relationship to education must be explained to the decisionmaker in clear and precise terms.

Second, the decisionmakers must be convinced that there is a need for PPBES within the Bozeman Public Schools. It is suggested that all three levels of the decisionmakers be approached with a set of assumptions such as the following:

1. The financial resources available to the Bozeman Public Schools are less than the desired level.
2. The organization of activities, events and services into a series of programs specifically directed toward the achievement of an objective and goal can augment the output of the school system in Bozeman.
3. The Bozeman Public Schools exist to produce a specific output or set of outputs, to achieve an objective or set of objectives derived from changes desired in the learner.

4. A standardized data base is essential before a meaningful comparative analysis of the present or future programs can take place.
5. Better decisions are made when various alternatives are available with consideration as to the cost and effectiveness over a multi-year period.
6. Better decisions are accomplished when output is related to specific objectives and goals.
7. The Bozeman Public School District is a part of society and must acknowledge a degree of accountability to society.

If agreement and acceptance is achieved with these assumptions, another step is gained toward receiving a positive commitment.

Third, a somewhat different approach should be made to the professional administrators as opposed to the school board group. The points of concern in the approach to the professional administrators should emphasize such areas as:

1. Long-range planning is needed in the school district and that PPBES is an executive tool which can be of positive assistance.
2. The Bozeman Public Schools are currently doing much in the way of objectives, and evaluation, but not on a systems basis; thus, a systems analysis can assist the administrator in relating what should be done, the best way to do it, and then later know how well it is being done. This knowledge then can be used by the administrator to make the best decision in allocating scarce resources.
3. It is entirely possible that the Bozeman Public Schools could experience a decrease in available income, thus PPBES can help prepare the administrator for contingency planning. Also, if an expanding economy should exist, PPBES could assist the decisionmakers.

The points of concern in approaching the school board should be centered on the aspect of the board member and his relationship to the community. The emphasis should include these two areas:

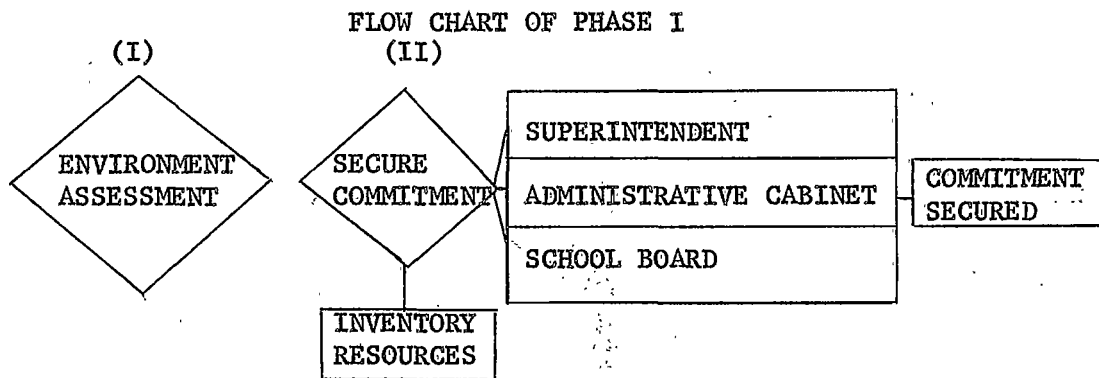
1. PPBES affords a better basis for making policy, assessing performance, and determining future years costs of present decisions. This is continually a difficult task with the present procedural approach.
2. With the increased concern over where the dollar is going and what is coming back in return, the reporting to the public can be accomplished in a more detailed manner and on a level of understanding by lay citizens if PPBES is utilized.

Fourth, the conceptualization of PPBES in the Bozeman Public Schools should be explained and illustrated to all levels of decision-makers. With the assistance of various audio-visual materials, the entire implementation model should be presented. Emphasis should be placed upon the planning component and the component of evaluation should be deemphasized at this time. Caution should be taken that the component of budgeting does not receive excessive attention to the point that PPBES would be interpreted as only a method of cost accounting. Heavy emphasis should be placed upon the existing practices and procedures which will fit into the implementation of PPBES. This implementation should be stressed as being evolutionary rather than revolutionary in nature.

The fifth and final point in the commitment plan should conclude the presentation with an accurate request for resources needed

for the implementation of PPBES. This information should be pictured in the frame of stages in a multi-year period. In concluding the presentation for the commitment, a clear statement should be given as to what PPBES can do and what it cannot do. Figure 12 depicts the steps in Phase I.

FIGURE 12



As the achievement of a commitment is essential before further progress can be made, ample planning time must be allocated. It must be assumed that it is possible to be working with those individuals who are very enthusiastic, those who cannot make up their minds, those who are not concerned, and those who are negative.

To assist in the formulation of the resource request, an inventory and identification of the present resources of the Bozeman Public Schools should be available. The type of resource inventory and identification is discussed in the following Step No. 3.

STEP 3: INVENTORY AND IDENTIFICATION OF RESOURCES

If an educational resource management system (PPBES) is going to be effective, it is essential that the input be inventoried and identified. The term resources is defined in different ways.

In 1969, Curtis (9:41-2) defined educational resources as:

people, materials, environment, time and values, with dollars as a means of procuring these resources. We feel too many people say the dollars are really the resource. Resources involve community; they involve so many persons that could serve the schools and would like to. And then, of course, we get into the matter of environment or even in a region that school systems have not begun to tap. We cannot place too much stress on the importance of the inventory, identification and most effective use of resources.

In a keynote address at the national convention of the American Association of School Business Officials in October of 1970, Dr. MacKenzie defined resources as men, money, machines, materials, and minutes (time)...the five M's. (Appendix F)

For the purpose of this model, the inventory and identification of the Bozeman Public Schools' resources should include those resources now available, but attention should also be given to those potential resources, which may appear to be somewhat intangible. This suggested inventory is divided into five sections: finances, personnel, facilities, equipment and time. It is acknowledged that the content is not 100 percent complete, but it can be utilized as a starting point.

Finances--are generally viewed as a means to purchase or secure other resources, but it is still of importance to identify all the sources of income and the availability of such in the Bozeman Public Schools.

As a basis for the financial structure, it is necessary to start with a structure known as the Foundation Program. Figure 13, page 78, depicts the organization of the State Foundation Program as it presently exists. In a study completed in 1970, Campbell (5:62) classified the various segments of the Foundation Program into a series of sources. In brief, this is the description of the Foundation Program:

1. Elementary

- A. Source No. 1: Interest and Income money earned from school lands and distributed on the basis of average number of students belonging
- B. Source No. 2: County-wide levy of 25 mills
- C. Source No. 3: State equalization money
- D. Source No. 4: Deficiency levy on a county-wide basis; the state has quite often fallen short of the amount of equalization which they had planned to provide

FIGURE 13

MONTANA STATE FOUNDATION PROGRAM

	Voted District Levy	Voted District Levy	
	Permissive levy on elementary district	Permissive levy on secondary district	
<u>F.P. Level 4th Source</u>	Deficiency Levy (Co.)	Deficiency Levy (Co.)	<u>F.P. Level 3rd Source</u>
	State Equalization Money	State Equalization Money	
<u>3rd Source</u>			<u>2nd Source</u>
	County-wide Levy	County-wide Levy	
<u>2nd Source</u>			<u>1st Source</u>
<u>1st Source</u>	State Interest and Income Money		
	ELEMENTARY	SECONDARY	

2. Secondary

- A. Source No. 1: County-wide levy of 15 mills
- B. Source No. 2: State equalization money
- C. Source No. 3: Deficiency levy on a county-wide basis;
levied the same as the elementary

In addition to the Foundation Program, a permissive levy equal to 25 percent of the Foundation Program is permitted for both elementary and secondary districts. As in nearly all school districts the Foundation Program and the permissive levy do not provide sufficient funds, so additional dollars may be obtained through a procedure known as the voted levy.

The Bozeman Public Schools have an enviable record in being able to obtain dollar resources through the passage of special mill levies. This accomplishment is illustrated in Table 5, page 80, and Table 6, page 81, as stated in the Bozeman Public Schools Board of Trustees Budget and Negotiation Primer. (3:5-6)

TABLE 5
ELEMENTARY SPECIAL LEVIES

YEAR	AMOUNT	MILLS	VOTE		PERCENT "YES"
			FOR	AGAINST	
1949	0	0			
1950	0	0			
1951	0	0			
1952	18,230	3.5	372	74	83.4
1953	28,045	5.0	320	75	81.0
1954	44,500	7.5	446	102	81.4
1955	31,029	5.0	281	72	79.6
1956	52,476	7.5	403	198	66.9
1957	41,733	5.5	673	623	51.9
1958	42,395	5.5	752	627	54.5
1959	30,994	3.8	1,107	582	65.5
1960	62,048	7.5	1,080	602	64.2
1961	47,321	5.5	1,168	204	85.1
1962	52,519	5.1	1,114	224	83.3
1963	0	0			
1964	43,263	4.0	1,260	650	66.0
1965	134,584	11.4	1,128	386	74.5
1966	191,549	14.7	1,150	418	73.3
1967	145,141	10.5	929	288	76.3
1968	232,375	16.9	1,225	400	75.4
1969	274,996	18.3	1,047	749	58.3
1970	274,996	18.3	1,260	368	77.4

TABLE 6
HIGH SCHOOL SPECIAL LEVIES

YEAR	AMOUNT	MILLS	FOR	VOTE AGAINST	PERCENT "YES"
1957	36,907	3.3	744	637	53.9
1958	(58,883)	(5.3)	711	781	47.7
	(58,883)	(5.3)	*1,244	1,292	49.1
1959	54,393	4.5	1,164	748	60.9
1960	60,170	5.0	1,178	736	61.5
1961	74,326	5.9	1,195	268	81.6
1962	82,020	6.2	1,163	308	79.1
1963	No voted Levy				
1964	29,792	2.2	1,334	871	60.5
1965	33,068	2.3	1,138	402	73.9
1966	97,119	6.5	1,443	381	79.1
1967	78,228	5.0	1,059	416	71.8
1968	145,700	8.97	1,366	498	73.3
1969	214,317	11.5	1,108	968	53.4
1970	214,317	11.5	1,393	459	75.2

*Second Vote

In studying the Foundation Program as a source of support in the Bozeman Schools, it is important to note the taxable valuation of the property in the districts. Table 7 delineates the growth pattern of the taxable valuation of the Bozeman School Districts. (3:13)

TABLE 7
COMPARATIVE TAXABLE VALUATION

	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>
H.S.	\$15,279,168	\$16,025,845	\$16,729,397	\$17,765,312	\$18,531,742
Elem.	\$12,870,330	\$13,498,855	\$14,092,734	\$14,982,520	\$15,919,624
Percent of Increase...	5.2	4.8	4.4	6.3	5.2

As shown in the above Table, a 5.1 percent average annual increase permitted budgets to be increased by a similar percentage if the Foundation Program schedule stayed the same, and if the permissive levy and voted levy remained constant.

In legislative years, school districts are primarily concerned with the action taken on the Foundation Program. The annual concern is usually centered on the passage of the district special mill levy. Campbell (5:77) states:

Even though the general fund is only one of eighteen separate funds available to the elementary and high school districts, it provides the largest share of the total financing of the operation of the school district.

The end result of the Foundation Program, the permissive levy, and the voted levy is the general fund budget. To further illustrate the availability of dollar resources, Table 8 relates the increases in the general fund budget over the past several years. (3:49)

TABLE 8

GENERAL FUND BUDGET INCREASES, BOZEMAN PUBLIC SCHOOLS
1959-1970

	HIGH SCHOOL			ELEMENTARY		
	Budget	Increase	%	Budget	Increase	%
1959	\$ 293,467	\$ 57,389	24.3	\$ 612,691	\$ 19,863	3.2
1960	303,951	10,484	3.6	682,397	69,706	11.4
1961	346,832	42,881	14.1	742,568	60,171	8.8
1962	392,492	45,660	13.2	827,251	84,683	11.4
1963	431,403	38,911	9.9	896,582	69,331	8.4
1964	511,393	79,990	18.5	984,723	51,141	5.8
1965	567,783	56,390	11.0	1,084,276	135,553	14.3
1966	650,354	82,571	14.5	1,197,743	113,467	10.5
1967	766,188	115,834	17.8	1,310,571	112,828	9.4
1968	920,385	154,197	20.1	1,601,896	291,325	22.2
1969	1,049,712	129,327	14.1	1,791,746	189,850	11.9
1970	1,086,439	36,727	3.5	1,833,844	42,098	2.3
AVERAGE PERCENT OF INCREASE:			13.7	10.0		

In addition to the General Fund Budget, there are several other funds which the Bozeman Public Schools may utilize. An information manual, edited by the State Department of Public Instruction (18:1-50) names the funds which are available:

Transportation	Driver Education
Bus Depreciation Reserve	NDEA (National Defense Education Act)
School Lunch	Vocational Education
Tuition	Area Re-Development
Teacher Retirement	Man Power Development & Training Act
Debt Service	Work-Study
Building Fund	Adult Basic Education
Adult Education	ESEA (Elem.-Secondary Education Act)
Housing & Dormitory	Child Nutrition Act
Non-Operating Fund	Operation Head Start

The Bozeman Public Schools are currently utilizing these thirteen budget funds:

Transportation	Building Fund
Bus Depreciation Reserve	Adult Education
School Lunch	Driver Education
Tuition	NDEA (National Defense Education Act)
Teacher Retirement	Vocational Education
Debt Service	ESEA (Elem.-Secondary Education Act)
Work-Study	

The above fund budgets are funded by a variety of sources: automatic levy, voted levy, fee income, direct grant, percentage reimbursement, tuition charges from other districts, or shared cost. The dollar resource comes from local, state and federal sources.

