

DOCUMENT RESUME

ED 182 867

EA 012 509

AUTHOR Kaufman, Roger A.: English, Fenwick W.
 TITLE Needs Assessment: A Guide to Improve School District Management.
 INSTITUTION American Association of School Administrators, Arlington, Va.
 PUB DATE 76
 NOTE 64p.
 AVAILABLE FROM AASA, 1801 North Moore St., Arlington, VA 22209 (Stock No. 021-00450: \$5.00 prepaid; quantity discount)
 EDRS PRICE MF01/PC03 Plus Postage.
 DESCRIPTORS Long Range Planning; *Management; *Needs Assessment; *Program Planning; School Districts
 IDENTIFIERS System Approach

ABSTRACT

Successful school district management, this book says, depends on including needs assessment in the planning process. Part 1 discusses the advantages of using needs assessment in management. Relevant terms are discussed in part 2, while part 3 examines specific steps towards utilizing a needs assessment process. Part 4 discusses the six steps to long-range planning, the "system approach." Finally, five hypothetical case studies are offered to help educational managers implement needs assessment in their own districts. (Author/LD)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

ED182867

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRO-
DUCED EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIGIN-
ATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRESENT
OFFICIAL NATIONAL INSTITUTE OF
EDUCATION POSITION OR POLICY

Needs Assessment: A Guide to Improve School District Management

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

AASA

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

by

ROGER A. KAUFMAN
Professor of Education
Florida State University
Tallahassee, Florida

FENWICK W. ENGLISH
Superintendent
Hastings Public Schools
Hastings-on-Hudson, New York

Prepared For
AASA National Academy for School Executives

Published by the American Association
of School Administrators
1801 North Moore Street, Arlington, Va.

© Copyright, 1976

EA 012 509

All rights reserved.

**No part of this publication may be reproduced in any form
without written permission from the publisher.**

Single copy, \$3.00

2-9 copies, 10 percent discount.

10 or more copies, 20 percent discount.

**All orders for less than \$15 must be accompanied by payment in full, and add
\$1.00 for handling and postage.**

Stock Number: 021-00450

Foreword

For a number of years, AASA's National Academy for School Executives has conducted programs on needs assessment. Surfacing initially as a function of interest in system management and buttressed by the accountability movement, needs assessment has consistently been both a highly-requested and rated NASE offering.

The Academy's experience in this program area suggested the demand for a practical, utilitarian monograph in a how-to-do-it format for use by the harried practitioner charged with implementing needs assessment procedures in his organization. Rationality dictated that we look to successful presenters in NASE programs for potential authors of such a publication. This tack inevitably led to Roger A. Kaufman and Fenwick W. English.

Kaufman's treatment of needs assessment in his earlier publication *Educational System Planning* has provided the theoretical context for a number of NASE programs on needs assessment. English, primarily through the use of case studies, has illustrated the design and implementation of needs assessment procedures to hundreds of participants in NASE programs on the topic. Together they have teamed to make consistent winners of NASE offerings in this dimension of educational management.

This publication continues in a different medium the authors' effectiveness and expertise in needs assessment. Moving deftly from a brief look at educational management today, Kaufman and English clarify their terms, describe in great detail the nature and conduct of needs assessment, and locate needs assessment within the larger context of educational planning. They then provide five hypothetical case studies as illustrations of needs assessment in a variety of community and educational settings. Coming across loud and clear throughout the volume are the basic truths that needs assessment implies gap or discrepancy analysis and that this analysis can occur at the course, pro-

gram, building, or organizational level.

AASA and its National Academy for School Executives wish to thank the authors for a job well done and for their commitment to the continued improvement of educational management. We are proud to add this work to our publications list with this purpose in mind.

Paul B. Simon
Executive Director
AASA

Table of Contents

INTRODUCTION	7
Part I—EDUCATIONAL MANAGEMENT TODAY	8
Confusion of Means and Ends	9
What Does Needs Assessment Allow Management To Do?	11
Differentiate Between Means and Ends	11
Identify the Difference Between Desired and Current Organizational Achievement	11
Identify the Validity of Means Being Used to Attain the Organization's Purposes	12
Provide Indicators to Redesign Educational Means	12
Serve as an Organizational "Sensing" Mechanism for Designing New Goals When Required	17
Summary	18
Part II—DEFINITION OF TERMS AND CONCEPTS	20
What Is a Need?	20
What Is a Needs Assessment?	20
What A Needs Assessment Is Not	22
The Politics of Needs Assessment	25
Summary	26
Part III—MANAGING A NEEDS ASSESSMENT	27
Explanation of Major Steps	28
Initial Development of Organizational Purposes	28
Establishment of Parameters to Prioritize Organizational Purposes	30
Goal Ranking Worksheet	32

Making Organizational Purposes Measurable	33
Developing Comprehensive Statements of Educational Accomplishment	37
Post Assessment Activities	38
Sample Locator Index For Identifying Educational Gaps	39
Developing A Managerial Plan of Action	40
Types of Planning	40
<i>Kaufman's Taxonomy of Possible Tools and Methods Which Can Be Used With the Major Functions of The System Approach To Educational Planning</i>	41
Other types of needs assessment procedures	42
Summary	43
<i>A Brief Survey of the Hillside School Program</i>	44
 Part IV—THE LARGER CONTEXT: EDUCATIONAL PLANNING	46
The System Approach	46
Identify Problem Based Upon Needs	47
Determine Solution Requirements and Identify Solution Alternatives	48
Select Solution Strategies From Among Alternatives	49
Implement Selected Strategies	49
Determine Performance Effectiveness	50
Revise As Required	50
Summary	50
 Part V—SOME HYPOTHETICAL CASE STUDIES	51
Curtis Unified School District Needs Assessment	51
Uniontown Union Free School District Needs Assessment	54
The Sagamore City Needs Assessment	58
The River City Needs Assessment	59
Megalopolis City Schools: Needs Assessment By Caucus	60

Introduction

This publication is for all educational administrators who have been searching for a better way to manage modern school districts. *Needs assessment* is a series of empirical steps to define organizational purposes and to identify and/or bring valid and compatible means for their realization.

The authors have implemented such strategies in a variety of situations, from national organizations to state agencies and local school districts of various sizes. We think the benefits are enormous, not to mention the added benefit of the confidence engendered in those who are served by the school district.

Needs assessment is not a way to put a "lid" on things, or a method to return to "the good old days" when things were less complex. *Needs assessment* is a process for the educational manager who wants to manage for success, who wants to see learners acquire those skills, knowledges, and attitudes which are required for societal survival and social growth.

The concepts are basically simple—to determine and validate what should be accomplished before collecting and mobilizing the means for education. It is so simple that it is easy to write it off as being what we already do or have done. In almost all cases it is not. A considered reflection on the ideas, practices, and concepts of needs assessment will indicate how school district management can be substantially improved.

Roger A. Kaufman, Tallahassee, Florida
Fenwick W. English, Hastings-on-Hudson, New York

Part I

Educational Management Today

Educational management today is beset with stresses and strains while trying to solve gargantuan problems: to lift up large masses of inner city children with chronically low achievement scores, to find more economical approaches to staffing with large numbers of teachers on tenure and personnel cutbacks of others who are sometimes better prepared than those with seniority, to integrate newer methodologies and curricula into the schools where resistance to new ideas appears overwhelming. Citizens complain about the lack of discipline in the schools, the perceived apathy of the administrators who have formed their own unions, declining enrollment and rising costs, and the steady intrusion of partisan politics into Board member selection processes—just a partial catalog of horrors facing educational managers today.

School administrators have resorted to a variety of techniques to confront contemporary problems such as massive citizen committee reports, de-centralization, PPBS (Planning-Programming-Budgeting Systems), performance contracting or management by objective (MBO). Yet few appear to have the capability of successfully performing the following essential tasks of management:

- (1) System direction finding;
- (2) System goal and objective setting;
- (3) Effective allocation of resources;
- (4) Feedback and evaluation;
- (5) Consideration/adoption of feasible alternatives and/or adjustments for new system directions;

Educational management often finds itself embroiled in controversy over the selection of means, the "how-to-do-its" of education. The definition of necessary and specific ends most often remains a mystery, or is based upon assumptions alone. Educational managers too often assume that the functions and results of the school system are known

and accepted. While many people may think they are known, there is most likely a great deal of confusion over what should be the directions of the enterprise and what should be its products.

We believe that the foremost purpose of responsive and responsible educational management is *direction finding*. The formal process for direction finding is *needs assessment*. Needs assessment is a piece of a larger process called a *system approach* (not "systems" approach) to educational planning.¹ Within a universal process of a system approach are contained methods for determining the sensible distribution of the resources of the school district (people, time and materials) and making provisions for re-adjustments based upon valid feedback concerning outcomes and changed procedures. What prevents most educational managers from accomplishing the purposes of the enterprise? We suggest that it is our chronic inability (or unwillingness) to perceive the difference between means and ends in education which has led to results less than those we want and expect. As a result of this means-ends confusion in attempting to manage and improve education, our management procedures usually fail to improve the delivery of resources and tend to be accompanied by excessive rigidity and standardization (and dehumanization) of schools and school districts.

CONFUSION OF MEANS AND ENDS

Kaufman² has defined an "end" as an outcome, a result, an output, or a consequence, while a "means" is any tool, vehicle, or solution which is used to achieve an "end." "Means" then are used to achieve "ends" and are selected on the basis of their probability to effectively and efficiently meet desired outcomes or "ends."

Successful educational management depends upon our ability to derive and define critical *ends* and find the best combination of *means* to get there. A current problem in education today—with all of the partners (the learners, the educators, and the community)—is a confusion of *means* and *ends*, or even the substitution of *means* for *ends*. When asked to talk about resulting student learning, we are tempted to shift the discussion to processes—teaching strategies, demographic characteristics, teacher credentials or money. In the larger picture of society, education is a *means*—a process for doing something. That "something" has to be defined and agreed upon in order for us to manage sensibly and successfully. If we do not know the product,

¹ Roger A. Kaufman, *Educational System Planning* (Englewood Cliffs: Prentice-Hall, 1972).

² *Ibid.*

just about any process will "work." Conversely, if we cannot specify the required result, anything we do can be judged as being deficient and thus we are constantly laid open to attack.

Schools and teachers are *means* employed to improve the chances that students within any given society will learn those things deemed relevant by that society. All human beings are learners. Learning is a natural and spontaneous human ability. Human learning has many definitions, purposes, levels and qualities. Wherever the human race has found itself on the face of the globe, it has gone about creating customs and traditions intermingled with the local geography and resources. The propensity for humans to improve upon their surroundings is amply demonstrated and documented within the history of civilization.

Schools appear to be places especially marked by any society to improve upon human learning. Rather than allow young homo sapiens to wander around and perhaps find the wheel, build a fire, or learn to construct a house from ice, rock, or wood, the rudiments of formal instruction provide for survival and enhancement of the culture. Therefore, schools are charged by society to perform a purpose; to instruct the young and to be able to show results, i.e., children should learn in schools and the results should be evident in their behavior.

That schools are formal institutions with specific purposes (outcomes) is basic to their formulation in the first place. Thus, the first schools in the United States were established in 1647 and were aimed at teaching the Bible so as to avoid leading a life of sin. The Deluder-Satin Act³ which brought into existence the first schools was very much aimed at improving the chance of survival of the young by instructing them upon those outcomes deemed essential for survival.

Since that time, however, the nation has undergone profound and drastic changes. Waves of immigration, the development of social pluralism, competing religious and racial viewpoints and histories, have muddied the purposes of the schools. Rather than being for a few children of privileged parents, they have now become an instrument to serve all the children of all the people. Schools and school districts were expanded from those places in the nation with definite sectarian purposes to a broader based "public" school with a supporting tax structure. Despite this broader charter, the schools have had to struggle to avoid becoming essentially a middle class institution. The inability of the schools to reach into our total society to effectively

³ See "The Town School" in Stephen Duggan. *A Student's Textbook in the History of Education* (New York: Appleton-Century-Crofts, 1948) pp. 379-381.

meet the needs of the less favored social classes has been amply demonstrated.⁴

The means of education are not achieving the required ends for all of the people.

WHAT DOES NEEDS ASSESSMENT ALLOW MANAGEMENT TO DO?

Needs assessment as a basic tool for direction finding allows management to perform its essential functions far better than most school districts can realize today. The concept of needs assessment can be applied at the district level, the school level, individual departments or grade levels, and even the individual learner level.

(1) Differentiate Between Means and Ends

Needs assessment enables management to differentiate between means and ends. By focusing upon the outcomes of schooling in terms of learner behaviors, skills, knowledges and attitudes, needs assessment dispassionately views schools, teaching methodologies, materials, curricula, staffing, performance objectives, etc., as possible types of means to achieve desired outcomes. While it may be possible to separate teaching and learning and to concentrate upon teaching to improve it per se, the ultimate criterion of teaching success is pupil learning, and the ultimate criterion of a school district's success is learner performance in society.⁵

(2) Identify the Difference Between Desired and Current Organizational Achievement

Needs assessment helps educational managers identify the legitimate and valid ends of the educational process desired, and then assists in identifying where the "gaps" exist between expected educational achievement and actual educational accomplishment.⁶ Desired organizational achievement is established in terms of pupil performances to

⁴ See Michael B. Katz, *The Irony of Early School Reform* (Boston: Beacon Press, 1968).

⁵ The problems of isolating teaching as a process per se, apart from considerations of improving the schools were discussed in Fenwick W. English, "Teacher Competencies in the Public School Setting: Paradoxes and Problems," *Journal of Collective Negotiations*, 2:3 (Summer, 1973).

