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AN HISTORICAL-DESCRIPTIVE ASSESSMENT OF THE
PERFORMANCE OBJECTIVE PROGRAM:
A SYSTEMS APPROACH TO INDIVIDUALIZING INSTRUCTION

by

John F. Reynolds

A Dissertation Submitted to the Graduate School
of the University of Massachusetts in Partial
Fulfillment of the Requirements for
the Degree of

DOCTOR OF EDUCATION

School of Education
Amherst, Massachusetts

December, 1972

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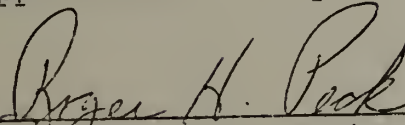
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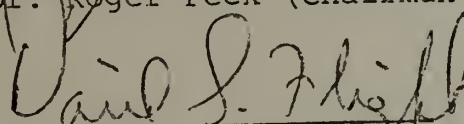
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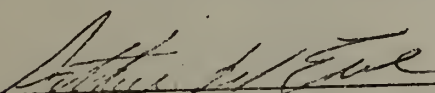
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December, 1972

DEDICATION

To Ann
and John, Jr.

A C K N O W L E D G E M E N T S

During the writing of this dissertation as well as throughout the entire doctorate program at the University of Massachusetts, the support and assistance of many individuals has been deeply appreciated. To Dr. Ronald Fitzgerald, the Superintendent of the Amherst-Pelham Regional School District, I owe deepest gratitude for encouragement throughout, and for the continual assistance which has made this entire experience so highly rewarding. I am grateful to all of the administrators and teachers of this school district for their constant support. Special thanks are due to Dr. William Allen for initially encouraging me to undertake this task, as well as for his frequent counsel and assistance.

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Words cannot express the gratitude I feel towards my family

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CHAPTER I

INTRODUCTION

Background of the Problem

The need for curriculum reform in our educational institutions is widely recognized and frequently demanded. Teachers, often pressed to militancy, seek increased control over policy-making decisions not merely for personal gain but rather to bring about an improvement in an out-dated system. Students, in increasing numbers, recognize the irrelevance of much of our traditional educational programs which answer the needs of a pathetically small minority of students. Parents and taxpayers demand both improved programs and increased economy, and they have the uneasy feeling that they are not getting the best education possible for the money spent.

An analysis of these desires and complaints has led many educators to the conclusion that a more individualized instructional program must be provided. However, even this terminology - "individualized instruction" - leads to numerous definitions and images of each student functioning independently of all peers. Independent study and individualized instruction have been misinterpreted to be synonymous. The resulting opposition declares that individualized instruction reduces the communication and cooperative learning experiences necessary in schools.

A more reasonable definition of individualized instruction is provided by Thorwald Esbenson:

An instructional system is individualized when the characteristics of each student play a major part in the selection of objectives, materials, procedures and time.¹

In addition to pressures for curriculum reform, the most powerful force operating upon our educational institutions is the economic threat. The Sputnik era provided an impetus to improve education regardless of the cost. Presently, "the well is running dry."

The demands to reform education continue, but commensurate with them are equally vociferous calls to hold down the taxes. Revenue for educational expenses is still provided by the antiquated and inadequate local collection of property tax. Property taxes are exorbitant in most communities, and the local politicians as well as the taxpayers are pressing for reduced spending.

Consequently, across the nation our educational institutions are in financial turmoil. Contract negotiations break down, teachers are striking, and schools are closing. School bond issues are being rejected by the voters in increasing numbers. A large number of school districts are on the verge of bankruptcy.

Ohio, which ranks fifteenth among the fifty states in per capita personal income, is shown to be symptomatic of the nationwide problem in the following newspaper report:

Dayton's public schools have run out of money and will close next week, giving 56,000 pupils an early vacation. They could be joined by as many as 67,000 pupils in 28 other Ohio school districts that may go broke before January 1.²

¹Thorwald Esbensen, Working with Individualized Instruction: The Deluth Experience (Palo Alto, Calif. Fearson Publishers, 1968), p. VII.

²"Ohio School Districts Going Broke", Boston Globe, Nov. 1, 1971, p. 13.

Financial crises are rapidly developing in Massachusetts also. The Concord-Carlisle School District, for example, is approaching the point of reducing educational services due to monetary difficulties. The following report states the position of the Concord-Carlisle Teachers Association in response to a school committee attempt to reduce the budget:

Teachers say the cut would prevent many students from taking desired French and chemistry courses; prevent juniors and seniors from carrying more than one English course per semester; diminish independent study options; curtail teacher adviser systems, limit book supplies, and force the abandonment of mini-courses.³

In spite of the recent California Supreme Court ruling in *Serrano vs. Priest*, in which school funding through local property taxes was deemed unconstitutional, school systems must strongly justify all expenses. For this reason, accountability has become a key word in educational administration. Dollars must be related to productivity, but the mistakes of the 1930's, when finances surpassed instruction in importance, must be avoided. Morphet, Johns and Reller warn that the "gospel of efficiency" which dominated the first third of the twentieth century failed to see human beings as living systems but rather as inanimate parts of an organization.⁴ Callahan warns

³"School Budget Draws Protest in Concord", Boston Globe, Nov. 14, 1971, p. 26.

⁴Edgar L. Morphet, Rae L. Johns, and Theodore L. Reller, Educational Organization and Administration (New Jersey: Prentice Hall, Inc., 1967), pp. 149-150.

against money becoming the educational criterion by pointing out that although these efficiency programs put administrators in a defensible position, the educational results were tragic.⁵

Nevertheless, educational administrators are presently being pressed to accomplish two dramatically opposed goals: to improve the curriculum and instruction in the schools, and to reduce spending. The options appear to be as follows: (1) reduce services, (2) increase spending, or (3) increase efficiency. Obviously, the task of the administrator is to increase efficiency. He must improve the curriculum. He must hold expenses down and be able to justify expenditures.

In keeping with these goals, the Massachusetts Department of Education has published a list of ten broad common goals for all public elementary and secondary schools in the Commonwealth. In emphasizing a "results approach to education", Neil Sullivan as Commissioner of Education fostered a long-term plan to institute broad and flexible educational aims statewide, while encouraging much greater specificity of objectives on a local level.⁶ Criterion referenced evaluation would then be possible with localities reporting instructional success in terms of their own stated objectives. This might be seen as an approach to a statewide, system by system

⁵Raymond E. Callahan, Education and the Cult of Efficiency (Chicago, The University of Chicago Press, 1962), p. 178.

⁶Report of the Tasks Forces on Educational Goals for Massachusetts, Neil V. Sullivan, Chairman (Boston). (The Commonwealth of Massachusetts, 1971), pp. 1-17.

accountability design so absolutely necessary if state financing of education does in fact result from the Serrano vs. Priest decision.

The Amherst-Pelham Regional School District has instituted a program designed to increase individualization of instruction and and increase educational accountability. Considered a systems approach to individualized instruction, the project is attempting to rewrite the system's curriculum in terms of performance objectives, and to pursue the systems goals within a Planning Programming Budgeting System.

As in any PPBS design, planning, in the form of program objectives, is the key component. Furthermore as Mager, Popham, Goodlad, and countless others advocate, educational objectives should be directed to the learner and be as specific as possible. To utilize both approaches, the Amherst program was designed to relate specific performance objectives to alternative learning activities to budget categories. In addition to this, however, an attempt was made to encourage flexibility and continual revision of the curriculum by maximizing the possible avenues of input. To do this, it was decided to design training programs for parents and students, as well as for teachers, to teach them to write curriculum in terms of performance objectives.

The institution of training sessions, development of a resource center, and employment of a staff to assist in this curriculum project was made possible by the funding of this Performance Objective Program by the U.S. Office of Education through E. S. E. A. Title III grant.

With the Superintendent of Schools serving as the project director, a full time administrator (the principal investigator of this study), two secretaries, a four-fifths time evaluation intern (a doctoral candidate from the University of Massachusetts), and a part-time Evaluation Council (four local parents with a great deal of educational experience) were employed. Initially funded from September 1, 1971, through August 31, 1972, the project listed the following as its objectives:

1. Before the 1971-72 school year ends, each secondary student will be able to differentiate between a properly defined and an improperly defined student learning objective.
2. Before the 1971-72 school year ends, each secondary student will be able to write a properly constructed learning objective of his own choosing.
3. Within one month of the date on which he joins a local district, each teacher will be able to differentiate between a properly defined and an improperly defined student learning objective.
4. Once assigned to teach a course or unit, a teacher will create a file or "bank" of properly defined student learning objectives for that course or unit.
5. Each teacher will create a bank of appropriate test items and learning activities related to his bank of student learning objectives.
6. Each professional staff member other than classroom teachers will create a bank of service objectives that describe the specific services to be provided to students, the conditions under which such services will be provided, and the degree to which services will be provided.
7. Each secondary department and elementary curriculum committee will create a structure or process that involves parents and/or other adults and, whenever possible, students in the curriculum building process.

8. Each secondary department and elementary curriculum committee will arrange opportunities for students to accomplish learning objectives in topics selected by the students; on the secondary level at least this will include the opportunity for students to create these objectives.
9. Each secondary department and elementary curriculum committee will propose all new programs within a program budgeting format that emphasizes - (1) defined program objectives, (2) analysis of possible alternative ways of reaching defined objectives, and (3) pre-planned evaluation processes for determining the degree to which objectives are accomplished by any alternative implemented.
10. District administrators will create a training program and related instructional materials that will prepare any interested citizen to construct properly defined learning objectives for consideration of professional staff members.
11. District administrators will create a communication structure that allows and encourages all local citizens to suggest learning objectives for school programs.
12. District administrators and their staffs will create general testing and reporting programs that offer citizens clear and understandable comparisons of local student achievement with national achievement levels in areas of basic skills.
13. District administrators and their staffs will create specific programs to report the progress of individual elementary students to their parents in terms of accomplishment of specific learning objectives.
14. Each parent who participates in the school training program will be able to write a properly constructed student learning objective on a topic selected by the parent.⁷

To accomplish these objectives, instruction of teachers, students and parents was required. Technical skills had to be developed such that all participants would be able to write performance objectives.

⁷Ronald J. Fitzgerald, "System Approach to Individualized Instruction", Amherst, Massachusetts, 1971, pp. 23-29.

However, to oversimplify the skills and abilities implied in any program like this would be quite unjust. The technical aspects of writing performance objectives are deceptively simple. The philosophy of education and the psychology of learning behind every objective cannot be quickly grasped. An understanding of the rationale for the use of objectives is prerequisite. Further, the level of mental process required to meet the objective successfully appears to coincide with the level of sophistication of instruction. Moving participants from knowledge or memory skills to analysis and evaluation skills is not an easy task. Yet knowledge in these areas is mandatory if a participant is to distinguish between a valuable objective and a trivial or useless one. Furthermore, recognizing the complexity of the skills to be taught, and ignoring the affective areas which are most important, would be foolish indeed. Clearly, the preparation of a balanced curriculum is a long and difficult task requiring the coordination of a skilled group of people.

Desmond Cook warns that in the institution of change such as in this program, research must concentrate on "the creation of attitudes" which will result in a willing utilization of the abilities developed.⁸ Here is an identification of the real need in this area. The processes required to institute curriculum reform must be understood and further

⁸ Desmond L. Cook, "The Impact of Systems Analysis on Education" (Columbus: Educational Research Management Center, Ohio State University, 1968), pp. 9-10.

developed. Reform must come not merely through acquisition of skills, but also through development of attitudes. This notion is expanded and clarified by Hersey and Blanchard as follows:

Changes in knowledge are the easiest to make, followed by changes in attitudes. Attitude structures differ from knowledge structures in that they are emotionally charged in a positive or negative way. Changes in behavior are significantly more difficult and time consuming than either of the two previous levels. But the implementation of group or organizational performance ⁹ change is perhaps the most difficult and time consuming.

This position is pictured graphically by the following figure:

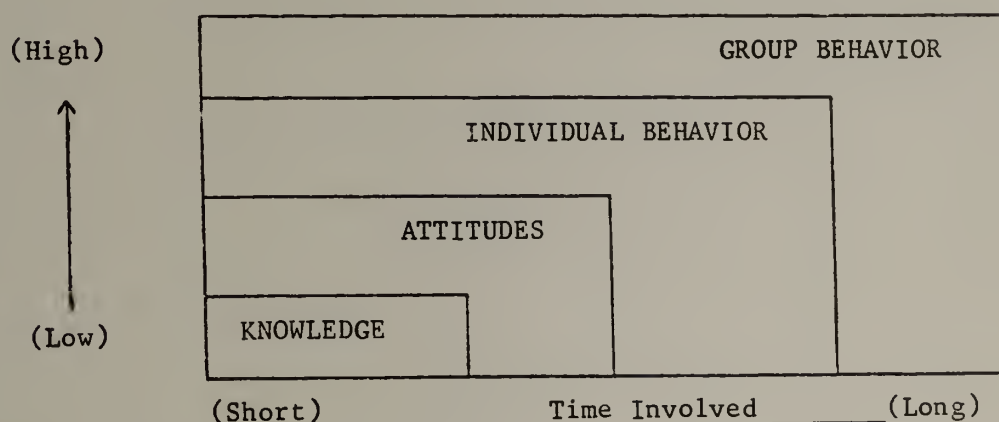


Figure 1 - Time and difficulty involved in making changes. Taken from Hersey and Blanchard, Management, p. 2.