Personnel--, as a category, is considered as a major type of resource even though it is obtained by another resource. This section describes the personnel resources of the Bozeman Public Schools and

also other personnel resources within the community of Bozeman. If a school system is to meet the needs of the students who attend, it must be considered as a part of the whole society in which it is located. Thus, it is deemed desirable to make effective use of all school staff and also personnel within the community when striving to meet the needs of the individual students. Table 9 shows Bozeman school salaried personnel resources.

TABLE 9

PERSONNEL RESOURCES OF BOZEMAN PUBLIC SCHOOLS

	<u>High School</u>	<u>Jr. High</u>	<u>Elementary</u>	<u>Dist. Wide</u>
classroom teachers.....	51	50	100	
teacher aides.....	0	0	2	
work study.....	3	3	14	
counselors.....	3	3	1	
librarians.....	2	2	3	
administration.....	2	2	6	9
cooks.....	2	2	3	
custodians.....	5	6	13	
office staff.....	2	3	8	9
research staff.....	0	0	3	
bus driver.....	0	0	0	1

The total number of personnel of the Bozeman Public Schools has been increasing over the past years as new programs and more students are involved within the educational system.

In viewing the entire community as potential personnel resources for the Bozeman Public Schools, one would need considerable time and writing space to approach the 100 percent coverage. In order

to establish the concept of the school system being an integrated part of the whole community, the following partial list of personnel resources is given:

1. Local and central PTA units
2. Montana State University staff
3. School appointed Drug Education Committee
4. County government staff
5. Architects
6. Building consultants
7. Financial consultants
8. Ministerial Association
9. Civic groups
10. City of Bozeman government staff
11. Planning consultants
12. Federal government agencies
13. Aviation agencies
14. Business consultants
15. Transportation agencies

Some of the personnel resources listed above are currently working in direct relationship with the school toward meeting the needs of the Bozeman public school students. Other personnel resources have considerable potential for being of benefit in assisting the school system in meeting the needs of students. The trend toward more and

more community involvement in the public school system will enhance the total personnel resources available to the Bozeman Public Schools.

Facility--resources are also dependent upon the dollar resources, but this type of resource is of a rather permanent nature. In reviewing the facility resources, the term real property will be used as a synonymous term. As in the area of personnel resources, there are facility resources belonging directly to the school district, as well as facility resources owned by various agencies throughout the community.

School facilities are organized within a K-4, 5-6, 7-9, and 10-12 grade level. The location of the K-4 units are based upon the community neighborhood concept. The 5-6 Willson Middle School is somewhat centrally located within the Bozeman City limits. The Junior High School and the Senior High School are located on the same 50 acre site in the west part of the City of Bozeman. Bozeman Vo-Tech School division is located in the east wing of the Willson Middle School.

The School Board has anticipated future growth and expansion of school facilities. The following sites have been purchased for this purpose:

Thompson	six acres	Corner of Lincoln and Black
Placek	four acres	Seventeenth and Koch
Bomier	seven acres	Twenty Nine Hundred Block of W.Babcock
Smith	ten acres	Eight Hundred Block of North Nineteenth

The classrooms available for instruction and the gym and auditoriums are located in this type of distribution:

	<u>Elementary</u>	<u>Junior High</u>	<u>Senior High</u>
Instructional classrooms	96	50	36
Gyms/auditoriums	7	1	1

Administrative offices are located within each building. The central office administration unit is located in the Willson Middle School.

The community facility resources are numerous with the facilities at Montana State University heading the list:

1. Montana State University: total complex including Museum of Rockies
2. City of Bozeman: parks, swimming pool, library
3. Various churches and meeting facilities
4. Ski slopes
5. Golf courses
6. Target ranges
7. Theatres
8. Ketterer Art Center
9. Radio stations
10. T.V. Channel Three
11. Federal and state outdoor environment

There are undoubtedly many other facility resources which could be considered for potential use in the educational programs in the Bozeman Public Schools. Just where and how each of these facility resources

can be of benefit to the school system depends upon the programs provided by the school to meet the needs of the individual students.

The equipment--resources mentioned in this section are considered to be of a specialized nature and in most cases somewhat costly. The equipment owned by the school system includes the following:

1. Three school buses
2. Burroughs E-6000 Electronic Accounting Machine
3. Commercial photo copiers
4. Print room equipment: cutter, folder, power punch, multilith, printer
5. IBM card punch
6. Specialized equipment: home economics, shop, business, science, art, music/band, athletics
7. Operation and maintenance equipment: scrubbers, polishers, mowers, vehicles
8. Hot-lunch kitchen equipment

A more complete list of equipment in the Bozeman Public Schools can be obtained from the current inventory kept in the central office administration files.

There are various types of equipment within the community of Bozeman which have potential benefit for the public school system. Examples of these are:

1. Montana State Computer Center: Sigma 7 and IBM 360
2. Contract bus service: 27 regular route busses
4 spare busses
2 special charter busses
3. City of Bozeman: fire and police equipment, maintenance and construction equipment
4. County of Gallatin: Burrough accounting equipment, construction and maintenance equipment, and law enforcement equipment

The extent to which this type of resource can be utilized by the school system depends, like the facility resources, on the process the school utilizes to meet the educational needs of the students.

Time--is considered a very important resource in a PPBE system. After determining the needs, the resources are considered in relation to alternatives for meeting the needs. The time resource can often be the determining factor in the analysis of the alternatives. Rather than attempt to identify the time resources available, it is deemed of more value to identify some of the time limitations or constraints which exist. The following limitations or constraints are present because of school laws of Montana or State Department of Public Instruction, or traditional concepts of the local public school system:

1. The legal age limit for public school students is 6-21 years of age. Beyond this age limit, no state finances are available.

2. All schools in the Bozeman system operate on the traditional nine-month system. A special program is usually operated within the summer months.
3. According to state law, the Bozeman Public Schools must operate for a minimum of 180 days to obtain Foundation Program assistance. A minimum of 180 days of instruction and up to seven days of pupil-instruction-related days are the guidelines. Bozeman Public Schools, for the past two years have had 182 instructional days and seven related days. This law does not prohibit a longer instructional year.
4. State law sets these minimum hours for a regular school day: grades 1-3, 4 hours; grades 4-8, six hours. In the secondary level these minimums are set for courses: academic subject (without lab work) shall be at least 225 minutes per week; subjects which require lab work shall have at least 270 minutes per week.
5. The school day is defined; eight o'clock in the morning and nine o'clock in the evening are the parameters.
6. The Bozeman system uses both nine and six-week recording periods for grades.
7. Bonds for construction purposes are limited to 20 years for payment.
8. Special mill levies may only be voted in for one year at each election.
9. Building reserves have flexibility in the number of years in which a specific sum of money is to be accumulated for a specific purpose.
10. School may not be held on Sunday or Saturday, except that Saturday may be used as a make-up day for time missed due to unusual circumstances.
11. General budgets are only designed for one school term.

The number and types of time resources are almost infinite when a school system takes on the task of analyzing alternatives for meeting the needs of the students.

Step 3 is an attempt to draw attention to the importance of an inventory and identification of the available resources in the Bozeman Public School District. It is hoped that this information will be useful as a starting point for those who accept the challenge of implementing PPBES in the Bozeman Public Schools.

PHASE II DEVELOPMENT OF THE IMPLEMENTATION STRATEGY

Assuming that the preliminary steps of assessing the environment, securing a commitment, and taking an inventory have been achieved, the next hurdle is to develop a strategy for implementing PPBES in the school system in Bozeman. In order to achieve this development, these following steps should be taken:

STEP A: APPOINTMENT OF THE PPBES DIRECTOR

The Bozeman Public Schools should name a present employee or a new employee as the director of PPBES for the school system. The selection of this individual is very important to the success of a PPBES program. These characteristics should be considered in selecting a PPBES Coordinator:

1. The individual should have experience as a teacher and as an administrator. Other experience in the area of systems and general management would be beneficial.
2. If the individual could qualify for certification in the state of Montana, it would enhance the overall program.
3. The individual should possess a proven skill in the coordination of the efforts of individuals within group situations.
4. A keen, sincere interest in PPBES is necessary.
5. A proven knowledge of PPBES on the functional level is of vital importance.
6. The individual should possess a sound general knowledge of school administration as well as a general knowledge of curriculum design and organization.
7. The individual must be systems oriented.

STEP B: THE APPOINTMENT OF A TASK FORCE

After the PPBES director has been selected, a task force should be appointed and assigned the responsibility to become knowledgeable in the subject of PPBES through participation in a massive inservice training program. Upon gaining an understanding of the working of PPBES, the task force next should be charged with the task of performing an analysis of the present school system. When that analysis is completed, the final job for this task force should be to generate an implementation strategy for PPBES in the Bozeman Public Schools.

The selection of the task force members should be accomplished by the recommendation of the PPBES coordinator with the approval of the

superintendent and school board. The selection criteria used in the appointment of the individuals to the task force should include as many of the following characteristics as possible:

1. An interest and desire to participate in an innovative program
2. A positive attitude toward change
3. Time and energy available to devote to such an assignment
4. Basic analytical abilities
5. Recognized traits which will enhance group activity
6. Some basic knowledge of systems approach
7. Elementary knowledge of PPBES
8. Reasonable knowledge of the school and community

The number of individuals appointed to the task force should be limited to 8-10. The task force should be representative of various factions of the community and school. In the Bozeman Public Schools, it is suggested that the following levels or areas be represented in the organization of the task force:

1. Board member
2. Superintendent or representative
3. Teacher
4. Director of special services or representative
5. Director of instruction and curriculum or representative
6. Business director or representative

7. Student

8. Community

After the task force members have been carefully selected, it is essential that each member be given a clear directive as to the obligation involved with the task at hand. Proceeding from this point, the next involvement is discussed in Step C: Orientate Task Force.

STEP C: ORIENTATE TASK FORCE

The process of the orientation should be centered in three specific areas of PPBES:

1. History of PPBES
2. Components of PPBES
3. Function of PPBES in the educational system

The orientation program should be designed by the PPBES director with the assistance of the Inservice Director of the Bozeman Public Schools under the supervision of the superintendent of schools. It is expected that the PPBES director would make the majority of the decisions as to the actual content of the program. The task force participants should be queried for suggestions and techniques to be incorporated into the program.

Some of the techniques available for organizing an efficient, successful orientation program may include:

1. Seminars
2. Work-shops
3. Extension classes
4. Local study committees
5. Visitations to other PPBES projects
6. Staff meetings
7. Summer school sessions

The seminars may be held locally with some outside expertise invited to lead the discussion and study. Expertise for seminars may be obtained from RC/ASBO, ASBO, Rand Corporation, AASA, SDPI, USOE, or one of the operational PPBES projects such as Edmonton, Alberta; Shoreline District in Seattle, Washington; or Clark County, Las Vegas, Nevada. It is possible that visitations may be made to these PPBES projects or any of the many other projects in operation in the United States. The seminars sponsored by NASE of AASA is a source of excellent inservice training if the financial resources of the district will permit this type of expenditure.

Instructional materials such as films, film strips, slides, brochures and other literature are available for training purposes from RC/ASBO and many of their pilot projects. RC/ASBO is expected to have a PPBES guide published late in 1971 which is supposed to be a composite of the work of the pilot projects and the research team of ASBO. This single document should be secured and placed high on the

list of references to be used in the Bozeman PPBES implementation.

Upon completing the orientation sessions on the history of PPBES, the components, and the function of PPBES in educational systems, the task force would move on to the next activity of analyzing and evaluating the Bozeman Public Schools for possible inclusion in the PPBES.

STEP D: ANALYZE AND EVALUATE THE BOZEMAN SCHOOLS

With a background and knowledge of PPBES, the task force will be asked to analyze the current operations and practices of the entire school system of Bozeman. The purpose of this task will be to compare the present status with the descriptive requirements of a PPBES operation. It is expected that the analysis will find many requirements of PPBES already in operation in the present system, as well as a number of PPBES characteristics.

The present status--of the Bozeman Public Schools, as categorized according to the four components of PPBES, is viewed by the superintendent of schools (Appendix C) as follows:

1. Planning: Problems are generally defined at various levels throughout the district; teachers and administrators are continually engaged in striving to identify problems and solve them. Charrette study techniques have been used twice this past year.

The senior high school has a written philosophy and statement of objectives (Appendix C, attachment No. 1). The administration has started a process in which district administrators are required to set goals, determine objectives and follow up on the evaluation of their particular job responsibilities. A multi-year plan has been developed for the maintenance of buildings.

The generation of alternatives is more notable in the area of social studies where the assistant director of instruction has a curriculum revision study underway. Many programs and techniques are being piloted in order that goals and objectives may be determined for the social studies curriculum K-12. Other than this particular program, the generation of alternatives are largely left to the desire of the individual teachers.

2. Programming: The social studies project is the main focal point in the analysis of alternatives which are being piloted. The analysis is primarily of the effectiveness and is less concerned with the cost analysis at this point.

The curriculum and offerings are not organized into programs as such, but are simply listed by subject and department.