⁶ Thomas W. Fine, "Implementing a Needs Assessment Program," *Educational Technology* 9:2 (February, 1969) pp. 30-31; also see Kaufman 1972.

be mastered at the end of a sequence of instruction. Even the most sophisticated school districts in the nation have not yet established such norms.⁷

(3) Identify the Validity of Means Being Used to Attain the Organization's Purposes

Needs assessment helps define the ends and identify the difference (gaps) between those ends and current educational outcomes. The validity and effectiveness of the means used to reach those ends are then capable of being assessed in some rational and objective manner. Means (staffing, curricula, scheduling, etc.) are shaped by the school district. How they are shaped or configured and the degree to which this configuration is effective has in the past been defined largely by convenience and tradition.

Once the ends of schooling reach a level of specificity where they can be accurately assessed, various types of configurations to reach the ends can be considered in ways other than advocacy on the basis of the "best" educational "good," or in raw terms of the lowest cost. *Needs assessment* also helps determine the "quality control" function in the school system. For example, the current proliferation of "mini-courses" in the secondary schools raises questions about dilution of the curriculum, the balance between basic skill development and/or reinforcement by using only student interest as the sole determiner of curricular scope and content. By what criteria and rationale were mini-courses developed? Who decided how they were developed and/or determined to become part of the total curriculum? Too often such determinations are made by the principal functioning on "gut feelings" or by various departments anxious to keep pace with modern "trends." Curricular content, utility and balance as a means to known and useful ends are sacrificed to that which is known or possessed by the faculty rather than in the systematic selection of courses to close validated gaps in a validated curriculum desired to achieve validated results.

(4) Provide Indicators to Redesign Educational Means

Needs assessment is a tool to determine the requirements for a possible district redesign to obtain desired and validated learner outcomes. Such criteria of specific accomplishment are largely non-existent in most school districts. One of the reasons poor or inefficient ed-

⁷ Leonard Buder, "City Refining School Norms," *New York Times*, May 4, 1975.

⁸ See Gene R. Hawes, "Criterion-Referenced Testing: No More Losers, No more Norms, No More Parents Raising Storms," *Nations Schools*, 91:2, (February, 1973) pp. 35-49.

ucation practices have not been weeded out of the school district is that the function of feedback is largely ignored. How well the district has been able to reach specified and validated objectives has not been the yardstick upon which to base resource allocation, curriculum revision or system renewal. Rather these decisions have come to be made on the basis of tradition and conventional wisdom and by formulae which have been easy to administer. As pupil performance begins to decline, the district often does not explore alternate methods of resource allocation. Historically, it "compensates" the existing methods, much in the same way mediæval astronomers augmented the geocentric concept of the universe moving with the earth as its center rather than the sun (heliocentric). We tend to "tinker" with the existing model rather than considering redesign.

These two approaches are depicted in Figures 1 and 2. Figure 1 shows a cycle which is felt to be humane, humanistic, accountable, functional and responsive. It shows that a district can meaningfully progress from documented needs (gaps between current results and required/desired results) to reasonable objectives to useful methods, to measurable learner skills, knowledges and attitudes to useful evaluation data and to feedback information for renewal of any part or all of the district. Because it starts with documented and validated needs (gaps) it is both responsive and responsible.

Figure 2 shows the more usual classical style of management which seems to be extant in most school districts today. It starts with historical precedents like Board policies or school philosophies which provide goals such as "to develop each student to fulfill one's own capacity." Next, it moves through teacher training and experience to objectives (usually process-oriented goals) which determine the selection of content. Much content of "what" is taught is selected without developing or validating objectives which serve as content selection criteria. The process of content selection by teachers is usually casual and based upon teacher experience alone and does not generally include a determination of learner entry characteristics or learner future goals and aspirations. Methods identification and selection are usually inspirational or historical and most often couched in such terms as "individualization" which is extremely hard to define. Sometimes "individualization" is pitted against "accountability" when what is really being debated is whether or not teachers should have to develop and publicly state the criteria by which content is selected, used and evaluated. What could be evaluated is not only the content per se and whether or not students have mastered it, but the process of the selection relative to valid criteria." It is this issue which often lies at

* Leonard Buder, *op. cit.*

Figure 1
A Suggested Managerial Cycle Which Is Self-Correcting

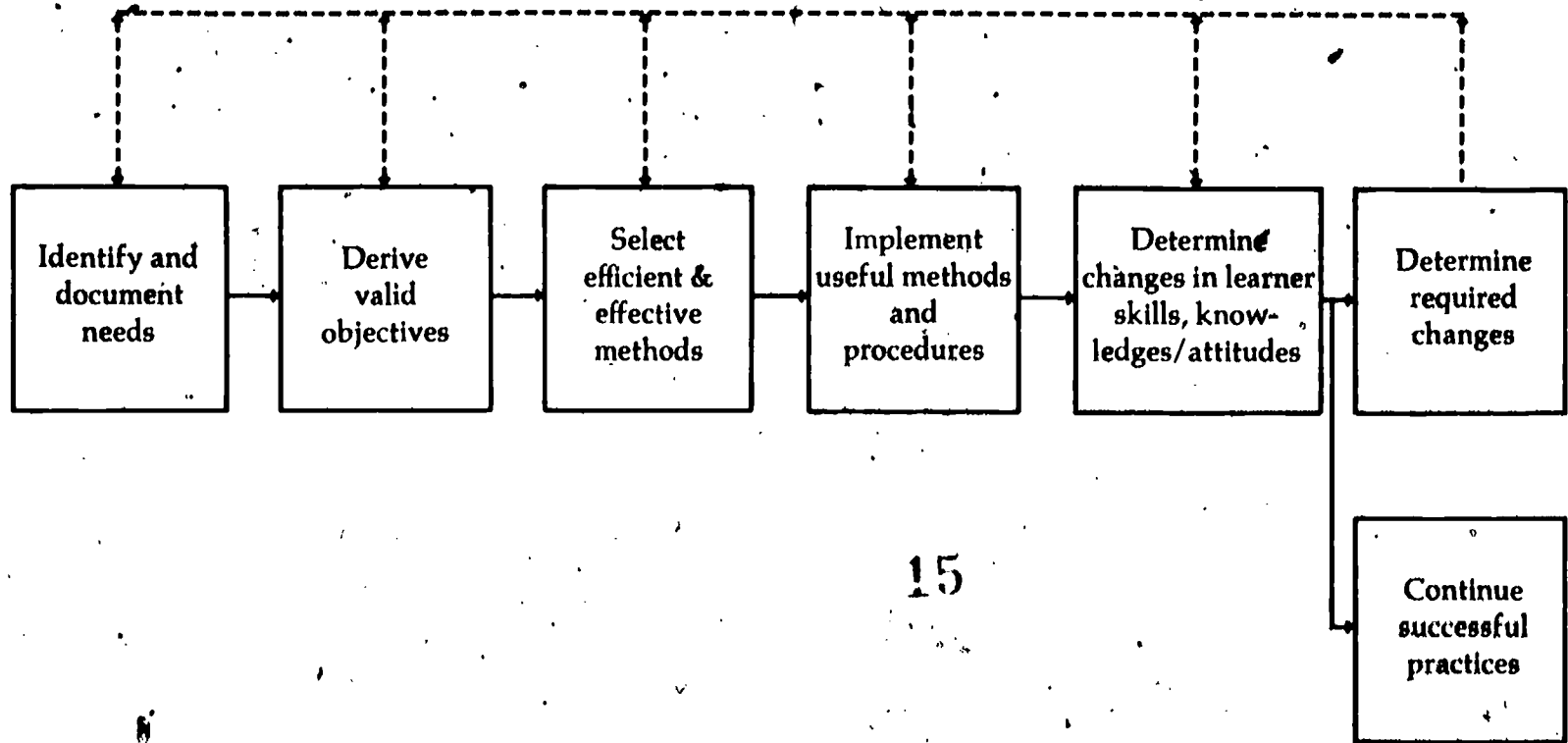
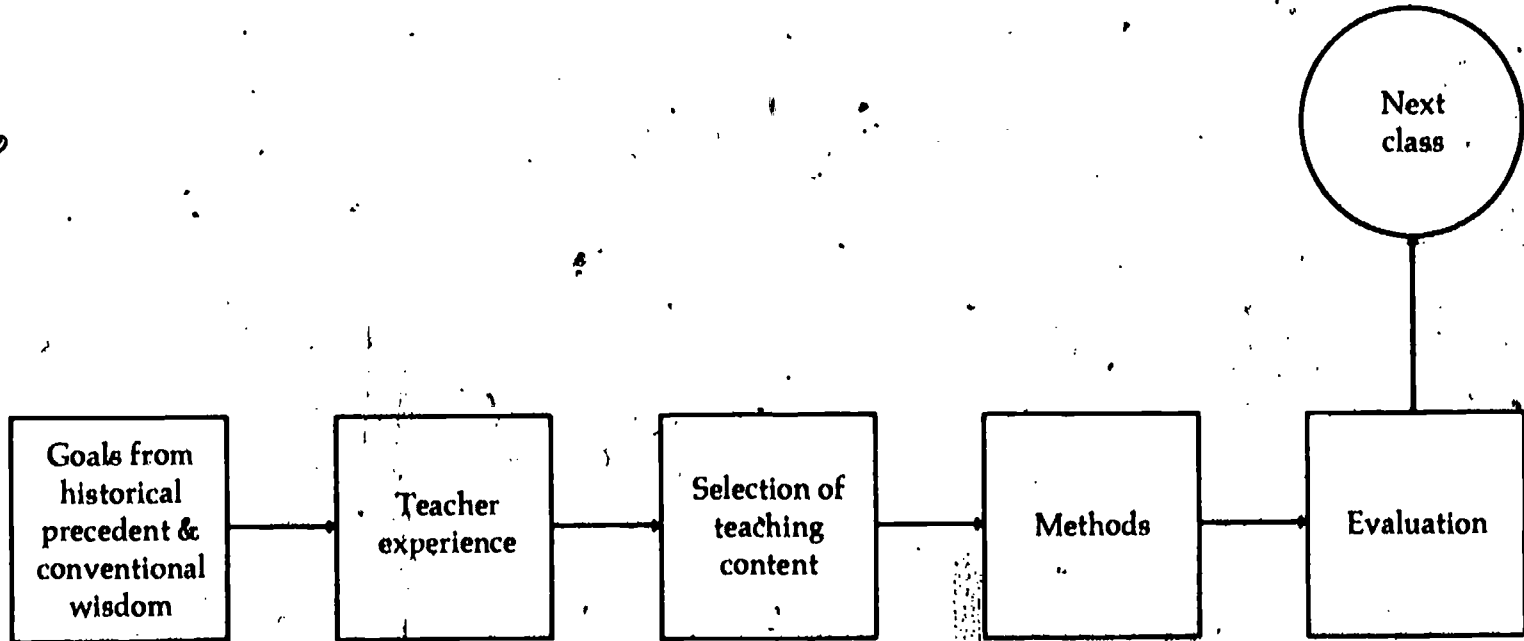


Figure 2

A Typical School Managerial Cycle Which Is Not Self-Correcting



15

the heart of the debate about performance objectives and whether or not teachers should develop, use and be evaluated by them.

Teachers often find evaluation extraneous to program change. The data most often used are principal, parent, or student feedback, rather than evidence of student learning. Adjustments are made or not made and the next class is initiated the next semester or next year. Change in such systems lacks a valid rationale and is often forgotten soon after implementation. Furthermore, it is sometimes never known if such changes were beneficial because of the lack of criteria for selection and comparison to output.

In the classical style of educational management, performance has come to be synonymous with existence and the lack of overt problems become the measure of effectiveness for school districts. A whole host of current educational practitioners are largely oblivious to learning, learners, learning phenomenon and learning theory. Such practices as age-grading, graded textbooks, standardized tests, lockstep scheduling are all examples of solutions which may not go with actual learning problems or requirements. Also representing solutions which might not relate to documented problems are current curricular disciplines such as math, physical education, art, etc. These educational traditions and procedures are largely based upon the assumption that learning can take place within convenient administrative rubrics and stereotyped labels. It is thought that they relieve educational districts of the responsibility of becoming flexible and more humane.

It is a fundamental hypothesis of *needs assessment* that the lack of valid, measurable standards for the schools has resulted in the encapsulation of practices which are frequently dehumanizing and intolerant of learning (perhaps even incompatible with learning) for there exists no set of external criteria by which they can be shown to be incompatible. Currently, we cannot evaluate and revise responsively and humanistically because we do not really know what is to be accomplished, why it should be accomplished, to what extent it should be accomplished and with whom it should be accomplished!

When educational feedback becomes the information of decision making and thus the method by which school districts are managed, it is clearly known in what direction the district is moving and why humanization and accountability can be integrated and made operational in theory and practice. Thus, a basis for managing a responsive and rational organization will have been laid and the sophistication of educational management will have been substantially improved. We call any system of management in which the objectives of the enterprise are vague and undefined leading to imprecise managerial objectives *irrational* (and very risky) because no set of valid external standards exists by which management itself can be evaluated in terms

of organizational purposes. Rather the characteristics of management become conformity, efficiency, and standardization of their own terms, rather than in relation to some agreement upon ends. It is risky to continue in this fashion because the criteria to be used might vary from power source to power source and survival might be based upon whim, whimsy, and idiosyncrasy.