To bring about change of this nature, the study of change methodology must be related to curriculum development and together produce a body of knowledge necessary to permit any major curriculum reform. The Amherst program is a comprehensive revision of the entire curriculum

⁹Paul Hersey and Kenneth H. Blanchard, Management of Organizational Behavior (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969), p. 3.

of the school district and as such it affects every teacher and student in the region. Due to the presence of one major university (the University of Massachusetts) and two colleges (Amherst and Hampshire) within the school district, an extremely education-conscious community must be seriously considered in the introduction of any such change. Additionally, a very vocal student-body must be kept aware of happenings that affect their learning and their future. Most immediate, however, in any program which originates with the administration as does the Performance Objective Program, is the need for a concerted effort to gain the support of the teaching staff. In attempting to alter the group behavior of parents, students and teachers within the Amherst-Pelham Regional School District, the Performance Objective Program has tackled a large and difficult task. The progress and results of this undertaking have generated data which should prove invaluable to the administrator or school system contemplating any similar reform.

In this study, the investigator has provided a historical description of the significant events leading to the development and implementation of the performance objective approach to education on a system-wide basis, kindergarten through twelfth grade. Through analysis of these incidents and an assessment of the project's effectiveness, recommendations have been made concerning the introduction of curriculum reform in the future.

Statement of the Problem

The major objectives of this study were, through the utilization of a case-study approach, (1) to identify the major actors and major incidents involved in the development and implementation of an ESEA Title III project entitled the Performance Objective Program, being instituted in the Amherst-Pelham Regional School District, and (2) to assess the effects of this program on teachers, students, and parents.

The specific purposes of the study were:

1. Through an analysis of existing documents such as proposals, correspondence, transcripts and reports, identify the major actors and incidents in the development, organization, and inception of the Performance Objective Program.
2. Through the use of structured interviews, determine the major actors and incidents in the development, organization and inception of the Performance Objective Program.
3. Through the use of observations and perceptions of the investigator, recorded in the form of a log, determine the major actors and incidents in the implementation of the program.
4. Through an analysis of the recorded observations of the program evaluators, determine the degree of achievement of the program's goals.

5. Through the use of an assessment instrument administered to a sampling of teachers at the beginning and end of the study period, determine if an improvement occurs in their ability to identify properly defined objectives, and to write properly constructed objectives.
6. Through the use of a questionnaire constructed as a part of the project, determine the attitudes and perceptions of the teachers and parents concerning the performance objective approach.
7. Through the use of a questionnaire constructed as a part of the project, determine the attitudes and perceptions of secondary students concerning the performance objective approach.
8. Through the use of achievement tests, measure the ability of secondary students to discriminate between properly and improperly defined performance objectives and to write properly defined objectives.
9. Through the use of "open-ended" questions in informal interviews, determine the attitude of participating teachers, students, and parents toward the performance objective approach.
10. Through the use of observations and analyses, evaluate a sampling of objectives for (1) proper construction, (2) value, (3) domain represented, and (4) level within published taxonomies.

11. Through the use of achievement tests designed during the study, measure the cognitive skills achieved by teachers, students, and parents enrolled in POP training sessions.
12. Through an analysis and synthesis of the findings generated from the procedures described above, develop conclusions focusing on the degree of success attained in implementing the Performance Objective Program.
13. From the conclusions generated from this study, develop recommendations relating to (1) plans for the second year of the program in this school system, (2) the development and implementation of similar programs in other school districts, and (3) future studies related to this assessment.

Definition of Terms

The following terms are defined as they are used in this study:

1. Amherst-Pelham Regional School District - a district in Western Massachusetts consisting of one elementary school in Pelham, four elementary units in Amherst, housed in six separate buildings (one elementary unit was housed in three different buildings), plus a Regional Junior High School and a Regional Senior High School taking students from the towns of Amherst, Pelham, Shutesbury and Leverett.

2. Attitude - the degree of positive or negative affect associated with some psychological object.
3. Performance Objective - a statement or description of a visible or audible behavior which indicates that a student has learned or achieved something. A performance objective is referred to as well-defined or properly constructed when it states or implies the quality of the behavior sought and the conditions under which it will be expected.
4. Performance Objective Program - an E.S.E.A. Title III project in the Amherst-Pelham schools designed to individualize instruction by assisting teachers, students and parents to prepare performance objectives and alternative learning activities covering the entire planned curriculum from kindergarten through twelfth grade. The title of the program will frequently be shortened to the acronym "POP".
5. Learning Activity - any action or process that will help the student to reach the desired performance objective.
6. Parent - any adult living in the Amherst-Pelham Regional School District.
7. Student - any child enrolled, K through 12, in the Amherst-Pelham Regional School District.

8. Teacher - any professional employee of the Amherst-Pelham Regional School District.
9. Training Session - any instructional program offered by the project staff to foster the objectives of the program.

Assumptions in the Study

1. Respondents would respond candidly and honestly to questions concerning the strengths, weaknesses and value of the performance objective approach to learning, and the Performance Objective Program of the Amherst-Pelham schools.
2. Respondents would react to an attitude measurement in terms of their own attitudes as felt at the time of responding to the items.
3. Attitudes expressed by the respondents would be those generated by this program, and not preconceived biases.

Limitations of the Study

1. As a description of an on-going district-wide program, as opposed to a strictly controlled research project, this study has certain expected advantages and disadvantages. While the investigator loses control of several variables such as population, the study gains value through its realistic situation. It should be kept in mind that the population to be served by the project was predetermined at the time of funding. Training sessions were available to all

in the district. To go outside the school district for subjects would appear to add untold variables to the study population. Consequently the entire study used participants from throughout the same school district.

2. The design used in this study includes the case-study approach. Since there are no control groups in this study, the results and conclusions must be regarded with care. However, it is felt that the need of administrators for a description of the methods used to institute such reform is evident, and that this descriptive form of research, with its recommendations, will be most valuable to any educator planning such a program.
3. The fact that the individual administering the program and directing the POP training sessions was also the investigator of this descriptive study makes personal bias a consideration. The writer is aware of this condition, and a constant effort has been maintained to eliminate biased reporting or analysis.

Design of the Study

While presenting a description of an on-going comprehensive curriculum project, the study was also exploratory in nature in that it has attempted to determine an effective means of instituting curriculum reform. It utilized a case-study method to analyze the development, and the implementation, of the Performance Objective

Program. In general, the developmental stages of the project were studied through interview and analysis of existing documents; the implementation of the program was studied through interviews, the investigator's recorded observations and perceptions, and through a multi-faceted assessment program developed and administered jointly by the system's administrators and the project's Evaluation Council. The specific methods used in this study are described in the following sections.

The Use of the Case Study Method

Data from various unobtrusive sources were analyzed in order to describe the development and implementation of the Performance Objective Program and to identify the major actors and incidents relative to these phases. As stated previously in this proposal, a primary goal of this study was to describe the processes involved in the development of the program, as well as to identify the major actors and incidents relative to this phase. To accomplish this, data from such sources as the following was analyzed: (1) various drafts of the project proposal, (2) correspondence, (3) minutes of meetings, (4) reports to the Department of Education, and (5) interviews with persons most directly involved in the development of the project.

A second goal of this study was to describe the processes involved in the implementation of the program as well as to identify the major actors and incidents involved in this phase. To accomplish this, data from such sources as the following were analyzed: (1) a

log of the observations and perceptions of the investigator extending from the first day of implementation, August 31, 1971, to July 1, 1972, (2) written and oral statements of the project evaluators, (3) informal interviews utilizing "open-ended" questions to elicit statements of attitudes toward the program, and (4) a multi-faceted assessment program which will be described in a later section of this proposal.

The data obtained from these sources were analyzed, synthesized, and presented in narrative, tabular and graphic form. The narration presents a detailed analysis of the development phase of the project prior to August 31, 1971, and the implementation phase during the August 31, 1971, to July 1, 1972, period of study. This provides the information necessary for interpretation of the data gathered in the multi-faceted assessment of the project.

The Use of the Assessment Design

The second phase of the study has incorporated a multi-faceted assessment design. The assessment techniques were used with the following purposes:

- a) to determine the effectiveness of the Performance Objective Program in meeting five selected objectives, and
- b) to determine the attitudes and perceptions of parents, students and teachers concerning POP.

Five Selected Objectives

As previously named, fourteen program objectives were stated in the original proposal. A combining and rewording of some of these objectives permitted the final selection of five objectives

as most appropriate for the purposes of this study. Following is a list of those objectives and the means by which they were assessed in the present study.

Objective Number One

Secondary students in the Amherst-Pelham Regional School District will be able to differentiate between a properly defined and an improperly defined student performance objective and will be able to write properly constructed objectives.

Assessment Methods Used for Objective Number One

Student abilities to differentiate between properly and improperly written objectives and to write properly constructed objectives were measured by tests administered to samplings of students in January and in May. Items dealt with each of these skills, and results were tabulated by grade level. Progress in meeting this objective was analyzed by comparing the results of the two administrations.

Objective Number Two

The teachers in the Amherst-Pelham Regional School District will:

- a) demonstrate the abilities necessary to utilize performance objectives, and
- b) develop the materials necessary to implement a high quality instructional program.

Assessment Methods Used for Objective Number Two

A pretest and posttest design was combined with an achievement test and an analysis of the materials produced during the period of this study. Identical tests were administered to a sampling of the

staff in September and again in June. The results of these tests were analyzed for movement of the group as well as for movement of individuals. This was possible since names were recorded, and the September and May tests of individuals were matched and compared.

Also an anonymous achievement tests was distributed to staff members in May. This tested skills deemed necessary and dealt with the voluntary in-service program. In addition to determining staff achievement, analysis of these results also were used to measure the effectiveness of the in-service program.

To assess the quality of the materials being produced, objective banks and activity banks were observed throughout the year and recordings of those observations were made. It was attempted to determine the approximate percentages of objectives in each domain and in each level of published educational taxonomies.

Objective Number Three

Each secondary department and elementary curriculum committee will arrange opportunities for students to accomplish learning objectives in topics selected by the students. On the secondary level at least, this will include the opportunity for the students to create these objectives.

Assessment Methods Used for Objective Number Three

Questionnaires were distributed to students and teachers to determine their perceptions as to whether or not students were given these opportunities. In addition, reports of the observations of the project evaluators were incorporated into the assessment of

this objective. Using a comparison of the perceptions of students and teachers, combined with the perceptions of the evaluators as sources of information, data were gathered and analyzed. Conclusions were based upon these data.

Objective Number Four

District administrators and their staffs will create specific programs to report the progress of individual elementary students to their parents in terms of accomplishment of specific learning objectives.

Assessment Methods Used for Objective Number Four

Programs designed to develop reporting systems were identified and their products were gathered. Since two such programs had produced two reporting systems, these two systems were compared and judged on specific criteria. Those criteria consisted of the conditions stated in the objective, as well as practicality of use and consistency with the entire Performance Objective Program.

Objective Number Five

Parents will be provided the opportunity and needed skills to participate in the curriculum building process.

Assessment Methods Used for Objective Number Five

Existing documents, including written communications, project publications, newspaper articles and the project log, were analyzed to determine the number of opportunities offered to parents. Interviews with parent participants and analysis materials produced by these parents were used to assess attitudes, understandings and skills of parents resulting from training sessions.

Attitudes and Perceptions

To determine the attitudes and perceptions that existed concerning the Performance Objective Program, questionnaires were administered to teachers and students both in January and in May, and to parents in May only. "Closed" and "open-ended" questions were asked, with the "open-ended" questions presenting a general issue designed to elicit voluntary responses indicative of the attitudes held. "Closed" questions consisted of specific statements relative to an aspect of the program, and responses were limited to "strongly agree", "agree", "undecided", "disagree", or "strongly disagree." In general, data presentation and analysis was under the following headings:

1. The Staff's Perceptions and Attitudes Concerning POP.
2. The Students' Perceptions and Attitudes Concerning POP.
3. The Parents' Perceptions and Attitudes Concerning POP.

With the teacher and student populations, sampling procedures in January and May permitted comparison of results to determine movement due to time. Data from parent questionnaires was limited to one administration in May. However, on questions which were responded to by more than one group, comparisons of different group responses were made. Statistical analysis in the form of "t" tests were employed to determine the level of significance of the differences between groups.

Development of Conclusions

Data from all the above sources were analyzed and synthesized,

and conclusions drawn on the basis of emergent patterns rather than specific or isolated instances.

Study Population

The Performance Objective Program includes all schools in the Amherst-Pelham Regional School District. Five elementary units, housed in seven separate buildings, serve one thousand, nine hundred eighty-three students, in addition to the Regional Junior High School and the Regional Senior High School which together serve one thousand, five hundred ninety-one students. All two hundred five teachers in the system were included in the project. Parent participation was open to all adults living within the school district.

For the purposes of this study, three groups of participants were considered: teachers, students and parents. All teachers in the system participated in the project, with some activities being voluntary while other training programs were mandatory. In assessing the program, all teachers and parent participants were considered, with appropriate sampling techniques utilized in the selection of groups to be tested. Attitude and skill measurements of the students were limited to the secondary level since it was only in grades seven through twelve that a concentrated effort was made to teach the students to write properly defined objectives during this first year of the project. Again, appropriate sampling techniques were used in testing participants.

Significance of the Study

Education, as it is practiced in nearly all of our public schools, lags ages behind educational theory, and even lags many years behind accepted research findings.

Curriculum theorists have been advocating an emphasis on learner outcomes through the use of performance objectives for many years. Recently, however, political and economic pressures have been forcing the educator to reconsider his position. There is a demand to equalize educational opportunity from community to community. The demand of the taxpayer that the schools be held accountable for dollars spent is quite real. Clearly there is an increasing demand for educators to measure and demonstrate their output. Curriculum reform is being demanded, accountability is being demanded, and in-service training is becoming essential.