3. Budgeting: The accounting code is a branch of the traditional line-item budget established by the State Department of Public Instruction. From this basis, considerable breakout is done under most all of the line-item accounts. For example, the 232 general teaching supply item has 13 sub areas in which specific amounts are allocated to subject area by grade level. A nine-digit code is utilized to identify the fund, account, building, and district.
4. Evaluation: In the various levels of the K-4, criteria are pre-determined and evaluation is accomplished at periodic intervals throughout the year. The majority of the evaluation at the upper levels is based upon the criteria set by the individual teachers. In most cases, the emphasis is placed upon the cognitive domain, but the affective domain is also of concern.

This additional comment on the present status of evaluation in the Bozeman Public Schools was obtained from the director of instruction (Appendix B):

1. Some of the evaluation techniques and methods used in the Bozeman Public Schools include:

Metropolitan Achievement Tests, grades K-2
 Iowa Test of Basic Skills, grades 3-8
 Preliminary Scholastic Aptitude, grades 9-12
 National Merit Examination, grades 10-12
 Skill Level Tests (math and reading), grades 1-4

The evaluation of the analysis should state in a clear, concise manner, the inadequacies or shortcomings that need to be improved upon to put the Bozeman Public Schools on a PPBES operational basis. The areas of concern in this analysis and evaluation of the present system should include:

1. Organization for decision making
2. Procedures of setting goals, determining objectives, devising measuring techniques, generating alternatives, analyzing the alternatives, and evaluating results
3. Information and communication systems
4. Accounting system
5. Budgeting system
6. Staff abilities and skills relative to procedures in number two above
7. Offerings and curriculum programs

8. Constraints; financial, political, traditional, moral, societal, personnel, temporal

9. Utilization of resources available

After the analysis and the evaluation procedures are completed, the findings should be prepared in a detailed written report. This report then must be validated by other individuals.

STEP E: VALIDATE THE ANALYSIS AND EVALUATION REPORT

Before proceeding with the implementation strategy, it is now essential that the findings of the analysis and evaluation of the present status in the Bozeman Public Schools be validated by the teaching staff, students, non-teaching staff, and the community citizens. This may be accomplished through a presentation of the findings to the group as a whole or to representatives of groups or to individuals. A secondary, but invaluable purpose of this process of validation is to gain collective support of the report.

STEP F: FINALIZE EVALUATION REPORT

At this point, the task force will make any necessary adjustments in its findings as a result of the validating process with the teachers, administrators, non-teaching staff, students, and community. It may be possible that the validating process will point out the need for a re-analysis of all or part of the present operational status.

STEP G: COMMUNICATE THE PPBES CONCEPT TO ALL CONCERNED

At this stage, the task force has pertinent information as to the present status of the Bozeman Public Schools. The next assignment for the task force is to communicate the idea that a PPBES would be beneficial for the school system and the community as a whole. This process demands that a broad communication program be initiated to reach the school staff and community. It is doubtful, at this time, whether students would be involved at this stage of the implementation strategy. It will be the responsibility of the task force to organize and implement methods and procedures in a simple and straight-forward manner for communicating the message of PPBES. It is expected that small and large group meetings will be held with school staff and community members. The concept may be injected at various teacher association group meetings as well as community clubs and organizational meetings.

Once this line of communication is opened, effort should be exerted to keep it operating on a two-way basis throughout the years to come. A planned program of PPBES information should be aimed at the community in general. A more detailed type of inservice information on PPBES should be organized and presented to the school staff. This plan should be correlated with the progress anticipated by the task force group.

STEP H: GENERATE A STRATEGY FOR IMPLEMENTATION

Assuming that the PPBES concept has received favorable reaction from the school staff and the community, the task force can now direct its effort toward the development of a detailed strategy to implement PPBES in the Bozeman Public Schools. Having achieved a knowledge of PPBES in Step C and a knowledge of what presently exists in the Bozeman Public Schools in Step D, the task force has the basic foundation needed to design a strategy for implementation.

The major areas of concern to the task force in the development of the implementation strategy at this point are:

1. The target area of the pilot project
2. Starting point and the development time schedule
3. Personnel assignments and their responsibilities
4. Allocation of needed resources

The Target Area--needs to be determined. This starting point should be decided upon in terms of the staff's understanding of the PPBES concepts, the staff's interest and desire to work with PPBES, and the skill of individual staff members relative to goal and objective development. It is important to pick a target area where the most positive factors exist. This target area may be a particular curriculum area, a grade level, a building, or a combination of such. This concept of a target area implies that PPBES will not be

implemented in the entire school system at one time, but will utilize a type of pilot approach.

The starting point and developmental time schedule--is concerned with which one of the components of PPBES should be approached first, second, and so on. It is of a vital concern that a timeline be developed which will depict the orderly development and interrelationship of planning, programming, budgeting and evaluation in the system.

Personnel assignments and responsibilities--are to be determined in relation to interests and skills of various staff members and community citizens. The personnel are to be assembled into teams or groups and then assigned specific responsibilities relative to the components of planning, programming, budgeting and evaluation.

Allocation of resources--is an area which should be clearly defined and stated. The requested amount of resources must be kept in the perspective of the statement presented in securing the original commitment from the decisionmakers. The resources of concern will include salaries, materials, space, time and equipment

Through the process of group interaction, it is expected that several trade-offs will bring the task force to a common ground. After a final individual and group analysis of the proposed strategy, the plan will be compiled and presented for the approval of the staff

and community citizens.

STEP I: IMPLEMENTATION STRATEGY SUBMITTED FOR APPROVAL

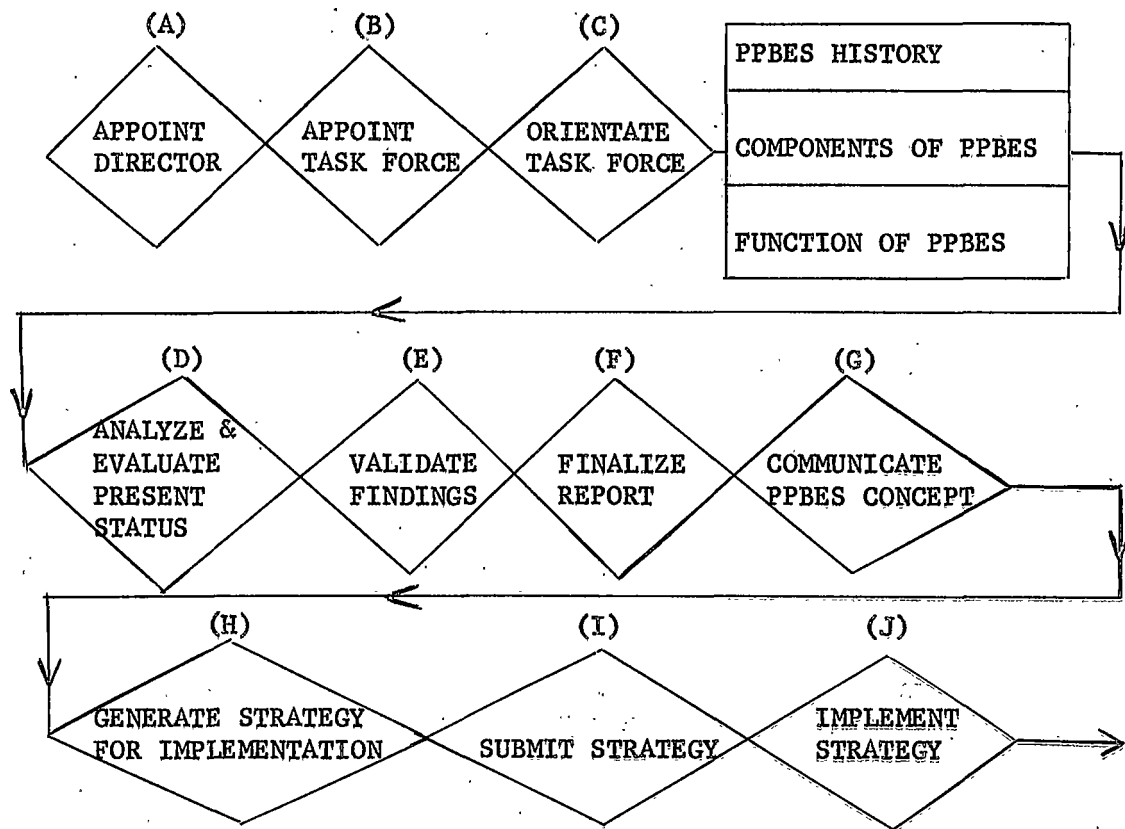
It is essential that the strategy for implementing PPBES in the Bozeman Public Schools be ratified by all concerned before the actual implementation is started. This ratification is to be interpreted as a review of the strategy by the decisionmakers and an evaluation by the staff members and citizens of the community.

The review by the decisionmakers is needed to supplement the periodic informational reports which have been made available to them throughout the period of strategy generation. The evaluation by the staff members and the citizenry of the community is needed because they have not been specifically informed during the process of the development of the strategy as have the decisionmakers. As Step G called for the start of a periodic inservice training program for staff and citizenry, it is expected that the concerned individuals of the staff and community will have sufficient expertise to make an adequate appraisal of the proposed implementation strategy.

STEP J: IMPLEMENTATION OF THE STRATEGY

If at this time approval is secured from the decisionmakers and a positive evaluation is reported from the staff and community members, the implementation strategy is ready to be put into action. Figure 14, page 105, depicts the total steps in Phase II leading to

FIGURE 14
FLOW CHART OF PHASE II



the implementation of a strategy.

In order to give further understanding of an implementation strategy, Phase III related how a hypothetical strategy might be employed.

PHASE III: HYPOTHETICAL IMPLEMENTATION

A hypothetical situation has been constructed to exemplify how the Bozeman Public Schools may progress through an initial implementation strategy. It is assumed that Phases I and II have been completed satisfactorily and that a strategy has been proposed and accepted for implementation. Phase III is an example of a strategy at this point.

This hypothetical situation will be concerned with the following:

1. The need
2. Selection of an area
3. Goals and objectives
4. Generating alternatives
5. Analyzing alternatives
6. Alternative recommendations
7. Decisionmaker selection
8. Implementation of program
9. Reporting
10. Evaluation

11. Recycling of process
12. Program structure
13. Account code
14. Multi-year program budget
15. Information and communication system
16. Inservice program

These 16 steps are discussed in the order given, but the order of implementation of the steps in the system is depicted in Figure 15, page 108.

STEP 1: IDENTIFICATION OF THE NEED

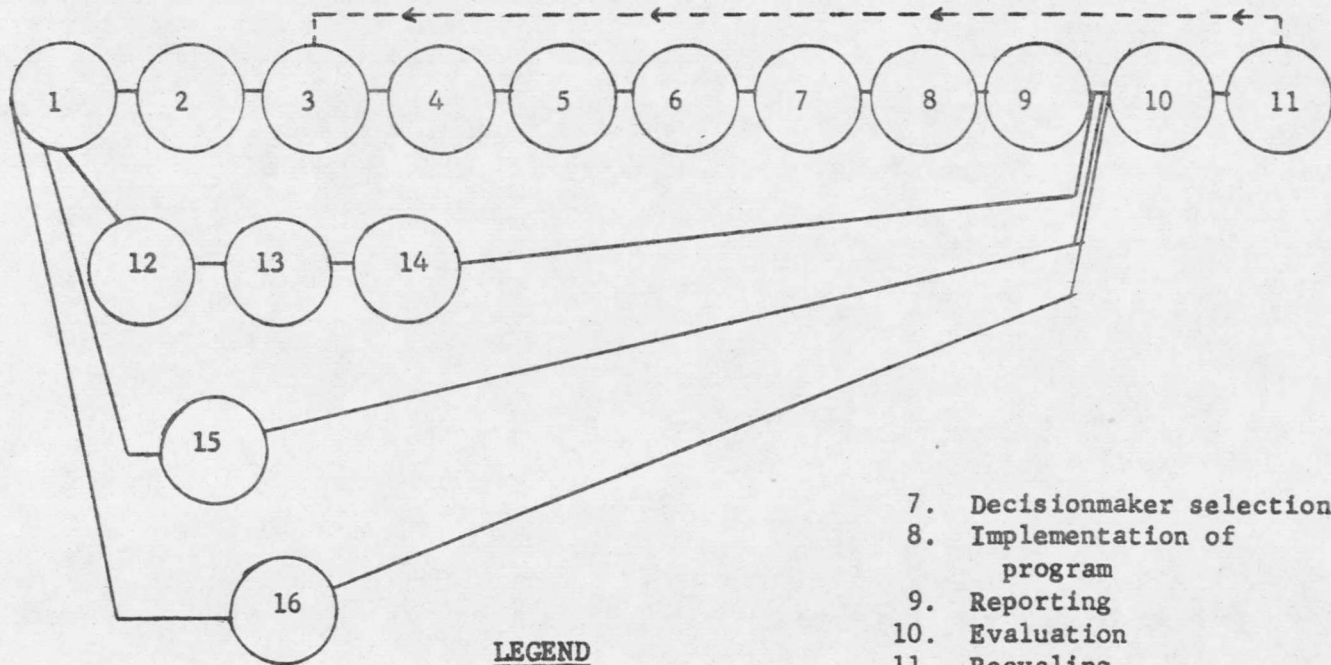
Basically, the identification of the need is thought of in PPBES terms as defining a problem area. As a result of defining a problem, a need for resolving the problem is evidenced. At the onset of this task, it is common to start with a very broad need such as a need for a basic education. For the purpose of this study, a more specific need will be defined. This need is: to enable graduating seniors to possess employable traits and skills and be successful in gaining employment.

