In the process of planning for the needs of all students, local school officials could use a linear planning guide. Such a procedure calls for moving through several phases: preparation for planning, analysis of the situation, development of alternatives, selection of a plan, implementation of the plan, and evaluation of the plan and of the process. Program Evaluation and Review Technique (PERT) diagrams assist in the utilization of a totally cooperative process, comprising both in-house involvement of staff and out-of-house objectivity and resources. The process appears to be applicable to any planning need regardless of its dimensions. It can apply to the development of long-range, systemwide plans affecting the community's total educational program, as well as to the renovation of existing facilities, or to short-range planning for the utilization of a single school or site. (Some small print may photograph poorly.) (Author/WM)
Planning for Education
People and Processes
FOREWORD

In the State of North Carolina, the statutory responsibility for operating the local public schools is delegated to county and city boards of education. Since a board of education is a policy-making body, the legal responsibility and authority for the administration of the local public school system is vested in the professional executive officer or superintendent employed by the local board of education.

Charged with this responsibility, the successful superintendent keeps abreast of recent developments and trends in public education, utilizes every possible source of professional information, and plans continuously for the improvement of the educational program. To insure the highest quality of educational decision-making and to guarantee a condition of preparedness, the alert superintendent maintains a well-defined and continuous planning process.

Effective and intelligent planning does not occur accidentally but through a carefully designed process that is sensitive to local conditions. This publication presents six phases that are inherent in the planning process. These phases are: (1) Preparation for planning, (2) Analysis of situation, (3) Development of alternatives, (4) Selection of a plan, (5) Implementation of the plan, and (6) Evaluation of the plan and the process. This process provides a framework for systematic, purposeful planning and permits the flexibility necessary for adaptation to any planning need or local condition.

We commend this publication to your attention. It, along with the Handbook for Planning in the Local School System, issued in October, 1972 by the Planning Division of the State Agency, and the 1972 State Board of Education Policy Statement which emphasizes planning as the basis for unit-wide school accreditation, should serve as the bases for an effective and efficient planning process to the end that your program of education is strengthened and improved. The Staff of the Department of Public Instruction is available for consultation and assistance in any or all aspects of the planning process.

March 1973

A. Craig Phillips, State Superintendent
Department of Public Instruction
This publication is a descendant of Educational Planning which was published in 1964. Planning for education is not something new; it has been going on to a greater or lesser degree as long as there have been organized systems of education. When a school board and its staff make decisions regarding future programs for curricula, for staff, for organization, or for facilities, they do so on the basis of some degree of planning. The purpose of this publication is to clearly define, to better organize, and to encourage the process of planning. For education is not something new but something more refined. The publication of this publication is to clarify the public's better organization and understanding of the process. The publication is intended to provide information and guidance on the planning process for educational improvement. The publication is to provide guidelines for educational improvement, to clarify the processes and to encourage the development of educational plans for the future. The publication is intended to provide guidelines for educational improvement, to clarify the processes and to encourage the development of educational plans for the future.
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INTRODUCTION

This publication was prepared by the Division of School Planning to provide a planning guide that will be useful to local school officials in the process of planning for the needs of all students. The Division’s original Planning Guide, printed in 1958, was an eight page publication which admittedly was not intended to be a complete treatise; it was a narrative document which described certain areas of the planning process in detail. Lusers have reported that the 1958 publication has been useful and helpful.

The second publication, School Planning Guide — Series 1, published in July of 1964, was a narrative document which described certain areas of the planning process in depth. It was intended to be a more sophisticated guide than the planners of the 1950's and 1960's, partly due to the refinement of the total planning process. The improved revision is intended for use in this revision. The major changes are reflected in the organization, the mode of presentation, and in further refining the explanation of the planning process. Much of the detail present in the former publication is included in addition to a wealth of more current information, which is included in this revision. An attempt has been made in this publication to organize the information differently.

In response to this request, this revision was prepared.
This publication is intended to build upon the experience and knowledge gained in recent years and to challenge local planners to continually work for improvements.

In attempting to define the steps that appear to be inherent in the process of educational planning, the Division of School Planning has identified a linear procedure containing the following phases:

Phase I—Preparation for planning
Phase II—Analysis of situation
Phase III—Development of alternatives
Phase IV—Selection of a plan
Phase V—Implementation of the plan
Phase VI—Evaluation of the plan and the process
This process seems to be applicable to any planning need regardless of its dimensions. It will apply to the development of long-range, system-wide plans affecting the community's total educational program including the instructional program, organization and administration, personnel, facilities, community/school interactions, and special services.

In order to provide a well defined and functional structure for the publication, the following PERT (Program Evaluation and Review Technique) diagram of the planning process is located on alternate pages. The diagram is located in this manner so that the reader can view and relate the printed information to the diagram at any time while reading the publication, the step or steps under consideration on a particular page will be highlighted on the diagram so that progress through the planning process is readily apparent.
PERT is a method for sequentially ordering tasks that must be accomplished to move a project in an orderly manner and to curtail omissions and duplications. In short, it is a method for organizing and planning to produce maximum efficiency. The numbers that appear in each circle are necessary for identifying the various tasks. The circles represent the completion of tasks. The lines represent activities that began at the preceding circle and end at the following circle. For instance, line 2 - 5 indicates that after staff organization is accomplished (Task 2), situation analysis is begun by the staff and is accomplished at Task 5.
In a technically correct PERT chart, the relationship of the various tasks are apparent as well as the sequence. For instance, Task 7 (developing alternative plans) should not be initiated until Task 5 (situation analysis) and Task 3 (updating philosophy, goals, and objectives) have been completed. Since the diagram is intended to be flexible, there will be instances when the local administration will prefer to utilize the local-staff-directed route without outside assistance. The process would then become a linear one as follows:

1. Staff recognizes need for and makes decision to plan.
2. Staff organizes for in-house planning.
3. Staff updates philosophy, goals, and objectives.
4. Staff completes situation analysis.
5. Staff develops alternative plans.
6. Administration recommends to Board.
7. Administration recommends to Board.
8. Staff make recommendations.
9. Administration recommends to Board.
10. Administration recommends to Board.
11. Staff makes recommendations.
12. Staff recognizes need for and makes decision to plan.
However, to realize the advantages of both routes, in-house involvement of staff and out-of-house objectivity and resources, the Division recommends that the total cooperative process be utilized whenever feasible.