To improve education, new attitudes must be developed. To change the schools, new skills must be learned. To keep schools viable and relevant to a changing society, increased involvement of all interested people must be encouraged. Training is a necessity to accomplish these goals. On a national scale curriculum reform is occurring, but more specifically the communities in the Commonwealth of Massachusetts, encouraged by a reorganized and more powerful Department of Education, are seeking to systematize their curricula. Many administrators are seeking assistance in the development of curriculum programs, since those with an overview of the field recognize the

need for change. A climate for change must be developed. Attitudes conducive to change must be fostered. Skills permitting the change must be provided.

The focus of this study is a description of one district's attempt to institute such reforms. By tracing the progress of this program, and by measuring the resulting attitudes and skills, this study offers valuable information to any administrator planning a similar project. The E.S.E.A Title III funds available to this project have permitted experimentation, evaluation, and redesign of planned activities, when necessary, until some level of success can be determined. The information and feedback gathered from this study may provide administrators with the data necessary to evaluate the effectiveness of this approach, and the conclusions and recommendations offer administrators direction for future development of similar programs.

Organization of the Dissertation

Chapter I of the dissertation consists of a statement of the need for the study, its purposes, its significance, the general design of the study, the assumptions and limitations. Chapter II presents a review of the literature and research related to the performance objective approach to education. Chapter III is a chronological report of the major incidents, events, and decisions of the project. Chapter IV describes the assessment methodology, the instruments used, and also the population involved in the study. In Chapter V is the presentation and analysis of the data. Chapter VI consists of the summary, conclusions, and recommendations.

C H A P T E R I I

A REVIEW OF RELATED RESEARCH AND RELATED LITERATURE

The Systems Approach

To many, the suggestion of applying a "systems approach" or "systems analysis" to education conjures up notions of labyrinthian organization, computerized instructional decision making, control of people by machines, and a loss of humanness in the schools. Defined as "a set or assemblage of things connected, associated or interdependent, so as to form a complex unity; a whole composed of parts in orderly arrangement according to some scheme or plan; rarely applied to a simple or small assemblage of things," the word "system" has connotations of numerous mathematical equations, each defining a step in a complex process, necessitating computerization.¹ In pointing out that the systems approach has traditionally been employed in areas in which the impinging variables are highly quantifiable, Desmond L. Cook justifies use of mathematical formulations. He further states:

This situation is quite disturbing to many educational personnel because they recognize that many of the variables cannot, at least at the present time, be expressed in quantitative terms. To such persons, the variables are very quantitative in nature and the translation of them into qualifiable terms is alien to both their ration and emotion. . . . To those of you who have

¹Webster's Third New International Dictionary (Springfield, Mass., G&C Merriam Co., 1966), p. 2322.

concern over the representation of systems by mathematical formulas, I would call your attention to the fact that an equally valuable way of representing systems² is through some type of descriptive flow-graph procedure.

Further, Knezevich argues that since education is not highly quantifiable, mathematical tools cannot infallibly identify the best course of action. It is very unlikely that mathematics will ever permit symbolic manipulation of anything as complex as a school district. Nevertheless, disregarding the inappropriate mathematical models, the systems approach can be a powerful tool to the administrator. Systems cannot make the decisions. It is argued, "Although systems may not solve the really significant policy dilemmas that confront school administrators in the sense of computing with infallible precision the optimum course of action, it can be employed to generate alternatives and frame issues in a manner that will sharpen the intuition and judgment of the educational decision-maker."³

Glenn L. Immegart offers the following justification:

The systems movement, for example, offers a real, and as yet somewhat untried, potential for improving the practice of educational administration. In particular, the systems movement offers a perspective for the administrator that, in and of itself, can facilitate his job. The systems movement has also resulted in numerous techniques, procedures, and methodology (which can be discussed and classified as management support systems) that can greatly relieve many of the burdensome aspects of administering. Available in the systems movement are

²Desmond L. Cook, "The Impact of Systems Analysis on Education" (Columbus: Educational Research Management Center, Ohio State University, 1968), pp. 4-5.

³S.J. Knezevich, "The Systems Approach to School Administration: Some Perceptions on the State of the Art in 1967" (paper presented at the U.S. Office of Educ. Symposium on Operations Analysis of Educ., Washington, D.C., Nov. 19-22, 1967), p. 6.

ways to free the educational administrator so that he can cope with some of the more important matters that face him.⁴

Immegart further points out that definitions and terminology need not be taken too seriously since there is no widely accepted "systems theory." Rather, it is argued, the systems movement has produced a mode of thought which provides a new perspective and conceptual apparatus.

Systems thought is holistic thought; it is contextual thought. Not only does the systems view focus on wholes and relevant (component) parts, but also this view is concerned with environmental context. By definition open systems exist and flourish in a dynamic exchange relationship with their environment(s).⁵

As a more comprehensive statement of definition, Bela H. Banathy claims:

Systems are assemblages of parts that are designed and built by man into organized wholes for the attainment of specific purposes. The purpose of a system is realized through processes in which interacting components of the system engage in order to produce a predetermined output. Purpose determined the process required, and the process will imply the kinds of components that will make up the system. A system receives its purpose, its input, its resources, and its constraints from its suprasystem. In order to maintain itself, a system has to produce an output which satisfies the suprasystem.⁶

⁴Glenn L. Immegart, "The Systems Movement and Educational Administration," Systems Approaches to the Management of Public Education (Detroit: The Metropolitan Detroit Bureau of Social Studies, 1969), p. 15.

⁵Ibid, p. 2.

⁶Bela H. Banathy, Instructional Systems (Palo Alto, California: Haron Publishers, 1968), p. 12.

The initial starting point then of any system must be a purpose. The defined needs to be fulfilled, the purpose of the design, become the nucleus of the system, and each component of the whole is based on that initial statement of purpose. Banathy asserts that the purpose of education is to ensure the attainment of specified knowledge, skills, and attitudes - thus, "learning" is the purpose around which the system is to grow. Here the author has distinguished between learning and instruction by claiming that learning is the true purpose while instruction is the process of education.⁷

It is here in the initial value decisions regarding the system design that educators must be wary. A study of the history of educational administration in the United States will reveal some unwise paths taken, due to initial acceptance of inappropriate values. The following table relates administrative doctrine to budgetary intent since 1870.

⁷Ibid, p. 24.

TABLE I

A COMPARISON OF LOCAL SCHOOL ADMINISTRATIVE STYLE WITH CORRESPONDING BUDGETARY INTENT*

Dominant Doctrine of Administration	Approximate Period	Budget Format	Budgetary Intent
1. Teaching teachers	1870-1875	Underdeveloped	N/A
2. Applied Philosophy	1886-1905	Nonstandardized	N/A
3. Business Management	1906-1935	Object-of expense	Fiscal accountability-Focus upon things purchased
4. Technical Expense	1936-1950	Function-object	Apply industrial management concepts to school finance: provide broad functional categories: unit cost analysis
5. Administrative Science	1951-1967	"	"
6. Systems Analysis	1968	Program	Focus upon instructional programs and objectives; long range emphasis; specify assumptions; explicit evaluative criteria

*Harry J. Hartley, "Educational Planning and Budgeting: A Systems Approach," Systems Approaches to the Management of Public Education (Detroit: The Metropolitan Detroit Bureau of Social Stu. 1969), p.35.

Specifically, the period designated "Business Management" has special relevance to a systems approach in that mistakes made at that time still serve to make those who are conscious of them wary of adapting business practice to the field of education. David S. Bushnell warns:

Adapting this more systematic approach to educational reform yields a higher probability that we will move beyond the "philosophical theorizing" of the past to something which approximates an empirically valid, scientifically managed renewal process. It is not my intent, however, to suggest uncritical adoption, as we did in the Thirties, of systems analysis techniques of the Frederick Taylor "scientific management" type, originally designed for industry or the military. These centrally managed, often monolithic organizational structures are not compatible with the largely decentralized, consensus - oriented, collectively administered public school systems.⁸

Morphet, Johns and Reller warn that the "gospel of efficiency" which dominated the first third of the twentieth century failed to see human beings as living systems but rather as inanimate parts of an organization. Consequently little emphasis was given to human relations, and attention centered on getting more from the workers and the organization.⁹

The definitive study of this era in American education is Raymond E. Callahan's book entitled Education and the Cult of Efficiency. In it he describes an America which idolizes the "big-business man". Business has discovered principles of scientific management, and the

⁸David S. Bushnell, "An Educational System for the '70's," Phi Delta Kappan, Vol. L1 (December, 1969), p. 199.

⁹Edgar L. Morphet, Roe L. Johns, and Theodore L. Reller, Educational Organization and Administration. (New Jersey: Prentice-Hall, Inc., 1967), pp. 149-150.

efficiency expert is the hero of the day. Success is determined by the ratio of input to output and the public clamors for educators to apply the same principles to the schools. The pupil was seen as the final product emerging from the factory and efficiency was sought by reducing money spent per child. Money became the educational criterion. Callahan says that the efficiency programs put school administrators in defensible positions in a business-dominated, efficiency-conscious society, but that the additional results were tragic. The educational leaders were devoting their time to matters which were incidental to the real purpose of the schools. The teachers spent hours on clerical detail rather than teaching and learning. Furthermore, just as administrators became efficiency centered to please a business society, teachers assumed a business managerial role in their classrooms to please business-oriented administrators. Thus the adoption of business-oriented solutions to educational problems only caused a further obscurance of the true purpose of education which is learning.¹⁰

Curriculum

Although relatively little has been written directly relating curriculum to systems, there is an abundance of material concerning the separate areas. In the field of Curriculum, the pieces of work concerning the writing of learning objectives and the application of

¹⁰Raymond E. Callahan, Education and the Cult of Efficiency. (Chicago: The University of Chicago Press, 1962), p. 178.

them to instructional methodology are extremely numerous. Annotated bibliographies, such as Louise L. Tyler's recent publication, have proved quite helpful in reviewing the relevant literature.¹¹

The Rationale for Objectives

As a rationale for the behavioral objective approach to instruction, Ralph W. Tyler's publication, Basic Principles of Curriculum and Instruction, provided one of the earliest and most encompassing investigations. The "Tyler Rationale" presents four questions which it claims serve as guidelines in developing any curriculum. They are:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained?¹²

Furthermore, Tyler describes the use of philosophy and psychology as screening devices in selecting learning objectives. Concerning the wording of objectives, it is claimed, "Since the real purpose of education is not to have the instructor perform certain activities but to bring about significant changes in the students' patterns of behavior,

¹¹Louis L. Tyler, A Selected Guide to Curriculum Literature: An Annotated Bibliography (Washington, D.C.: National Education Association Center for Instruction, 1970).

¹²Ralph W. Tyler, Basic Principles of Curriculum and Instruction (Chicago: The University of Chicago, 1950), pp. 1-2.

it becomes important to recognize that any statement of the objectives of the school should be a statement of changes to take place in students.¹³

"The most useful form for stating objectives is to express them in terms which identify both the kind of behavior to be developed in the student and the content, or area of life in which this behavior is to operate."¹⁴

However, contrary to most of the more recent writers, Tyler favors more general objectives rather than specific objectives. In both the behavioral and content sections of an objective, generality is preferred.¹⁵

More recently, John I. Goodlad has produced an expanded rationale, citing the need for a conceptual system for working with curriculum. He has defined "a curriculum" as a set of intended learnings, and "curriculum" as the study of the processes of selecting, justifying, and arranging these learnings.¹⁶ In this light, a curriculum is the product of a set of decisions in which ends are selected, and a set of decisions in which means are determined. Goodlad calls for rationality in curriculum planning, checking the relationships of the means to the ends by both logical and empirical study.

Goodlad's model for curriculum planning may be summarized in the following outline:

¹³ Ibid, p. 44.

¹⁴ Ibid, pp. 46-47.

¹⁵ Ibid, pp. 56-59.

¹⁶ John I. Goodlad, The Changing School Curriculum (The Georgian Press, Inc., 1966), pp. 11-13.

1. Selection of values
2. Formulation of educational aims
3. Refinement into specific objectives
4. Selection of learning opportunities
5. Designation of the organizing centers for learning.

In this, Goodlad disagrees with Tyler who would first turn to three data sources: (1) the society, (2) the learners, and (3) subject matter specialists. Tyler would then design objectives and filter them through philosophical and psychological screens. Goodlad claims, "We propose turning to values as the primary data source in selecting purposes for the school and as a data source in making all subsequent curricular decisions."¹⁷ "The ultimate starting point for curriculum planning must be a set of values."¹⁸ The decision-making process now involves more than mere analysis of data; it includes the utilization of values and data, simultaneously. Evaluation truly must include an acceptance or rejection of values.

To visualize curriculum as inextricably united with, or even a rational result of, explicit value statements is fraught with difficulty. The value conflicts natural to a pluralistic society such as ours put public education in a very uncomfortable position. Toffler clearly delineates the problem in the following statements:

Value turnover is now faster than ever before in history. While in the past a man growing up in a society

¹⁷ Ibid, p. 27.

¹⁸ Ibid, p. 27.

could expect that its public value system would remain largely unchanged in his lifetime, no such assumption is warranted today, except perhaps in the most isolated of pre-technological communities.

He further identifies a "crack-up of consensus."