STEP 2: SELECTION OF AN AREA

The selection of an area in which to start the implementation strategy is the responsibility of the task force in the generation of

FIGURE 15

PHASE III IMPLEMENTATION PROCESS



LEGEND

- | | |
|-------------------------------|---|
| 1. Identification of need | 7. Decisionmaker selection |
| 2. Selection of an area | 8. Implementation of program |
| 3. Goals and objectives | 9. Reporting |
| 4. Generation of alternatives | 10. Evaluation |
| 5. Analysis of alternatives | 11. Recycling |
| 6. Alternative recommendation | 12. Program structure |
| | 13. Accounting code |
| | 14. Multi-yr. program budget |
| | 15. Information and communication systems |
| | 16. Inservice program |

the strategy proposal. This should be based upon the needs as surveyed, the abilities and interests of staff in the specific areas of the school system, and the degree of difficulty expected in the implementation of PPBES in that particular area. It is well to start with an area which can lend itself to performance objectives somewhat easier than some other areas. Success on the first try is very important. With the need stated in general terms, the hypothetical area is now set as the vocational educational field.

After the area for implementation has been selected, various teams should be assigned to work with particular units of the strategy. For the purpose of this illustration, the following assignments have been made:

1. Goals, objectives, and alternatives:

- (4) vocational education teachers, representative of the post high, senior high, junior high, and university;
 - (2) community citizens; (2) senior high students

2. Program structure:

- (4) teachers representative of the post high, senior high, junior high and elementary; (1) administration, (2) community citizens; (1) student

3. Accounting and budgeting system:

Business office staff

4. Analysis of alternatives:

- (1) representative of each of: business office, senior high administration, vocational education student at senior high, curriculum office, senior high teacher from math,

- senior high teacher from vocational education area,
community citizen
- 5. Inservice training program
 - Members of the original task force
- 6. Information and communication system
 - (1) data processing staff member, (1) high school administration member, (1) community member, (1) teacher from senior high
- 7. Evaluation team will be appointed after the implementation is under way

STEP 3: GOALS AND OBJECTIVES

As mentioned in Chapter I, goals are considered to be broad statements of intent and are normally not measurable. Objectives are thought of as more specific statements of intent, but must be measurable in terms of performance expected under specific conditions and by a predetermined criterion or standard.

Under the assumption that the team has been assigned to this task in the area of vocational education, one may expect a product of goals and objectives such as the following: (G=Goals; O=Objectives)

- G₁ TO PROVIDE THE OPPORTUNITY FOR ALL STUDENTS AT BOZEMAN SENIOR HIGH SCHOOL TO ACHIEVE THE NECESSARY SKILLS TO ENABLE THEM TO BECOME EMPLOYABLE UPON GRADUATION.
- O₁ For 85 percent of the Bozeman Senior High School graduates who desire to seek employment to secure employment within (3) months after graduation. The Bozeman Senior High School Counselor follow-up file, as updated on September 1, will be the measurement tool.

- G₂ TO PROVIDE THE OPPORTUNITY FOR ALL STUDENTS AT BOZEMAN SENIOR HIGH SCHOOL, WHO DESIRE, TO ACHIEVE EMPLOYABLE SKILLS IN BUSINESS, HOME ECONOMICS, AND TRADES AND INDUSTRY.

- O₂ For 85 percent of the Bozeman Senior High School graduates, who desire to seek employment in business, home economics, or trades and industry, to secure employment within (3) months after graduation.

Bozeman Senior High School Counselor follow-up file, as updated on September 1, will be the measurement tool.

- G₃ TO PROVIDE THE OPPORTUNITY FOR ALL STUDENTS, WHO DESIRE, TO ACHIEVE EMPLOYABLE SKILLS IN TYPING, SHORTHAND, BOOK-KEEPING, FILING, AND OFFICE MACHINE OPERATION.

- O₁ For 85 percent of Bozeman Senior High School graduates, who desire to seek employment in business, to achieve the following skills by graduation time:

Typing: minimum of 50 WPM on Southwestern Test A-1 with a minimum of 95 percent accuracy.

Shorthand: minimum of 80 WPM on Gregg Test 100A

Bookkeeping: Pass the Montana Employment Initial Employment Test with a minimum score of 80.

Office Machine

Operations: Pass the Montana Employment Initial OM Test with a minimum score of 85.

- G₄ TO PROVIDE THE OPPORTUNITY FOR ALL STUDENTS, WHO DESIRE, TO ACHIEVE EMPLOYABLE SKILLS IN WORKING WITH THE COMPLETE BOOKKEEPING CYCLE.

- O₁ For 85 percent of the Bozeman Senior High School graduates, who have completed two semesters of book-keeping, to be able to demonstrate a skill and knowledge of the complete bookkeeping cycle. This skill shall be based upon the ability to work a practice set which includes: balance sheet, five special journals, three special ledgers, and a worksheet. The set will

include twenty daily transactions and require the student to complete the worksheet process and complementary documents. Three hours shall be allowed for the examination. A minimum of 95 percent accuracy and a minimum of 80 percent of the work completed shall be the passing standard.

With the foregoing statements of goals and measureable objectives, the team would assess the present situation. The summary report would appear as such:

The present bookkeeping classes are taught in the usual traditional approach; two teachers with four classes of bookkeeping each, 25 students average class load, each teacher is assigned one student-study hall and one free period, materials consist of Southwestern seventh edition texts with corresponding workbooks and practice sets, no grouping of students is used in the assignment of students to sections, and the class is offered to both juniors and seniors on a yearly basis.

STEP 4: GENERATION OF ALTERNATIVES

The team is now confronted with the job of generating some alternatives to offer as a solution to their stated objectives. Here are four such alternatives:

1. Continue the present program.
2. Modify the present program so that ten classes are scheduled in order that the average class size will be 20 students. Assign the study halls to other staff members. Two teachers will be needed for the bookkeeping classes. Group the students for the various sections according to their academic ability in previous math and English classes. Utilize audio visual transparencies in presentation of lectures. Field trips would be incorporated into the instructional process toward the end of the second semester.

3. Organize a team-teaching approach to bookkeeping whereby large and small group techniques would be used. One master teacher and two teacher aides would be required. The master teacher would present a one-hour lecture/demonstration on each Monday, Wednesday, and Friday. A one-hour lab period would be scheduled for each student following the lecture/demonstration by the master teacher. Adding machines and table areas would be provided for the labs. Each lab session would have approximately 10 students.
4. Utilize an individualized programmed learning approach. One master teacher and one teacher aide would be required to staff the program. A programmed workbook would be supplied each student. Supplementary slides and overhead transparencies would be available for use by the students. The workbook would include periodic self-tests for use by the student.

The master teacher and aide would be available at one location for six periods each day as well as thirty minutes before and after the regular school day. At this location, tables and adding machines would be available for use by the students. The staff would assist individuals as well as keep records on the individual's progress. A final exam would be given by the supervising teacher at the student's request. Each student would be scheduled so that he would be assured of at least one period in the bookkeeping lab per day. He would not be required to attend unless he needed assistance. Bookkeeping career investigation contacts with local businesses would be arranged during the second semester for those students who were interested.

STEP 5: ANALYSIS OF ALTERNATIVES

After generating a supply of alternatives for achieving the stated objective, the team must develop a system for analyzing the various alternatives. In studying the alternatives, the following points are considered as essential before a report can be made to the decisionmakers:

1. Staff required
2. Cost and time required
3. Facilities required
4. Equipment required
5. Instructional materials required
6. Constraints to be considered
7. Approximated effectiveness

In the analysis of the alternatives, the team should use the examples given in Figure 4, page 41, and Figure 5, page 43 as guidelines. When the analysis task is completed the information should be reported in a manner similar to Table 10, page 115, and Table 11, page 116. In addition to this information the team should be sure to consider all possible intangible (non-quantifiable) items along with the quantifiable items before the analysis of each alternative is completed and reported.

STEP 6: ALTERNATIVE RECOMMENDATION

For each objective stated, the team must complete an analysis of two or more alternatives. Upon completion of the analysis, the team shall submit the best alternatives to the decisionmakers. This act should be accomplished by submitting all the supporting data substantiating the particular alternatives recommended. In this hypothetical situation, four alternatives are recommended with the number

TABLE 10
COST ANALYSIS OF ALTERNATIVES

RESOURCES REQUIRED 1971-72	A L T E R N A T I V E S			
	1	2	3	4
1. Instructional salaries	18,000.	18,000.	15,000.	13,000.
2. Instructional personnel benefits	2,700.	2,700.	2,250.	1,950.
3. Texts	0.	0.	0.	1,000.
4. Supplies	300.	600.	500.	700.
5. Capital Outlay	300.	300.	600.	600.
6. Support services				
a. Instructional	500.	500.	500.	500.
b. Management				
c. General				
TOTAL COSTS:	21,800.	22,100.	18,850.	17,750.

TABLE 11
ANALYSIS OF EFFECTIVENESS

ANTICIPATED EFFECTIVENESS ALTERNATIVES										
	Motivation of student	Freedom of teaching style	Low pressure on student	Economy of teacher time	Economy of student time	Economy of space	Benefit to all student levels	Allows individual student progress	TOTAL POINTS	
	1. Present program	1	3	2	2	3	3	2	2	18
	2. Modified program	3	3	3	2	3	2	2	3	21
	3. Team-Teaching program	3	4	3	3	2	3	3	3	24
4. Programmed learning	4	2	4	5	4	4	5	5	33	

(Rating Scale: high 5 points; low 1 point)

four alternate ranked as priority number one. Table 12, page 118, is submitted as additional information for the decisionmakers in preparing the total school budget for the coming school term as well as a projected multi-year budget.

STEP 7: DECISIONMAKERS SELECTION

The decisionmaker to whom the selected alternative is submitted may vary, depending upon the particular objective. It may be the school board, the superintendent or the administrative cabinet. It may also be at the level of a building principal or group of teachers. In all cases, the decision should be made at the lowest possible level.

STEP 8: IMPLEMENTATION OF PROGRAM

Once the decisionmaker has approved the alternative which was submitted, it is then considered a program or part of a program. The next step now is to test the program through actual use. There may or may not be a waiting period in getting the program started. If the time of acceptance of the alternative by the decisionmakers is in the middle of a semester, it may be necessary to wait until the end of the semester.

TABLE 12

SUB-PROGRAM COST WORK SHEET

CODE: <u>1-01-08-1-02-10</u> , TITLE: <u>Bookkeeping</u> , LEVEL: <u>V</u>					
RESOURCE REQUIREMENT	Current Year	71-72	72-73	73-74	74-75
1. Inst. salaries	\$ 16,920.	\$ 13,000.	\$ 13,780.	\$ 14,160.	\$ 15,585.
2. Inst. personnel benefits	2,538.	1,950.	2,070.	2,195.	2,330.
3. Texts	0	1,000.	1,100.	1,150.	1,200.
4. Supplies	300.	700.	700.	750.	800.
5. Capital Outlay	300.	600.	600.	650.	700.
6. Support Services					
a. Instructional	470.	500.	550.	600.	650.
b. Management					
c. General					
TOTAL COSTS	20,528.	17,750.	18,800.	19,955.	21,265.
Projected enrollment	200	200	210	220	230
Staff FTE	2	1	1	1	1
Cost per student	\$ 109.	\$ 89.	\$ 90.	\$ 91.	\$ 92.

STEP 9: REPORTING

The reporting step is integral with the evaluation period in the program. A specific procedure should be planned for getting the information on the progress of the specific program to the individual or individuals who are to collect information for the evaluation process. This process may involve forms, punch cards, or similar methods for conveying information.

STEP 10: EVALUATION

At this point, a team of individuals familiar with systems analysis would take the information conveyed to them through the reporting step and then compare the information with the criteria stated in the given objective for the particular program. A comparison of the output of the program would also be made with the goal and the objective to see if the goal, objective and alternative were all aimed at a common purpose.

STEP 11: RECYCLING

This step of recycling is closely related to the step of evaluation. At this time, a complete review of the process is made, starting with the goal statement, the objective, the alternatives, the analysis of the alternatives, the program structure arrangement, the budgeting system, and the evaluation process. PPBES is an iterative

process. Nothing about the entire PPBES is fixed, the entire process has to be flexible and easily changed to improve the system at various periods of recycling and appraisal.