A rational managerial system (actually, sub-system) is one in which the managerial practices and methods can be specifically related to the purposes of the enterprise. We believe schools are dehumanizing by default and because there has been no "grand design" which has then been translated into measurable objectives and responsive programs.¹⁰ Ambiguity is no base upon which to build a bridge to social viability, nor can it be the base upon which any enterprise is improved, regardless of how improvement comes to be defined. If improvement is defined only as cost, then we have allowed the means to determine the ends: what is *cheap* is then by assumption *good*. It is because we lack a set of external and validated objectives that schools are still plagued by the imposition of capricious means to evaluate their overall social importance and contribution. It is because of the lack of valid feedback about what has been accomplished in schools that we continue to mismatch means and ends; methods and outcomes, and produce results contrary to our stated intentions.

In this position of poorly defined ends and a preoccupation with means there is a substantial risk for the manager, for the administrators, for the teachers, and of course for the learners. The simple fact emerges that schools seem to come under the most fire when there is a heated controversy over the means for doing something, not over the ends desired. By not defining the ends of education with our educational partners (community, learners, and educators) we are risking a constant, never ending assault on the schools. Fear and frustration move many to attack and destroy. On the other hand, when we have a defined and agreed-upon outcome referent, we are in a better position to deliver required and desired results, and in a better position to ward off attacks which are unreasoned. Most of all, we get into an active mode rather than staying in a reactive mode, and thus achieve greater measurable success and reduce the numbers and kinds of attacks on the schools. Everyone wins, even learners!

(5) Serve as an Organizational "Sensing" Mechanism for Designing New Goals When Required

Needs assessment is a tool for defining and/or redefining organ-

¹⁰ See Fenwick W. English, *School Organization and Management* (Worthington, Ohio. Charles A. Jones, 1975).

izational goals (purposes) based upon the procedures previously prescribed. As means are redefined to attain the goals of the organization, a "feedback" mechanism is provided to ascertain if organizational goals are still valid and held in approximately the same order of importance by the critical audiences (or partners) involved with establishing those purposes. Thus *needs assessment* is a tool for defining and redefining organizational goals and for maintaining the sensitivity of any organization so that it can attain its goals, even when (as in the case of the schools) the goals (and objectives) may not be permanent and are shifting. *Needs assessment* does not assume a permanent base of values upon which organizational purposes endure; rather it assumes a more or less steady base with the possibility of change as values change.¹¹ *Needs assessment* is therefore a tool for "sensing" organizational purposes and priorities and for providing a logical process for continual improvement.

Summary

There is a fundamental difference between *administration* and *management*. A perusal of *Webster* indicates that *administer* is heavy on *minister*; that is, the carrying out of affairs whereas *management* is the "judicious use of means to accomplish an end."¹² The function of management is the establishment of goals and the relating of means to ends (goals). This is not necessarily a function of administration per se. In the operation of school districts we have been heavy on administration, short on management.

We have invented a myth which says that administrators *minister* and Boards *manage*. That is, we say that Boards should decide on policies and Superintendents should execute or *minister* those policies. This is a kind of simplistic thinking which ignores the complexity of running a modern learning/learner-oriented school district. Boards and Superintendents and the public must manage in the sense that all are part of establishing goals. Policy is not direction finding; ideally it rests upon data and information derived from direction finding (goal identification and development). We search for better methods of instruction which are more effective and efficient for all students because our educational policy states that the school district believes that the

¹¹ For a detailed analysis in this regard which has been integrated with leadership models see Roger Kaufman, David Feldman, Edward Snyder and Warren C. Coffey, *Human Aspects of School Change*, published by Research for Better Schools, Inc. Philadelphia, Pennsylvania, 1975. Also see the planning processes and procedures in Kaufman, 1972.

¹² *Webster's Seventh New Collegiate Dictionary*, P.B. Gove (ed), Springfield, Mass. 1972) p. 513.

schools should serve all the children of all the people.

When we understand fully the difference between administration and management we shall have laid to rest an antiquated notion which has hindered the development of managerial information from the public and from the Boards they elect. The fact that *needs assessment* as one part of a larger whole in planning and direction finding brings these partners together in the business of successful management represents the first step towards upgrading the ability of school districts to become more responsive and responsible to students and to the community which supports the school district.

Part II

Definition Of Terms And Concepts

What Is a Need?

A need "is the gap between what is and what should be."¹³ It is a noun, i.e., a thing. As used here a need is nothing more or nothing less than the documented gap or difference between *the results* we are currently achieving and *the results* we wish to achieve.¹⁴ It is a gap in ends, not means. A thrust of previous material was to explain this difference between means and ends, and a need as we use it here is a gap in ends or outcomes.

What Is a Needs Assessment?

A needs assessment is a formal collection of the gaps, the placing of the gaps in priority order, and selecting the gaps of highest priority for action and resolution. It is a formal process. Because of the importance of the needs assessment and its leading decisions in the schools, it is of critical importance that the needs data obtained provide a representation of the partners in education and a calibration of reality which will give validity to the educational planning and doing process.

Formal assessment of needs should include the partners of educa-

¹³ Ralph W. Tyler, *Basic Principles of Curriculum and Instruction* (Chicago: University of Chicago Press, 1949) p. 8.

¹⁴ For a guide as to how needs assessment is used in curriculum development see Fenwick W. English and Roger A. Kaufman, *Needs Assessment: A Focus for Curriculum Development*. Washington, D.C. ASCD, 1975, 65 pp. This emphasis upon a need as being an outcome gap was used extensively in *Operation PEP* in California, and noted in published works by Kaufman in 1968 (*AV Communication in Review*), in 1971 (*American Psychologist*) and formally expanded in 1972 (*Educational System Planning*). The emphasis upon outcomes and not processes cannot be overemphasized.

tion: the learners,¹⁵ the implementers and the society (or community). The learners are the recipients of the process (and their behaviors—skills, knowledges and attitudes—are the products of the educational system). We are concerned that they will be able to survive and contribute in the external world after legally exiting from our educational settings. Since they are the recipients, it seems important to get them to actively identify the discrepancies they perceive between current results and required results.

The implementers—or educators—are critical to the implementation and success of education. It seems reasonable to capture their training, experience and support by obtaining formally their perceptions of the gaps between current results and required results. Finally, the society (or community) is the context within which education is funded, survives and hopefully contributes, and it is important to obtain representative perceptions of societal members concerning the gaps between current results and required results. The involvement of the educational partners is critical, critical because it makes them active participants in the change process, and critical because it involves and formally includes their perceptions, realities, symbols, and reward systems.¹⁶ With their participation and inclusion, the educational system shifts from "theirs" to "ours." This transfer of ownership is critical to the success of education and educational change.¹⁷

A needs assessment includes the perceptions of gaps between current results and required results for each of the three referent groups. It is important to remember that these are *perceptions* and thus only reflect the partner's perceived realities. Perceived realities may or may not be in accordance with other external indicators of reality. For example, the issue of school prayer in some states may find all three partners in agreement, but may run afoul of the courts, state and federal. For this reason cross checks outside of the three partners are recommended.

A model which has been suggested and found useful in a number of applications is one proposed relative to achieving survival and contribution to society.¹⁸ Survival is basic—without survival other things

¹⁵ Tyler makes a cogent case for involvement of learners in developing educational objectives and in studying contemporary life as a source for validating objectives. He refutes charges of "presentism" by conservatives citing the "transfer of training" principle. *op. cit.*

¹⁶ See H. Blumer, *Symbolic Interactionism* (Englewood Cliffs: Prentice-Hall, 1969).

¹⁷ This notion is central to Peter Drucker's work, and is discussed in his book *The Effective Executive*.

¹⁸ Roger A. Kaufman, Robert E. Corrigan and Donald W. Johnson, "Towards Educational Responsiveness to Society's Needs, A Tentative Utility Model," *Socio-Economic Planning Science*, London, 1969, pp. 151-157. Also see Kaufman, *Educational System Planning*, *op. cit.* Chapter Three.

have little meaning to the individual. This criterion can then serve to enable each pupil to acquire those skills, knowledges and attitudes to survive and hopefully contribute in the external world of work, family, and other essential human interactions and transactions. A useful needs assessment includes *both* the perceptions of gaps by the partners as well as the measurement of gaps in survival and contribution of learners in the external world.

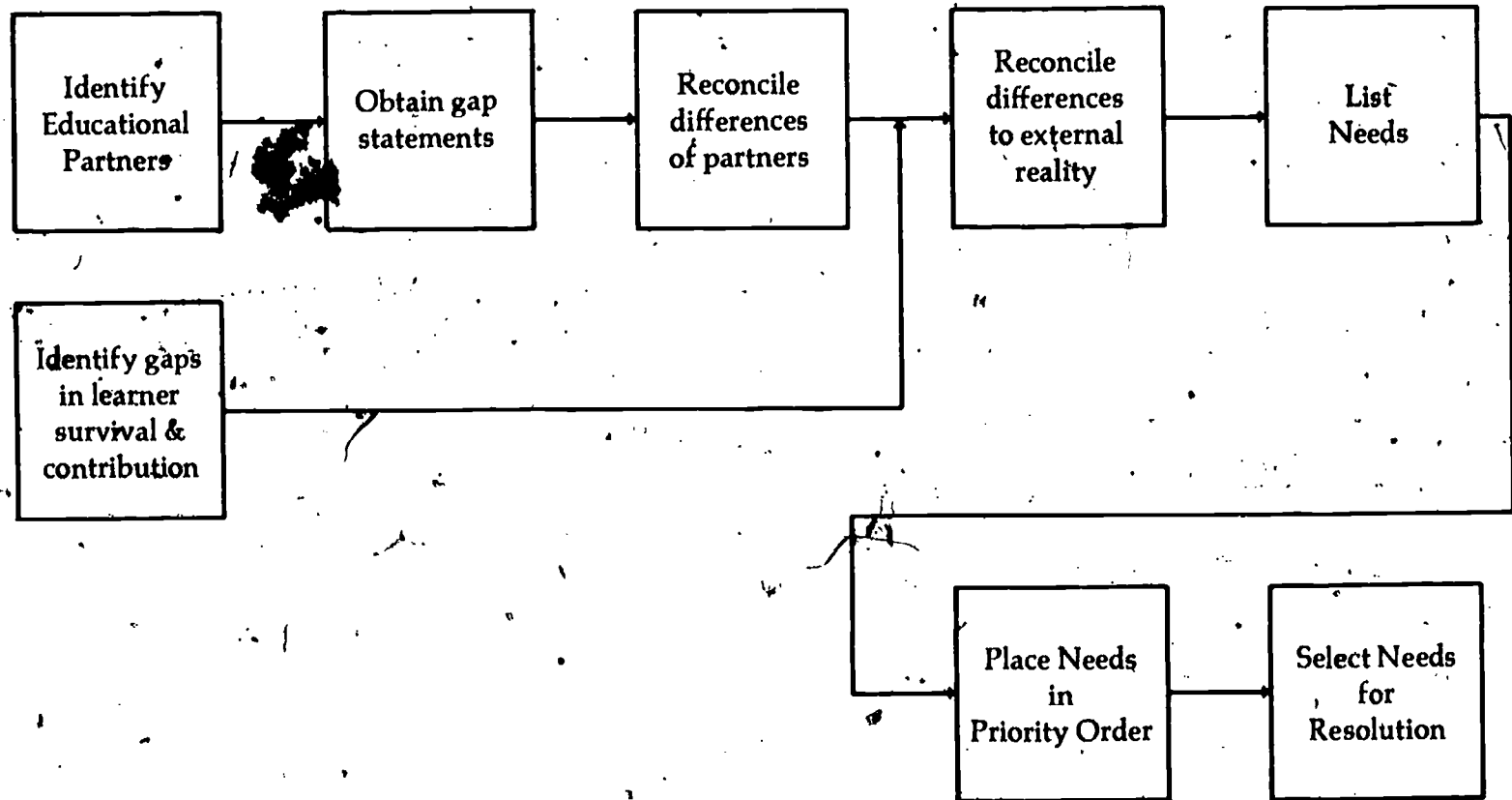
Any discrepancies between the perceptions and external reality are reconciled, and the gaps are then placed in priority order by the partners—ordered on the basis of their essentialness to the children and to our society. The basic steps or functions involved in a needs assessment are shown in Figure 3, where the process is started by two simultaneous functions: identification of the educational partners of learners, educators, and community members and the identification of gaps between current learner survival and contribution and desired levels of survival and contribution. The educational partners then prepare "what is" and "what should be" statements of their perceived realities (all in outcome, or "ends" terms) and then they reconcile any difference between and among themselves. After the above, there is a reconciliation between the external contribution data and the partners-agreed-upon-gaps, and then the needs are listed and selected.

Before leaving this definition of needs assessment, it is important to note that the educational partners (should be representative samples (not necessarily the total population) of various groups and segments of the partners. Usually, stratified random samples are the first obvious consideration for sampling whereby a sample is obtained based upon the personal demographic characteristics of the larger total universe. A needs assessment done by the teachers alone, or by the learners alone, or by the community separately, will be biased. The involvement and commitment of all the groups are important to the success of such a venture.

What A Needs Assessment Is Not

A needs assessment is not instant validity, instant wisdom, instant reliability, or instant anything. It is an empirical process which is imperfect and fallible, but correctable. It is no better than the validity of the design and the data collected—the computer notion of GIGO (garbage in, garbage out) is appropriate here. Because it is an approximation, it should be a continuing process, revised and revisable whenever new data are uncovered and documented. Anyone thinking that a needs assessment is a one-shot, final-authority statement of facts should be immediately disabused of the notion. Needs assessment is not a "solutions" assessment. Many current models ask educators and

Figure 3
Involvement of Partners in the Needs Assessment
Process



some parents (and an occasional student) to rank order goals (which are usually statements related to programs and procedures, not about ends or outcomes) and these revised rankings are guides to development of educational programs and procedures. Such a "solutions assessment" is useful in that it will, perhaps for the first time, get the partners together and share ideas and values—an important element in educational management and success. It alone, however, is not enough for it "locks" into means and generally ignores or infers ends. The earlier emphasis on not confusing means and ends relates directly to this problem. People should talk about "needs" in terms of what they "want" and ignore or infer intended results. A proper needs assessment speaks only to needs as gaps between current results and required results.