The major content of this guide is in outline form and will be found on the left side of each page. The column on the right side of each page contains explanatory statements designed either (1) to explain further the outline content, (2) to provide additional information that is not suitable to outline form, or (3) to refer the reader to other publications of the Division of School Planning where more detailed information on the subject may be located.
Local school officials recognize a need for and decide to plan as a result of many factors:

- Realization that long-range plans need revision
- Changes in the school population
- Changes in the financial structure of the system
- Recent judicial precedents
- Changes in the financial structure by type or degree
- Recent judicial precedents
- Changes in attitude and/or composition of agency on which education is dependent
- Changes in attitude and/or composition of agency on which education is dependent
- Recent judicial precedents
- Recent judicial precedents

Changes in bonding capacity
- Current sales tax
- Evolving standards
- Changes in attitude and/or composition of agency on which education is dependent

**Task 4** Staff recognizes need for and makes decision to plan.

**Phase I — Preparation for Planning**

1. Staff recognizes need for and makes decision to plan.
2. Consultants develop situation analysis.
3. Consultants develop situation analysis.
4. Consultants develop situation analysis.
5. Consultants develop situation analysis.
6. Consultants develop situation analysis.
7. Staff modifies decision to plan.
8. Staff modifies decision to plan.
9. Staff modifies decision to plan.
10. Staff modifies decision to plan.
11. Staff modifies decision to plan.
12. Staff modifies decision to plan.
13. Staff modifies decision to plan.
14. Staff modifies decision to plan.
Impact of curriculum and organization innovations and the implications of current research and literature, e.g.

- Most economical and efficient size of schools and school systems
- Middle school concept
- Open classroom concept
- Early childhood education, K-3
- Computer technology and simulation
- Career education
- Compensatory education
- Extended school year
- Flexible scheduling and independent study
- Team teaching
- Non-graded, continuous progress, and individualized instruction
- Differentiated staffing
- Alternative schools
- Experience curriculum
- Cooperative programs (DE, ICT, etc.)

Increasing demand for educational accountability

Changes in society's attitudes and values

Changes in the composition and attitudes of the teaching personnel

Unexpected availability of funds

Realization that facilities are inadequate

Loss of or damage to facility due to arson or natural causes

Whenever these situations occur, the school system that has a well defined and active planning process established will react naturally and effectively to meet these needs in stride. However, the system that hesitates for lack of an established procedure will not only lose time and money but may cause the students and teachers to learn and work in a less-than-desirable environment. In any event, the price of inadequate planning is most certainly paid by the students.
Facets of the educational community such as:

- Consultants (in an advisory capacity)
- School board members
- County commissioners
- Advisory committee members
- P.T.A. members
- Students
- Non-professional staff
- Instructional personnel
- Principals
- Members of local news media
- P.T.A. members
- Advisory committee members
- School Board members
- County commissioners
- P.T.A. members
- Students
- Non-professional staff
- Instructional personnel
- Principals
- Members of local news media
- Community members from various segments of the educational community should be composed of self-selected steering committees.

There are several reasons why the steering committee should be composed of representatives from various segments of the educational community. The most obvious reason is that the school is a social institution and as such the school is interested in the determination of how best to meet the needs and purposes of the community. A second reason is that an assessment of these needs and purposes and that of the school program, the citizens must first be knowledgeable concerning the direction and goals of the educational purposes and goals of the school program. The citizens must have knowledge of how best to meet these needs and purposes. An assessment of these needs and purposes and of the school program, the citizens must first be knowledgeable concerning the direction and goals of the educational purposes and goals of the school program. The citizens must have knowledge of how best to meet these needs and purposes.

Staff begins internal organization for in-house planning.
A third reason is closely related to the second. Most planning involving capital outlay in the implementation phase will necessitate a new source of funds. The possibility of a successful campaign is much greater if a large number of people representing many interest groups have been involved in designing the program for which the new funds are intended.

The next reason for involving a number of people is primarily one of communication. In The Social Psychology of Organizations, Daniel Katz and Robert Kahn state that the "organizational space" separating those at the "top" of the organization from those at the "bottom" and from those they are intended to serve impedes communication greatly. In other words, because organizations are growing and because communities are becoming more diverse, the steering committee extends the representative function of the board of education and provides a community sensitivity that is so vitally needed.

Whether a simple calendar of due dates or complete PERT network of tasks and time allotments is employed, there should be a set of clearly understood time limits for each activity. Open-ended assignments have a tendency to be delayed and extended ad infinitum.
The community has been used in dozens of communities across the country. The community is to be engaged in the planning process. This process has resulted in a community-driven, comprehensive plan. This plan is to be adopted by the community.

Staff and consultants are to be engaged in the planning process. This process has resulted in a community-driven, comprehensive plan. This plan is to be adopted by the community.

The community is to be engaged in the planning process. This process has resulted in a community-driven, comprehensive plan. This plan is to be adopted by the community.

The development of purposes and goals is perhaps the most important step in the planning process since every succeeding step is evaluated in terms of what has been established here. It is at this point that the development of purposes and goals is to be evaluated. The term "charrette" is borrowed from the architectural profession, where it indicates an intensive effort to finish a project before a deadline. In school planning, it denotes a session of intensive group planning, with each member writing one or more purposes and the list is compiled into a final consensus.

Group discussions are held with someone recording individual statements.

Small groups discuss purposes and compile lists.

Establish a statement of the purposes of public education as suggested below:

1. Group discussions are held with someone recording individual statements.
2. Small groups discuss purposes and compile lists.
3. Establish a statement of the purposes of public education as suggested below.

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Each member writes one or more purposes and the list is compiled into a final consensus.
• Make adjustments indicated by the growing body of literature and research
• Make definite plans for periodic reviews of the purposes

• Why are we in this business called education?
• What are we trying to accomplish and why?
• Who is to benefit and how?
• Should education reflect society, restructure society, or ignore society?

Once these questions have been satisfactorily answered, it is necessary to prepare a rather definitive statement of the desirable goals for the various facets of the educational program. Based upon the stated purposes and upon a study of current research and literature, what do we believe to be the best instructional program we can offer our future citizens? How can the organization and personnel best be deployed to facilitate that program? How can the facilities best reflect that program and provide the flexibility it requires? What is the desirable financial structure and level of support required?

These are the types of questions that must be considered in developing the desirable goals for the educational program.
Preparation for Planning

1. Staff recognizesmod for and makes decision to plan.
2. Staff organizes for in-housing planning.
3. Staff updates philosophy, goals, and expectations.
5. Staff somplatoes situation analysis.
6. Consultants amplify situation analysis.
7. Staff develops alternative plans.

Based upon the agreed-upon purposes, develop a tentative statement of the goals of the system as they relate to what is desirable in:

- Instructional program
- Personnel
- Organization
- Facilities
- Community/school interaction
- Finance
- Special services
- Locally and study current literature and research related to each of the above

The subcommittees assigned to work on the above:

Evaluative and refine the tentative statement into a set of desirable goals for each

- Instructional program
- Personnel
- Organization
- Facilities
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- Finance
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- Community/school interaction
- Finance
- Special services

The subcommittees assigned to work on the above:

Evaluative and refine the tentative statement into a set of desirable goals for each
Task 4 Board contracts for out-of-house consultation.