Most previous societies have operated with a broad central core of commonly shared values. This core is now contracting, and there is little reason to anticipate the formation of a new broad consensus within the decades ahead. The pressures are outward toward diversity; not inward toward unit.¹⁹

In spite of the obvious difficulties, educators must concern themselves with values. It is absolutely unavoidable. Not to decide, is to decide. Values are built into nearly everything that occurs in a school. As the Honorable William G. Davis asserts:

It has been suggested that the school should stay clear of value questions. As I have implied, I consider this to be completely impossible, not only in practice, but also in theory. Not only will a teacher be unable to keep his own views from a class with whom he is associated for a whole year, but a position of values neutrality is itself a value position.²⁰

It appears evident that education must take value positions, yet those positions must be tolerant of opposing positions and they must also be flexible and open to change. Toffler's study clearly demonstrates that educational aims must be continually exhausted and revised by a wide spectrum of personnel.

¹⁹ Alvin Toffler, Future Shock (New York: Random House, 1970), p. 269.

²⁰ William G. Davies, "Values and the Curriculum" (an address to the Fourth International Curriculum Conference, Ontario, Canada, October 14, 1969), p. 9.

W. James Popham and Eva L. Baker discuss the question usually posed by the beginning teacher. The usual approach is to ask, "What shall I do?" The more functional question is, "What do I want my learners to become?"²¹ The first question focuses attention on the teacher instead of the student and on instructional means rather than on the results these means are intended to produce. The authors' insistence on use of the second question stems from a recognition of the need to shift away from merely satisfying the needs of the teacher to satisfying the needs of the students. Use of the first question is referred to as a "means-referenced instructional model" and evaluation of teacher effectiveness within this model can only be by an observer drawing inferences concerning instructional competence. Various research instruments have been designed in recent years purporting to obtain data from classroom observation making teacher evaluation more objective. Nevertheless, study of the means employed tells nothing of the ends resulting. Clearly, if the teacher is employed to promote learning, then evaluation must be in terms of that resultant learning.

A "goal-referenced instructional model" on the other hand measures effectiveness and success in terms of student goals. "What do I want my learners to become?" becomes the starting point for curricular decisions. The teacher must decide what observable behaviors his learners should have at the conclusion of instruction. Popham argues:

Measurable instructional objectives are designed to counteract what is to me the most serious deficit in American

²¹W. James Popham and Eva L. Baker, Systematic Instruction (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970), p. 7.

education today, namely, a preoccupation with process without assessment of consequences. Measurable objectives are designed in part to alleviate that particular difficulty. There are at least three realms in which measurable objectives have considerable potential dividends; in curriculum (what goals are selected); in instruction (how to accomplish these goals); and in evaluation (determining whether objectives of the instructional sequence have been realized).²²

From this perspective, a teacher, a student, or the group involved can be evaluated in terms of having reached or not having reached specified goals. The curriculum itself can be examined as to the appropriateness of the objectives and the means-ends relationship of those activities designed to reach the objectives. Results of this form of evaluation are much more useful than the results of an evaluation of a teacher's behavior in the classroom. Benjamin S. Bloom states:

Most students (perhaps over 90 percent) can master what we have to teach them and it is the task of instruction to find the means which will enable our students to master the subject under consideration. Our basic task is to determine what we mean by mastery of the subject and to search for the methods and materials which will enable the largest proportion of our students to attain such mastery.²³

To the curriculum writer, "what we mean by mastery" would be signified in terms of measurable student objectives. These statements then become the basis for activities associated with education. Textbooks no longer dictate the student's experiences, but rather they

²²W. James Popham, "Practical Ways of Improving Curriculum Via Measurable Objectives," The Bulletin of the National Association of Secondary School Principals, No. 355 (May, 1971), p. 76.

²³Benjamin S. Bloom, "Learning for Mastery," Evaluation Comment (Newsletter) (Los Angeles: U.C.L.A. Center for the Study of Evaluation of Instructional Programs, May, 1968), p. 1.

become subordinate to the design of the curriculum. Educational activities then become the methods by which teachers help learners attain goals. Gagne describes this as follows:

Possibly the most fundamental reason of all for the central importance of defining educational objectives is that such definition makes possible the basic distinction between content and method. It is the defining of objectives that brings an essential clarity into the area of curriculum design and enables both educational planners and researchers to bring their practical knowledge to bear on the matter. As an example of the kind of clarification which results from defining content as "descriptions of the expected capabilities of students," the following may be noted. Once objectives have been defined, there is no step in curriculum design that can legitimately be entitled "selecting content." This is because the capabilities of the learner are directly derivable from the objectives themselves, as when from the objective "adds fractions" one derives the content statement "capability of adding fractions." One can select textbooks, motion pictures, laboratory equipment, even teaches; but one does not select content.²⁴

The "rational animal" has reasons, or goals for nearly everything he does, yet educators persist in forcing students to experience various activities - lectures, discussions, movies, laboratory periods, et cetera - without telling them the reason. Certainly the student would be much more likely to reach the desired learning if the objectives of the activity were known to him. As education is now commonly practiced, the student has to guess how the teacher will test him. "Down with guessing games" demands Deterline. "Students should not have to play guessing games about objectives; students should not have difficulty

²⁴ Robert M. Gagne, "Curriculum Research and the Promotion of Learnings," Perspective of Curriculum Evaluation, ed. by R. Athanel Smith (Chicago: Rand McNally & Co., 1967), pp. 21-22.

discriminating objectives from instructional clarification content, irrelevant content or enrichment and interest only content."²⁵

The Preparation of Objectives

Just as the reasons for a behavioral objective approach to instruction are extremely varied, so too are the views concerning the statement of the objective. A hierarchical structure of educational goals was designed by Benjamin S. Bloom and his associates, however, and this has served as a framework for many writers of objectives.

Bloom writes:

We are of the opinion that although the objectives and test materials and techniques may be specified in an almost unlimited number of ways, the student behaviors involved in these objectives can be represented by a relatively small number of classes.²⁶

Of the cognitive or knowledge domain, Bloom states:

As the taxonomy is now organized, it contains six major classes:

1:00	Knowledge	4:00	Analysis
2:00	Comprehension	5:00	Synthesis ²⁷
3:00	Application	6:00	Evaluation

In a later volume, Krathwohl, Bloom and Masia designated further categories of affective or attitudinal objectives as follows:

²⁵William A. Deterline, "The Secrets We Keep from Students," ed. by Miriam B. Kapfer (Englewood Cliffs, New Jersey: Educational Technology Publications, 1971).

²⁶Benjamin Bloom, ed., Taxonomy of Educational Objectives, The Classification of Educational Goals, Handbook I Cognitive Domain (New York: David McKay Company, Inc., 1964), p. 12.

²⁷Ibid, p. 18.

- 1.0 Receiving
- 2.0 Responding
- 3.0 Valuing
- 4.0 Organization
- 5.0 Characterization by a value or value complex²⁸

Most recent curriculum writers specify a methodology of curriculum preparation within these categories. A third domain, the psychomotor, has been categorized by Elizabeth Jane Simpson, but as yet has not had the effect of the earlier volumes.

Most influential in its effect on the writing of objectives has been a book by Robert Mager entitled Preparing Instructional Objectives. Mager's criterion of an acceptable objective is stated as follows:

Basically, a meaningfully stated objective is one that succeeds in communicating to the reader the writer's instructional intent. It is meaningful to the extent it conveys to others a picture (of what a successful learner will be like) identical to the picture the writer has in mind.²⁹

Further defined, the standard for objectives is that they clearly answer the following questions:

1. Does the statement describe what the learner will be doing when he is demonstrating that he has reached the objective?
2. Does the statement describe the important conditions (givens or restrictions, or both) under which the learner will be expected to demonstrate his competence?
3. Does the statement indicate how the learner will be evaluated? Does it describe at least the lower limit of acceptable performance?³⁰

²⁸David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masia, Taxonomy of Educational Objectives, The Classification of Educational Goals, Handbook II Affective Domain (New York: David McKay Company, Inc., 1964), p. 95.

²⁹Robert F. Mager, Preparing Instructional Objectives (Palo Alto, California: Fearon Publishers, 1962), p. 10.

³⁰Ibid, p. 52.

Numerous writers have reworded this criterion, but in general there is agreement that an objective should contain a measurable student behavior, a context or statement of conditions in which measurement will occur, and an acceptable level of performance. Schwab comments on the redundancy of writers: "I recoil from counting the persons and books whose lives are made possible by continuing restatement of the Tyler rationale or of the character and case for behavioral objectives or of the virtues and vices of John Dewey."³¹ Yet in spite of many steps sideways, the field inches forward.

The following objectives illustrate the existing conflict:

1. To write clear and well-organized reports of social studies projects.³²
2. Ability to analyze, in a particular work of art, the relation of materials and means of production to the "elements" and to the organization.³³
3. Given a human skeleton, the student must be able to correctly identify by labeling at least 40 of the bones; there will be no penalty for guessing (list of bones inserted here).³⁴
4. Deliberately examine a variety of viewpoints on controversial issues with a view to forming opinions about them.³⁵

³¹Joseph J. Schwab, The Practical: A Language for Curriculum (Washington, D.C.: National Education Association Center for Instruction, 1970), p. 20.

³²Tyler, Basic Principles, p. 30.

³³Bloom, Handbook I, p. 148.

³⁴Mager, Instructional Objectives, p. 49.

³⁵Krathwohl, Handbook II, p. 181.

5. To improve the math skills of fourth-grade students in adding unlike fractions, as determined by Gores Test of fractions, so that out of 25 additional problems, 80% of the students get at least 21 out of 25 answers correct.³⁶
6. Students will exhibit positive attitudes toward "school" and "teacher" by selecting, from a list of positive and negative adjectives, adjectives having positive connotations as descriptive of these dimensions.³⁷

The writers of each of the preceding statements refer to them as behavioral objectives. Obviously there is a disagreement extending from the general goals such as numbers one and two, to the specific ends of Mager (number three) or McAshan (number five) who requires two evaluation criterion phrases - one for the individual learner and one for the class. There is disagreement as to proper wording as well as to degree of measurability. Nevertheless, these writers have certain definite areas of agreement: (1) that learning objectives should be written in terms of student behavior, and (2) that they be worded in such a way that they may be easily measured. Mager's requirement, that an objective convey to the reader the precise instructional intent of the writer, is still the agreed upon position. Ideally, the context of the evaluation, the expected student behavior, and the level of performance considered acceptable should be included.

This is not to claim that everyone involved with curriculum supports this position. In an analysis of the behavioral objective approach, Elliot Eisner states:

³⁶ H.H. McAshan, Writing Behavioral Objectives (New York: Harper & Row, Publishers, 1970), p. 36.

³⁷ Attitude Toward School Gr. K-12 (Los Angeles: Instructional Objectives Exchange, 1970), p. 17.

At first view this seems to be a reasonable way to proceed with curriculum construction: one should know where he is headed before embarking on a trip. Yet, while the procedure of first identifying objectives before proceeding to identify activities is logically defensible, it is not necessarily the most psychologically efficient way to proceed. One can, and teachers often do, identify activities that seem useful, appropriate or rich in educational opportunities and from a consideration of what can be done in class identify the objectives or possible consequences of using these activities.³⁸

Eisner argues in support of what he calls "expressive objectives."

Expressive objectives differ considerably from instructional objectives. An expressive objectives does not specify the behavior the student is to acquire after having engaged in one or more learning activities. An expressive objective describes our educational encounter: it identifies a situation in which children are to work, a problem with which they are to cope, a task they are to engage in - but it does not specify what from the encounter, situation, problem, or task they are to learn. An expressive objective provides both the teacher and the student with an invitation to explore, defer or focus on issues that are of peculiar interest or import to the inquirer. An expressive objective is evocative rather than prescriptive.³⁹

MacDonald argues that behavioral objectives are trivial and superficial, their determination is arbitrary and inappropriate, as a guide to teaching they are incomplete and inadequate, and the entire approach is not helpful to the teacher. He further attacks what he refers to as questionable assumptions about the nature of man, learning

³⁸ Elliot W. Eisner, "Educational Objectives: Help or Hindrance" (Paper presented at the 50th Annual Meeting of the American Educational Research Association, Chicago, February, 1966), p. 5.

³⁹ Elliot W. Eisner, "Instructional and Expressive Educational Objectives: Their Formulation and Use in Curriculum," p. 15. (Mimeographed)

activity, and knowledge, basic to the objective approach.⁴⁰

J. Myron Atkin feels that "certain types of innovation, highly desirable ones, are hampered and frustrated by early demands for behavioral statements of objectives." He continues:

Further: early articulation of behavioral objectives by the curriculum developer inevitably tends to limit the range of his exploration. He becomes committed to designing programs that achieve these goals. Thus, if specific objectives in behavioral terms are identified early, there tends to be a limiting element built into the new curriculum. The innovator is less alert to potentially productive tangents.⁴¹

Arguments too numerous to mention have been offered in opposition to a behavioral objective approach. Teachers are threatened by evaluation and students by the threat of being programmed. Many of these anxieties concerning the objectives approach are removed in a paper entitled "Probing the Validity of Arguments Against Behavioral Objectives" by W. James Popham in which the author refutes a number of opposing arguments.⁴² A review of the relevant literature, however, points out the need for empirical data since nearly all arguments for or against a behavioral objective approach are based primarily on deductive reasoning.⁴³

⁴⁰James B. MacDonald and Bernice J. Wolfson, "A Case Against Behavioral Objectives" (Paper presented to the Association for Supervision and Curriculum Development, Chicago, 1969). pp. 1-5.

⁴¹J. Myron Atkin, "Behavioral Objectives in Curriculum Design: A Cautionary Note" (Paper presented at the American Educational Research Association Meeting, Chicago, February 9, 1968).