A needs assessment is not a casual affair. It is formal and it collects attitudinal, value, and performance data. It is not something to be "winged" or used as a public relations gimmick (PR is another topic and is not a legitimate element or function for a needs assessment). It is not to be done on a weekend in the Superintendent's office, nor on the back of old envelopes on an airplane coming home from a conference. It is formal, it is precise, and it is worth taking time and allocating resources to do it properly. The data it collects will be the basis of what will follow in educational management.

Needs assessment is not value-free. Values and valuing behavior are critical to human life and human performance, and values are important in a needs assessment.¹⁰ Values are both implicitly included when we use the perceptions of the educational partners and explicitly when we design elements of the needs assessment to include values and valuing behavior. Needs assessment is not a guide to allow us to do the same things as before in the same ways as before. It is not, therefore, a "geometric proof" for current administrative or managerial decisions. In many cases it will challenge both the decision and its assumptions.

Needs assessment is not a way to circumvent or replace the functions of the Board of Education, but it is a way to supply Board members (and the Superintendent and his team) with data on what it is the schools should be doing (in terms of results, i.e., outcomes). It thus provides them with an on-going plebiscite on what the community wants its representatives to accomplish. If done correctly, it will also constantly plot the current and future requirements, on an ongoing basis, for survival and contribution. Needs assessment is a way to improve communication between a community and its educators, between

¹⁰ W. R. Rucker, "A Value-Oriented Framework for Education and the Behavior Sciences. *Journal of Value Inquiry*. 111, No. 4, Winter, 1969.

communities and their elected boards, and between boards and educators—on the basis of a set of common referents, on the basis of discussion about ends, and not on means of solutions alone.

The Politics of Needs Assessment

A needs assessment has political overtones. It can be used or abused by anyone. Many people see it as a public relations effort and want to seize it for advertising, showing what is good in the schools, advertising new programs or bolstering sagging ones. This should not be done for it shifts the emphasis from identifying gaps in outcomes to advertising and mending fences. A needs assessment is fact finding, not fact fabrication. Another apprehension is expressed by some who wonder what would happen if the press or critics of the schools were to obtain a portion of the data, not realize it is a public instrument with requirements, and bias it to "smear" the current program. An example: perhaps one of the outcomes was that most of the partners agreed that the schools were doing a poor job in preparing scholars. An incomplete report in the press could have a headline of "Schools Doing Poor Job, Say Most Parents," when the actual truth is that schools, as perceived by the partners, are not turning out scholars but are turning out functional learners who can and do solve real problems. This apprehension is a valid one, it should be noted, and provisions should be made for coping with it. One way of handling it is to involve the newspaper and its educational reporters and editors in the process—after all, they are citizens too!

What the schools are doing, what they should be doing, and how the educational partners perceive them in these areas is a political question. It has to be treated as such and any educational manager entering into this adventure should be aware of it. A needs assessment, therefore, should be managed (like everything else in the school district) for results, for *required results*; and should be designed so that information does not get out in incomplete form, and that the consumers of the information know what it is, what it is not, and handle it as a complete whole.

While each of the partner groups is being involved, this fact should be shared with each of the partners, so that they know what their rights and responsibilities are in this educational effort to bring about planned, productive change. Others in the community not directly involved should be briefed and their aid enlisted. Finally, if the collection of data is to be by questionnaire (either mailed or face-to-face), be sure that the purpose is clear and precise, and stated in the language level (and even the language) of the respondents. As participants in the process, they can also better understand the results and

perhaps any (although unlikely) distortions which might appear later. The politics of education should not be a surprise to educators, nor should politics deter them from moving ahead to better assure the validity and the success of the educational enterprise. We only want to note that a needs assessment has political implications.

Summary

Needs assessment is the basic tool by which educational management defines and accomplishes its essential direction finding tasks. It represents the first step toward constructing a rational management system for the schools. The most fundamental assumption of needs assessment in terms of improving educational management is that organizational effectiveness is defined in terms of pupil learning. To produce desired levels of pupil learning, costs may be more or less than current levels, or means better or worse to lead to desired pupil progress, but pupil learning (and ultimate success in the external world), cognitive, affective, and psycho-motor, is THE INDEX toward which schools and school districts are shaped, administered and evaluated. The entire process of determining purposes, shaping, administering and evaluating schools is the function of educational management.

Part III

Managing A Needs Assessment

To undertake a needs assessment for a school district, school or classroom, it is necessary to create two yardsticks or standards. A needs assessment per se is nothing more than the comparison between the two yardsticks or standards, i.e., the notation of the gaps or distances between the two. While both standards are impermanent and in reality always moving, their construction is vital to the act of comparison. A need is a tangible thing or measurable distance between two or more standards. Sometimes the word "need" is used to form the base for a psychological description such as in a case conference, or to refer to a variety of needs which are supposed to, in and of themselves, indicate a course of action.²⁰ However, unless such data exist in the form of "gap statements" and relate to specified *purposes* (outcomes) of the unit for which the assessment is being done, the management of the educational enterprise is not necessarily enhanced with an examination of accumulated data, no matter how "objective."

The notion of "need" as an outcome gap is of critical importance, for it will allow us to design and plan for success, and it will keep us from jumping into solutions before we know the problems. It is a gap in results, not a difference in procedures or means, or how-to-do-its.

The *major conceptual steps* of a needs assessment are as follows:

- (1) Initial development of organizational purposes;
- (2) Validation of organizational purposes;
- (3) Establishment of parameters to prioritize organizational purposes;
- (4) Making organizational purposes measurable;

²⁰ For an example of needs derived from this approach see James R. Barclay, "Needs Assessment," Chapter Four in *Evaluating Educational Performance* (Berkeley: McCutchan Publishing Corporation, 1974) H. J. Walberg, (ed.), pp. 47-56.

- (5) Assessing if organizational purposes are being met;
- (6) Developing comprehensive statements of accomplishment and future direction.

The most important post-assessment step is that of development managerial plans of action to shape the organization's resources to achieve higher levels of accomplishment (close the gaps or meet the needs) derived from the comparison.^{21 22}

EXPLANATION OF MAJOR STEPS

Initial Development of Organizational Purposes

Accepting the major premise of a needs assessment, that is, that the purposes of the school district are to be expressed in terms of desired learner growth, the first step in developing a list of purposes for a district is to derive sets of desired pupil achievement in the form of educational goals. One such set of goals was listed by French for general education in high school.²³ Some examples are shown below:

- (1) To develop for the regulation of one's personal and civic life a code of behavior based on ethical principles consistent with democratic ideals;
- (2) To participate actively as an informed and responsible citizen in solving the social, economic, and political problems of one's community, state, and nation;
- (3) To attain a satisfactory emotional and social adjustment.

Goals are future oriented and relatively non-specific statements of desired pupil growth or achievement upon graduation from the exit point of the school district. They represent the level of minimum expectancy for each student. Goals may be derived from many sources. Most state departments of education have published lists of desired educational goals. Some have even made them mandatory to incorporate them in educational planning by local school districts.²⁴ Goals

²¹ See "Plan for Educational Assessment in Florida: Final Report." Bureau of Research, Division of Elementary and Secondary Education, Department of Education, Tallahassee, Florida, 1971, 23 pp.

²² "Florida Educational Opinion Survey," Department of Education, Tallahassee, Florida, 1970, 225 pp.

²³ Will French, *Behavioral Goals of General Education in High School* (New York: Russell Sage Foundation, 1957) p. 40. French cites the goals from *Higher Education for American Democracy* (New York: Harper and Row, 1947).

²⁴ For example, in Florida, in the Annual Comprehensive Plan Required of School Districts By The Florida Department of Education.

may also be developed by joint planning groups of citizens, teachers, administrators and students. The decision as to whether to use goals already developed or develop them from "scratch" is ultimately one of practicality. Since it is probably impossible to originate a goal which is not a paraphrase of the original 1918 Cardinal Principles²⁵, most school districts do not spend a great deal of time here.

Sometimes goals are found imbedded in a philosophy of education. Too often such philosophies serve to mix statements about pupil growth and thoughts about what teachers should teach or what schools should be. We have said before that needs assessment aims to separate means and ends and it assumes that the purposes of schools can only be stated in terms of pupil growth. This is one reason why educational philosophies found in Board policies or school handbooks are often more hindrance than help in the needs assessment process. Goals should be kept as broad outcome statements—intents—without any examples in the specific or how to accomplish them. This will come later under step four.²⁶

Kaufman has developed a model for securing consensus from three constituencies in the validation and prioritization goals.²⁷ Goals can be developed by each of the three groups; students, community and educators, or each group can assist in validating the goals by indicating that such goals should indeed be part of a set of organizational purposes. Consensus can be established at whatever level appears to be reasonable, 50%, 60%, or 75%, etc. Groups can be sampled in a variety of ways. Sampling decisions can be made dependent upon the size of the community and how various groups within the community can best be reached and how they are represented.

Is it necessary to actually engage in community validation? Why not use some other district's priorities? It should be remembered that ultimately an administration and board of education are going to implement a course of action based upon the gaps identified in their needs assessment process. If all the groups, at that point, refuse to accept the course of action because they were not involved in the earlier steps, action will become difficult. Under these circumstances, instead of the needs assessment process leading to a viable and workable consensus,

²⁵ Commission on the Reorganization of Secondary Education. *The Cardinal Principles of Secondary Education*. Bureau of Education, Government Printing Office, Washington, 1918.

²⁶ Global goals can be placed into a job description as well. For an example of this process see Robert F. Mager *Goal Analysis* (Belmont: Fearon Publishers, 1972). Specific objectives must be ultimately derived. A good preliminary resource is Mager's second edition of *Preparing Instructional Objectives*, Fearon Publishers, Belmont, California, 1975.

²⁷ Kaufman, *Educational System Planning*, op. cit.

it produces its own resistance for action to close the gaps. Therefore, even though the the organization's purposes have been identified, the absence of a partnership effort in defining goals will result in the lack of a broad base of support. Thus, one of the most promising features of the needs assessment process will have been lost. The needs assessment process offers a method for not only identifying the purposes of the organization but for developing a commitment to doing something about them. Care should be taken, therefore, to involve a large enough constituency to form a working consensus about the purposes of the organization.²⁸

In order to be truly functional, a needs assessment should also include a phase, ideally at this point, to interpose external reality for the gaps which exist between current results and required results. For instance, many members of a community (even a majority) might want their learners to go to college and complete a doctorate, but the reality is that only a very small fraction of all learners are interested (or even capable) of achieving this goal. Another example might be of the necessary skills, knowledges, and attitudes which are required for learners to survive and contribute in the world upon exit from the educational agency. Those doing a needs assessment could then plot the gaps between current learner abilities to survive (as a minimal outcome, not a maximum) and the required abilities to survive (as a minimal outcome, not a maximum) and hopefully contribute. Such an external referent will help the educational planners to assure that their goals and resulting objectives will not only be in line with the perceptions of their educational partners, but also in keeping with the world of work and world of relationships external to the schools into which the schools will be sending their "products."

A possible result of such an external "look" might be similar to the Oregon "survival curriculum" which sets minimal performance standards for learners before they can be legally graduated from Oregon high schools. By adding such an external referent for the needs assessment, there is a combination of "felt needs" and "external needs" and greater probability that the needs assessment will give a valid and useful starting point for educational planning and doing. It removes it from the realm of "opinion only."

Establishment of Parameters to Prioritize Organizational Purposes

After organizational purposes have been developed and validated, they must be ranked or prioritized. It is after prioritization that the

²⁸The National Laboratory for Higher Education in Durham, North Carolina, has developed a goal-setting exercise for organizational accountability. See G. A. Baker, III, C. Mullaney, and L. Pratt. G.O.A.I.S. Instructional Kit, 1971.

range of purposes can be defined and organizational activity weighed against gaps which are identified. There are a number of procedures which can be used to rank goals. One method is to publish a list of the goals with a sliding scale attached after each to a numerical rating. See Diagram #1 for an example. Arithmetic means can then be derived for each goal by dividing the sum total of points assigned to each goal by the total number of respondents and giving the results a total ranking by mean scores.

It is further suggested that the ranking be accomplished and noted by each set of the partner groups—one ranking to be accomplished by the learner group, another by the community/society group, and still another by the educator/implementor group. After each group does its rankings, they are tabulated and any differences resolved within their respective groups. After there is agreement within the groups, then the three different partner groups may be brought together to compare their rankings—this “bringing together” may be done on a face-to-face basis, or it may be done through simulation, mail, or a Delphi technique (a method for gathering group opinion and consensus without actually convening groups). “Matches” or agreements may be sorted into one group, and differences placed in another group to be reconciled. These latter “mismatches” should be reconciled before a final ranking is attempted.

Frequently, when there are differences within and between groups, it is due to goals (or objectives) being identified which are means, not ends. For example, we might argue long and hard about raising taxes in a district and perhaps never achieve a consensus, but we might agree upon minimal levels of reading—an end which may or may not subsequently require raising taxes. Another example might be a possible argument about whether or not to have a sex education program (a means) even when there is agreement that the community rate (or student rate) of illegitimate births should never be more than one in one hundred (an end).

Another important result of this group activity is the interaction and commitment that is instilled because the needs assessment and the educational adventure becomes one of “ours” not “theirs.” Needs assessment is group participation and group contribution. And remember, the schools do belong to the community.