Written request for out-of-house consultation forwarded

The Division of School Planning of the State Department of Public Instruction provides consulting services upon written request from local boards of education.

Other sources for out-of-house consultation may be contracted, i.e.

- Survey team composed of recognized educational specialists
- Private agencies that specialize in school surveys

The Division of School Planning is available without cost to serve local boards of education in a variety of ways. The Division compiles extensive research data; organizes and directs local, comprehensive surveys; conducts surveys limited to specific areas; assists in the development of educational specifications; coordinates the involvement of other State Department of Public Instruction divisions in surveys and in the development of educational specifications; and coordinates the involvement of other State agencies such as the Highway Commission, the Board of Health, the Insurance Department, and the Division of Natural and Economic Resources.

The Division provides architectural and engineering services which include review and approval of all plans for new construction (G.S. 115-13C); consultations with local school administrators and their architects and engineers; building and site investigations and evaluations; interim and final inspections of school construction projects (G.S. 115-13O); and assistance in planning in the area of environmental pollution control.
### Preparation for Plonnissij Task

**Task 4:** A Plan of Analysis

**Phase I** - Preparation

1. Staff receives need for and makes decision to plan.
2. Staff organises in-house planning.
3. Staff updates philosophy, goals, and objectives.
5. Staff completes situation analysis.
6. Consultants complete situation analysis.
7. Staff develops alternative piano.
8. Local committees and/or consultants develop information base.
9. Staff makes recommendations.
10. Consultants make recommendations.
11. Administration monito.
12. Board approves the plan.
13. The plan is implemented.
14. The plan and the planning premises are evaluated.

The items listed in the left column that may be examined are only suggested components of the situation analysis and are by no means all-inclusive. Many of the items would require only an updating of the information normally maintained by the superintendent. Other data, particularly comparing the local school system with other systems, can be obtained through the Division of School Planning and is available upon request whether or not Division consultants are actively involved. At the discretion of the superintendent, any of the items listed in the left column that may be examined are only suggested components of the situation analysis and are by no means all-inclusive. Many of the items would require only an updating of the information normally maintained by the superintendent. Other data, particularly comparing the local school system with other systems, can be obtained through the Division of School Planning and is available upon request whether or not Division consultants are actively involved.

**Phase II - Analysis of Situation**

- Staff completes situation analysis.
- Consultants complete situation analysis.
- Local committees and/or consultants develop information base.
- Staff makes recommendations.
- Consultants make recommendations.
- Administration monitors.
- Board approves the plan.
- The plan is implemented.
- The plan and the planning premises are evaluated.

The situation analysis is so thoroughly defined we now have...
Community information is compiled

- Maps
  - Boundaries of unit
  - Location of schools and other school board properties
  - Adjacent units with location of schools
  - Topographic information
  - Water (oceans, lakes, streams, ponds)
  - Transportation (highways, railroads, airports, etc.)
  - Land use patterns
  - Zoning
  - Utilities (present and future expansion)
  - Proposed developments (highways, shopping centers, housing, etc.)

A study of the community's history, traditions, culture, geography, and economy is important in determining its educational assets and liabilities. Public schools are not the only agencies that educate young people. The social environment, the economic resources, the business enterprise, the industries, and the cultural resources of a community also affect the 24-hour development of young citizens. Communications media—television, motion pictures, radio, and printed material—as well as travel all the parameters of the present program that alternative courses of action can be identified.

As in Phase I, the number of areas to be studied will be determined by the situation and the specific needs. It is suggested that an initial situation analysis should be as comprehensive as possible, whereas follow-up studies may be limited to specific problems. For example, there may be occasions when the immediate problem deals entirely with facilities; this may require an analysis and evaluation of only the areas of finance and facility.
Commencing patterns
- Annual average work force estimates
- By selected industries
- Employment patterns
- Resource persons
- Theaters (live and drama)
- Libraries
- Museums
- Mineral rights
- Cultural resources available
- Comparative growth of adjoining cities
- Comparative growth of adjoining counties
- Comparison of county births and deaths
- County-wide population projections by age
- County-wide population by age
- Increase or decrease by minor civil subdivisions
- Population data
- Health services centers
- Location of correctional centers
- Higher education and preschool centers
- Student residences coded according to ages
- Educational (private and parochial) and cultural installations
- Public and institution lands
- Staff recognizes need for and makes decision to plan.
- Staff organizes for in-house planning.
- Staff updates philosophy, goals, and objectives.
- Staff conducts external and internal consultation.
- Staff develops alternative plans.
- Staff makes decision to plan.
- Consultant coordinates education
- Consultant coordinates information and analyses.
- Consultant makes recommendations.
- Consultant provides services for children and families.
- Consultant generates new school programs.
- Consultant develops district-wide strategy plan.
- Consultant develops alternative education plan.
- Consultant recommends action.
- Consultant recommends action.
- Consultant recommends action.
- Consultant recommends action.
- Consultant conducts education program.
- Consultant makes recommendations.
- Consultant develops district-wide strategy plan.
- Consultant develops alternative education plan.
- Consultant recommends action.
- Consultant conducts education program.
- Consultant develops district-wide strategy plan.
- Consultant develops alternative education plan.
- Consultant recommends action.
- Consultant conducts education program.
- Consultant develops district-wide strategy plan.
- Consultant develops alternative education plan.
- Consultant recommends action.
- Consultant conducts education program.
• Economic data
  • Per capita retail sales for county and surrounding counties
  • Per capita income for county and surrounding counties
  • Per capita and/or per pupil property valuation
  • Total travelers' expenditures in county
  • Housing characteristics

• Recreational facilities available
• Other educational institutions
• Communication media
• Private and industrial resource persons available
• Sociological data
  • Number of broken homes
  • Number of female-head-of-households
  • Percentage of population receiving welfare assistance
  • Crime rate
  • Socio-economic trends
  • Number of working mothers

• Health and social services

While it is difficult to establish a direct cause and effect relationship between the sociological data and the school program, the insight into and feeling for the community that results from an understanding of such data is invaluable. For example, if a large number of broken homes and female-head-of-households exist in the community, increased time, effort, and money could be justified to locate and to recruit additional male teachers for the elementary schools.
A prediction of the future school population is an integral part of planning for the future. Information that will lend validity to the predictions should be collected and interpreted annually. The predictions should be evaluated each year or updated with successive years. Consequently, pupil population projections should be collected and interpreted annually. If properly developed, the projections are highly reliable for the first year but become less reliable with successive years. Hence, highly reliable projections for the first year but become less reliable with successive years. Consequently, pupil population projections should be collected and interpreted annually. If properly developed, the projections are highly reliable for the first year but become less reliable with successive years. Hence, pupil population projections are useful within certain limitations. The projections are normally based on an analysis of the past pupil population during past years and attempt to predict future pupil population. The projections are limited within certain limitations. The projections are normally based on an analysis of the past pupil population during past years and attempt to predict future pupil population.
An analysis of the instructional program, including the depth and scope of the curriculum content, is imperative to insure that the educational program is, in fact, providing for the educational needs of the students.