⁴²W. James Popham, "Probing the Validity of Arguments Against Behavioral Goals" (A Symposium Presentation at the American Educational Research Association Meeting, Chicago, February 7-10, 1968).

⁴³W. James Popham, ed., Criterion-Referenced Measurement: An Introduction (Englewood Cliffs, New Jersey: Educational Technology Publications, 1971).

The Use of Objectives

Various strategies have been devised which are effective within the behavioral objective approach to education. The whole notion of teaching for mastery as espoused by Bloom certainly presupposes a collection of objectives. Popham's recent edition offers a collection of writings extolling criterion-referenced measurement, which requires pre-stated behavioral objectives.⁴⁴ This view holds that an absolute criterion of performance must first be stated, and measurement instruments should be devised not merely to discriminate between degrees of student achievement relative to others, but rather to compare an individual's performance to a set standard criteria. In this scheme, instruction is a process of proceeding from one milestone to the next.

Kibler, Parker and Miles state that "the goal of instruction is to maximize the efficiency with which all students achieve specified objectives," and they offer the following as a general model of instruction:

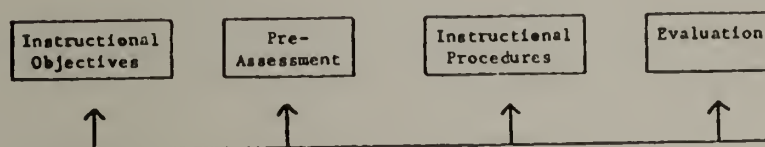


Figure 2 - A Feedback Loop Model of an Instructional Sequence
 Source: Robert J. Kibler, Larry L. Barker and David T. Miles, Behavioral Objectives and Instruction (Boston: Allyn and Bacon, Inc. 1970), p. 3.

⁴⁴ Ibid.

Muriel Berhard suggests teaching strategies which complement the behavioral objective approach and offers the following ten step plan for starting:

- Step 1 Select a Content Area
- Step 2 Develop Skill in Utilizing the Cognitive Processes
- Step 3 Create a Responsive Environment
- Step 4 Construct a Brief Learning Unit
- Step 5 Prepare Your Pupils for the Pre-Test
- Step 6 Pre-Test
- Step 7 Introduce the Learning Unit
- Step 8 Post-Test
- Step 9 Provide Pupils with Knowledge of Results
- Step 10 Continue the Process of Unit Construction

She sees the Pre-test step as a means to group students in terms of their needs. The Learning Unit might then be handled differently within each group such that the groups complete the unit in different periods of time.⁴⁵

Tyler accents the fact that it is what the child does that he learns, not what the teacher does. In this way it may be seen that learning activities must be carefully designed to bring the students to the goal or objective. Tyler further suggests the following five general principles to be used in the selection of learning experiences:

The first of these is that for a given objective to be attained, a student must have experiences that give him an opportunity to practice the kind of behavior implied by the objective.

A second general principle is that the learning experiences must be such that the student obtains satisfactions from carrying on the kind of behavior implied by the objectives.

⁴⁵Muriel Gerhard, Effective Teaching Strategies with the Behavioral Outcomes Approach (West Nyack, New York: Parker Publishing Company, Inc., 1971), pp. 239-242.

A third general principle with regards to learning experiences is that the reactions desired in the experience are within the range of possibility for the students involved.

A fourth general principle is that there are many particular experiences that can be used to attain the same general educational objective.

A fifth general principle is that the same learning experiences will usually bring about several outcomes.⁴⁶

In selecting the activity or activities to bring learners to a particular goal it is helpful to consult the research regarding the most efficient types of activities in relation to certain classes of objectives. William Allen offers the following table as a guide in selecting learning activities.

⁴⁶Tyler, Basic Principles, pp. 41-44.

TABLE 2
RATINGS OF THE EFFECTIVENESS OF VARIOUS TYPES OF MEDIA IN MEETING CLASSES OF OBJECTIVES*

MEDIA	Types of Learning Objectives					
	Learning factual information	Learning visual (audio) identifications	Learning principles, concepts, & rules	Learning procedures	Performing skilled perceptual motor acts	Developing desirable attitudes, opinions, and motivations
Still pictures	Medium	HIGH	Medium	Medium	low	low
Motion pictures	Medium	HIGH	HIGH	HIGH	Medium	Medium
Television	Medium	Medium	HIGH	Medium	low	Medium
Audio recordings	Medium	HIGH (audio)	low	Medium	low	Medium
Programmed instruction	HIGH	Medium	HIGH	HIGH	low	Medium
Printed textbooks	Medium	low	Medium	Medium	low	Medium
Oral presentation	Medium	low	Medium	Medium	low	Medium

*William Allen, "Audiovisual Instruction: The State of the Art", in The Schools and the Challenge of Innovation, (New York: McGraw-Hill Book Co., 1969), p. 222.

An opposingly extreme position on this selection of activities is taken by Mager who states, "If you give each learner a copy of your objectives, you may not have to do much else."⁴⁷ Mager would have the students design their own learning activities, whereas Allen would help teachers make choices based on knowledge of research findings.

The field of curriculum is certainly divided in opinion with many authorities maintaining positions defensible only by "theoretical justification" and not by empirical data. Nevertheless, some essentials are widely agreed upon, and these should be distinguishable. Broad educational goals, derived from a thoroughly considered philosophy of education, should yield more specific student behavioral objectives. These objectives then should be associated with alternative learning activities offering the student more than one route to achieve the objective. Student evaluation must therefore be based on attainment of specified objectives - a pre-determined performance criteria - rather than an evaluation of relative position among peers. It may be seen that this design for education readily lends itself to a systems design.

⁴⁷Mager, Instructional Objectives, p. 53.

Planning Programming Budgeting Systems

Desmond Cook, who distinguishes between Instructional Systems, Operations Research, Project Management Systems, Management Information Systems, and Planning Programming Budgeting Systems, refers to the latter as one of the newest and most controversial applications of the systems approach to education.⁴⁸ Developed and utilized by the military, PPBS serves to assist decision-makers by providing necessary information in an organized and practical manner. It has been defined as "an integrated system that provides school executives with better information for planning educational programs and for making choices among the alternate ways in which funds can be allocated to achieve the school district's established objectives."⁴⁹ Hartley refers to PPBS as "a comprehensive planning process that includes a program budget as its major component."⁵⁰

It is well to note that PPBS is distinguished from "Program budgeting" even though a program budget is a key component. Program budgeting refers to a financial accounting system in which costs are related to objectives rather than to traditional categories such as

⁴⁸ Desmond Cook, Program Evaluation and Review Technique, Applications in Education (Washington: U.S. Government Printing Office, 1966), p. 7.

⁴⁹ Joseph Perkins, "PPBS and MIS" Their Role in Managing Education," (Paper presented at the National School Finance Conference at New Orleans, La., March, 1969). p. 2.

⁵⁰ Harry Hartley, Educational Planning Programming Budgeting: A Systems Approach (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1968), p. 83.

personnel, services, travel, and other similar items.⁵¹ Such fiduciary budgets, which are now used in most schools, are primarily incremental in that they repeat last year's budget with slight increases, usually due to cost-of-living change. The validity of such a budget is entirely based on its comparison with previous budgets, and it may be easily and indiscriminately reduced. Edward L. Katzenbach contrasts this form of budgeting to a program budget which creates a self-fulfilling prophecy in a long-term plan.⁵² Output becomes the unit of the budget.

However, the program budget, although an improved budgeting procedure, is still merely a method of budgeting. Knezevich points out, "Preoccupation with the cost dimension obscures the effectiveness dimension as well as analysis based on objectives, resources, and generating alternatives to resource utilization."⁵³ Money must not be the criterion of education, as the experiences of the Thirties demonstrated. Primary consideration must be elsewhere, and a Planning Programming Budgeting System may ensure just that.

⁵¹Cook, Program Evaluation, p. 8.

⁵²Edward L. Katzenbach, "Planning Programming Budgeting Systems: PPBS & Education," New England School Development Council (Cambridge, Mass., March, 1969), pp. 2-4.

⁵³Ibid, p. 7.

A Means of Management

PPBS is a system of planning. Initial attention must first be given to the establishment of goals or objectives. The following chart gives the basic sequence of events:⁵⁴

- | | | |
|-------------|---|--|
| Planning | - | Establishing goals |
| Programming | - | Combining activities and events to produce distinguishable results |
| Budgeting | - | Allocating resources |

PPBS becomes a system when the parts are connected for purposes of analysis.

Planning is the key component of any PPBS design. It is here that decisions are made determining the future objectives.⁵⁵ Those objectives are the desired quantifiable goals within a time framework. They should:

- Relate to a goal
- Be measurable
- State the method of measurement
- Indicate the evaluative criteria
- State the time period for achievement⁵⁶

Programming refers to that phase in which the planned goals are related to specified alternative programs. Inputs are related to outputs by alternative lines of action. It entails a review of objectives

⁵⁴Ibid, p. 4.

⁵⁵The Western New York School Development Council, "Development of an Operational Model for the Application of PPBS in Local School Districts," Program Budgeting Note 4 (Washington, D.C.: Office of Education, October, 1969), p. 3.

⁵⁶Perkins, PPBS and MIS, p. 5.

relating them to alternative means, and encourages revision of procedures as needed. It must be a multiyear process.⁵⁷

Budgeting within PPBS relates programs to resources that are transformed into budget dollars over several years. Here dollars are expressed in relation to outputs or program objectives.⁵⁸ Alternative activities are assigned dollar values, permitting economically sound decision-making, since goals and programs have been related to expenses.

Systems analysis is used to examine the various alternative courses of action in terms of utility and cost. Options are clarified, distinguishing their probable consequences. This analysis may then generate new objectives and alternative programs and suggest the most appropriate course of action.⁵⁹

A Means of Change

Chin and Benne distinguish between three types of strategies for change: (1) Rational - Empirical, (2) Normative - Re-educational, and (3) Power - Coercive. Whereas (3) refers to conflicts, negotiations, and judicial decisions, and (2) refers to behavioral shaping, sensitivity T-groups, psychological counseling, and organizational analysis,

⁵⁷Hartley, Educational Planning, p. 84.

⁵⁸Ibid, p. 85.

⁵⁹Ibid, p. 84.

(1) may be seen to be most directly associated with the philosophical commitments inherent in a PPBS approach. The rational - empirical strategies include the use of basic social research, scientific management theory, research and development centers, operations research and systems analysis. Seen from the perspective of the change theorist, the use of systems analysis or management by a systems approach can in fact be a strategy for the implementation of deliberate and planned change.⁶⁰

The rational - empirical approach assumes that men are rational and will follow their rational self-interest once this is revealed to them. Education is relied upon to enlighten the minds of men by diffusing the results of research. Mathematicians, engineers, more recently behavioral scientists and large segments of the American population find this systematic approach to be most appealing. Further, the emergence of federally supported projects in education, such as Title III projects and the creation of Research and Development Centers, have fostered this perspective in confronting problems of educational change. Linking research and development efforts with diffusion and innovation efforts has compelled people to address the question of results through a systematic analysis. This change strategy usually involves a well-research innovation and the question deals with its application in a

⁶⁰ Robert Chin and Kenneth D. Benne, "General Strategies for Effecting Changes in Human Systems," The Planning of Change, ed. Warren G. Bennis, Kenneth D. Benne and Robert Chin (New York: Holt, Rinehart and Winston, Inc., 1961), pp. 58-59.

specific setting. What the program can accomplish, and whether it will bring about a desired result are frequently the primary concerns.⁶¹

Chin and Benne also refer to the work of Clark and Guba who have formulated very specific processes necessary for change in educational practice. For them, these processes are: (1) development, including invention and design, (2) diffusion, including dissemination and demonstration, and (3) adoption, including trial, installation, and institutionalization. Research and development are seen as the obvious route to change in educational practice, through a systematically organized process of change.⁶²

Marks, Stoops and Stoops relate a systems approach quite similar to PPBS designs to curriculum development. In attempting to institute curriculum change, the authors state that the supervisor might employ a systems analysis cycle. That cycle is represented as follows:

⁶¹Ibid, pp. 34-40.

⁶²Ibid, pp. 40-41.

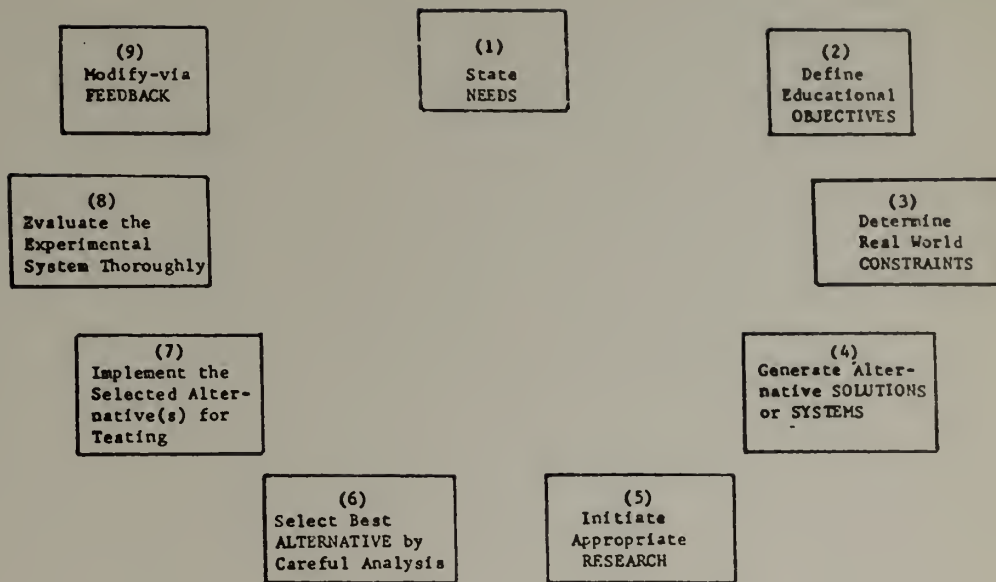


Figure 3 - A Systems Analysis Cycle Applied to Curriculum Development
 Source: James Marks, Emery Stoops, and Joyce King Stoops, Handbook of Educational Supervision, (Boston: Allyn and Bacon, Inc., 1971), p. 479.