It is important to rank organizational goals because it will soon be discovered that no organization has enough resources to meet all of the possible needs for which it is or could be responsible. Therefore, a ranking procedure develops the parameters of responsibility on a sliding scale of decreasing importance. When resources are limited, responsibility must be assigned proportionately, not equally.

Some administrators may bridle at this procedure, feeling that to

assign degrees of importance to the educational purposes of the organization is unfair. After all, how can purposes related to ecology be equated with the necessity to enjoy great literature? Aren't they both important? We should remember that our educational purposes *now* are assigned unequal weights, probably by many other methods which we may not care to discuss. We can examine the school budget and analyze the amount of money it costs to educate pupils by area. We may

Diagram #1

Goal Ranking Worksheet

Goal	Possible Ranking				
	5 Essential	4 Very Important	3 Important	2 Somewhat important	1 Not very important
1. To develop for the regulation of one's personal and civic life a code of behavior based on ethical principles consistent with democratic ideals		X			
2. To participate actively as an informed and responsible citizen in solving the social, economic, and political problems of one's community, State, and Nation			X		

Hypothetical Tabulation Sheet

Rank	Goal #	Total Sum	Number in Group	Average
1	8	89	24	3.70
2	5	63	24	2.62
3	2	58	24	2.41
4	1	50	24	2.18
5	7	39	24	1.62
etc.				

find that we pay more for some areas because of a successful political lobby at the state level which assigns a higher funding ratio, or because secondary teachers typically have more advanced degree backgrounds and the cost of secondary education is generally higher than that for elementary education. The point is that there are many inequalities within the current school budget which account for disproportionate emphasis upon educational goals and thus the educational effort. They are there because of many forces at work and so we now have unequal emphasis by default. If the matter of unequal emphasis is troublesome, let there be a reminder that no school district now has equal emphasis upon all educational goals. By establishing a system of priorities we give to the educational program a purpose and design it now lacks. Because our resources are more or less fixed²⁹ we cannot place equal emphasis upon all objectives which might be accomplished.

The whole point of a ranking procedure is to begin a deliberate, open and rational process of making choices about what the school system must do as opposed to what it could do if there were unlimited resources. It is critical that the three important constituencies are involved in the ranking of educational purposes. Group responses are weighted equally in terms of input—an equal partnership.

Making Organizational Purposes Measurable

Once organizational purposes in the form of educational goals have been developed, validated and ranked the process to translate them into measurable statements must be initiated.³⁰ Goals are simply too broad to be much help in assessment or in determining responsibility for their being taught.

“... it has been noted that statements of the goals of education, despite their wide availability, generally have much less impact on the curriculum or on what actually takes place in the classroom than they otherwise might. This is principally because such state-

²⁹ Resources are never technically fixed, but they are more or less stable given the continuance of the current tax structure.

³⁰ In actuality, some needs assessment efforts might actually have derived outcome statements which are in “objectives” form. One example is that of a much earlier effort accomplished in Temple City, California, where there were a series of “indicators” derived on the basis of external criteria and current learner performance, and these measurable outcome indicators were related to the ten generic “Goals of Education” which were developed by Educational Testing Service for the Pennsylvania State Department of Education. Thus, if there already exist objectives (and not just goals) it might be possible to skip this step with only making sure that the objectives derived are measurable on an interval or ratio scale. (Kaufman, 1972, chapter 9).

ments have little exact meaning for the practicing classroom teacher or for any other educator. Only when the broad, general goals are given operational definitions can they be expected to have much influence on what a student learns in school."³¹

The process of translation can take many forms. Many educators have found it convenient to break the exercise into two parts. An intermediate step is to break goal statements into "performance" or "initial behavioral" indicators. Behavioral indicators are "proto-objectives"; that is, they are in the process of "becoming" objectives or represent a total domain of behaviors of which the one presented is only an "indicator." French calls such intermediate statements "illustrative behaviors."³² An example is shown below:

GOAL: The student will become sensitive to, and competent in, the use of logical thinking and problem-solving processes.

BEHAVIORAL INDICATORS:

1. The learner, when given a problem in two of the following areas: physics, cooking, income tax preparation, purchasing a \$1,000.00 item will correctly identify the following elements, as measured by the approval of the teacher in that content area:

- (a) Need which gives rise to the problem;
- (b) Requirements for resolving the problem;
- (c) Alternative methods and means for resolving the problem;
- (d) The selected methods and means and the rationale for the selection;
- (e) The implementation plan for the methods and means;
- (f) The ways in which they will evaluate the extent to which the solution was correct and functional;
- (g) The ways in which evaluation data will be used to revise if one of the methods-means was not successful.

2: The learner will be able to separate problems from non-problems as measured by a performance test.

3. The learner will be able to list at least two alternative methods and means for resolving the problem, which are judged as appropriate or better by the teacher.

4. In a simulated problem, the learner will, at least 80% of the time, obtain a "satisfactory" solution as indicated by teacher substantiation of the performance.

Behavioral indicators, then, are not intended to measure the total

³¹ C. M. Lindvall, "Introduction," *Defining Educational Objectives*, University of Pittsburgh Press, Pittsburgh, 1964, as cited in Richard B. Waina, "Specification of Educational Objectives for System Evaluation," Rand Corporation, Santa Monica, California (P-4099) (May, 1969) 19 pp.

³² French, *op. cit.*

array of possible behaviors for any given goal, but rather to indicate only the types of performances and the levels of performances which will be taken as indicating successful mastery and/or achievement in a given goal area.

As soon as the behavioral indicators have been developed, the next step may be taken, that is, breaking each indicator into full behavioral objectives, following the indices developed in the two taxonomies of educational objectives.³³ Sometimes the question is asked by practitioners, how many objectives must be written for each goal? The answer lies in the number of behavioral indicators that are written for the goal. Each indicator may be broken into several associated objectives.³⁴ Full behavioral objectives specify the type of student behavior deemed desirable, or a range of behaviors desired. Often such a behavior cannot be isolated as right or wrong, but as acceptable within bands of desired responses. There may be those who will object to such objectives as constraining, unnatural or confining, or even dehumanizing. Yet we often forget that half-formed objectives or purposes in the teachers' minds in countless classrooms everyday determine what children learn or do not learn. We often cannot even tell what they have learned or may learn. And if children do not learn it is impossible to know what to do about it to correct the situation in most schools since we cannot tell what has and has not been mastered. This condition makes it difficult to diagnose teaching/learning problems and determine possible changes. How does a teacher retrace any series of strategies to discover what didn't work when almost any outcome was legitimate? If we as educators do not know what children should learn, how can instruction be individualized? Individualization (a means) is only possible if clear outcomes are formulated and stated. Just as a physician has an obligation to work towards defined states of optimal health (also usually rather vaguely defined but known) so does a teacher have the same obligation. And there is nothing inhumane about attempting to define those outcomes from validated goals.³⁵ Forcing

³³ David R. Krathwohl, "The Taxonomy of Educational Objectives—Use of Cognitive and Affective Domains," in Blaine R. Worthen and James R. Sanders, *Educational Evaluation: Theory and Practice* (Worthington: Charles A. Jones, 1973) pp. 246-268.

³⁴ R. A. Kaufman, M. John Rand, F. English, J. Conde, and W. Hawkins, "An Attempt to Put the Ten Objectives of Education Developed for Pennsylvania by Educational Testing Service into Operational Definitions," Temple City Schools, 1968. Also worthy of consideration is the Taxonomy developed by R. Gagne. This model is being further developed in the "ISD" model at The Florida State University's Center for Educational Technology.

³⁵ See Robert F. Mager, *Developing Attitude Toward Learning*, (Palo Alto: Fearon, 1968).

all children to respond to a narrow band of outcomes may be inhumane to serve as a range of expected outcomes or as benchmarks to perform diagnosis and individualization which will foster the diversity and responsiveness every program can use. If love, creativity, curiosity, humanism etc., are important enough to say they must happen in schools, it is important to know if they happened. Knowing that requires specificity and quantification. The definitions per se are not de-humanizing. Only if they lead to a more procrustean standard would the result perhaps be more de-humanizing. It should be realized that a de-humanizing standard may now be imposed by grades, standardized tests, report cards, textbooks and countless other devices we use in schools everyday. While we cannot dismiss practices which lead toward less effective schools, we ought to be realistic about those things we now do in them that are also de-humanizing, and more so than those we are suggesting here.

When all of the behavioral objectives have been developed to fully translate the educational goals, they represent a set of educational outcomes for the school district. However, these educational objectives must also be validated in two additional ways. First, the behavioral objectives must be screened so that they are in fact behavioral. Secondly, a group of respondents must agree that the list of educational objectives represents the full scope of any given educational goal. This can be accomplished by submitting for validation to established sample groups a list of behavioral indicators and objectives for each educational goal. A simple response statement of "agree" or "disagree" can be used. By agreeing ahead of time, consensus levels can be established. Those educational objectives which do not reach such levels should be re-written or if all else fails, temporarily abandoned. Upon finishing this step, the school district should have a list of validated, terminal objectives (or outcome specifications) by which program analysis may be initiated.

A need used in the context of a needs assessment is a "gap"; that is, a discrepancy between two indices which have been created for purposes of program planning and evaluation. Standards are created for measurement of progress, and for providing the criteria for the configuration of new programs of "innovation."

In his international analysis of innovation in education, Huberman²⁰ uses the definition of Richland of an educational innovation:

"Innovation is . . . the creative selection, organization and utilization of human and material resources in new and unique ways

²⁰ A. M. Huberman, *Understanding Change in Education: An Introduction* (Paris: UNESCO, 1973) Richland cited as M. Richland, "Implementation of Education Innovations," Systems Development Corporation, Santa Monica, 1965) p. 5.

which will result in the attainment of a higher level of achievement for the defined goals and objectives."

It is important to note that an innovation is not just anything new or different; rather, it represents a deliberate selection of a variety of means towards defined goals and objectives. We would add "validated" goals and objectives. Too often educational innovations lack purpose as a deliberate selection of many means available to the educator to teach validated and defined goals and objectives.⁸⁷ Regardless, the development of innovation as one type of managerial decision making is not actually part of the needs assessment. Rather, it is distinctively a post-assessment activity. Innovation is a new solution which should be responsive to meeting identified and documented needs.

Developing Comprehensive Statements of Educational Accomplishment

The final step of needs assessment is the development and publication of a list of comprehensive "gaps" or "needs" of the school district. In actuality, each performance objective should be assessed against its own standards. To arrive at performance statements or "gaps," the educational manager will have had to select the testing instruments and data base upon which the educational objectives were compared. It is at this point that the controversy between norm-referenced or criterion-referenced measurement can be resolved.⁸⁸ Testing measures or instruments should be selected with an eye toward what the educational objectives are trying to achieve. Sometimes subscales of standardized tests used in a diagnostic fashion are appropriate. In other cases school districts will be well advised to develop or buy criterion referenced measures or instruments. Rather than let the bell shaped curve define what the educational objectives should be (or are), we believe that measurement procedures should be selected with an intent to assess what the school district and its constituents have said it should be doing in terms of learner performance.

Too often teachers complain that tests are irrelevant to classroom practice. The reasons this may be a true statement are twofold. First, teachers often do not have a precise list of educational objectives by which feedback about pupil progress can be used in a meaningful fashion, and secondly, because the objectives of classroom instruction cannot be found too often in standardized achievement batteries.

⁸⁷ Fenwick W. English, "Change Strategies That Fail," *California School Boards* May, 1969, pp. 16-19.

⁸⁸ See James Popham (ed.) *Criterion-Referenced Measurement* (Englewood Cliffs: Prentice-Hall, 1971) 108 pp.

Some tests require pupil behavior which is contrary to good classroom instruction. Teachers have learned, therefore, to ignore test data or to attack them as damaging, dehumanizing or irrelevant to the classroom. In too many cases they are right. If test results are not used in a cybernetic fashion (that is, as feedback to improve performance) and instead are used punitively, educational personnel are not above resorting to devious means to preserve their dignity and concept of fair play.³⁹ One should remember that norm-referenced testing requires the definition of "an average"; that is, that point about which the sum of the deviations is zero. To write objectives for a student population to be above a norm may be illusory, self-defeating and destructive. On the other hand, standardized tests have their place. That "place" is best determined after developing an explicit set of educational objectives for test selection and interpretation. Testing is a possible means to determine the performance "ends."

A published set of comprehensive statements of educational accomplishment, sometimes called an "educational accomplishment audit,"⁴⁰ should be accompanied by a list of the measuring instruments used to determine the "gaps" and statements about the validity and reliability of those instruments. The needs assessment process per se ends with the initial publication of a list of the goals, gaps or needs, and the instruments used to ascertain them.

Post Assessment Activities

Once the educational needs have been identified they must be located within ongoing programs for the administrator or manager to "act upon" the data. A program is a configuration of learning activities and support services brought together to achieve previously established objectives. Educational gaps or needs have not heretofore been located within specific school or district programs, i.e., reading, science, physical education, etc. At this point the gaps or needs must be located within such programs. One easy method for doing this is to construct a "locator index" for each educational gap corresponding to each educational objective of the needs assessment process. An example is shown in Diagram # 2. The locator index helps find the place in the current program where gaps have occurred and is a vital activity for responsibly following up a needs assessment.

The functions of the locator index are as follows:

- (1) To trace the identification of an "educational need" into the

³⁹ Junie Brown, "Teacher Claims School Cheated on Test," *Atlanta Journal*, April 27, 1973.

⁴⁰ Leon Lessinger, *Every Kid A Winner* (Chicago: SRA, 1970).