A principle of education that is readily embraced by every educator is the necessity to provide for the individual. However, its implementation is much more difficult than its endorsement. A special effort should be made to determine how effectively, if at all, the needs of special or deviant students are being met.
Preparation:

Analysis of Situation:

Alternatives contd

Organization and Administration

Vertical Organization
(graded, multigraded, nongraded, or a combination)

Horizontal Organization
(self-contained classrooms, departmentalization, Joplin plan, homogeneous or heterogeneous grouping, "open" etc.)

Administrative Policies and Practices
- Coordination of central office
- Channels of communication
- Administrative policies and practices
- Administrative changes, if any

Conflict:

Conflict or do their functions overlap and are administrative practices consistent with their objectives or are they designed by people who are affected by the organization?

How are students organized in groups (vertical)? How are students advanced through the program from year to year?

Related types of questions are:
- How are students advanced through the program from year to year (vertical)?
- How are students organized in groups (horizontal)?
- Are administrative policies clearly understood by all who are affected by them?
- Are administrative practices consistent or do their functions overlap and conflict?

One can hardly overlook the effect that the organization and the administration of a system has in stifling or enhancing the realization of goals and objectives. To determine whether the organization truly reflects the philosophy of the system, answers to the following questions are valuable:

How are students advanced through the program from year to year?

Maximum time a pupil is on a bus per day

Number of buses

Number and percentage of pupils transported

Transportation

Percentage unaccounted for

Percentage accepting immediate employment

Percentage attending technical or vocational school

Percentage going to two-year college

Percentage going to two-year college

High school graduates five-year summary

Site and regional accreditation status of individual schools

Professional staff/pupil ratio

Classroom teacher/pupil ratio

Coordination of central office

Channels of communication

Authoritarian, democratic, or laissez-faire in practice

Classroom teacher/pupil ratio

Administrative and instructional policies

Administrative changes, if any

Organization and administration

Vertical Organization (graded, multi-graded, nongraded, or a combination)
School finance data are accumulated

- Instructional personnel by major source of funds
- Current expense per pupil (comparative)
- Current expense disbursements
- Current expense expenditures and per pupil cost
- Total county-wide tax rates for specified purposes for the selected fiscal years
- Per pupil expenditures for instructional supplies, library books, and textbooks from local and federal sources
- Comparative effective county-wide property tax levy
- Total property taxes levied county-wide for the selected fiscal years
- Capital outlay
- A five-year comparison of the amount of local funds expended for current expense, capital outlay, and debt service levied for schools
- Comparative local salary supplements paid teachers
- Comparative appraised valuation per ADM
- Bonding capacity, bonded indebtedness, and amortization schedule

There are very few educational problems whose solutions do not involve financial decisions; educational planning and financial considerations are difficult to separate. Both the scope and quality of the educational program affect and in turn are influenced by the financial parameters of the school system. Therefore, situation analysis must include a thorough investigation of:

- the extent of funds currently available
- how these funds are being used
- potential sources of additional funds
- the implications of judicial precedents and pending State and Federal legislation for the local financial structure.

- Are the channels of communication open or closed?
- Does communication flow upward as well as downward?
- How open or closed is the decision-making process?
- Does the organization provide a desirable pupil/teacher ratio in all schools?
Preparation for Planning

I. Staff recognizes need for and makes plans to plan.
II. Staff organizes for in-house planning.
III. Staff updates philosophy, goals, and objectives.
IV. Board contracts for out-of-house consultation.
V. Staff completes situation analysis.
VI. Consultants comply with situation analysis.
VII. Staff develops alternative plans.
VIII. Consultants develop alternative plans.
IX. Staff makes recommendations.
X. Consultants make recommendations.
XI. Administration recommends to board.
XII. Board adopts a plan.
XIII. The plan is implemented.
XIV. The plan and its planning process are evaluated.

While a comparison of local financial data with State averages is useful and to be encouraged, a comparison of local data with that of geographically adjacent systems or those with similar characteristics is more revealing in terms of the level of local support. Comparative fiscal data, although difficult for local agencies to secure on their own, may be obtained through the Division of School Planning upon written request from the local board of education. When written requests are made to the local board of education, the Division of School Planning will review the submitted data and provide a report on the data.

### Potential Sources of Funds
- Reserves
- Effective tax levy
- Tax levy
- Date of last revision
- Appraised valuation
- Assessed valuation
- Tax base data
- Federal funds
- Revenue sharing
- Federal funds
- Alcohol excise duties
- Alcohol excise duties
- Federal funds
- Non-property revenues
- Student fees
- Income tax
- Sales tax
- Non-property revenues
- Comparison of uses of one percent sales tax
- Comparison of uses of tax funds with neighboring counties and with State and Federal funds

### Tax Valuation

<table>
<thead>
<tr>
<th>NEIGHBORS</th>
<th>STATE AVERAGE</th>
<th>OUR SYSTEM</th>
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### Comparative Data

- **Sales Tax Revenue**: $23,000
- **Federal Funds**: $15,000
- **Revenue Sharing**: $10,000
- **Other Non-Property Revenues**: $5,000

**Note**: Comparative data shall be presented in a more detailed format in the final report.
Facilities are evaluated

- Property accounting data are updated and checked for accuracy:
  - Plot plan of each school-owned property showing topography, driveways and parking, utilities, buildings, developed playgrounds, stadiums, wooded areas, north point, graphic scale
  - Acreage of each site
  - Plan of each building showing room arrangement and room sizes, construction characteristics, dates of construction, general condition, utilization
  - Availability of adjacent property

- Review most recent architectural and engineering reports
- Review and revise data from property accounting records
- Evaluate each school including:
  - Number of teaching stations or classrooms
  - Short-range pupil capacity
  - Long-range pupil capacity
  - Educational adequacy in terms of national and state standards
  - Capacity and/or adequacy of service systems (heating, cooling, electrical, sewer, water, etc.)
  - Capacity and/or adequacy of special areas (lunchroom, gymnasium, auditorium, mecha center, etc.)
  - Location and adequacy of pupil, staff, public and service entrances
  - Traffic patterns to and around schools
  - Location relative to students

- Availability of found space

While there are no clear definitions that can be applied in every situation regarding the long or short-range utilization of a building or addition, the following factors should be taken into consideration:

- Age of building and/or additions
- General structural condition
- Sanitation code requirements
- Life safety code requirements
- Location of site
- Adequacy of site
- Educational adequacy
- Construction type
- Replacement cost
- Total cost of ownership

"Found space is the judicious use of society’s unwanted architecture. It often carries an additional bonus for the user, since it can be leased on a 'pay-as-you-go' plan with funds from an operating budget instead of from capital expenditures. Found space can be acquired fast, too. More often than not, it is only a matter of months between finding an old building and moving into it. But the process of planning and constructing a new building can take years. Found space is relatively inexpensive; it recycles the urban environment; it shoots life and activity into old neighborhoods; and it is applicable to a variety of needs for a variety of clients."
After collecting, organizing, and displaying the data in the most appropriate manner (tables, figures, narrative reports, maps, etc.), the information must be analyzed to determine if further data is needed and available. The local committee and consultants cooperatively determine who is in the best position to secure the additional data and assignments are made and completed.

When all the data are in and analyzed, it is determined whether the superintendent and consultants submit written reports to the superintendent.

Local committees and/or consultants complete situation analysis.

Tasks are cooperatively assigned for securing further data.

Local committees and/or consultants complete and analyze initial data.

After collecting, organizing, and displaying the data in the most appropriate manner (tables, figures, narrative reports, maps, etc.), the information must be analyzed to determine if further data is needed and available. The local committee and consultants cooperatively determine who is in the best position to secure the additional data and assignments are made and completed.

When all the data are in and analyzed, written reports are prepared.

When all the data are in and analyzed, it is determined whether the superintendent and consultants submit written reports to the superintendent.
PHASE III — DEVELOPMENT OF ALTERNATIVES

Task 7 Staff develops alternative plans
Task 8 Consultants develop alternative plans.

Staff and/or consultants review purposes
Staff and/or consultants review what was identified as desirable regarding
- Instructional program
- Personnel
- Organization
- Finance
- Facilities
- Community/school interaction
- Special services

Community participation continues to be a worthy objective in this phase of the process; but from a practical standpoint, the degree of responsibility delegated to community representatives must be limited. It is suggested that the major burden of developing alternatives be assumed by the professional staff with lay representatives serving in an advisory capacity and as a communications link with the greater community.

Because of the increasing complexity of communities and of school systems, the "organizational space" separating superintendents and their immediate staff from the teachers is also increasing; this has a tendency to create both psychological and behavioral gulfs between teachers and superintendents. To expect central office staff intuitively to evaluate alternatives in terms of their effect upon teachers and students is futile in many cases. Therefore, because of this phenomenon of differential perception, it is al-
Staff compares parameters of present situation with the "desirable" statements in light of agreed upon purposes. The human, technological, organizational, and systemic manipulation of propositional and systemic manipulations involves the development of alternatives. It is most mandatory to involve teachers in the process of developing alternatives.

In the broad sense, planning is a process of considering the likely consequences of actions before they are taken. More specifically, planning is the selection of a course of action by systematically considering the relative advantages of alternative courses of action. All too frequently, the first feasible solution is the result of poor prior planning, while the best solution is the result of poor prior planning, the first feasible solution often adopted without proper consideration. In the pressure of reaction planning, that which occurs in a crisis or as a result of poor prior planning, the first feasible solution is often adopted without proper consideration. In the broad sense, planning is a process of considering the likely consequences of actions before they are taken. More specifically, planning is the selection of a course of action by systematically considering the relative advantages of alternative courses of action.

Instructional program options:
- Required courses / mini courses / independent study
- Academic, college-oriented program / vocational, career-oriented program
- Comprehensive high school / high school with tracks within the curriculum
- Teachers and textbook dominated instruction / a child centered approach

Organization options:
- Junior high/middle school
- Middle school
- Self-contained / open
- Non-graded / graded
- Homogeneous groups / heterogeneous groups

Special schools, i.e. vocational, impaired, talented, etc.,
- Several small schools / one of two larger schools
- 4-4-3 / 2-3-3-3 grouping
- Multi-age grouping
- Homogeneous groups / heterogeneous groups
- Non-graded / graded
- Open / self-contained

The long-range goals
- Still manipulates the variables for each area to identify alternative ways to reach
- Still completes parameters of present situation with the "desirable" statements in

The short-range goals
- Teachers and textbook dominated instruction / a child centered approach
- Comprehensive high school / high school with tracks within the curriculum
- Academic, college-oriented program / vocational, career-oriented program
- Teachers and textbook dominated instruction / a child centered approach

Planning is a process of considering the likely consequences of actions before they are taken.

Developing alternatives involves the systematic manipulation of the human, technological, organizational, and systemic variables that comprise the educational entity. It is a process of considering the likely consequences of actions before they are taken. More specifically, planning is the selection of a course of action by systematically considering the relative advantages of alternative courses of action.

In the broad sense, planning is a process of considering the likely consequences of actions before they are taken. More specifically, planning is the selection of a course of action by systematically considering the relative advantages of alternative courses of action.
After reviewing the purposes and desirable goals established for the various areas of the system, a comparison of the present program with the desirable program is made. While considering the present and anticipated resources available to the system, the question, "What will happen if ...?" is answered for each variable and combination of variables that are compatible with the purposes and objectives of the system. The objective at this point in the process is to identify and describe as many feasible alternatives for reaching the long-range goals as possible.

School systems with access to computers and programmers should explore the possibility of utilizing a computer planning model or cybernetic technique; these are valuable in simulating the effects of manipulating educational variables in terms of cost and quality. Computer planning models enable the local planners to predict the immediate and long-range resource demands of implementing specific alternatives.
Community/school cooperation and coordination options:

- Shared instructional services: library (summer and adult), recreation, post-secondary education, secondary equivalency, resource persons, local industry resources, communications media, cultural resources, etc.

- Shared special services: transportation, maintenance and operations, cafeteria, health

- School-managed special service options: system-employed psychologists, system-employed nurses, local school-managed cafeterias, centrally-managed cafeterias, system-operated cafeterias, outside catering, vending

The alternatives listed in the outline section are not intended to be all-inclusive; they are included only to suggest possible options. The alternatives listed in the outline section are not intended to be all-inclusive; they are included only to suggest possible options.
PHASE IV — SELECTION OF A PLAN

Task 9 Staff makes recommendations.

Task 10 Consultants make recommendations.