This cycle then might be seen by the change theorist as a means of instituting change. It might be seen by the curriculum specialist as an organized, systematized plan for developing curriculum. It might be seen by the school administrator as a means of planning and managing a complex program in an orderly fashion. It might further be seen by the advocate of a Planning Programming Budgeting System as an amplification or a rewording of the PPBS design of relating specified objectives to the money spent. Goals must be established, alternative means of reaching those goals must be determined, and the cost for alternatives must be known to provide data necessary for proper evaluation and decision-making.

To institute a Planning Programming Budgeting System, Durstine and Howell claim that an administrator may begin with any of the component parts. While their project in Milford, New Hampshire, instituted PPBS by starting with the budget stage, they state:

An administrator could begin by questioning what his organization's goals and objectives are and then by establishing programs which will lead to the attainment of those objectives. Once the programs have been determined their financial implications can be assessed.⁶³

If it is to be held that schools are not for taxpayers or politicians who may hold finances at prime importance, and that schools are not for teachers or administrators who may hold programs of study as the most important, but rather that schools are for children, then the primary issues to be faced should be, as in the systems analysis cycle, the needs of the children to be taught, and the results or objectives that the school's programs are to seek.

⁶³Richard Durstine and Robert A. Howell, Toward PPBS: Program Budgeting in a Small School District (New England School Development Council, 1970), p. 8.

C H A P T E R I I I

AN HISTORICAL DESCRIPTION OF THE DEVELOPMENT AND IMPLEMENTATION OF THE PERFORMANCE OBJECTIVE PROGRAM

Development

As early as 1962, the Amherst-Pelham Regional School Committee had signified its support of the concept of curriculum development by allocating funds for teachers' salaries during summer vacation, for research and development work. In 1963, with the hiring of the present superintendent of schools, much greater emphasis was placed on the preparation of curriculum and instructional materials. This was clearly demonstrated in the first of several papers written by the superintendent and referred to as a teachers' guide.¹ Dated September 1963 and entitled "Change Is Your Business," this paper stated that a curriculum development project would be instituted whose basic function would be to formulate, publish, and constantly revise courses of study and method guides for every subject matter area and every grade level. It was made clear that all staff members would participate in carefully analyzing and defining specific educational objectives, and that the implementation of any change in the system would be to improve progress toward stated objectives.

¹Ronald J. Fitzgerald, "Change Is Your Business, A Teachers Guide for Curriculum Building," Amherst, Mass., 1962.

On March 25, 1964, the marking policies were altered, and included in that policy statement was the requirement that course objectives be specific and adjusted to suit the different ability levels within the class.² Marks should reflect achievement of specific assigned objectives. The district was moving towards some form of homogeneous grouping of students, and later in that school year, three administrators traveled to Florida to study the ungraded program in Melbourn High School. The ungraded system in this school, utilizing five achievement level phases, greatly impressed the Amherst group, and shortly thereafter the Amherst system designed a program modeled closely after it. In May of 1964, the superintendent had prepared a proposal for establishing an ungraded program in Amherst Regional High School, and a year of study and discussion followed.³ Curriculum revision committees on the various levels analyzed, debated, and amended the proposal. In March of 1965, the revised proposal was presented to the School Committee who voted to implement an ungraded program in the High School and the Junior High School, to begin in September, 1965.⁴ The major purpose of this was to individualize the instructional process, varying the time a child might spend on some activity. Five phases and a weighted marking system were to be established. Evaluation of the program was to determine if

²Amherst-Pelham Regional School District, Minutes of Meetings of the Regional School Committee, meeting of March 25, 1964. (Typewritten)

³Ronald J. Fitzgerald, "Proposal for Establishing an Ungraded Program in Amherst Regional High School," Amherst, Mass., May, 1964.

⁴School Committee Notes, March 25, 1964.

measurable and significant improvement occurred in student achievement or attitude due to the changes. This was a direct implementation of Teachers' Guide #2, published in September, 1964, and entitled "Objectives and Philosophy."⁵ This paper by the superintendent, revised and accepted by both the Teachers' Association and the school committee, strongly dedicated the Amherst-Pelham School District to the individualizing of instruction. Further, it mandated that all departments, curriculum committees, and individual teachers produce courses of study for all aspects of the instructional program, and that these include specific objectives, course activities, reference materials, and audio-visual materials.

On September 20, 1965, Teachers' Guide #3, entitled "Efficiency in our Schools" was distributed to the staff.⁶ This pointed out that detailed prior planning of instructional presentations by teachers was necessary, and that cultural alternatives and value judgments just be selected. All curriculum groups were asked to prepare courses of study which define the objectives toward which each instructional program is directed and provide detailed plans for reaching these objectives. Since no one textbook was tailored to the instructional needs of this specific community, specific objectives had to be defined, and to do this, all staff members were required to read the booklet entitled Preparing

⁵Ronald J. Fitzgerald, "Objectives and Philosophy, Teachers Guide #2, Amherst, Mass., 1964. (Mimeographed)

⁶Ronald J. Fitzgerald, "Efficiency in Our Schools, Teachers Guide #3, Amherst, Mass., 1965. (Mimeographed)

Objectives for Programmed Instruction by Robert Mager.⁷ Furthermore, each staff member was given the responsibility for preparing the annual budget request for that part of the program for which he was responsible, and it was advised that these specific objectives be utilized in the preparation of that budget request.

In September of 1965, the ungraded program was implemented, and as that school year progressed, ESEA Title III funds were sought to support this project. The program was in fact funded with a \$200,000 grant, over a three-year period, which, among other things, permitted employment of one-third of the teaching staff for work-study coordination and curriculum development during the summers of 1967, 1968, and 1969. It was emphasized that the construction of objectives was a major task of the summer projects.⁸

By November, 1966, the teaching staff as well as the administration had come to the realization that different programs were needed for students in different phase levels, and even within the same phase level. At this time, in an interim report on the program by the superintendent, it was stated that it had become very obvious that the greatest single task in this program was the production of very carefully defined courses of study for different achievement levels. It had been found that to be useful, these courses of study must establish objectives that were truly appropriate for the different levels

⁷Robert F. Mager, Preparing Instructional Objectives (Palo Alto, California: Fearon Publishers, 1962).

⁸Ronald J. Fitzgerald, "An Ungraded High School," Amherst, Mass., September, 1969, pp. 2-3. (Mimeographed)

and that could be measured in terms of pupil performance, behavior or attitude.⁹

This realization was emphasized in Teachers' Guide #4, published in September, 1967, and entitled "Of Pupils and Teachers and Such."¹⁰ Here the major goal of the system was identified as the adjustment of school experiences and academic work to individual children regardless of their grade level. It was recognized that the establishment of a flexible or continuous progress curriculum is quite difficult but that it offers the best opportunity to work toward positive self-image and maximum utilization of potential. To permit the curriculum to be flexible, ungraded, and continuous progress, much prior planning, developing of materials, and establishing specific instructional objectives was seen as necessary.

Detailed evaluation reports on the ungraded program was prepared by a team of outside consultants. Little use of independent study, and high level of student competition were noted. Test outs were not used enough. Motivational issues were still present. A greater variety of teaching methods were seen as necessary to attend to individualized learning. The value of student and parent input to the curriculum was identified and it was suggested that efforts be made to increase this. The R&D work was praised as largely responsible for the changes that occurred in the classrooms. It was suggested

⁹Ronald J. Fitzgerald, "Summary of Evaluation Report on Ungraded Secondary Schools," Amherst, Mass., April 14, 1969. (Mimeographed)

¹⁰Ronald J. Fitzgerald, "Of Pupils and Teachers and Such, Teachers Guide #4, Amherst, Mass., 1967. (Mimeographed)

that departments develop a bank of evaluation techniques, and that the school's data processing center be used to assist in organizing this material.¹¹

At this same time, the school system had adopted a resource center concept for the organization of many of its learning materials. The development of these centers was seen as a means to increase facilities for the use of programmed materials and similar aids, to provide a place for student initiated experiences geared to individual interest, and to coordinate various learning materials with the regular school curriculum. The introduction of these centers clearly facilitated the independent study program and increased student option.¹²

In May, 1968, the superintendent presented a proposal to introduce differentiated staffing into the school system.¹³ Citing comments by Dwight Allen and J. Lloyd Trump, the superintendent argued that the traditional staffing design was inefficient and that a differentiation of the tasks would facilitate the individualizing of instruction. This proposal was adopted by the local school committee, the Teachers' Association and the State Board of Education and on June 10, 1968, the Amherst-Pelham Regional School Committee

¹¹Ralph R. Pippert, Jules M. Zimmer, and Ronald H. Fredrickson, "Evaluation Report on Ungraded Secondary Schools," Amherst, Mass., January 1968, pp. 445-455. (Mimeographed)

¹²Ibid.

¹³Ronald J. Fitzgerald and Donald B. Frizzle, "A Proposal on Differentiated Staffing," Amherst, Mass., May 1968. (Mimeographed)

approved a design for a differentiated arrangement of the High School Social Studies Department.¹⁴ Furthermore, in March of 1969, this Social Studies plan was praised and supported, and the Junior High Social Studies Department also received approval of a differentiated staff design.¹⁵

On December 9, 1968, a paper entitled "A System Approach to Individualizing Instruction" was distributed by the superintendent, and this demonstrated the extent to which the district's thought on individualized instruction had evolved.¹⁶ A detailed explanation of the meaning of individualization was given, emphasizing that it does not mean that isolating individuals into independent study was the ideal, but rather that provision should be made for pupils to learn various things in various ways. It was made quite explicit that an ungraded or continuous progress curriculum could only be attained, as demonstrated by experience in this district, through the establishment of measurable or observable performance objectives for students. Only through their use could teachers (1) maintain a valid record-keeping system, recording student attainment, (2) base guidance recommendations on data gathered from tests, (3) permit a variation

¹⁴Amherst-Pelham Regional School District, Minutes of Meetings of the Regional School Committee, meeting of June 10, 1968. (Typewritten)

¹⁵Ibid.

¹⁶Ronald J. Fitzgerald, "A System Approach to Individualizing Instruction Programs," Amherst, Mass., December 9, 1968. (Mimeographed)

in the material to be studied by different students, (4) utilize learning experiences which occur outside of the school, (5) vary the time each pupil may spend on an activity. The approach being advocated was designed to replace the "telling" model of teaching with the library-seminar method of learning, and to tailor the instructional experiences to the needs of the individual child.

In March of 1969, the High School Student Council formed a Curriculum Committee to help provide teachers with student reactions to high school programs.¹⁷ The school administration offered to publish the students' comments each month.

In April, a summary of the final evaluation of the ungraded program was released, along with the recommendations of the evaluation team. Among their report was notice of the following:

1. There appeared to be a lack of a relationship between teaching methods and objectives. Most instruction was by group and not sufficiently individualized.
2. Courses seem to have been developed in isolation from each other.
3. Students were not given choices.
4. There were no viable alternative textbooks or references.
5. Tests were not relative to objectives.
6. The relationship between objectives, phases, and methods were not sufficiently spelled out.
7. No provision was made for self-appraisal.

¹⁷Amherst-Pelham Regional School District, Minutes of Meetings of the Regional School Committee, meeting of March 5, 1969. (Typewritten)

8. Learners were too often passive in a teacher-oriented class.¹⁸

During the summer of 1969, a position guide describing the role of the classroom teacher in the Amherst-Pelham Regional School District, and a memorandum stating the curriculum building tasks for the 1969-1970 school year were prepared. In the description of the position of classroom teacher, listed among the "key duties" was that the teacher will a) plan relevant and specific performance objectives for students, b) define these objectives to the students, c) plan and implement learning activities designed to allow individual students to accomplish defined objectives in a manner commensurate with their individual abilities and interests, d) evaluate student accomplishment of objectives and adjust individual learning activities accordingly, and e) help students to develop individual learning objectives and to accomplish these objectives.¹⁹ In the second release mentioned, the curriculum tasks for the 1969-1970 school year were identified as the implementation of resource centers, and the development of alternative routes for pupils to reach performance goals.²⁰

After having accented a philosophy of participatory government within the school system, and describing a long-term goal of team

¹⁸Fitzgerald, Summary of Evaluation Report, pp. 9-10.

¹⁹Amherst-Pelham Regional Schools, "Classroom Teacher, Position Guide," Amherst, Mass., August 1969. (Mimeographed)

²⁰Ronald J. Fitzgerald, "Curriculum Tasks for the 1969-1970 School Year - Memo to the Staff," Amherst, Mass., September 1969. (Mimeographed)

management by teachers, a paper entitled "Looking Ahead to 1970-1971: Accountability in Our Schools" was distributed by the Superintendent.²¹ In this paper it was argued that the public does have a right to know what we are attempting to teach to whom and why, what instructional approaches are being used and why, and to what degree we are succeeding. Having worked hard on programs of individualization, ungradedness, continuous progress, student involvement in the directing of learning, staffing alternatives, and multi-media resources, and humanization of the educational process, it was felt that advances had to be supported and continued. To do this it was proposed that opportunities be increased for local citizens and pupils to review and influence stated objectives and that curriculum guides be made available to all so that knowledge of the work done could be easily reached. It was made clear that all teachers should work toward designing more than one path to each student performance objective, and that standardized tests or locally designed tests be used to measure the results of these programs.