Diagram #2

Sample Locator Index For Identifying Educational Gaps

GOAL: The student will become sensitive to, and competent in, the use of logical thinking and problem-solving processes.

BEHAVIORAL INDICATORS: (See p. 34)

BEHAVIORAL OBJECTIVE:

When given several descriptions of situations, verbally or in writing, the student will be able to correctly identify the situations into problems and non-problems as measured by _____.

CURRICULAR DISCIPLINES

GRADE	SOCIAL STUDIES	SCIENCE
Kindergarten	Students experiment with various types of puzzles and explain how they tried to solve them. <i>Current Practice</i> Relevant. Retain.	Without using the term "hypothesis" students are asked to guess about causes of heat, cold, etc. <i>Current Practice</i> Initial exercises pertinent to objective attainment at later levels.
First Grade	Unit on the firehouse and the home. Appears to be little emphasis on skills relative to problem identification or problem solving. <i>Current Practice</i> Not related to objective, unit should be restructured.	Students continue "hypothesis" construction in unit on "seeds" and "trees." <i>Current Practice</i> Continues to develop critical skills related to objective.
Second Grade	etc.	etc.

- precise levels of the current educational program;
- (2) To identify current programs and what the probability or possible reasons for the gap may be at each level;
 - (3) To serve as a method for identifying curricular skills, knowledges, and attitudes.

As soon as the gaps identified outside current district programs are placed within those programs, they become program gaps. A needs assessment per se will not explain to the administrator or manager "why" educational gaps exist within programs. It will tell the practitioner "if" they exist. The locator index attempts to define more precisely the places in current programs where educational gaps exist.

Developing A Managerial Plan of Action

Once the educational gaps have been identified by level and in fact by school, those involved and responsible for the educational program should be gathered together to construct the managerial plan of action.⁴¹ This plan can use a variety of current strategies (or "system approaches") such as PERT, CPM, etc. At this point, "the problem is to determine the most efficient combination of instructional methods A and B to achieve these minimum standards of performance," and close the educational gap.⁴²

Kaufman has designed a taxonomy of possible tools and methods which can be used in each step of the system approach to Educational Planning. These are shown in Diagram #3. This is an attempt to alleviate some of the confusion between the tools of successful management and successful management itself. In part it was a reaction to some people saying that a given management tool (such as MBO) was the same as a system (or systems) approach—it was confusing methods (means) with other means and/or ends.

Types of Planning

It can be shown that each step in the managerial plan of action in Diagram #3 requires planning. The only differences between them are the assumptions of actual data on hand by which to do the planning. Step 1, or "Identify problem based upon documented needs," is called Alpha planning and the appropriate tools are: (1) needs assessment and/or (2) utilization of the Delphi technique. The second function of

⁴¹ See Michael J. Grady, Jr., "Using Educational Indicators for Program Accountability," Cooperative Accountability Project, Denver, Colorado, September, 1974. Bulletin No. 5139.

⁴² Charles S. Benson, "Programming of the Allocation of Educational Resources," in *The School and the Economic System* (Chicago: SRA, 1966) pp. 106-108.

Diagram #3

**Kaufman's Taxonomy of Possible Tools and Methods
Which Can Be Used with the Major Functions of The
System Approach To Educational Planning**

Managerial Plan of Action

Possible Appropriate Tools

System Approach Function

1. Identify problem based upon documented needs
2. Determine solution requirements and identify possible solution alternatives
3. Select solution strategies from among alternatives
4. Implement selected strategies and tools
5. Determine performance effectiveness
6. Revise any or all steps as required when required

needs assessment
Delphi technique
system analysis
behavioral objectives
front-end analysis
problem analysis
methods-means analysis
systems analysis
cost-benefit analysis
cost-effectiveness analysis
planning, programming, budgeting system (PPB)
simulation
operations research
gaming
methods/means/media analysis
program evaluation review technique (PERT)
line of balance
critical path method (CPM)
management by objectives (MBO)
management by exception
testing
assessment
independent educational accomplishment audit
an outcome gap analysis (similar to a needs assessment)

(After Kaufman, 1971, 1972)

the system approach, "Determine solution requirements and identify possible solution alternatives," is Beta planning, etc.⁴³

A manager beginning with a tool such as management by objectives (MBO) is either saying that he/she has data from a preceding accomplishment of steps 1, 2, and 3, or that he/she is willing to assume those data in starting at that point. If one were to look at management by objectives (which, by the way, is a very valuable tool when it is used properly and is not used to replace other management functions and planning) in a clear manner, it might be seen that it usually assumes such questions as "Management of what?" "Management for what?" "By whose objectives?" "Are the objectives valid?"

The planning taxonomy can help put most planning tools into useful perspective, and show the possible interrelationships between the tools which are in current vogue. Also Diagram #3 indicates that any management which does not start with a formal assessment of needs is risking proceeding without the necessary level of information and data. What the diagram does not show, however, is what is presented in this book. A needs assessment in order to be functional has to be an outcome gap analysis, not a solutions assessment. An assessment of solutions (or means) can at best be a tool for accomplishing a part of planning function 2 and usually a part of function 3.

Other Types of Needs Assessment Procedures

There are other types of needs assessment approaches, each using the basic concept of "gap," or "discrepancy" analysis. One such approach is that of a "perceptual" or "felt needs" model. (See Diagram #4) "A felt needs survey can provide useful information about current perceptions. However, its major weakness is that it is invariably a "solutions assessment." For example, in Diagram #4, items number 8 and 9 deal with programs. Programs are by definition solutions; that is, they represent a combination of resources configured in such a way as to accomplish an array of objectives. The objectives are not stated. Furthermore, objectives should be designed to close identified needs or gaps. None of these is stated.

These types of "perceptual or felt needs" surveys are common in the needs assessment field. However, they are substantially different

⁴³The planning taxonomy was first developed in Roger Kaufman, "A Possible Integrative Model for the Systematic and Measurable Improvement of Education," *American Psychologist*, 26:3 (March, 1971) pp. 250-256. It also may be reviewed in Kaufman; 1972.

⁴⁴For another example of moving to a gap assessment from felt needs see Fenwick W. English, Chapter VI. *School Organization and Management* (Worthington, Ohio: Charles A. Jones, 1975).

from comparing needs to validated outcomes which were established via an empirical procedure. In essence, a perceptual needs survey carries with it two indices of the present or status quo. Its greatest weakness is that it begins with the present as a base for jumping into the future. Too often this merely "captures" the present and distorts future desired conditions to those which now exist. Thus, the perceptual needs approach is open to the criticism of "presentism." That is, without the comparison of what is and what is desired (the latter which reflects many inputs including the past and future), we have a self-perpetuating procedure.

Summary

Beginning with the initial development of organizational purposes, the steps of the needs assessment process result in formulating specific goals for the school district. Needs assessment is the primary direction finding sequence for any enterprise. Once the direction has been established then the location of the system along with the indices created occurs. The variability between future desired learner conditions and current behaviors are the "gaps" between the two indices and form the base for intelligent managerial action via comprehensive planning.

Is such and such a program effective? Could it be better? How would the educational administrator or manager know the answers to these questions? Better than what? The needs assessment cycle is a continuous, empirical validating process. It is open, invites criticism, and can be corrected with feedback.

Some processes for direction finding stem from philosophies which are distinctly not couched in empiricism. Such philosophies are established from their own logic and cannot be tested in practice against operational criteria which are changeable with feedback. If the nation's schools are not teaching children to read or to appreciate ecological principles, what can be done to be sure that learners reach these objectives?

We are convinced that ultimately no improvement is possible for the schools unless they are made accountable on validated criteria emanating from the first step of a system approach, that is, needs assessment. No system is foolproof, but we suggest that a system which is self-correcting is better than any other system which does not have that provision and certainly better than no system. The last statement is really a misnomer. We have a system of national education now, established by national textbook makers, teacher unions via uniform contracts, and standardized tests. No community is well served when its prerogatives and individual variations are usurped in the

name of local control or falsely under the umbrella of educational humanism. The schools can be humanized and they can be responsive and responsible. That they are not now as responsive and responsible as they must become is well established. That they can improve is the promise of educational planning founded upon a solid first step, *needs assessment*.

Diagram #4
A Brief Survey of the Hillside School Program

How do you, the parent, see the school program at Hillside? We value the communication between the home and the school and in an effort to keep an open door policy we request your help in compiling information about the Hillside program. It would help to know your attitudes and feelings as we develop Hillside's Program for 75-76. We will appreciate your cooperation in the completion of this survey.

Sincerely,

School Principal



DIRECTIONS: Please find in the left column a brief title of each Hillside program. On the right, two columns for responses. Place a mark which indicates your perception of the adequacy of the current Hillside program (four possible responses) and then in the next column indicate what you think the desired level of emphasis of that program should be by placing a number to represent your thinking. Only one number should be placed in this column.

Please Check: Mother <input type="checkbox"/> Father <input type="checkbox"/>	Perception of Adequacy of Current Hillside Program/Activity			Degree of Emphasis Desired In The Future Compared to Now	
	Program/Activity Is Strong	Program/Activity Is Adequate	Program/Activity Is Inadequate	Don't Know	
Volunteered at Hillside: Not at all <input type="checkbox"/>					1—same emphasis
Occasionally <input type="checkbox"/>					2—more emphasis
Regularly <input type="checkbox"/>					3—less emphasis
					4—don't know
1. Teaching handwriting skills					
2. Teaching physical fitness skills					
3. Teaching basic reading skills					
4. Teaching math skills					
5. Teaching social studies skills					
6. Teaching music skills					
7. Teaching art skills					
8. Library Program					
9. Programs that help students with learning problems					
10. Learning interpersonal skills, in human dynamics					
11. Teaching a child to accept self responsibility for learning					
12. Teaching family life & sex roles					
13. Activities/skills related to the arts, poetry & literature					
14. Nature studies & concern for environment					
15. Homework assignments					
16. Program related to student behavior					
17. Emphasis placed by teacher & other personnel on safety in bus loading and playground					

45

Part IV

The Larger Context: Educational Planning

THE SYSTEM APPROACH

Needs assessment exists within a larger planning process. Kaufman has called this larger process a *system approach*. Others may prefer the term "long range planning." The system approach, however, may incorporate many such long-range plans. If long range planning pertains to the adoption of a particular solution strategy such as implementing differentiated staffing over a five-year period, it may only be part of the system approach, but qualifies as a long-range plan. The *system approach* is a generic process of planning per se and consists of five segments or steps, plus a sixth step which refers to a continuous feedback loop. The six steps are:

- 1) Identify problem based on needs;
- 2) Determine solution requirements and identify solution alternatives;
- 3) Select solution from among alternatives;
- 4) Implement selected strategies;
- 5) Determine performance effectiveness;
- 6) Revise as required (feedback loop).⁴⁵

In Part III we noted that each of these six steps of the *system approach* is associated with (1) a taxonomy of planning, and (2) tools and tech-

⁴⁵Based on Kaufman's, *Educational System Planning*, *op. cit.* This work was started in education in the 1960's, with formal development and application coming in two federally funded programs. The Experienced Teacher Fellowship Program at Chapman College, Orange, California with Robert Corrigan, and OPERATION REP (Preparation of Educational Planners), also conducted and developed with Dr. Corrigan. Further uses and publications were based on activities across the nation, and many professional educators are responsible for its acceptance, growth, and development. Further development continues today, as witnessed by this publication, and the continuing seminars offered by the National Academy for School Executives (NASE) of AASA.

niques for accomplishing each function. These steps also provide a generic "template" for identifying and resolving any problem where logic is desired. While many might state that they are not logical but emotional, this is a "logical choice" on their part. The decision to plan and to proceed is one of logic, even among those who might declare that logic is not part of the milieu of change in public education. The decision to be logical or illogical (emotional is the word used most often here) is a rational choice when seen from the perspective and context of the decision maker. This notion is basic to the work of Greenwald and is discussed both logically and emotionally in his writings.⁴⁶ Greenwald indicates that people are constantly making decisions, and making new decisions requires the replacement of old ones. A decision to change is a decision to change the "payoffs" of old decisions. Other psychotherapists have noted the importance of decision in change, including but not limited to Freud, Harris, Berne, and Ellis. Greenwald, though, seems unique in noting that when taken from the perspective of the individual, there is no "crazy" behavior nor are there any "crazy" decisions. They are all logical.

This notion is important to those interested in system planning in general and needs assessment in particular. The unique positions and decisions of the partners are valid. All partners should be able to examine the values and positions of all the others, decide to change if they want to, and to provide a referent for valid, planned change. A system approach is a model for valid planned change—a planned change which itself is changeable and does not lock itself into a set of values forever.

A system approach is a public and group decision-making process, and it allows all of the decisions of all of the partners to enter in and be counted. Further, a system approach allows all partners to act upon decisions based upon logical and consensual bases, and provides a referent for changing decisions once made and found wanting or requiring change due to additional information and experience. Change requires decisions, and decisions—to be effective and useful—should be based upon valid information.

A system approach, as conceived here, is a formal process for incorporating both the logic and "illogic" of all of the partners in moving toward planned, valid change. It is correctable and it is responsive and flexible when appropriate. It is not "loose" and undisciplined—change is made on the basis of facts and reality, not upon hunches, intuition, and outside pressure groups.

1) Identify Problem Based Upon Needs

Needs assessment is a tool for getting the first step of a system

⁴⁶ Harold Greenwald, *Direct Decision Therapy* (EDITS, San Diego, 1973).

approach accomplished—Identify problems based upon needs. It is an outcome gap analysis which determines the gaps between current results and required results, places these gaps in priority order and selects those gaps of highest priority for resolution. The needs selected for action are the "problems."