Local committees and/or consultants make recommendations to superintendent

- One recommended and one or more alternate, long-range plans (5-15 years) are submitted
- Each long-range plan is broken down into phases or short-range (1-5 years) plans
- A long-range plan may be presented with one or more strategies (series of phases) each having the same net effect
- Recommendations are made in writing
- A verbal report may be made to the Board of Education
- At the request of the board, consultants make other verbal and media presentation to other audiences

After carefully evaluating the options available for each variable, the local committee and/or consultants select several alternative plans which best implement the stated purposes and objectives of the school system. The committee may submit the acceptable plans to the superintendent with each carrying equal weight; they may, however, select one plan which seems to be most compatible with the stated purposes and goals while presenting the other plans in order of their priority. It is recommended that the plans should be submitted to the superintendent in a written report which explains the rationale for the recommendations and defines the strategies or phases included in each plan. The several proposals may vary in detail; on the other hand, the long-range objectives of the several plans may be identical with the plans differing only in the strategies required.

Surveys and recommendations provided by the Division of
problems sometimes disappear. While the decision not to decide may be very

profound, the decision to make a decision will usually yield the greatest

benefit and more often prove multiplicative over a period of time. Making a decision is strong. By failing to decide, however, delayed

decision-making process. The first obstacle involves the com-

prehensiveness of the involvement of many persons in the develop-

However, the board of education is responsible for the final decision:

the establishment of the purposes and goals. In the analysis of the

While it is important to involve the community and the staff in

Superintendent selects a plan and makes recommendations to the board.
Superintendent carefully studies the several alternatives that are available to the system and weighs the pros and cons of each against the purposes of the system and against the human, financial, technological, political, and social inputs that influence the decision-making process. Hazardous both for the organization and for the individual.

Another tendency that must be avoided by the superintendent is the erroneous reasoning that, because of the involvement of staff members and community representatives, the recommended alternative must be accepted unquestioningly as the superior plan. Also, the superintendent may feel pressured to make a decision quickly before thoroughly analyzing the likely consequences of each alternative. As the individual who is legally and professionally responsible for the recommendation made to the Board, the superintendent must weigh and analyze the probable cost and/or benefits of the alternative courses of action as thoroughly as did the committee who recommended the alternative. While pressured by outside interest groups and by his colleagues to make a decision and while influenced by the recommended solutions, the superintendent cannot abdicate his responsibility for thoroughly analyzing and evaluating the alternatives for himself.

All complex systems that interact with their environment for survival develop subsystems for the operation of their function. In order to survive, these systems must maintain a state of equilibrium:
After thorough consideration of the alternatives, the Superintendent makes recommendations to the Board.

Any internal or external force which disrupts the system is countered by another force from within which tends to bring it back to its original state. This is especially true in school organizations where subsystems in the structure develop and attempt to maintain a certain degree of security. For this reason, information that is generated purely from the inside should be checked periodically by objective, outside experts to eliminate the possibility that vested interests within the organization may never be realized simply because information does not work and can be put into acceptable operation.

Therefore, several sources of information should be utilized by the Superintendent to insure that he does not become unduly influenced.

Implementing the alternative can usually be found through a process which secures community support. The mean for this is found in the administration and therefore requires internal agreement. If the means of an alternative are considered objectively impractical, then new alternatives are considered.

The real merit of an alternative is usually realized only when the system is confronted with a minimum of confusion. The real merit of an alternative is usually realized only when the system is confronted with a minimum of confusion. The real merit of an alternative is usually realized only when the system is confronted with a minimum of confusion. The real merit of an alternative is usually realized only when the system is confronted with a minimum of confusion. The real merit of an alternative is usually realized only when the system is confronted with a minimum of confusion. The real merit of an alternative is usually realized only when the system is confronted with a minimum of confusion.
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2. Staff organizes for in-house planning.
3. Staff updates philosophy, goals, and objectives.
5. Staff completes situation analysis.
6. Consultants complete situation analysis.
7. Staff develops alternative plans.
8. Consultants develop alternative plans.
9. Staff makes recommendations.
10. Consultants make recommendations.
11. Administration recommends to Board.
12. Board adopts a plan.
13. The plan is implemented.
14. The plan and the planning process are evaluated.

After thoroughly considering each of the alternatives in terms of the purposes and goals of the system and in terms of the human, financial, technological, political, and social resources that are available, the superintendent makes his recommendation to the Board of Education.

Task 12 Board adopts a plan.

The Board of Education, after considering the data and the rationale behind the recommendation, adopts a plan.
## Task 13: Implementation of a Plan

### Preparation:

1. Staff recognizes need for and makes decision on plan.
2. Staff organizes for in-house planning.
3. Staff updates philosophy, goals, and objectives.
4. Staff (un)requests out-of-house consultation.
5. Staff approves draft analysts.
6. Consultants complete situation analysis.
7. Staff develops alternative plans.

### Phase V - Implementation of a Plan

The plan is implemented.

- Implementation of the adopted plan is begun.
- Implementation of the adopted plan is examined.
- Open lines of communication with the staff and community should be maintained.
- Implementation of the adopted plan is evaluated.

### Implementation Principles:

- Communication and consultation are maintained.
- Staff are involved in decision-making.
- Staff are involved in implementation.
- Staff are involved in evaluation.
- Staff are involved in follow-up.

### Short-Range Tasks

1. Development of objectives and goals.
2. Identification of resources.
3. Development of strategies and tactics.
5. Development of evaluation plans.

### Significance

- Staff and community should be involved whenever possible.
- Implementation of the adopted plan is begun.

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**Table:**

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<thead>
<tr>
<th>Task</th>
<th>Description</th>
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<tbody>
<tr>
<td>1.</td>
<td>Staff recognizes need for and makes decision on plan.</td>
</tr>
<tr>
<td>2.</td>
<td>Staff organizes for in-house planning.</td>
</tr>
<tr>
<td>3.</td>
<td>Staff updates philosophy, goals, and objectives.</td>
</tr>
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<td>4.</td>
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</tr>
<tr>
<td>5.</td>
<td>Staff approves draft analysts.</td>
</tr>
<tr>
<td>6.</td>
<td>Consultants complete situation analysis.</td>
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<tr>
<td>7.</td>
<td>Staff develops alternative plans.</td>
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<tr>
<td>8.</td>
<td>Implementation of the adopted plan is begun.</td>
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<td>9.</td>
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</tr>
<tr>
<td>10.</td>
<td>Open lines of communication with the staff and community should be maintained.</td>
</tr>
<tr>
<td>11.</td>
<td>Implementation of the adopted plan is evaluated.</td>
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</tbody>
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**Diagram:**

- Implementation of a Plan
- Communication and consultation
- Staff involvement
- Evaluation
- Follow-up
Local, State, and National approval should be secured at appropriate time.

Comply with Local, State, and Federal regulations and standards.