In August of 1970, in a memorandum to principals, several books concerning the preparation and use of performance objectives were suggested for purchase for professional libraries. At this time, in negotiations, the Superintendent sought membership of all teachers on some curriculum committee. Each department was to be responsible for the submission of an annual report which was to include the degree

²¹Ronald J. Fitzgerald, "Looking Ahead to 1970-1971 - Accountability in Our Schools," Amherst, Mass., May 19, 1970. (Mimeographed)

to which students were achieving previously defined instructional objectives.²²

Also during the summer of 1969, several printed sheets were produced to assist teachers in implementing the individualized program. Teacher Guidesheet #1, entitled "Hints for Individualized Learning Programs" attempted to point out that learning was increased when students were actively involved and when students were given opportunities to direct their own studies. Independent study was distinguished from individualized instruction, demonstrating that individualization does not require constant use of independent study and that readiness for independent study varies. Affective objectives were emphasized, and the development of files of objectives and alternative resources for accomplishing those objectives were seen as basic to a process of individualizing instruction. A conclusion from the system's experiences was that teaching is the management of learning. Additionally, several procedures which support individualization were suggested.²³

Teacher Guidesheet #2 entitled "Performance Objective Defined by Teacher and/or Student" presented a sample performance objective with a description of its component parts, a corresponding test

²²Memorandum to Principals from Ronald J. Fitzgerald, Amherst, Mass., August 1969.

²³Superintendent's Office, Region Schools of Amherst, Pelham, Leverett, and Shutesbury, Mass., "Hints for Individualized Learning Programs, Teacher Guidesheet #1," Amherst, Mass., August, 1970. (Mimeographed)

item, a brief taxonomic analysis, and some suggestions for the teacher as to how to manage such a class. It was suggested here that index cards be used for objectives and associated resources.²⁴

Also produced was a "Staff Orientation Folder on Ungraded or Individualized Instruction and Teacher Responsibilities." In it, a philosophical rationale for this approach was given, and it was clearly described to teachers that they must define exact performance objectives so that different ways might be designed to reach the same goal and so that objective measurement of student performance might be made and recorded.²⁵

At this time, the Massachusetts Board of Education published a position paper entitled "The Results Approach to Education and Educational Imperatives" which was introduced as a step toward fulfilling their directive from the General Court to develop a Master Plan for public education in the years ahead. The main concerns of the Board were identified as equal educational opportunity, curriculum development, establishment of minimum standards, student involvement, occupational and special education, teacher certification, expansion of Regional Education Centers, and regulations for the operation of public schools.

To address these issues, and to introduce necessary change, the

²⁴Superintendent's Office, Region Schools of Amherst, Pelham, Leverett, and Shutesbury, Mass., "Performance Objective Defined by Teacher and/or Student, Teacher Guidesheet #2, Amherst, Mass., August, 1970.

²⁵Superintendent's Office, Region Schools of Amherst, Pelham, Leverett, and Shutesbury, Mass., "Staff Orientation Folder on Ungraded or Individualized Instruction and Teacher Responsibilities," Amherst, Mass., September, 1970. (Mimeographed)

Board of Education mandated a results oriented approach to education. It was stated that the concept of management by results is essential, and that the effective manager focuses on the results to be achieved and judges activities in this light. It was further stated that in the results approach to education, the top priority project must be to define the educational results to be sought and to provide ways of measuring the accomplishments of school systems and schools in terms of student outputs in all dimensions of educational quality. It was clearly required that this be done. Measurement of student success in terms of pupil, program and societal objectives was given as an educational imperative.²⁶

As part of this design the Commissioner of Education had already assembled a task force to develop a formal statement of educational goals. These people were further assigned the task of designing a plan for assessing the school system's attainment of those goals. Referred to as a policy statement providing priorities to the Commissioner and the Department of Education, this document encouraged all school committees to establish their own lists of educational imperatives and to request programs and progress from their superintendents.²⁷

Spurred on by this mandate for a results-oriented approach through

²⁶"The Results Approach to Education and Educational Imperatives," Boston, Massachusetts Board of Education, 1970.

²⁷"Educational Goals for Massachusetts," Boston, Massachusetts Board of Education, 1971.

the use of performance objectives, so similar to the Amherst program, the Superintendent determined to seek Title III funding for the curriculum development. All professional staff members were requested to submit any idea or suggestions for such a Title III proposal, and several papers from teachers and administrators were received. After analyzing the various suggestions, the Superintendent incorporated as many as he could into the design of a program which was really an extension or continuation of the ungraded program of 1965. On September 29, 1970, the superintendent submitted a "Letter of Intent to Submit Innovative Program Proposal."

As described in the letter of intent, the program was called "A System Approach to Individualizing Instructional Programs," and was designed to tailor instruction to the needs of individual children through a systems approach, consisting of an accountability program and a planning - programming - budgeting system. An Accountability Team headed by a doctoral intern or released teacher, a Program Budgeting and Change Agent Team headed by a doctoral intern or released teacher, a Humanistic Education Team headed by a doctoral intern or released teacher, and a Reading Team headed by the district's Reading Supervisor, were proposed as the framework of the project staff. The defining of performance objectives, the designing of learning activities and the development of test items - projects pursued by the teachers for several years - were now to be expanded to include parents, local employers, and students. Curriculum was also to be developed in the Humanistic area, accenting self-awareness, self-confidence, and human interaction skills. The program was described as exemplary,

possibly to be used for state-wide implementation, and designed to apply management concepts to coordinate programs and eliminate fragmentation. The budget estimated request was for \$81,200.²⁸

Questionnaires were distributed to parents of students in grades K - 12 on January 6, 1971, to document the interest of local parents to help teachers design curriculum objectives. Of the six hundred questionnaires returned, support for parental participation in planning the learning goals for the system was shown by a ratio of 2 to 1 in favor. By a ratio of 3 to 1, parents endorsed the idea of planning affective goals as well as cognitive goals. Also, 187 parents signified that they would be willing to spend time defining and evaluating learning goals during the 1971-1972 school year. The parent advisory councils of each of the schools in the district were also included in the planning of the program with the anticipation that they would work with their building principals, curriculum committees, and with individual teachers to decide what to teach and how to evaluate and report on the degree to which defined objectives were accomplished.

Rough drafts of the project proposal were prepared, and distributed, and discussion and modification took place. On February 10, 1971, the Operational Proposal Application was submitted to the Department of Education. The general purpose of the project was to utilize performance objectives, an accountability program and program budgeting

²⁸Ronald J. Fitzgerald, "Letter of Intent to Submit Innovative Program Proposal," Amherst, Mass., September 29, 1971. (Mimeographed)

to create a curriculum building process that would offer maximum support to relevancy of instruction for individual students, community involvement, efficient use of resources, and adaptability of school operations to a changing environment. At the request of the Title III staff, the personnel structure was also changed from what it had been in the letter of intent. Rather than having several part-time team leaders, the funding agency preferred one full-time administrator. Consequently, an Assistant Project Director replaced the team leaders - and this position was to aid the Superintendent of Schools who was to direct the project. A 4/5 time evaluation intern, seven secretaries and four local citizens on an evaluation council composed the rest of the project staff. In general, the project was designed to teach every secondary student, every staff member and every interested parent to write acceptable learning objectives. It was further designed to develop input opportunities for students and parents to all curriculum programs and to develop budgeting and reporting procedures directly related to defined learning objectives. (A more specific statement of the program objectives may be found in Chapter I). This was to be accomplished through locally designed training programs, through the establishment of objective and activity banks in all classrooms, through wide-based input to all curriculum committees, and through the hiring of temporary personnel to get the system established. It was argued that the typists were especially critical during the initial development of the learning banks. The budget request accompanying this proposal was for \$75,618, and it was pointed

out that the local districts would be contributing \$26,103 to related research and development activities.²⁹

Subsequent to submission of this proposal, the Superintendent and two other district administrators went to the Department of Education to discuss the project. Title III personnel specified no disagreements with the objectives and planned activities of the program, but they did question, again, the staffing arrangements. Specifically, they did not agree with the need for seven secretaries, and after some heated exchanges, both oral and in writing, the final funding of the program was for two rather than seven secretaries. The Superintendent argued that Title III was funding the beaureaucracy but would not fund the workers, and that teachers greatly needed clerical assistance to develop the learning banks. Nevertheless, the staff was reduced to one full-time administrator, two full-time secretaries, one 4/5-time evaluation intern and four local parents to serve as an evaluation team. The final funding of the project was for \$48,102.00.

During the summer of 1971 the project staff was hired. A hiring committee consisting of five administrators and one school committeeman interviewed and selected the project administrator. The Superintendent, the Project Administrator and the Evaluation Council members - previously selected by the Superintendent - interviewed applicants and selected the Evaluation Intern. The secretaries were selected from among a list of applicants to the school district. Although the

²⁹Ronald J. Fitzgerald, "System Approach to Individualizing Instruction - Title III," Amherst, Mass., February 12, 1971.

project staff was not officially employed until September 1, 1971, the Project Administrator spent much time throughout the summer of 1971 in meetings with district personnel in planning activities for September.

Implementation

The remainder of Chapter III consists of a month-by-month description of the implementation of the Performance Objective Program. The primary purposes of this section were to identify the major actors and incidents during the study period, and to supply detailed background information needed to interpret the data gathered for assessment of this project.

September

The beginning tasks of the program were seen as the designing and instituting of training sessions in which teachers, students, and non-staff adults would be taught to write curriculum in the form of performance objectives. The initial and major task was clearly seen to be the instruction of teachers, since their attitudes toward the project, their knowledge and skill in preparing instruction, and their actual use of this methodology was vital. Consequently, it was decided that small group sessions (approximately twenty teachers) would be used to introduce POP and to plan further sessions to answer the needs of the staff members. Introductory sessions were scheduled such that all secondary teachers attended, by department, during a curriculum

day on August 31, 1971, and all elementary teachers attended, by school, throughout September with meetings held after dismissal in the afternoon.

At this first session, a pre-assessment (see Appendix A) was administered to determine staff ability to differentiate between properly and improperly defined objectives and to write properly constructed objectives. A description of the resources and possible services available to teachers through the POP Center was followed by a discussion period. Each group also stated its plans relative to the program, and most groups scheduled a second meeting with a specific objective. Many wanted to bring objectives that they had written, exchange them, and see if they were writing them properly.³⁰

Since the school system had determined to use a performance objective approach to instruction, by school committee policy, as early as 1965, and since this approach had been advocated by administrators since then, it was assumed that veteran teachers would be able to write acceptable objectives, but that new teachers might not. To the contrary, analysis of the pre-assessment pointed out that numerous teachers needed further instruction on the technical aspects of writing a performance objective.

Teachers were told that there would be another evaluation in one month to see if by then all teachers could write performance objectives. An analysis of teacher questions, comments, and reactions provided a new perspective on the task ahead. Teachers felt very threatened by

³⁰From the Log of the Project Investigator.

both the pre-assessment and the October test. "What happens if a teacher fails the test in October?" and "What will the test look like?" are examples of the questions asked. An antagonism was evident. Some departments and schools were clearly supportive, while others were quite negative. Obvious from these meetings was the fact that attitudinal considerations must become paramount to gain the support of the staff. A conscious effort was made to guarantee that the project staff be seen as non-threatening, supportive, and a resource available to teachers upon request.

The primary request of teachers were for the following:

1. Meetings with departments to help evaluate existing objectives
2. An annotated bibliography
3. Help in developing skills to work with affective objectives
4. Suggestions for methods to be used to instruct students to write performance objectives
5. Instructions in writing performance objectives.³¹

An Individualized Learning Packet entitled "How to Write Behavioral Objectives", was given to all teachers (see Appendix A) to assist them in writing objectives properly, as defined by the project. Furthermore, nine sessions with various departments were held at teacher requests. In each case, objectives written by teachers in the department were analyzed and discussed. The most common weaknesses were the use of vague verbs such as "know" or "understand" and the use of a learning

³¹Ibid.

activity as an objective. Behavioral verbs were contrasted to the non-behaviorally defined verbs that some were using. Lists of behavioral verbs were made available to teachers, and objectives were contrasted with learning activities. It was emphasized that the teacher must analyze the true objectives of his instruction, and associate a value statement with them. The wording of objectives was discussed, with help being given to those who had difficulty. The specificity of objectives was considered. It was pointed out that the content specificity should be quite clear. Examples were cited.

The notion that "objective banks", mentioned in the project proposal, mandated very large numbers of objectives was dispelled. To emphasize this, it was pointed out that those questions asked on tests did in fact represent the program's objectives, and they were usually not all that numerous. In some cases the objectives would be quite numerous, and uniquely tailored to individual students, and in other cases there would be a few objectives requiring much work to accomplish.

The Art teachers identified a difficulty in making a statement which defined the criterion of performance in an objective. Due to the nature of the subject, it was felt that evaluation was highly subjective. They had designed their broad aims and further named twenty concepts which they intended to build their curriculum around, but in reducing these to objectives, the evaluation explanation was frequently "to the satisfaction of the teacher." Upon discussion, it was discovered that in some cases evaluation was based on the student's ability to explain and defend what he did, and in others

evaluation depended upon what classmates thought of the work. Consequently, it was decided that whenever the level of performance expected could be described, it would be stated in the objective. It was again accented that POP was not tied to stringent rules, and that omission of the evaluation statement was at times acceptable.³²

On September 9, prior to meeting with the High School English Department, in a meeting with the High School principal and assistant principal, these administrators brought out a problem that had developed with the student training plans. Secondary teachers had been told that secondary students were expected to be able to write performance objectives by January, 1972. Many teachers immediately began to try to teach the students to write objectives, and the students felt they were getting hit from all sides, in all of their classes, with instruction on how to write objectives.