STEP 12: PROGRAM STRUCTURE

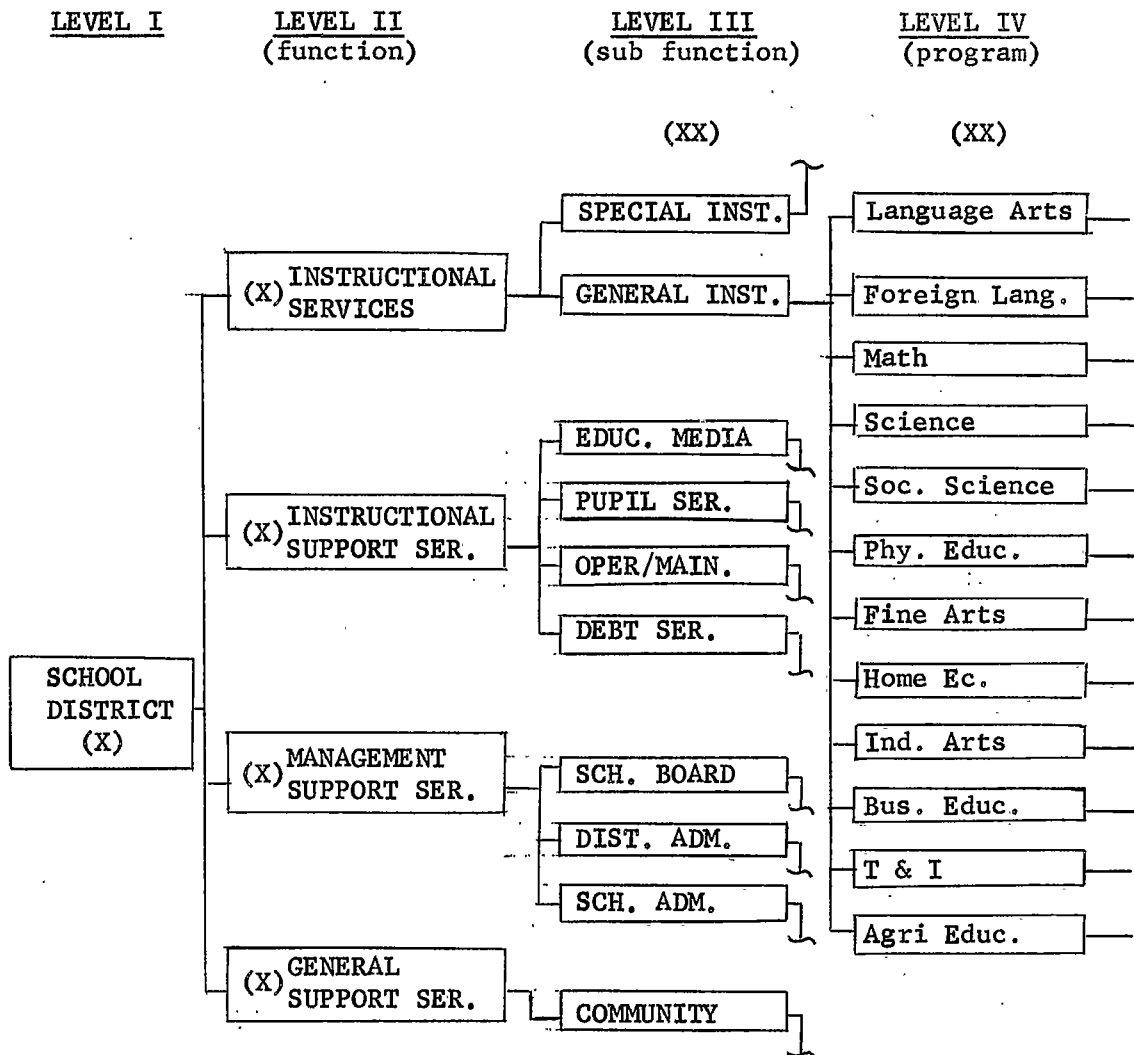
In this hypothetical situation, the team would start with the existing curriculum offerings and convert them to programs. The programs would then be arranged in a program structure. Figures 16 and 17, pages 121 and 122 respectively, illustrate a program structure with the business program depicted on Level V. At the time a particular alternative is selected by the decisionmakers to meet the needs of a particular objective, it will be necessary to make a corresponding change in the existing program structure. For example, it may become necessary to drop a particular course or add another course at Level V. Sometimes the change will only be evident within a sub program at Level V.

STEP 13: ACCOUNTING CODE

Once the program structure has been developed, the business office team can proceed to develop a workable code which the Bozeman Public Schools' equipment can accommodate. At the present time, the limit is 12 digits. The following code could be utilized to accommodate the program in this hypothetical situation:

FIGURE 16

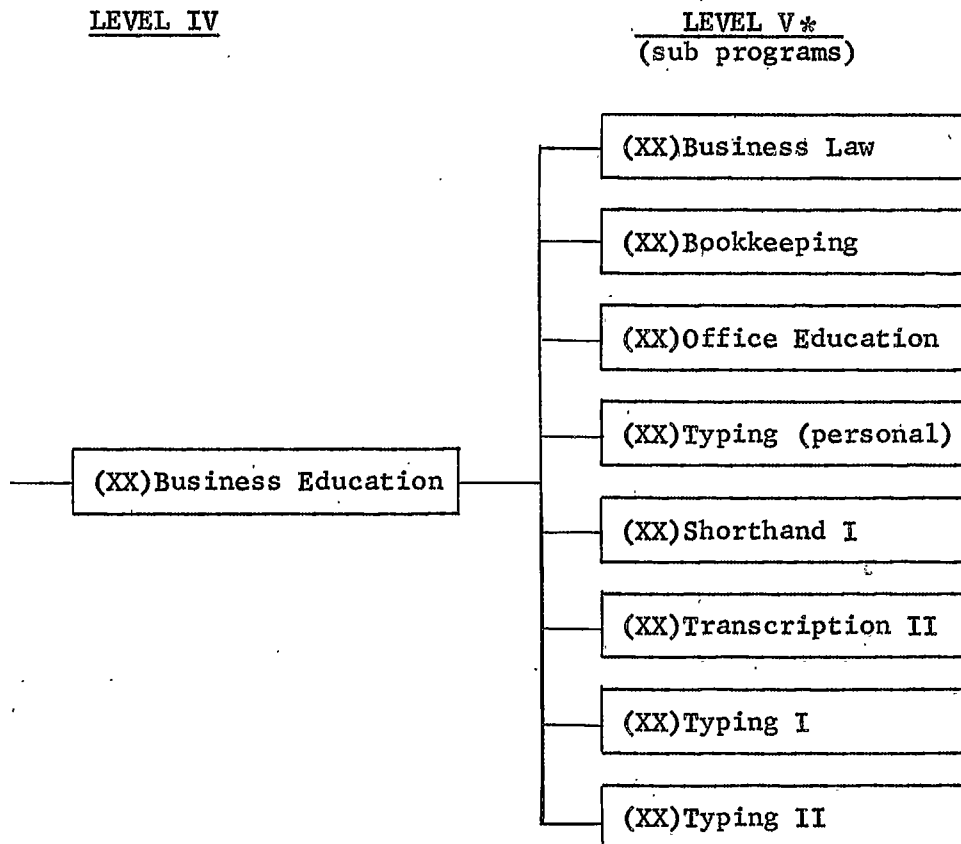
BOZEMAN PROGRAM STRUCTURE



Note: each X in the parentheses indicates the number of digits used for coding that particular level of the program structure.

FIGURE 17

BOZEMAN PROGRAM STRUCTURE
(Business Education)



*Level V two digit numbers will be included when accounting machine limitation of 12 digits is expanded to 14 or more digits.

123

DISTRICT	1	Secondary
	X	as needed
FUND	01	General Fund Expenditures
	XX	as needed
LOCATION	08	Senior High School
	XX	as needed
FUNCTION	1	Instructional Services
	X	as needed
SUB FUNCTION	02	General Instruction
	XX	as needed
PROGRAM	10	Business Education
	XX	as needed
SUB PROGRAM	(when equipment permits, two digits will be used)	
OBJECT	10	Certificated Salaries
	XX	as needed

The accounting code for the payment of the salary of the book-keeping teacher would be: 1-01-08-1-02-10-10. By utilizing two digits on the Location Code, it is possible to combine grade level in the elementary with subject or curriculum programs in the upper division. For example: 21-26 could be coded for grades 1-6, while numbers 1-10 could be utilized for building locations.

STEP 14: MULTI-YEAR PROGRAM BUDGET

With the accounting code established, the team can now proceed with the design of the multi-year program budget. In order to secure the required information for constructing the budget, a type of

program data or cost form must be completed on each program. In the Bozeman Public Schools, each building principal currently is given an allocation of money based upon the number of students accounted for in the past school year. Under PPBES this lump sum allocation will be reallocated with the individual school units according to their priorities and programs.

There may be a variety of break-outs of the budget for different parts of the total budget. Two of the basic parts of the budget document are illustrated in Figures 18 and 19, pages 125 and 126. The Bozeman Budget Crosswalk will often have a breakdown to include the allocation to the specific programs. This type of crosswalk is usually thought to be necessary at least until a district has become quite familiar with program budgets throughout the entire school system. The Multi-Year Budget is vital if the Bozeman Public Schools want to do any of the necessary planning for the future. If space is available in Figure 19, it would be advisable to insert the per pupil cost for each sub function for the current year and the projected five years through extrapolation.

STEP 15: INFORMATION AND COMMUNICATION SYSTEMS

The team assigned to this step would be concerned with the basic types and amounts of information which are vital to the operation of a PPBES strategy implementation. This team will be working

FIGURE 18

BOZEMAN BUDGET CROSSWALK

ACCT. NO.	ACCT. DESCRIPTION	TOTAL	INST. PROGRAMS		NON-INSTRUCTIONAL PROGRAMS						
			SPEC	GEN	EDUC. MEDIA	PUPIL SER.	OPER MAIN	DEBT SER.	BOARD ADMIN.	DIST. ADMIN.	SCHOOL ADMIN.
100	Admin.										
200	Instruction										
300	Library										
400	Health										
500	Attendance										
600	Operation										
700	Maintenance										
800	Food										
900	Student Aux.										
1000	Other Chgs.										
1100	Cap. Outlay										
TOTAL-----											
PERCENTAGE											

FIGURE 19

BOZEMAN MULTI-YEAR PROGRAM BUDGET

DISTRICT LOCATION		TOTAL	CURRENT YEAR	E S T I M A T E D					ESTIMATED REVENUE	
LEVEL	DESCRIPTION			1972-73	1973-74	1974-75	1975-76	1976-77	OTHER	GEN.
II	INST. SER.									
III	SPEC. INST.									
III	GEN. INST.									
II	INST. SUP.									
III	EDUC. MEDIA									
III	PUPIL SER.									
III	OPER/MAIN									
III	DEBT SER.									
II	MNGT. SUP.									
III	SCH. BOARD									
III	DIST. AD.									
III	SCH. AD.									
II	GEN. SUP.									
III	COMM.									
T O T A L :										
STUDENT ENROLLMENT--										
TEACHERS-----										
CLASSROOM-----										

closely with all other teams in the implementation, but more especially with the analysis team and the reporting team. A basic format for collecting, storing and communicating the needed information is essential.

In regard to the program in business education, the following types of information would be of concern:

1. Statistics on pupils: abilities, aptitudes, interests, follow-up data
2. Program information: objectives, criteria standards, past evaluation reports
3. Fiscal information: details as to cost per program, cost per function, cost reporting for state and federal
4. Staff statistics: certification, major and minor, subject area preference, salary break-out according to assignment
5. Facility statistics: cost break-out for buildings, functions, and sub functions; space available, equipment
6. Community, state and national statistics: data on types of business job opportunities, supply and demand ratio, projected opportunities, characteristics of jobs in demand now and future

The computer center at Montana State University could be utilized for the information system for the Bozeman Public Schools. Once the basic format was designed, a minimum of basic information would be inserted to test the operation and efficiency of the input, storage and reporting abilities.

The team assigned to the information and communication task would also be concerned with the development of a workable and

efficient design for securing feedback from the four components of the system. It is vital that a good two-way communication line be established within the system.

STEP 16: INSERVICE PROGRAM

The inservice program will be the responsibility of the task force which originally designed the implementation strategy. Inservice programs are to be directed specifically at these areas:

1. Seven teams (listed on pages 109-110)
2. All other staff members of the school system
3. Decisionmakers

Interested community citizens and students would not be excluded in that many of them will be on various assigned teams.

A close observation of the assigned teams must be accomplished by the task force in order to keep their efforts orientated through a process of inservice training. It is important that all team members have an overall perspective of the total PPBES strategy as well as a keen knowledge of their respective assignments; this is the task of the inservice program.

It is expected that the inservice program for individuals working on goals, objectives and alternatives will include an exposure to Mager's book on preparing instructional objectives and Bloom's Taxonomy. The United States Office of Education Handbook II will be

available to the accounting and budgeting team. A close liason with the SDPI and other educational agencies in the states can supply current practical information which will assist the inservice team in meeting the needs of the assigned teams. The task force inservice group should utilize the work of RC/ASBO and the eight pilot districts in structuring the inservice program for the Bozeman Public Schools.