Implementation of instructional program component
Implementation of organization component
Implementation of finance component
Implementation of personnel component
Implementation of community/school interaction component
Implementation of special services component

Implementation of facilities component

For more details, consult the Division of School Planning publication *North Carolina Laws Pertaining to Public School Construction*, recent editions of *Public School Laws of North Carolina* and *General Statutes of North Carolina*.

Implementation of the total plan may include several components such as organization, reorganization, finance, facilities, program, personnel, and others. Since implementation of the plan may be done in stages with one or more components being implemented simultaneously, this publication does not attempt to identify procedures for the implementation of each component but rather attempts to utilize for illustrative purposes the details suggested for the facilities phase of the plan. Plans for the implementation of other components of the total plan would logically need to be tailored to the local situation.

Although implementation of the facility component depends upon many relative factors also, there is a fairly well established procedure that is applicable regardless of
Preparation

1. Select consultants

2. Staff recognizes need for and makes decision for plan.

3. Staff organizes for in-house planning.

4. Staff updates philosophy, needs, and guidelines.

5. Staff selects consulting firms.

6. Consultants complete/site analysis.

7. Consultants develop alternative plans.

8. Staff makes recommendations.


10. Administration recommends to Board.

11. Board adopts plan.

12. The plan and the planning process are evaluated.

13. Whether the project is renovation, a rehabilitation, or a completely new structure.

14. The plan and the planning process are evaluated.

Legal consultants and their basic services

- To advise on contracts with consultants, builders, equipment, fixtures, etc.
- To advise on school law and legal consultants and their basic services.

...and we can save 700 lira by not taking soil tests.
Educational consultants and their basic services
- To give counsel and recommendations regarding education matters such as: organization, transportation, finance, building programs, educational specifications, equipment, etc.
- To assist in interpreting facility needs
- To evaluate processes and results

Design consultants (architect, engineer, landscape architect, interior planner) and their basic services
- To assist in programming the building projects
- To assist in site selection
- To prepare schematic plans and construction documents
- To assist in obtaining bids and executing contract documents
- To assist in inspection of project and in administering construction
- To assist in coordinating functions and services of other agencies (Federal, State, utilities, transportation, etc.)
- To assist in selection of furnishings and equipment
- To provide additional services, at additional cost, such as:
  - Special analysis and studies of the owner's needs, beyond those called for in the schematic design phase of the basic services
  - Making measured drawings of existing buildings
  - Revising previously approved drawings to make changes not initiated by architect

The services of educational consultants may have been obtained early in the planning process; if not, they may be contracted to assist in more limited activities at various stages of the process.

While design professionals may be retained on a continuing consulting basis, they should be utilized to a greater extent during construction or remodeling of facilities. In any event, the agreement between owners and design professionals should be in writing and clearly understood. This agreement between the administrative unit and consultants describes the relationships and mutual responsibilities among the parties involved.


Develop educational specifications and user requirements.

Consultants and planners need not be "home-town folks" for detailed information on the process.

Factors to be considered in selecting consultants are:

- Location
- Suitable experience
- Adequate amount of time schedule
- Capacity to provide all required services within a reason
- Competence to provide complete services required
- Competence to provide complete services required
- Sufficient experience
- Location with present day transportation/communication possibilities

Selecting consultants and planners should not be unduly influenced by political factors; competence and thoroughness, imagination and resourcefulness are more important.

Providing specialized interior design and furnishing services according to the needs of the school or community and cost.

Educational specifications may be defined as a means of communication between the educator and the design professions. For detailed information on the process of selecting a site, consult the Division of School Planning publications Planning for New School Sites and Public and Private Schools and Planning for New School Sites and Public Schools and Highways.

...
Prepare architectural-engineering program

- Architect and engineer develop preliminary drawings
- Preliminary drawings are reviewed and suggestions are made by:
  - Administrative unit
  - Division of School Planning
  - State Insurance Department
  - State Board of Health (when necessary)
  - USOE if Federal funds are involved
- Adjustments are made to the preliminary drawings pursuant to the suggestions by the above agencies
- After a process of reviews and refinements, preliminary drawings are approved by the above agencies
- The design and/or selection of furniture and equipment is begun

For additional information consult the Division of School Planning publication Procedures for Review and Approval of School Building Plans and for Inspection of Building Projects.

The architectural program reflects the architect's initial comprehension of the design problem given to him by the client. This is not a preliminary sketch for a building project, but it may include sketches and graphics as well as verbal statements which communicate the architect's response to the owner's statement of the planning problem.

1. Start recognition of need for and make decision to plan.
2. Staff develops in-house planning.
3. Staff updates philosophy, goals, and objectives.
5. Staff completes situation analysis.
6. Consultants complete situation analysis.
7. Staff develops alternative plans.

Prepare, review, and approve design development documents which include working drawings, specifications, and other contract forms.

Design development documents are reviewed and suggestions are made by:
- USOE if Federal funds are involved
- State Board of Health
- State Insurance Department
- Division of School Planning
- Administrative unit

Adjustments are made to the design development documents pursuant to the suggestions by the above agencies.

After a process of reviews and refinements, design development documents are approved by the above agencies.

Prepare, review, and approve construction documents which include working drawings, specifications, and other contract forms.

Construct and engineer prepare design development drawings and outline specifications which indicate all basic decisions regarding:
- Materials
- Mechanical-electrical system
- Structural system
- Basic equipment and services
- Plan layout

Design development documents are reviewed and suggestions are made by:
- Plan layout
- Basic equipment and services
- Structural system
- Mechanical

Consultants develop alternative plans.
8. Staff makes recommendations.
10. Administration recommends to Board.
11. Board adopts a plan.
12. The plan is implemented.
13. The plan and the planning process are evaluated.
• Architect begins to prepare working drawings and specifications
• The design and selection of furniture and equipment progresses
• Working drawings are reviewed and approved by:
  • Board of Education
  • Division of School Planning
  • State Insurance Department
  • State Board of Health, which delivers a set of the drawings to their local or district representative

• State Department of Insurance and State Board of Health comment by letter to the Division of School Planning
• Acting for State Superintendent of Public Instruction, the Division of School Planning forwards certificate of approval to administrative unit and architect

See the Division of School Planning publication Procedures for Review and Approval of School Building Plans and for Inspection of Building Projects for State laws, regulations, and procedures for obtaining necessary approval from State agencies.

For assistance in developing plans and technical specifications, the superintendent and his architect are invited to consult the following Division of School Planning publications:

• Roofing-Planning, Specifications, Construction, Problems — Technical Series 1

• Specifications for Structural Concrete for Buildings — Technical Series 2

• Considerations for Fire Alarm Systems, Sprinkler Systems, and Vandalism Control Systems in Public Schools — Technical Series 3

• Moisture Protection — Technical Series 4

• Pre-Fabricated, Pre-Engineered Rigid Frame Buildings — Technical Series 5
Staff recognizes need for and makes decision to plan.
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12. Board approves a plan.
13. The plan is implemented.
14. The plan and the planning process are evaluated.