There are a number of approaches for getting this job done—needs assessment—and we have noted some of them here. Some utilize unique procedures for each needs assessment and use of instruments, surveys, kits, and the like may not be responsive to the individual characteristics of any given school district.

This is "Alpha" planning in the taxonomy of planning; it is fundamental and the logical starting point for educational planning and change. Some of the procedures in accomplishing this first step might be:

- 1.1—Identify partners (learners, implementers, community);
- 1.2—Select partners (either a sample or the total population);
- 1.3—Identify possible methods and means for harvesting needs;
- 1.4—Select the methods and means for harvesting needs;
- 1.5—Obtain needs data;
- 1.6—Obtain agreement within each partner group on needs and their priority;
- 1.7—Obtain agreement between partner groups on needs and their priority;
- 1.8—List needs in priority order;
- 1.9—Select needs (identify problem based upon needs).⁴⁷

Perhaps less is known about this step than any of the others in the system approach planning model, so care should be exercised in its design and conduct. It is easy to take the path of least resistance in this first and perhaps most critical step. Because everything else in educational change emanates from this point, this step is worth the time it demands.

2) Determine Solution Requirements and Identify Solution Alternatives

The first step has given us the gaps to be closed. This step is designed to analyze these problems and determine the detailed requirements to get from current results to required results. The outcome of this analysis includes the determination of solution requirements, i.e., the specifications of any solution or set of solutions regardless of

⁴⁷ Kaufman, R., 1972, op. cit., 1971, op. cit. Readers interested in the function, tools and skills of Educational System Planning in general and System Analysis in particular are urged to read "Educational System Planning, 1972."

which one(s) we ultimately choose. Like the first step, this is a determination of WHAT is to be done, not how-to-do-it. The determination of solution requirements is a determination of what any solution would have to do and be like if it is to be successful. It is a detailed analysis of the problem, and uses such analytical tools as:

- mission analysis
- function analysis
- task analysis
- methods-means analysis.

Mission, function, and task analysis break the function down into their constituent component parts identifying and defining the aspects of the problem. It is a series of analyses which are "layered." Such analyses look at and define the problem in increasing detail from the total, overall "mission" level down through the task level. Methods-means analysis "identifies solution alternatives," i.e., it looks for and lists the possible how-to-do-its for each of the requirements for problem resolution, and lists the advantages and disadvantages of each. For instance, this step would not prescribe a specific reading program or teaching technique. It would require that we look at all of the possible alternatives for meeting the requirements and list the advantages and disadvantages of each alternative how-to-do-it, or in our parlance, "methods-means."

3) Select Solution Strategies From Among Alternatives

While the first two steps of a system approach are concerned with WHAT IS TO BE DONE, the rest of the model is concerned with HOW TO GET THE JOB DONE AND DOING THE JOB. First *what*, then *how*. This step is where the actual selection of the alternative how-to-do-its are accomplished, based upon empirical analysis. There are a number of tools available for doing this selection job, including PPBS, cost-benefit analysis, cost effectiveness analysis, methods-means selection technique and systems analysis (This is different from the tools mentioned in function 2 of this system approach model). Thus, before implementation, this step picks out the best ways and means for getting the job done.

4) Implement Selected Strategies

While most people start their efforts here, we should note that this is but the fourth step in a six-step planning model. It is the *doing* step, and is quite complex and important. Here we make, buy, and obtain the how-to-do-its, schedule their implementation, implement them, and set in motion their evaluation.

5) Determine Performance Effectiveness

In the jargon of today's education, this is frequently called "summative evaluation"—the determination of whether or not we accomplished that which we set out to accomplish. It should give us (and the other decision makers in the district and outside of the district) the information necessary to:

continue, and/or

stop, and/or

revise, some, all, of that which has been going on.

Because of the preceding steps, there is a precise, measurable set of requirements and specifications upon which to base an evaluation. A better basis is thus provided for knowing exactly where in the district changes should occur. Note that this approach gives a number of options, from total cessation to continuing. It includes the most effective result, changing that which requires, changing, and maintaining that which works—on purpose.

6) Revise As Required

Change and renewal is important in this model. This is the step which requires it. This step is a *continuous one*, and thus revision may occur at any or all of the previous steps. As a process for logical, orderly change, a system approach is a useful tool, and provides a conceptual framework and a set of management functions using the needs assessment data. It is a set of links for achieving educational success.

Summary

System analysis is a general planning process. The language may strike some as unduly technical, but it attempts to describe and delineate various aspects and applications of planning into a general approach. The result will be greater school system rationality, better decisions, and a more effective and efficient configuration of the resources provided by the community to educate its children. Needs assessment is a tool which fits logically into this planning-for-results context.

Part V

Some Hypothetical Case Studies

To assist the educational administrator or manager in developing some idea of how to implement a needs assessment (as a part of a system approach) the following case studies have been constructed from experience in many states, but bear no specific resemblance to any particular school district.

Curtis Unified School District Needs Assessment

A midwestern school district was interested in newer management practices. There was a new superintendent who had an excellent "track" record from his previous school district, and he was known and recognized as an innovator. He hired a consultant to come in and guide him and his directors about new organizational development procedures and management techniques. During the first meeting, the consultant asked the superintendent what outcomes he wanted, and the following dialogue ensued:

"We want to make a difference for learners around here, and we want to take advantage of the newest methods for managing for results. We are interested in learners and learning here, we have a fine staff, and we want to make things even better."

"Fine. Let's talk about some of the needs, needs as you see them and as the teachers see them, as the learners see them, and the community sees them."

"Well, I think that most of us feel that we need better ways of planning education and then managing it for success."

"I agree that it would be useful to find better ways to do things, but that is not what I meant."

"What do you mean? We do need to improve the way in which we deliver education, and we need to do it rapidly."

"I use 'need' as an outcome gap. You were talking about solutions,

or how-to-do-its."

"Well, by golly, there is a gap—a gap between our current management methods and what they should be."

"That is a gap all right, but it is a gap in process, not in product. If the new management techniques were successful, what results or changes in learner behaviors would we be able to measure, or at least observe?"

"Are you telling me that I do not know the needs around this district?"

"Not exactly, I am saying that we should know the deficits in results before we select ways in which to teach and manage."

"O.K. we are into a semantic thing here."

"It might be that, but it is really more fundamental, at least I think so. We are interested in finding out the gaps in results so that we can consider alternative ways and means—even be creative—in closing the gaps. Some things get used when they aren't necessary, and sometimes what we think are needs really are not."

"Is there something before management development?"

"Right, an assessment of needs—that is, determining the gaps between current results and desired or required results."

"I am starting to understand. We should define our problems before selecting solutions. That is pretty simple. I don't know why we have missed it up to this point. Where do we start?"

This hypothetical dialogue might happen anywhere. It signals the shift from concern with means to concern with ends. It is healthy and usual. From here the consultant with the district personnel organized the following sequence of events:

- 1) A preliminary set of questions was drawn up to which administrators, board members, teachers and learners might want answers in performing their assigned functions and roles.
- 2) A sample of administrators, learners, and community members were asked to list questions to which they currently had inadequate or no data to help them in making decisions relative to the schools. The data were collected and sorted into categories and zones.
- 3) A series of problem areas for further research was then generated.
- 4) A Needs Assessment Advisory Council (NAAC) was organized which worked with the Superintendent. It was composed of the president of the local community college, a member from the state university, community members, a board member, two learners, a dean of instruction at a private university, three teachers, a principal from an elementary school, and three community members of high stature. They were briefed on the procedures and concepts of a needs assessment and told that they were not a "rubber

stamp."

- 5) A preliminary needs assessment data collection vehicle was drafted, perhaps usable as a questionnaire, or perhaps usable for a town hall meeting—the exact vehicle for harvesting needs had not been selected.
- 6) An advisory group of teachers, principals, learners (called the Educational Advisory Board) was shown the questionnaire, told the purpose of the needs assessment, and asked to critique it. They did and revisions were made.
- 7) The NAAC convened and critiqued the revised questionnaire and revisions were made.
- 8) The questionnaire was brought back to the Educational Advisory Board and reviewed, critiqued, and revised.
- 9) It was then returned to the NAAC for approval and minor modifications which were judged to be in keeping with the instructions of the EAB.
- 10) A consultant in public opinion methods was hired and asked to recommend methods and procedures for data collection appropriate to this community. At first, the consultant was confused between this effort and public relations, but soon he noted that it was a difference between information dissemination (PR) and information gathering (needs assessment). He recommended that a stratified random sample of educators, community members, and learners be identified and quota sampled, and that it be done with a door-to-door interview with the community members (including a sub-sample of community leaders). He also recommended a mail survey of educators. He noted that the average cost for door-to-door interviews throughout the nation in 1967 was \$45.00 per interview. The Superintendent gave his approval and this data collection segment of the needs assessment was begun.
- 11) The needs assessment agenda item was brought before the Board for final approval as to format, the funds, and the total effort. TROUBLE. Board members (only three) thought that some of the questions were not correct (even though they had been empirically built) and stopped to edit and change. Explanations about sociological concepts of perceived reality-being of prime importance (what people think they know is their only reality—not of great importance is what they really do know in reality) were considered and the instruments modified. It was noted by the two consultants that the instrument was not as appropriate as before, but the political decision was made to go ahead anyway (half a loaf was better than none) and that there were two or three items which could help decisions in the district. Modifications for greater validity could be "cranked in" during the next year's efforts. A

tactical error was made when the questionnaire as revised by the Board was not taken back to the two advisory boards, but time was running out.

- 12) There was training conducted on the part of the data collection interviewers, and the sample was drawn and data collected.
- 13) Questionnaires were sent to the learners and educators.
- 14) The data were reduced and analyzed in a contract computer facility, and part of the data lost. A sample was drawn to make sure a systematic bias had not been introduced. It had not.
- 15) The data were summarized and reported for each of the partner groups, and the Board was given first review. They were surprised at some of the ranked priorities but they were pleased with this new tool for decision making.
- 16) The advisory boards were shown the results, and questions they had answered, including several new analyses of the existing data to show new relationships.
- 17) The EAB was given monitoring authority over the process and the data, and they convened a representative sample to reconcile differences between partner groups. It wasn't difficult for it was found that there could be alternative programs for differing emphases among the partners.

Recommendations were made for the next needs assessment in the following years. There was a rather smooth procedure to the process, with a minimum of problems. There were some errors, but none was fatal. A data base was established, and all the partners could rely on empirical information for most of their questions, and now know the vehicle for getting additional data next year. Management training is now being formulated against these needs and the characteristics of the educators in terms relative to the management of programs, the now agreed-upon objectives, and a knowledge by all concerning "management for what?" An anticipated program of management-by-objectives (a pet of the new superintendent) was implemented easily since all had a common referent for organizational objectives and required results. Everyone knew that the objectives were relatively valid and useful.

Uniontown Union Free School District Needs Assessment

The Uniontown Free School District was part of a New England textile center. Highly unionized, both the town and teaching ranks had established contractual provisions which virtually excluded any new idea or procedure from being implemented without first being cleared through the Curriculum and Instruction Council. This group was composed principally of teachers selected by the union, many of whom had

been ex-officers in the union. Innovations died aborning in the Council. Several proposals by students for more alternatives at the high school were quelled. The attitude was that "the curriculum and the school were good enough!" After some training sessions the assistant superintendent persuaded the superintendent to appear before the Council and present a case for doing a needs assessment. He appeared before the group one afternoon in the high school library.

Assistant Superintendent: "Now you have seen some of the basic steps for a needs assessment, what are your reactions?"

First teacher: "I think it's a waste of time. We worked for two years on the district philosophy and objectives. We can compare our programs to that study."

Assistant Superintendent: "Yes, but how was the validity of the objectives and the philosophy determined?"

First teacher: "What do you mean by validity?"

Assistant Superintendent: "I mean, who agreed to be bound by this philosophy, and who determined if the objectives represented it in its total scope?"

First teacher: "Well, it is published in the first page of the high school handbook. Isn't that enough stamp of approval?"

Assistant Superintendent: "No. It has no validity unless the rest of the faculty was involved, plus the Board, students, as well as the community; plus some measure of what the learners have been able to accomplish since leaving our schools. These groups are not bound by any of the provisions represented there."

First teacher: "That's a professional prerogative anyway. We know what is best for the program."

Assistant Superintendent: "Really? Is that why the community rejected the social studies curriculum last year? Is that why the state legislature is now demanding to know what objectives and programs exist for slow learners in the schools? You have before you a batch of mini-courses developed by some of the department chairmen. On what criteria were they developed? On what basis was the curriculum determined to be inadequate? How was it decided to drop two industrial arts courses from the course catalog last year? The truth of the matter is that we do not know why and we did not have any criteria."

Second teacher: "What should we do? How would we know if these decisions were warranted?"

Assistant Superintendent: "We should go back and develop some educational goals and then compare them to the objectives we derived from our philosophical statement. These should then be ranked as to importance."

Third teacher: "Wait a minute. We made a decision last year not to

rank any of the objectives. They are all important. Besides if we rank them the Board might eliminate them from the program. That's all that group of politicians would need—an excuse for cutting back on the program and let more teachers go. I would not want to give them any excuses for that."

Assistant Superintendent: "Do you not see that such can occur in the absence of any ranking. The Board eliminated two physical education positions based upon their own perceptions of the importance of that program. So ranking is not going to give them any power that they do not have already and have not exercised. Besides we have priorities for programs now. Look at the money we spend in music compared to remedial reading at the junior high school. How did that priority become established? Did somebody make a rational decision that music was more important? No, no such decision was made except by default. Most of our program expenditure levels were established by aggressive teachers in a time when the budget and the community were functioning on a growth economy. Now that enrollment is declining we are having a hard time explaining and defending our expenditure levels to the public. Our shortcomings are more obvious and we look like we are insensitive to some problems. Now, more than ever, we must make rational and public decisions about what is important and it will require some adjustment internally."