It is expected that the task force will give specific directions to the various assigned teams. These directions should include the time allotted to each specific assignment and the relationship among all assignments. Figure 20, page 131, is a hypothetical Timeline Flow Chart. This illustration shows the recommended development of Phase I and Phase II and the hypothetical implementation of strategy in the Bozeman Public Schools. The Timeline is coded to correspond to Phase I Steps: I and II; Phase II Steps: A-J; and Phase III Steps: 1-16. The legend for Figure 20 is as follows:

PHASE I

- I Environment assessment
- II Secure commitment

PHASE II

- A. Appoint Director
- B. Appoint Task Force
- C. Orientation of Task Force
- D. Analysis and evaluation of present status
- E. Validate findings
- F. Finalize report
- G. Communicate PPBES concepts

- H. Submit Proposal
- I. Implement Strategy Proposal

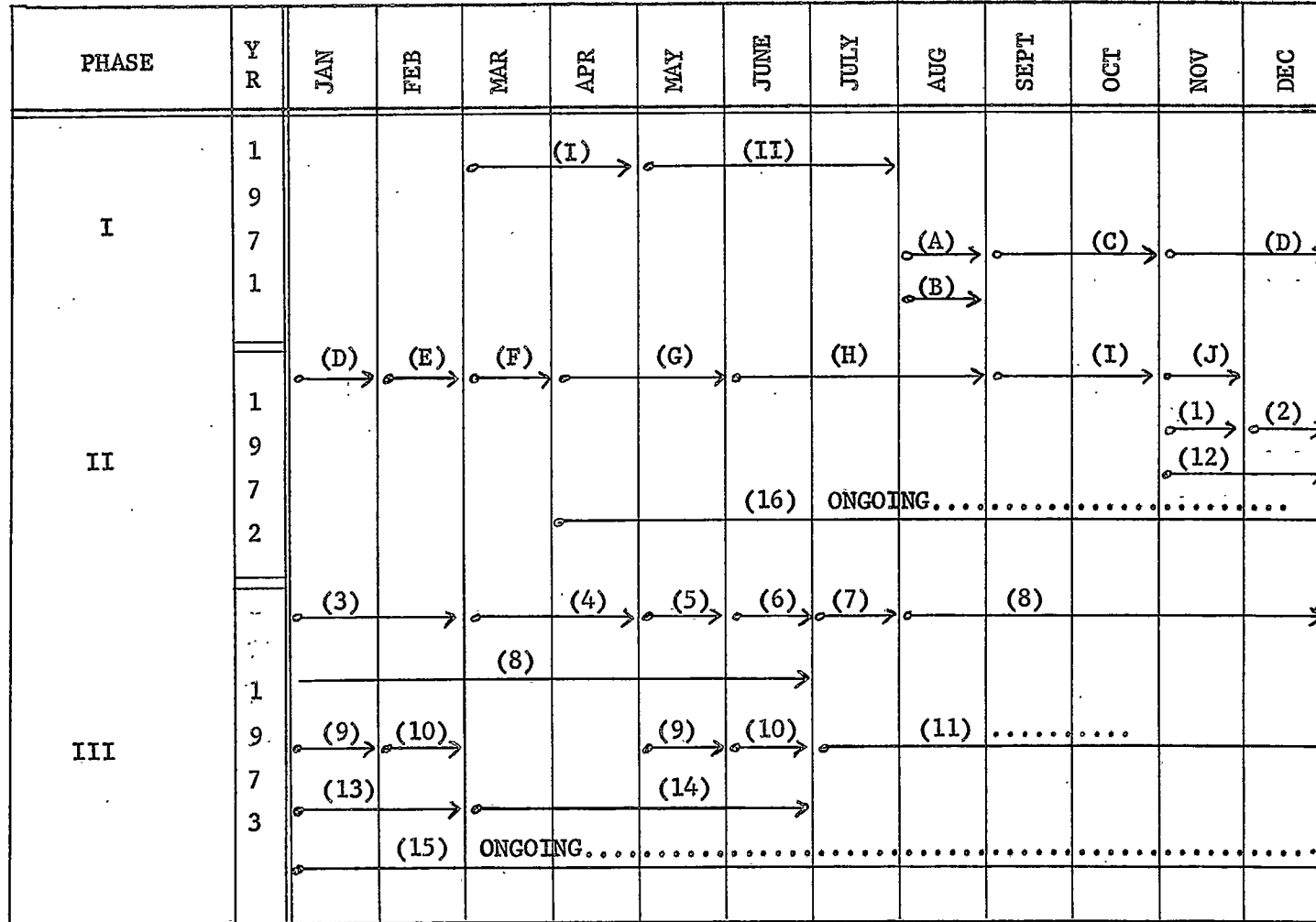
PHASE III

- 1. Identification of need
- 2. Selection of an area
- 3. Goals and objectives
- 4. Generation of alternatives
- 5. Analysis of alternatives
- 6. Alternative recommendation
- 7. Decisionmaker selection
- 8. Implementation of program
- 9. Reporting
- 10. Evaluation
- 11. Recycling
- 12. Program structure
- 13. Accounting code
- 14. Multi-year program budget
- 15. Information and communication systems
- 16. Inservice program

Chapter Four concludes this study with a statement of summation, conclusion and recommendation.

FIGURE 20

TIMELINE FLOW CHART OF IMPLEMENTATION STEPS



CHAPTER IV

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This final chapter includes the summary of the introduction to the study, the review of literature pertaining to the history of PPBES, the details of the components of planning, programming, budgeting, and evaluation, and the model designed for implementing PPBES in the Bozeman Public Schools.

The conclusions as outlined in this chapter are drawn from the review of literature pertaining to PPBES, the relationship of PPBES to the educational environment in Montana, and the feasibility of the model for the Bozeman Public Schools.

The recommendations prescribed in this chapter are directed toward the Bozeman Public Schools and the community at large. As the Bozeman Public Schools do not operate in isolation from the SDPI, some of the recommendations are related jointly to both the Bozeman Public Schools and the SDPI.

SUMMARY

It is clearly stated that the schools are responsible for producing an output on the basis of a predetermined need. In accomplishing this task the school should be held accountable for the tax dollar provided in relation to what is then produced with the tax dollar.

The need for the study was based primarily upon the national trend in the demand for accountability of what school systems are doing, how well they are doing, and how costs are allocated. The same environment is beginning to show up in the state of Montana. In the spring of 1970, the rash of mill levies defeated for the second, third and fourth times seemed to point to the need for a PPBES approach.

In the review of literature, it was found that some common threads of PPBES date back to 1915 in the industrial management field. The concept of budgetary procedures and documents came on the scene about 1921. A revolution in budgeting procedures came with the application of the technique of operations research as used by the Armed Forces during World War II. As the United States Military became involved with systems analysis as an off-shoot of the operations research, many private businesses and corporations began to get involved with the systems analysis approach. By the early 1950's, most major companies were dealing in depth with the systems analysis approach. It was during this period that Rand Corporation became one of the leaders in systems analysis and later a prime consultant to the U.S. military under the direction of the Secretary of Defense, Robert McNamara.

It was in the DOD that the term "planning, programming, budgeting system" (PPBS) had its origin. It was viewed mainly as a process for improving decisionmaking. In 1965, President Johnson

helped the PPBS concept along with the issuance of a directive to all federal departments and agencies that PPBS shall be adopted and used for increasing the abilities of decisionmakers to make more rational decisions.

In the field of education, RC/ASBO and Dade County of Florida joined forces with the assistance of a grant from the USOE (United States Office of Education) to work together for a period of three years. The prime purpose was to study PPBS and strive to adapt its philosophy to the field of education. Several pilot schools were selected to experiment with PPBS in their school districts. The term evaluation was soon added, (PPBES). In some of the most recent literature from RC/ASBO, the terminology has changed from PPBES to ERMS (Educational Resource Management System). RC/ASBO is expected to complete its three-year study in 1971.

The four components of PPBES are planning, programming, budgeting and evaluation. Planning is considered to include the identification of the needs of the community, stating the goals, development of the objectives and then a generation of alternatives for meeting the objectives. Programming begins with the analysis of goals and objectives, then takes up the task of analyzing the alternatives developed. As alternatives are analyzed and a program is developed, it becomes necessary to develop a type of program structure. Budgeting is thought of as the arrangement of the given programs and elements

whereby the multi-year allocation and expenditure of resources can be depicted in an understandable manner for all citizens of the community. The budget documents must be able to give assistance to the analysis team relative to various program costs. The evaluation component is generally thought of as a comparison of one thing to another; the actual output of the various programs to the stated expected output at the onset of the program. The measurement must be in the terms as stated when the objectives were developed. It is hoped that the evaluation will also deal with cognitive, psychomotor, and the affective domain in as many programs as possible.

Activity in PPBES across the nation has been moving at a rapid pace. Between 60 and 70 percent of the states have mandates upon their school systems for the adoption of a type of PPBES approach. The schools in Montana, in general, have not as yet taken any measurable steps to adopt a PPBES approach. This is not to say that there is no need for PPBES, for financial resources were very difficult to obtain in 1969-70 in the school districts of Montana. The outlook for the school terms of 1971-72 and 1972-73 appear even dimmer at the time of this writing. The only state-wide effort toward the adoption of PPBES to date has been by the Montana School Boards Association and the American Facilitators Incorporated. The MSBA attempted to get finances for piloting two PPBES projects in the state two years ago. In the regular session of the 1971 Legislature, the MSBA's effort to

secure \$200,000 for PPBES was lost after the first reading; it was left in committee.

In general, the citizens of Montana are and have been asking for "accountability" of the educational institutions in the spending of the scarce tax dollar, but they have not yet recognized PPBES as a means of answering their requests. PPBES is a complex and time consuming task as well as being an item of school district expense.

It is possible that the Bozeman Public Schools could be a pioneer of PPBES in the State of Montana. The design and development of a model for the implementation of PPBES in the Bozeman Public Schools could well be the catalyst in moving this school toward such an implementation. The task of developing this model was approached in two phases.

Phase I stressed the importance of assessing the environment to find out if the climate was right for implementing PPBES. This phase concluded with the approach to seeking and securing a commitment from the school district decisionmakers.

Phase II brings in the topic of staffing requirements and the procedures for developing the specific implementation strategy. The following steps are considered essential to the design of the strategy:

1. Appoint a director
2. Appoint a task force
3. Orientate the task force

4. Analyze and evaluate the present status in the Bozeman Public Schools
5. Validate the findings of the analysis and evaluation
6. Finalize the evaluation report
7. Communicate the PPBES concept to all concerned
8. Generate an implementation strategy proposal
9. Submit the implementation strategy proposal for review and evaluation
10. Implement the strategy

In order to illustrate the working of the PPBES, a hypothetical situation was presented in the unit entitled Phase III. As a need was set and an area for implementing was stated, the goals and objectives were determined. Alternatives were generated and followed with the required analysis phase. From this point, alternatives were selected and presented to the decisionmakers. When a program is finally selected, it is then put into the school for testing. The evaluation component comes into action primarily at mid-year and at the end of the year. In addition to these basic steps of PPBES, the hypothetical situation depicts how the Bozeman Public Schools could develop a program structure, accounting code and a multi-year program budget. The importance of an efficient information and communication system was also stressed in the illustration as an ongoing process. A continuous inservice program for participants was also included as an essential ingredient of PPBES implementation. In order to give the reader a

general perspective as to what, when and where, a Timeline Flow Chart of the various implementation steps in the hypothetical situation was designed.

CONCLUSIONS

From appraising the educational environment during the past two years in Montana and from equating the present situation, it is evident that the educational institutions in Montana are in need of a tool which can help increase the skill of decisionmakers in allocating scarce resources to meet the needs of students. It is apparent that the budget dollars and facilities are nearing the point of becoming inadequate. PPBES is a tool for educators, which if used properly, can generate needed information upon which they can make rational decisions effecting the needs of students.

The review of literature pertaining to PPBES indicates that a type of PPBES is coming to the educational scene. The concept of PPBES is well entrenched in many school systems across the nation, and it is spreading rapidly to many other schools. It behooves school authorities to make the first move toward the implementation of PPBES, rather than wait for a mandate from legislatures, state departments or school boards, as has happened in many localities across the country.

As set forth in the model, it is evident that Bozeman Public Schools could adapt many of their present practices to the

requirements of a PPBE system.

The equipment in the school system of Bozeman and at the Montana State University computer center is very adequate for getting a PPBES budgeting system implemented. The sequential steps as outlined in the model are feasible for implementing PPBES in the Bozeman Public Schools and are also thought adaptable to other similar districts in the state of Montana.

The full implementation of PPBES in the Bozeman Public Schools should not be made until the SDPI moves to establish some standardization in program structure, accounting procedures and budgetary report systems. In view of the report that the SDPI is currently working with the PPBES approach, the Bozeman Public Schools should not wait for specific directions from the SDPI before getting involved with some of the beginning steps leading to implementation of PPBES.

PPBES should not be construed as a panacea for the many difficult problems facing education today. Neither should it be depicted as a method of saving money for the taxpaying citizens. PPBES is neither of these; it is a valuable tool for improving decisionmaking, but in most cases it costs money to implement. The payoff is in the area of making a better decision to more wisely use the tax dollar in selecting a program which meets the need of the individual student in the classroom. A secondary payoff is the ability to report to the

community what is happening, what the cost is, and how well it is working. The involvement of the local society is also another asset to the school.

RECOMMENDATIONS

In a brief and concise manner, the recommendations could be stated in this singular way: "get ready and start yesterday!" Reading and talking about PPBES will never reap the benefits of PPBES; the school administration must take specific action to put such a concept as PPBES into practice in the Bozeman Public Schools. In view of the long time span of five to ten years for full implementation, it behooves the school administration to get started now. The following specific recommendations should be taken under consideration by the community of Bozeman.

1. The Bozeman Public School authorities should allocate sufficient financial resources for a full-time director of PPBES. A minimum of one-half time should be considered.
2. The Bozeman Public School authorities should allocate sufficient financial resources for securing a task force and teams for implementing a PPBES strategy. This should be considered largely for freeing school staff to do PPBES work during the regular school work week.
3. The Bozeman Public School authorities should make the move to plan a detailed implementation strategy. The model designed in this study should serve as a guide and starting point. As mentioned in the study, the initial push should involve some key school administrators if the move is to be successful.