For planning, constructing, and executing projects, and for the acceptance of completed projects, consult the Division of School Planning, and PROCEDURE FOR STATE-FISENDED PROJECTS. For more detailed information on the procedures, contact the Division of School Planning.

Planning
Planning includes the preparation of the plan. It includes the formulation of objectives, the determination of the methods to be used, the organization of the project, and the determination of the means by which the project will be executed.

Construction
The construction phase of the project is the period during which the project is executed. During this phase, the project is developed in accordance with the plan. It includes the procurement of materials, the construction of buildings, and the installation of equipment.

Evaluation
The evaluation phase of the project is the period during which the project is evaluated. During this phase, the project is reviewed to determine if it meets the objectives set forth in the plan. It includes the collection of data, the analysis of the data, and the preparation of a report summarizing the results of the evaluation.

North Carolina School Facilities Program
This program is designed to provide a coordinated approach to the planning, designing, and constructing of school facilities. It is intended to ensure that school facilities are designed and constructed in a manner that is consistent with the needs of the students and the community.

The program includes the following steps:
1. The school district identifies the need for a new or renovated school.
2. The school district develops a statement of need.
3. The school district convenes a planning team.
4. The planning team develops a design concept.
5. The design concept is presented to the community for discussion.
6. The design concept is approved by the school district.
7. The design concept is executed by a construction firm.
8. The construction firm completes the project.
9. The project is evaluated by the school district.

For more information, contact the Division of School Planning.
Administer and complete construction process

- Architect, engineer, and possibly administrative unit observe and inspect construction process to check compliance
- Administrative unit makes periodic payments to contractors and consultants according to the written contracts
- Furniture and equipment are completed or purchased
- Upon completion of the contracts, administrative unit, architect, engineer, and Division of School Planning representatives make inspections
- Consultants provide administrative unit with operating instructions for the utilization of the facility
- Architectural and engineering consultants of the Division of School Planning conduct a final inspection of the new construction before all State funds are released
- Administrative unit accepts building and makes final payment to contractors and to consultants
- Administrative unit completes preparation for using the building
Task 14: The Plan and the Planning Process are Evaluated

Objectives of Evaluation:

- To further refine the planning process for more efficient operation in the future.
- To gather the information for making adjustments determined to be desirable.
- To ensure that selected goals (short- or long-range) of the school system are date-specific.
- To assess the effectiveness of the planning process and the plan in achieving the goals.

Evaluation is part of every phase of the planning process, not just a culminating activity that symbolizes termination. Actually the process was begun with an evaluation (situation analysis); it is realistic to assume that Phase VI of one process may be the beginning of Phase I of another.

Throughout the planning procedure information is gathered to assess progress toward the goals of the system, to determine the effectiveness of the procedure, and to refine the planning process for more efficient operation in the future. Effective evaluation is a part of every phase of the planning process.
Principles of evaluation

- Evaluation must be practiced continuously throughout the process, not reserved as a culminating activity.
- Evaluation is a dynamic activity.
- Evaluation is cooperative, involving many levels of the school system.
- Evaluation is most effective when there is a definite, well-defined channel for feedback to the appropriate operating level.
- Evaluation should focus upon students and upon the teaching/learning situation.
- Evaluation may be critical but should always be constructive.

Criteria for evaluation

- Purposes of the school system
- Goals (short- and long-range) of the school system
- Educational specifications (if there was a facility construction component)
- Effect upon and reaction of the persons or groups affected
  - Students
  - Teachers
  - Parents

These evaluative principles are applicable at any phase of the planning process; they are appropriate for assessing progress in long- or short-range plans regardless of whether one school or the whole system is involved.

Evaluation should be a dynamic or active part of the process from the first phase through the last. It is suggested that the initial time and effort expended in developing a well-defined evaluation system are well worth the investment in terms of the efficiency and effectiveness of the total planning process.

Progress in the planning process should be evaluated in terms of several criteria; these should be cooperatively developed in the beginning and should be flexible enough to allow for additions and deletions as the process continues. Therefore, criteria listed in the outline are suggestions and should not be considered all-inclusive. The first five criteria are obvious, need no explanation, and are relatively easy to evaluate. The last two, the effect of the plan upon the social interaction and upon the informal structure of the system,
pertinent to the success of the plan. Evolving side-effects that are so im-
portant with the obvious criteria but subtle are not only with the obvious criteria but subtle. The point is: an evaluation should be concerned with the improvements by these groups. The effect upon the acceptance and the resultant change. They have a direct and immediate bearing. However, upon the morale of the situation; therefore, upon the morale of the planning process actually side-effects of the planning process are improving in reality. These factors are not apparent only if they are sought out. This is because both are elusive and intangible factors that become apparent only if they are sought out. This is not intended to minimize their importance. On the contrary, both factors and others like them may play a very important role in the evaluation of the plan of improvement. These factors are actually side-effects of the planning process and its resultant changes. They have a direct bearing, however, upon the morale of the students, the teachers, and the community. The effect upon the formal structure of the system are less obvious and much more difficult to ascertain. This is true because both are elusive and intangible factors that become apparent only if they are sought out. This is not intended to minimize their importance. On the contrary, both factors and others like them may play a very important role in the evaluation of the plan of improvement.
Techniques for gathering evaluative data

- Objective data may be obtained by:
  - Testing (teacher-made and standardized)
  - Opinion polls
  - Attitude scales or inventories
  - Outside evaluation team of professionals

- Subjective data may be obtained by:
  - Purposeful and systematic observation
  - Self-analysis by the individuals involved
  - Group discussions
  - Interviews
  - Public reaction (telephone conversations, news media, letters)
  - Written evaluation of facility projects by principals and senior custodians during first year of utilization

Since evaluation is complex, it should employ a variety of methods, techniques, and instruments for supplying the system with the volume of objective and subjective data that is necessary for analyzing both the progress and the process. While objective data are more easily generated in large volume, the subjective information, like the artist's thumb, is necessary to put everything in its proper perspective.

In summary, the evaluation phase of the planning process, while appearing last, should never be considered the end of the process; it is a time for reflection and for course-correction for the beginning of the subsequent process. Planning for education is never complete. It is only one segment of a never-ending spiral that will continue as long as there are children and as long as there are adults who feel an obligation to help them develop as successfully as possible.


3-Specifications for Structural Concrete for Buildings — October, 1970.

4-Moisture Control — August, 1971.

5-Pre-Coated Roofing Felts — June, 1972.

6-Pre-Engineered Rigid Frame Buildings — April, 1972.

7-Prefabricated Case Study Buildings — August, 1972.