Fourth teacher: "I do not like it, it sounds too mechanical. Besides this accountability thing imposes an industrial-based philosophy on a humanistic profession. They are totally incompatible. What we should have is more aides and lower class sizes, that is all."

Assistant Superintendent: "Lower class sizes and aides for what? You heard the Board's negotiator say that without some measurable improvement, additional expenditure levels would result in staff reductions, not staff additions. Our schools look like factories now. We push kids through now, not on the basis of their growth but on the basis of how much time they have spent in each cubicle called a classroom. We use group-based instructional procedures that are oblivious to individual differences in youngsters. We do not diagnose youngsters because we do not have to do so. Our instructional program does not require any feedback because it does not run on feedback. For a so-called humanistic profession we certainly ignore human feedback a great deal in the design of our programs and in assuming that all is well. Our dropout rate has increased, the ninth grade teachers have complained publicly that a larger percentage of students cannot read as well as they have in the past so that they want more days of remedial reading for them. Is that a sign that all is well? How will aides solve that prob-

lem? How will lower class size teach youngsters to read better unless we know that lower class size is the real solution to that problem? We are defenseless without knowing what the real problems are and the community does not believe us anymore when we say that all we need is money. They have had it with the tax rate. Taxes are out of sight and we have reading problems! The two just do not go together and in their common-sense analysis the public feels that we are missing the boat. Is this group going to be accountable for declining reading scores? If you fail to act, then the contract places the responsibility for curriculum improvement right here. What are you going to do about it?"

First teacher: "I think this should be part of next year's negotiations."

Second teacher: "That is right. Any change like this should be subject to the collective bargaining process."

Assistant Superintendent: "You mean you are going to wait to identify gaps in the program until negotiations? How are you going to establish your negotiating platform unless you know what the gaps are? Besides, there is no change implicit in needs assessment. It simply identifies where the program and learner deficiencies are."

First teacher: "I think it is better if we do not know where the deficiencies are. If the Board found out they would want to fire some of us for a poor job."

Assistant Superintendent: "The Board can release teachers now *without* any data. I think it's to your advantage and to the community's advantage to know where the gaps in learner growth are and use that information to build inservice training, purchase needed materials or give teachers the relief they say they need if that's what it will take to close the gaps. I think the requests by teachers will be heeded more and with greater sensitivity than in the past. Besides, when the requests are tied to youngsters, that is what makes a difference to the community. It will build a bridge between the teacher and the community that does not exist now."

First teacher: "I would like to caucus with the group. What you say is beginning to make sense. These are hard times for teachers. It would certainly be nice to have some sympathetic ears for the teachers in the community instead of what I hear now."

Assistant Superintendent: "Fine. I think so, too. The needs assessment will not change either group's source of power, that is in law and fact. It will make the discussions between the two groups more rational and channel the energy that goes into conflict to become more productive and fruitful. We cannot always agree on methods, but we should be able to agree on outcomes. However, if we can define the outcomes, I think we may find we also agree more

on methods as well. Let me know."

This was the initial discussion which resulted in a district-wide needs assessment in Uniontown.

The Sagamore City Needs Assessment

Coming from a successful experience in an exemplary school district, the new Director of Instruction was charged by the Superintendent with doing a needs assessment. He assembled a district task force, and got the members to define exactly what they wanted from a needs assessment, and to express their expectations and their greatest concerns. The concerns were answered (for the most part—there are always one or two who reserve the right to be skeptical no matter what), and then suggested that each member of the partner group become trained in setting measurable objectives and needs assessment concepts. They did, and went back to their respective schools to perform a needs assessment at the school level.

Each school had a different design, and a different set of data. One school decided to have partner groups meet in the auditorium, and they did it "town-hall" meeting style. They generated a list of outcomes and expectations from the partners, and went on to derive goals and objectives to meet the identified and "felt" needs. Another school decided to select representatives among learners and their neighborhood, and to have all acquire training in setting objectives and conducting needs assessment. After training (and actually as part of it) the representative partners identified gaps and compared these with survival criteria such as unemployment, welfare, college entrance, income level and discrimination. Next, they set objectives, argued out common points of view, and designed programs to meet the needs.

A third school decided to prepare questionnaires and sent them out to all learners, all parents and community members and all educators. They designed a questionnaire, pilot tested it, and then collected the data. A problem arose when there were some disagreements and a teacher noticed that the questionnaire allowed some of the responses to "talk" about means and not definitively about ends. They revised the responses, placing them in measurable performance terms (using the concept of performance indicators) and convened a sample of each of the partner groups and obtained concurrence after a few minor modifications. Then the teachers in this third school designed programs to meet the needs.

Here much diversity was employed with each school acting as its own agent, going about the task in different ways, but coming up with a process which best suited their views and characteristics. It had the advantage of getting high levels of commitment at the local level, and

getting a "team" spirit built.

The new Director of Instruction took the resulting needs data from all of the schools, combined with some "massaging" of the data and some minimal translating, and used these to build a synthetic district needs assessment. It was noted by him that there was a lot of agreement, but there were different priorities in different neighborhoods due to different cultural and economic factors. This composite plus a capsule of the individual schools were provided to the Board and they had a new perspective concerning the schools. The next year the three school groups came together and shared their experiences and their disappointments and successes and decided to design the second year's needs assessment jointly but administer it again at the neighborhood level.

The River City Needs Assessment

A relatively small rural community has had good community school relations for years. The mayor and city council and the editor of the newspaper have been active in schools for years, and they take great pride in the high school football and basketball teams, and the cheerleaders are another source of boasting. The town is together. Education is important, and the schools and administrators are supported. Teachers are listened to and respected.

Recently the schools and the town have been hit by rising costs and learners who cannot get jobs. The agribusiness has been down lately, so jobs for even the "poor" students do not exist. Meetings were held and a copy of a recent education journal on needs assessment was presented by the superintendent. They reasoned together that they might "streamline" the schools, and perhaps introduce some new curricula and strengthen some of the old. Together they formed four committees:

- learners
- educators
- community
- survival

Each charged itself with defining needs as gaps between current results and desired results, and each group prepared goal statements based upon its findings. As each group came to terms with itself, it brought its goal statements back to the council and the council turned them over to a measurement and evaluation specialist who converted them into measurable performance objectives which met all of Mager's criteria. Then the goals-converted-to-objectives (in interval or ratio scale terms) were brought back to each group and they decided whether, in making the goals more measurable, there was distor-

tion added. If they met "muster" they were approved; if not, then they were revised until there was agreement within each group that at least 60% of the members agreed that the goals and objectives derived presented measurable statements of the gaps between their perception of "what is" and "what should be" for themselves was adequate.

When all groups, including the reality group (who looked at figures locally and nationally for unemployment, suicide, divorce, abortion, venereal disease, premature death, drugs and alcohol abuse, depression, self-concept—all things related to survival outside of schools) came to agreement within themselves, a town meeting was held of all the partners. It was on a Saturday night, and there was coffee, cookies made by the home economics classes, and the auditorium/gymnasium was set up with chairs formed into a circle. Each group presented its "needs" and everyone listened, and comments were tabled until all had presented. Then the Survival Group's work was critiqued, and modifications suggested, discussed and voted upon. In turn, each group was "on the hot seat" and the work of each was viewed and discussed by all. Some "hotheads" were given time, but the group kept its temper, and some revisions in all areas were accomplished. One technique used by the superintendent was to help each discussant to talk about outcomes, not processes. This was not easy, but he did it well. The specialists did another "massage" of the outcomes, and another meeting was held. At this meeting, a vote of agreement on the objectives resulted in all but three being included in a list for priority setting. The group was told to vote on the importance of each need—to think about weighting each one on the basis of the perceived cost to meet the need and the perceived cost to ignore the need.

At first, the number of votes was thought to give priority, but it was found that many people couldn't decide, so the high school principal thought of another method—to have people "Q sort" the total needs, have the sorts for all partners summarized and integrated, and report the results at another meeting, and then decide to adopt or revise. This was done and a vote one week later showed that the town was in good agreement on high priority items—vocational and technical education for both boys and girls. This meant they would get and keep jobs upon leaving the high school, whether or not they were going to college.

The process further united the community, and it was decided to go through the process regularly every two years, and to have special meetings if there were dramatic changes in the society or the schools.

Megalopolis City Schools: Needs Assessment By Caucus

As one of the ten largest school districts in the nation, Megalop-

City faced familiar problems; a declining tax base, white flight to the suburbs, descending test scores, militant unionism, bureaucratic proliferation and a succession of superintendents. A school busing proposal had driven the Board into fighting camps and separated the community and further accentuated white flight. Schools in the older part of the city were falling down and vandalism and attacks on educational personnel steadily growing.

Sensing the inability of the Board and administration to govern the system, the Superintendent proposed the establishment of an ad hoc committee of extraordinary authority, a project type of management design which would cut across the entire breadth of the school system at all levels. He persuaded the Board of Trustees of the city's most prestigious university to release their President for six months to head the task force. The task force was then staffed methodically to include strata from the entire school district and key members of each major division. This became the Committee of Governors. The first task was to bring some OD (organization development) personnel into the system and perform problem diagnosis sessions. All kinds and types of problems were discussed and prioritized. These were then sorted into the divisions of the district where they were allocated under the existing table of organization.

Most of the problems were listed as the lack of solutions such as, the district does not have enough buses, or the district requires more reading specialists, or facilities are dilapidated, etc. After the problems were arranged in order of severity and listed by each division the President asked the Committee of Governors to form two special subcommittees. The first was aimed at identifying common problems and the second at identifying common outcomes desired. The latter group arranged their work in hierarchical form beginning with desired student outcomes to desired support system outcomes (administrative, etc.).

When these two reports were presented to the Committee of Governors the key criteria for examining them were scope and priority. Were the problems identified, were all the problems included and were they in the proper order of severity? Were the outcomes desired identified, and all the outcomes displayed in descending order of importance? When these two subcommittees completed their assignments, a third ad hoc group was formed to mesh the two reports, problems and outcomes. Problems were sorted into required outcome areas and then amalgamated into larger problems and larger outcome statements. Finally, the required outcomes were listed in the most inclusive manner possible. The committee was charged according to the law of parsimony, that is, to include as much as possible within one rule or statement. One of the most urgent priorities was that of establishing output criteria for the school district in terms of pupil growth and then

in terms of desired managerial outcomes by division and office. The logical set of relationships was then set into motion in a solution search within each of the divisions and offices. This provided a pragmatic validation of both problem and solution.

The needs assessment determination of educational specifications was established to be performed by political caucus. The Committee of Governors leased the civic auditorium and scheduled it for two days for a Conference and Caucus on School District Performance. Every major political and civic group was invited to send a delegation: the teachers' union, the principals' union, NAACP, the League of Women Voters, the PTA, the Civic Taxpayer's Association, etc. Each group was invited to submit a platform on what it thought the educational outcomes should be, as well as to make statements about current expenditure levels and problems which they felt were of immediate importance derived from the lists developed by the Committee of Governors.

After two days a joint list of common caucus agreements was developed which included a pooled series of goals, problems and priorities. These were then written into a position paper for the Board of Education to consider. From this paper a survey instrument was developed to be randomly mailed to the city residents for response. With the development of the position paper and the recommendations to form action groups in the school district across the many divisions, each with sets of performance objectives and on a two-year basis, the Committee of Governors was abolished. It would be reconvened in a two-year time period to review the progress made and to evaluate the performance of the Superintendent in bringing about the desired changes, i.e., an independent audit of the performance of the chief school officer and the progress of the school district itself.

The process was much like that of accreditation, except that this was a functional accreditation consisting of meeting the objectives and goals derived from the community caucus. The process was also kept very close to the people and the political system. The Superintendent's annual report was a progress document which reported in detail what and how the various divisions and offices had met the performance requirements necessary to move the district towards responsiveness to society, students, and professionals.

ABOUT THE AUTHORS

Fenwick W. English is the superintendent of schools in Hastings-on-Hudson, New York. Previously, he was assistant superintendent of the Sarasota County Schools in Florida. He has been a leader in the differentiated staffing movement and served as director for the Differentiated Staffing Project in Mesa, Arizona, and for the Temple City project in California. He received his B.S. and M.S. Degrees from the University of Southern California and his Ph.D. from Arizona State University. In 1961, he was awarded the "Outstanding Achievement Award in Education" by the USC Chapter of Phi Delta Kappa. Dr. English is also a recipient of the National Academy for School Executives' Distinguished Professor Award.

Roger A. Kaufman is a professor of education in the Area of Instructional Design and Development at Florida State University in Tallahassee. He is also the Senior Research Associate for the Center for Education Technology, Instructional Systems Development Center at F.S.U. Dr. Kaufman has also been on the faculties of the United States International University in San Diego and the Institute of Instructional System Technology and Research at Chapman College, Orange, California. He has been employed by the Douglas Aircraft Company; Bold, Beranek and Newman; U.S. Industries, Inc.; Martin Company; Boeing Company; and the National Bureau of Standards. Mr. Kaufman received his B.A. Degree from George Washington University, his M.A. Degree from Johns Hopkins University, and his Ph.D. from New York University. He has written numerous articles for magazines and journals, authored five monographs and books, and consulted on over four dozen different projects. He is also on the editorial board of a number of psychological and educational journals.