4. The Bozeman Public School authorities should explore the possibility of coordinating the assignment of student teachers and para-professionals so that a large share of the expense of freeing school staff for PPBES assignments can be covered by such outside personnel.
5. The task force and teams should be scheduled to do their work during a regular work week in the school year and/or during regular work weeks in the summer session.
6. The SDPI should be encouraged to begin immediately with state-wide inservice programs to school districts regarding PPBES implementation. The SDPI should begin immediately to work on the revision and standardization of an accounting system and budget report forms which would be adaptable to a minimum and maximum PPBES implementation in the school districts of Montana.
7. Montana school educators should strive to influence the University System of Montana to place emphasis upon the concepts of PPBES in the training programs of teachers and school administrators. This may be accomplished through required courses for degrees and/or special summer seminars or conferences.
8. Montana school educators should strive to coordinate the efforts of the Montana School Boards Association, State Department of Public Instruction, and the University System in regard to getting PPBES started in the state of Montana.
9. Montana school educators should encourage the Legislature to provide funding to the SDPI specifically earmarked for getting PPBES implemented in the school districts in the State. This should be stated as a voluntary action on the part of the individual districts. The first priority of funding should be at the state level, then secondly, the individual school districts should be given assistance according to their needs and the amount of funds available to the SDPI.
10. Bozeman Public School authorities should be sure equal emphasis is placed upon goals and objectives dealing with affective as well as cognitive domains.

11. Bozeman Public School authorities should take caution that a "cult" of testing is not developed.
12. Bozeman Public School authorities should caution against an immediate benefit being weighed out of proportion as compared with long-range benefits.
13. Bozeman Public School authorities should consider the adapting of the best aspects of PPBES from other schools rather than adopting other school practices.

In closing, it is hoped that the Bozeman Public Schools and other districts of the state as well as the SDPI, will get started with the concepts of PPBES before a taxpayers' revolt reaches the bursting point and a mandate of some type is imposed upon the school districts.

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LITERATURE CITED

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APPENDICES

APPENDIX A

BOZEMAN PUBLIC SCHOOLS

TELEPHONE: 586-2364

MILTON K. NEGUS
SUPERINTENDENT

MRS. ESTHER NELSON
CLERK

SCHOOL DISTRICT NO. 7
P.O. BOX 520
BOZEMAN, MONTANA

July 6, 1970

TO: John B. Deeney
FROM: Board of Trustees, District No. 7
RE: PPBS

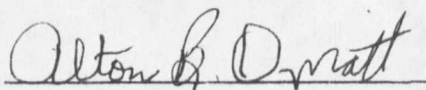
The purpose of this communication is to state the relationship of the concept of PPBS (Planning, Programming, Budgeting System) to the needs of our school district.

The Board first became interested in PPBS when the administration indicated an interest in participating in a nationwide study of program planning systems which was conducted the fall of 1968.

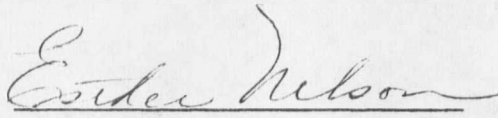
Our interest in PPBS comes through a great need for better accountability to the taxpaying public, improved management decision-making processes, increased effort in setting objectives and the need for improved evaluation/measuring techniques.

The Board's direct involvement in PPBS required the assistant superintendent and clerk's attendance at a state agency conference held in Helena, November 14, 15, 1968, and the clerk's attendance at a week-long seminar held in August, 1969. The assistant superintendent and clerk have been authorized to attend the advanced PPBS seminar in August, 1970.

Increasing pressures for better planning, allocation and management of scarce resources call for an increasingly higher level of skill to best accomplish our goals and objectives. While PPBS processes pose many problems, the Board and Administration believe that PPBS offers the greatest benefits.



Chairman, Board of Trustees



Clerk

APPENDIX B
BOZEMAN PUBLIC SCHOOLS

TELEPHONE: 586-2364

MILTON K. NEGUS
SUPERINTENDENT

MRS. ESTHER NELSON
CLERK

SCHOOL DISTRICT NO. 7
P.O. BOX 520
BOZEMAN, MONTANA

April 5, 1971

Mr. John B. Deeney
105 C Julia Martin Drive
Bozeman, Montana 59715

Dear Mr. Deeney:

In striving to answer some of your questions pertaining to what the Bozeman Public Schools are currently doing which would fit into PPBES, I will make the following summary statements and then let you decide how well they fit:

1. Needs and problems are usually discussed in principals' and administrative cabinet meetings. Of course many suggestions are brought into the discussion from individual staff members as well as the faculty council.
2. Although not formally stated, I believe the goals of the school district are to preserve and implement the precepts of the American Creed; to inculcate a sense of individual responsibility to the ideas and ideals expressed in the Creed; to search for means by which the potential of each individual may be more fully developed and utilized; to prepare young people to rationally deal with the problems they will meet as stewards of this unique society.
3. I feel the objectives of the school district should include the regular evaluation of the effectiveness of instructional methods and materials in meeting current needs.

Presently, the objectives are selected by the administrative staff, the board of trustees,

Mr. John B. Deeney
Page 2
April 5, 1971

4. Some of the evaluation techniques and methods used in the Bozeman Public Schools include:

- Metropolitan Achievement Tests, Grades K-2
- Iowa Test of Basic Skills, Grades 3-8
- Preliminary Scholastic Aptitude, Grades 9-12
- National Merit Examination, Grades 10-12
- Skill Level Tests (math and reading), Grades 1-4

Respectfully yours,



W. O. Forsgren
Director of Instruction

/jg

APPENDIX C
BOZEMAN PUBLIC SCHOOLS

TELEPHONE: 586-2364

MILTON K. NEGUS
SUPERINTENDENT

MRS. ESTHER NELSON
CLERK

SCHOOL DISTRICT NO. 7
P.O. BOX 520
BOZEMAN, MONTANA

April 5, 1971

Mr. John B. Deeney
105 C Julia Martin Drive
Bozeman, Montana 59715

Dear Mr. Deeney:

In regard to your request for a written statement concerning PPBES-related activities in the Bozeman Public Schools, I first would mention that we do not have a systems approach, but we do feel that many of our approaches are similar to those used in PPBES.

In the following, a general picture of the Bozeman Public School activities are categorized according to the four components of PPBES:

PLANNING

1. Defining the problem: Problems are generally defined at various levels throughout the district; teachers and administrators are continuously engaged in striving to identify problems and solve them. The Charrette study technique was used twice in 1970; a curriculum study in the middle school and a system study of the entire school district identified problems as well as supplying some direction for solving the problems. A master's thesis by a school counselor has identified a problem area at the secondary level.
2. Setting goals and objectives: The senior high school has a written philosophy of education at that particular level. (See attachment #1.) Other than at the senior high level, goals have not been written out in formal statements. As you are aware, I have been implementing an approach of setting goals, determining objectives and a follow-up evaluation with individual administrators in our system. I

Page 2

feel that this method of placing administrators in an accountable position will enhance the output of our schools. We are currently working on a five-year maintenance program which will assist us in scheduling work projects in the district so that the dollar output will be more evenly distributed over the years.

3. Generation of alternatives: The active area of generating alternatives is in the study of social studies K-12. Mr. Lasher is directing this study which is piloting several programs and techniques in the field of social studies. It is hoped that through this process, the teachers can determine objectives and goals for the social studies program K-12. Other than this particular study, generation of alternatives is largely done on the individual teacher basis.

PROGRAMMING

1. Analysis of alternatives: Again the social studies project is deeply involved in the analysis of the alternatives which are being piloted. This analysis is primarily on effectiveness and is less concerned with cost analysis at this point. We do have analysis, both of effectiveness and cost, but not a systematic analysis approach.
2. Programming and structure: Our curriculum and offerings are not at this time organized into programs as such, but are listed by departments and subjects.

BUDGETING

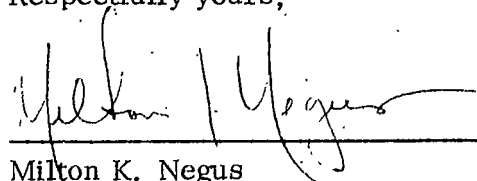
1. Our accounting code is based upon the traditional general budget form required by the State Department of Public Instruction. This is a line-item budget. We have considerable breakout of this line-item budget. For example we breakout the traditional 232 general teaching supplies into several other areas: A. V., fine arts, music, physical education, business education, computer education, home economics, industrial arts, periodicals, science, testing-guidance, workbooks, and EMR. These in turn are accounted for at the K-4, middle school, junior high and senior high levels. An example of our code would be: 01-02326-1-1. From left to right: the 01 indicates general fund, 02326 indicates science general teaching supplies, 1 indicates the secondary school district.

Page 3

EVALUATION

1. In general, the evaluation is geared at meeting the criteria set at various levels in the K-4 units, the subject criteria set in the departmentalized levels from 5-12. The majority of the evaluation deals with the cognitive, but affective areas are of concern also.

Respectfully yours,

A handwritten signature in cursive script, appearing to read "Milton K. Negus", is written over a horizontal line.

Milton K. Negus
Superintendent of Schools

sb
Enclosures

Attachment #1

PHILOSOPHY OF BOZEMAN SENIOR HIGH SCHOOL

Bozeman Senior High School can generally be considered a comprehensive high school. The academic and extra-curricular programs are designed to meet the educational needs of the youth of the community. The comprehensiveness of the program is somewhat limited in the vocational offerings due to the occupational characteristics of the community. However, as the university influence lessens, due to continued growth of the community, expansion of the vocational program is eminent.

In achieving the objectives of the academic program a realistic approach is implemented. The curriculum is organized around subject-matter fields, but the content of the curriculum is not always predetermined. Each student is expected and encouraged to follow through his own interests in learning. Some learning experiences are the same for all pupils since these are prerequisite to other courses. But generally, with the exception of the required subjects, the student's area of learning would be of his own selection.

Students are reminded or required to "keep at it". They are guided toward an appreciation of learning so that school becomes their first love and education opens a career for them. Each student is treated as an individual. Through counseling, teacher evaluation and testing, the educational level attained by each student is determined and then the student is placed in the academic areas most suitable to his needs, abilities and desires.

In programming the students, the counselors strive to place each child in an area of instruction in which the individual is extremely interested. This provides added incentives and lessens discipline problems.

Discipline is basically self-imposed. The students are reminded to treat their associates, fellow students and staff members, as they in turn would like to be treated. Individuals who attempt to get out of learning or inhibit the learning of others are dealt with rather severely and, when students refuse to respond to counsel, they are asked to leave school. No student, regardless of native ability, who cooperates wholeheartedly and works up to his capacity will be deprived the opportunity of earning a high school diploma.

The teacher's role is that of an advisor, counselor, and guide whose primary purpose is to assist the adjustment of the student and to emphasize learning.

Adjustments, additions, and improvements in the academic offerings and

extra-curricular program are indirectly the results of a coordinated effort on the part of the students, the teachers, the board of education, the administration, and the patrons. Changes that will benefit a significant number of the student population are given careful consideration and are implemented whenever facilities and personnel permit.

The extra-curricular portion of the curriculum is considered in some respects "the fun" part of high school. The vast programs of music, including Key Club, Great Books, Science, F. H. A., A. F. S., and Thespians, opens many avenues of interest to the students. The activities' program strengthens the academics. It serves as a reward for those who excel, offers a common interest area for the staff and students, and assists immeasurably in the teaching of good citizenship.

And lastly, the student is reminded that, although the right to attend a public high school is granted by statute, he must earn and preserve the privilege through a constant effort of becoming an informed and useful citizen.

OBJECTIVES OF BOZEMAN SENIOR HIGH SCHOOL

1. To provide a satisfactory program of education for those students whose vocations will depend on their training in a university or college. Four years of preparation are offered in the areas of mathematics, science and English and three years in modern language. Primarily the school's function is to prepare students for college, as three out of four graduates generally enroll in institutions of higher learning.
2. To provide a good general education for all of the students regardless of their native ability. The class schedule permits a wide range of different subjects and levels of instruction. The range, for example, includes basic arithmetic to calculus, three levels of English II, a series of selective electives in English for juniors and seniors, two versions of biology plus an advanced course, three years of home economics, four years of art and drafting and two levels of industrial science.

3. To provide a reasonable elective program for those students who wish to use their acquired skills immediately on graduation. Courses in commercial, drafting and industrial science are designed to prepare students with saleable skills.
4. To provide a curriculum that challenges the academically talented student. Advanced courses in science and mathematics are offered along with special courses in English. Academic proficiency is required of students enrolled in second year commercial subjects and all language courses.
5. To provide an atmosphere of cooperation and an appreciation of the purposes and functioning of a democratic society through courses in American Government, home room group guidance, and an integrated Americanism program.
6. To provide sufficient electives in the areas of instrumental music, vocal music, music appreciation and art to stimulate an interest in cultural media.
7. To conduct adequate physical education courses and a broad extra-curricular activities program to meet the needs and interests of all the students, thus encouraging fair play, good health habits, spectator participation and useful recreational attitudes.
8. To provide selective instruction in home economics with special emphasis on homemaking as the responsibility of the mother, and the importance of "the family" as the most significant unit of our society.
9. To provide continuous instruction in the basic skills of reading, writing, arithmetic and the spoken word in all academic areas throughout the curriculum and to strengthen this instruction by using help sessions, library activities, reading laboratories and special classes in reading.
10. To cooperate wholeheartedly with state and county agencies, such as the Board of Health, the University System, State Highway Patrol, Welfare Department, Law Enforcement Personnel, State Department of Public Instruction and other public agencies in order to provide the best possible educational opportunities for the student.

APPENDIX D

STATE OF MONTANA

OFFICE OF THE STATE SUPERINTENDENT

HELENA 59601



November 24, 1970

DOLORES COLBURG
Superintendent of
Public Instruction

Mr. John B. Deeney
Assistant to Superintendent
School District #7
P. O. Box 520
Bozeman, Montana 59715

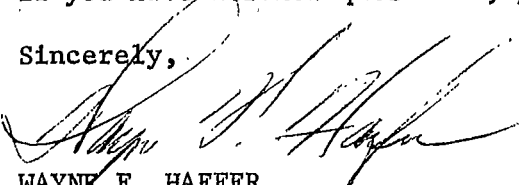
Dear Mr. Deeney:

I have your letter of November 18 in which you request a summary of the status of PPBES and its expected direction as related to the Office of the Superintendent of Public Instruction.

At the present time our office has initiated a modified planning, programming, budgeting management system for use within our office. In addition, we are in the process of training several staff members in the application of planning, programming, budgeting management systems to local school districts. Further developments regarding management systems for local school districts will be dependent on the progress of our office activities in this area of concern as well as the actions of the 42nd Legislative Session.

If you have further questions, please advise.

Sincerely,


WAYNE F. HAEFER
Assistant Superintendent

APPENDIX E

This statement is to certify that the writer is in possession of a cassette tape recording of the speech delivered by Dr. Thomas Murphy at the PPBES seminar held in Helena, Montana, December 1, 1971. Dr. Murphy came to the seminar from the University of Missouri to give an introductory talk to participants on the subject of PPBES.

Signed: John Barrett Deeney
John Barrett Deeney

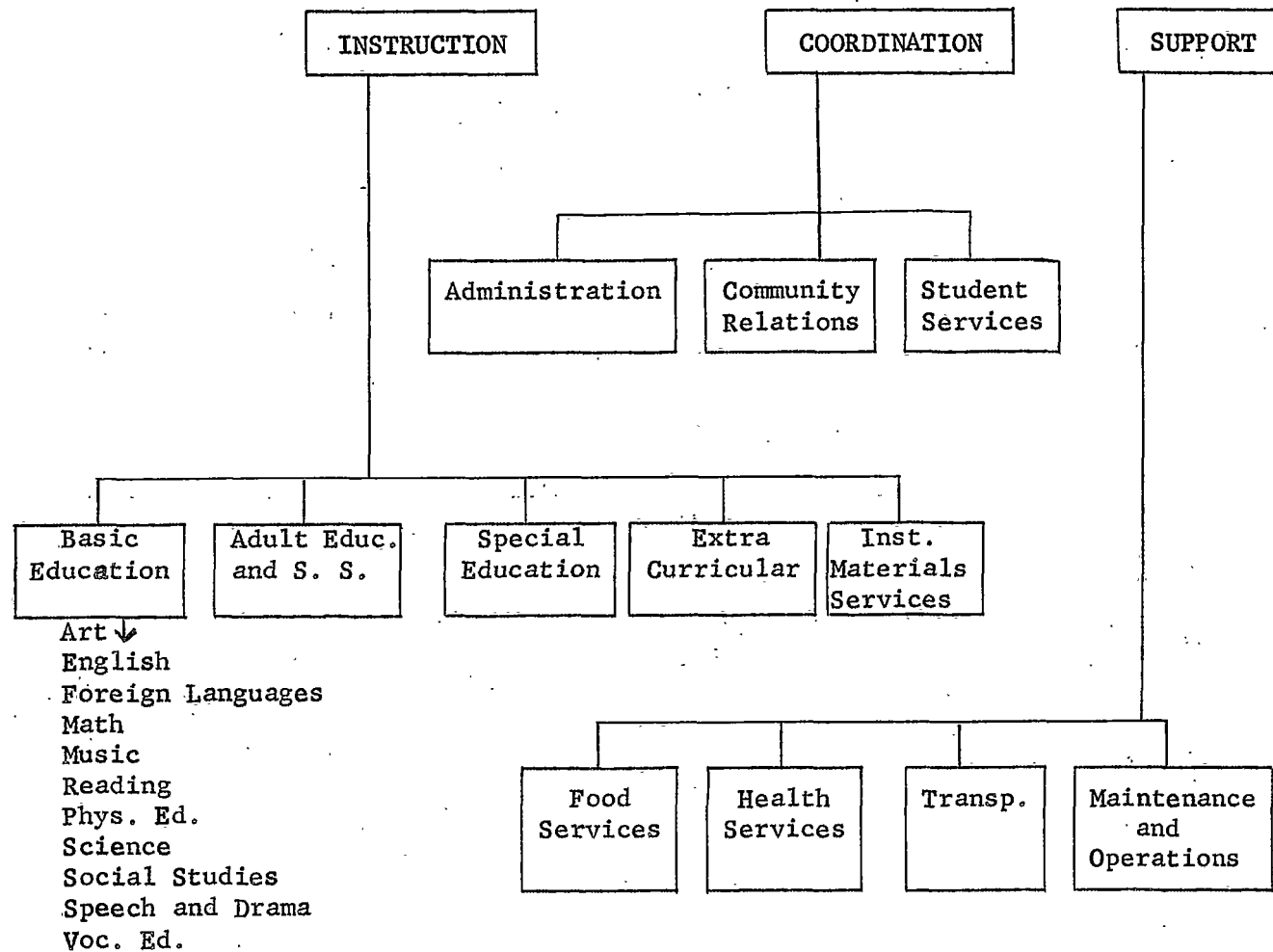
APPENDIX F

This statement is to certify that the writer is in possession of a cassette tape recording of the speech given by Dr. MacKenzie at the opening general session of the Association of School Business Officials national convention in Seattle, Washington, October 18, 1971.

Signed: John Barrett Deeney
John Barrett Deeney

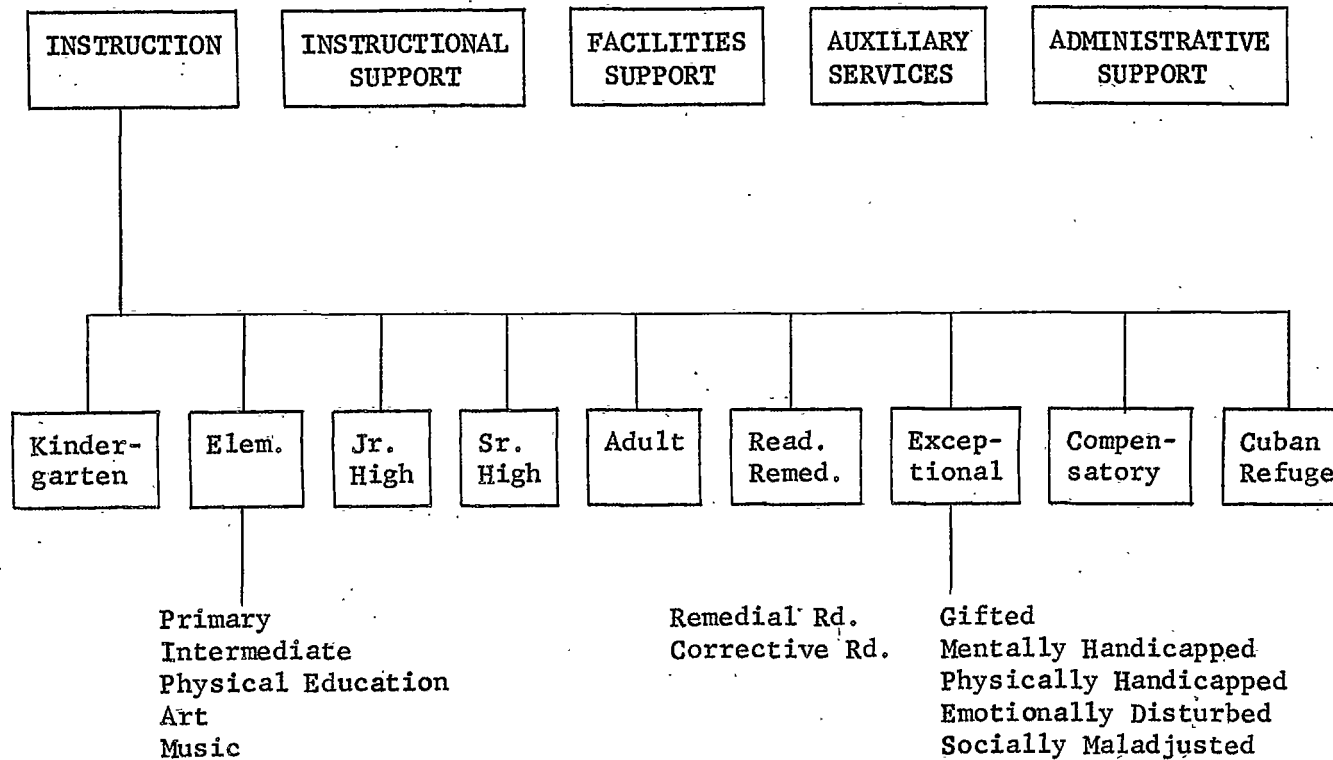
BOARD OF EDUCATION
WESTPORT, CONNECTICUT

PROGRAM STRUCTURE



APPENDIX C

DADE COUNTY PUBLIC SCHOOLS
PROGRAM STRUCTURE
(PART ONE, Instruction detailed)

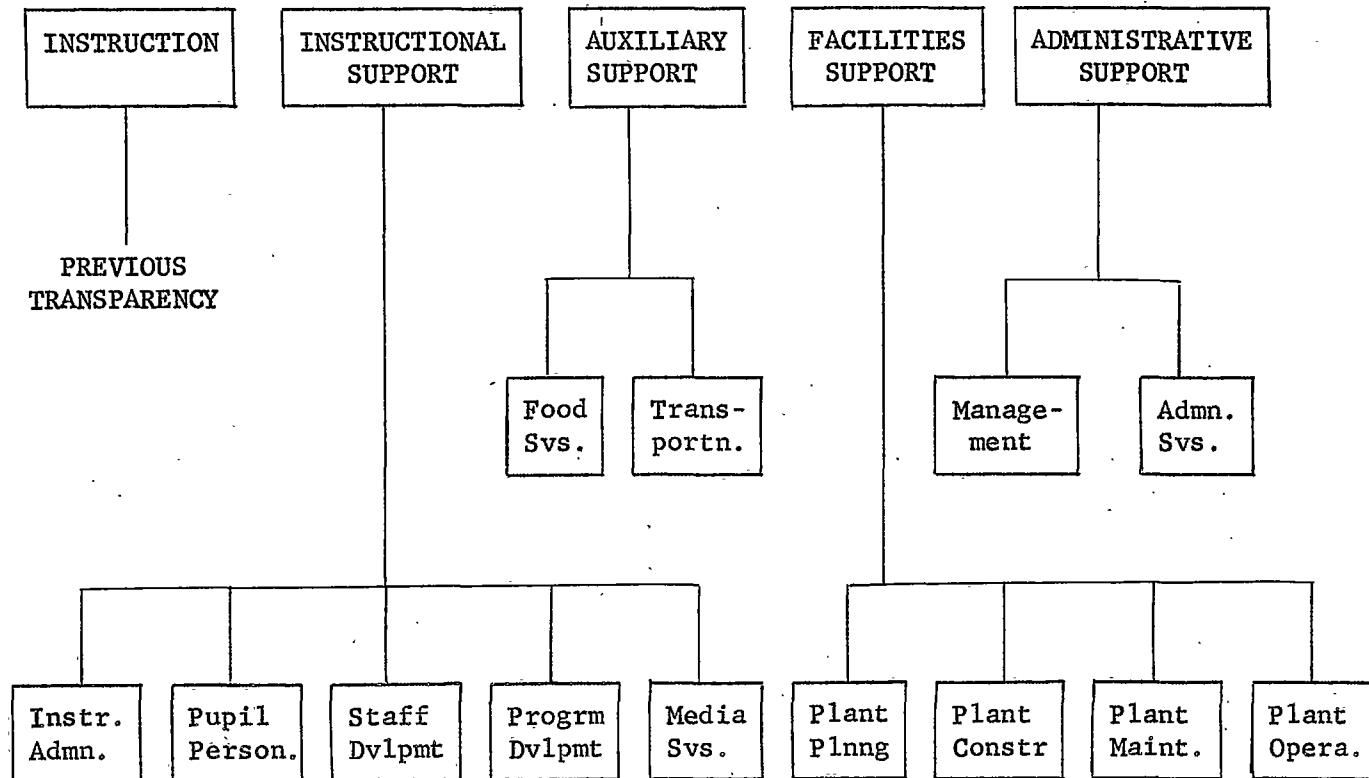


APPENDIX H

DADE COUNTY PUBLIC SCHOOLS

PROGRAM STRUCTURE

(PART TWO, NonInstructional detailed)





D378 Deeney, John B
D36 A planning, program-
cop.2 ming, budgeting,
evaluation system model
for the Bozeman schools

NAME AND ADDRESS	
Lib use	Dan V. [unclear]
Nov 2-76	[unclear]
Lib Use	[unclear]
	[unclear]
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JUN 30 1976	John N. [unclear]
	Jack Hank [unclear]
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AUG 19 1976	[unclear]
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APR 1 1977	[unclear]

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