It was decided that since the English teachers were the only ones who met all students, they should assume the responsibility of teaching the students to write objectives. Therefore, in the meeting with the High School English Department, this was an additional consideration. Some resentment was displayed of this burden being imposed on them, but in general it was accepted. This session then focused on the approach to be used, and a request for an outline of the information to be given to students was received.³³

³² Ibid.

³³ Ibid.

In all meetings, the feeling of having been threatened by the pre-assessment and by the coming test in October was clearly shown. It was emphasized that these evaluations were program evaluations and not evaluations of individuals. It was obvious that non-reactive evaluation was unlikely, and that any testing would cause increased antagonism.

Further formal sessions were requested as follows:

September 20	Crocker Farm School
21	Pelham School
21	Quad E - Wildwood School
22	Quad C - Wildwood School
25	Wildwood School
28	Wildwood School

Many teachers in these groups expressed anxiety about the pre-assessment. In all sessions, teachers brought objectives they had written, and these were discussed. A brief presentation on how to write proper performance objectives was given. The Crocker Farm session was devoted primarily to writing Social Studies objectives, and some steps were taken to use ten concepts which had been adopted K through 6 as a source of objectives.

The Pelham staff of six needed assurance that they would be given help, and a long session included the analyzing of objectives and the rewording of them to make them behavioral in nature. Pelham appeared to be further out of touch with the philosophical and curriculum directions the system had adopted, and needed encouragement to try to develop these objectives as tools to individualize instruction.

Many of the Wildwood teachers were using objectives in one way or another in their classes. Some felt fear that they would be forced to alter successful teaching techniques. For example, one team used

contracts in mathematics in which objectives and alternative activities were listed, and a continuous progress form of learning was employed. They feared that they would have to transcribe all their objectives and activities onto the yellow and blue cards that POP had suggested for this purpose. Their format was strongly praised, and was used as an example of one of the many possible means of using performance objectives in instruction. Several creative ways to handle the use of objectives had been instituted in addition to the yellow and blue card format, and this was strongly encouraged.

Sessions were requested on September 17 and 22 by elementary librarians and counselors and by the High School Guidance Department to discuss the writing of service objectives. In these sessions a conceptual framework was designed in which services could be categorized as to whom was being served as well as to whether the objective was continual with the job, part of a one-year plan, or provisional dependent upon requested assistance. Sample objectives for administrators and department heads were distributed.

On September 24, POP was discussed at the weekly meeting of the Central Curriculum Council, which consists of all administrators in the school system. The Superintendent stated that he intended to visit all schools on a monthly schedule at which time he wanted to be shown an example of POP in use. It was made clear that he only wanted to see progress in the use of performance objectives. Teacher evaluation in Amherst was to be in relation to their use of performance objectives in instruction.

In light of the perceived threat of the October testing of staff

on their ability to write performance objectives, it was decided to allow the principals of each school to test their staff members in whatever way they saw fit, and to report their findings to the project staff. These administrators decided that collecting three objectives from each teacher would serve the purpose of determining if they could write acceptable objectives, while reducing the anxiety of a threatening test. These objectives were collected in all schools at the beginning of October, and evaluation of them showed that 84 percent of the staff could write technically correct performance objectives. The remaining 16 percent of the staff was exposed to various further instruction by their principals. It was emphasized that this figure of 84 percent represented only technical competence in writing objectives, and said nothing of the value of those objectives, the level of learning implied, or the activities or instruction planned to reach them.

October

During the second month of the project, parent involvement was initiated. On a questionnaire sent out in January, 1971, 187 parents had signified that they would be "willing to spend some time defining or evaluating learning goals" of the school programs. Invitations were sent to these parents to attend a session on either October 5 or 7, and at that time the program was explained and discussed. The first group, although seriously questioning the performance objective approach (the question of a Skinnerian shaping of children was evident), was willing to take part and provide a voice in the curriculum design. The second group was less positive. Several had come not because they

were invited but rather to oppose defining student goals. Comments such as the following were typical: "I thought that students had fun in school," "They learn without realizing," "Why do we tell him what he is going to learn?" A second meeting was scheduled for October 26, however, and this was to be for those who wanted instruction in the methods of writing acceptable performance objectives. In general, it was found that if a person came with an open mind and accepted the desire for individualized instruction, then acceptance of the use of performance objectives as a means of individualizing instruction and as an improved communication method might be expected. However, many came with a set, pre-conceived opposition, and wanted no discussion but only a forum to state their views.³⁴

On October 26, a session with parents was held, and after some philosophizing on the role of parents and the discipline areas which would best lend themselves to this approach, a presentation on the writing of performance objectives was given. This group asked for another session on November 23, giving them a month to write objectives which could be evaluated at that time.

With the student training sessions underway in all secondary English classes, the project staff was contacted at different times by three groups of High School students. Two groups asked to visit the center, and one English teacher asked that he be given help explaining the program to his class. Questions of the following nature were commonly asked:

³⁴Ibid.

1. Can a student write good performance objectives when he doesn't know what the course is about?
2. Can students substitute their objectives for the teacher's?
3. Do specific objectives restrict meaningful digression in a course?
4. Isn't too much time being spent writing objectives?
5. Doesn't this only work for the highly motivated?
6. Isn't there a big discrepancy between the theoretical description of the program and the way it's being practiced?
7. Do we really need to have objectives so specifically stated and in writing?
8. What happens when a student and a teacher disagree?

Responses to their questions seemed to be highly satisfying to one group, placating to another group, and unsatisfactory to the third group. This third group of highly talented and motivated tenth graders had been quite successful in traditional settings and clearly stated that they would prefer to have the teacher state general aims, not worry about student input, and test achievement in the subject.³⁵

The issues raised by students were considered to be intelligent, perceptive inquiries which needed further explanation. It was realized that by having different English teachers training the students, different groups were getting different messages. The student training program was scheduled for consideration at the next Central Curriculum Council meeting.

³⁵ Ibid.

Throughout October, various groups of teachers continually called upon the POP staff and resources. On October 4, individual conferences with each of the Pelham teachers were devoted to critiquing their objectives, and suggesting plans to use the program. On October 6, a meeting with the Elementary Mathematics Curriculum Committee Chairman revealed a lack of organization in that committee's approach; suggestions were given and further meetings were planned to organize a team effort to make Mathematics Objectives available system-wide.

It was also realized at this point that confusion existed in the minds of some elementary teachers who were unsure as to the area in which they should work, and a notice was sent out reminding them that many had been placed on specific subject area curriculum committees. If a teacher was on such a committee, that was the only area in which he should be preparing objectives. Those who had not been placed on such a committee were to confine their efforts to Social Studies. The majority of elementary staff members, then, should be writing Social Studies objectives.

On October 13, a session was held with the Media Processing Staff concerning the writing of service objectives. As with the librarians and counselors, sample objectives were made available, the components of an acceptable objective were identified, and a discussion of the level of specificity took place.

In two separate instances, individual teachers came to discuss the level of objectives they were writing. As one put it, "I do not want to settle for the easier to write low level objectives." This teacher said that she would rather have poorly worded objectives aimed at the

higher levels of work such as critical thinking. This was taken as a most healthy sign. Whether writing objectives was lowering the level of instruction or merely making the teacher aware of low level goals was uncertain, but it was encouraging to see this dissatisfaction. In a subsequent meeting of the Junior High Science Department, teachers were encouraged to strive for high level goals, and secondly, to try to perfect the wording of the objectives. This was warmly accepted by the teachers who still felt that their evaluations were based on the preciseness of their objectives.

In a meeting with the elementary curriculum committee chairmen, on October 26, the problem of designing input channels for non-staff contributions to the program was presented. Through discussion and debate, the group designed a plan which would offer the following avenues:

1. If objectives applied to one child only, they could be sent directly to the child's teacher.
2. If objectives were being suggested for system-wide use, they could be sent to a curriculum committee chairman.
3. If the non-staff adult preferred to join with a particular committee or department to consider curriculum issues, he could submit his name to the chairman.

In either of the first two choices, prompt consideration and response would be guaranteed. This plan was to be described to all staff members, and then sent to the community in the form of a Mini-paper.³⁶

³⁶ Amherst-Pelham Schools "POP Mini Paper #14," Amherst, Mass., November, 1970. (Mimeographed)

November

During the month of November, the Superintendent, the POP Administrator, and the secondary administrators scheduled meetings with each secondary department. Department chairmen had been advised to read Instructional Design by Jerrold E. Kemp, which describes in simple terms the overall design Amherst has been striving for, beginning with broadly stated educational aims or purposes and organizing them into a general framework.³⁷ These purposes had been designed previously and had been published in curriculum guides, but in fact, it appeared that they had become outdated. Consequently, most chairmen intended to re-evaluate or even to re-write them.

The Massachusetts Department of Education published a list of ten broad educational goals that applied to all schools in the commonwealth, and it was requested that all departments attempt to relate their goals to those of Massachusetts. In the scheduled department meetings, the staff was asked to submit these goals in a framework design, relating them to Massachusetts' goals. This framework was to cover both Junior and Senior High School, grades seven through twelve, with the hope that during Curriculum Days in February, secondary and elementary personnel would together produce a K - 12 framework. All department meetings covered this responsibility as well as the department's progress on POP.³⁸

³⁷ Jerrold E. Kemp, Instructional Design (Belmont, California: Fearon Publishers, 1971)

³⁸ Taken from the Log of the Project Investigator.

A component was added to the student training sessions in light of the feedback received in October. To provide a constant to the description of the program given to students, sessions were scheduled in the High School on November 12 and 15 in which all students in groups of approximately one hundred twenty would hear a fifteen-minute presentation to be followed by a thirty-minute period open to questions. In the Junior High, a similar arrangement was made. The groups were kept down to about seventy-five students and these were further subdivided for the question and answer period. In both cases mixed reactions were noted, but in general it seemed to assure many that the program really held some advantages for them. It was emphasized that student input to the curriculum in the form of objectives was really wanted, and that they could negotiate goals with their teachers. Whereas teachers alone had been writing objectives previously, it was explained that this program now made it possible to instruct parents and students such that they could write objectives whenever they felt a need. Again some felt that several teachers were still reluctant to accept the notion of students proposing and negotiating their objectives. Student support was sought by reminding them that unless they kept trying to affect their curriculum, these reluctant teachers would completely control what would be taught. Many recognized that they would have administrative support to the point of open negotiation with teachers.³⁹

The non-staff adults met as scheduled on November 23, and it was

³⁹ Ibid.

found that some were writing excellent educational goals, especially in that they saw discipline areas from a perspective not represented among teachers. Many of these goals had not been successfully defined in terms of performance objectives, and further efforts were necessary. One parent had prepared an entire Physical Education program by writing objectives and suggested activities quite different from those presently utilized. Again, an entirely new perspective was offered. This paper was sent to all Physical Education staff members for consideration.

A second group of adults, the Amherst Human Relations Council, invited the POP Administrator to address one of their meetings, and it was decided that six members wished to attend POP training sessions. They had very specific objectives for themselves involving the preparation of curriculum concerning attitudes toward minority groups. With that in mind, they scheduled a workshop for December 1 to learn specifically to write affective objectives.

At the November 22nd meeting of the Junior High Parent Council, POP was briefly explained to this group of parents, and many questions followed. An attempt was made to recruit more adults for the training sessions. Also it was announced that on December 2 and December 7 a presentation would be given by the Superintendent, explaining POP and how it fits into the Amherst program. This was to be followed by an opportunity for adults to question district administrators concerning POP.

On November 9, the Elementary Mathematics Curriculum Committee met with the project administrator and administrators from the elementary schools to plan action to bring the Mathematics objectives up

to the level of the other curriculum areas. It was decided that a teacher who was instrumental in the development of the program as it now exists, but who is presently on maternity leave, would be hired to work at home on the preparation and organization of this material. With her assistance, the Mathematics Curriculum Committee planned to formulate a framework of general goals and then to organize all existing objectives within that structure. Many objectives were to be reworded, and many areas still needed to be translated into performance objectives. It was felt that the elementary Mathematics program could be defined in terms of performance objectives and organized into a usable form by June of 1972, with the expectation that summer work would provide alternative learning activities for the objectives.

Throughout the month of November, secondary departments met with the Superintendent, the POP Administrator, and the secondary administrators to discuss their implementation of POP and development of a framework of goals. The Foreign Language Department discussed a desire to alter their staffing pattern, utilizing more aids and interns. They further wished to move toward continuous progress education, with, for example, no designated "French I" content limits. English dealt with the student instructional program, and Home Economics, Industrial Arts, Art and Music were involved with scheduling issues. The Physical Education Department was grappling with value questions resulting from the program submitted by a POP trained parent. While trying to justify the program presently being offered, they made preparations to incorporate

parent input. Clearly, POP was affecting all areas of the district's program.⁴⁰

At a meeting of the secondary administrators, the parent training program was discussed. It was the consensus of opinion that the staff was not ready to utilize parent input to its best advantage, and that teachers needed two months more, at least, to organize themselves such that they could deal with outside assistance. It was their belief that non-staff adults should not be permitted to join curriculum committees until further staff preparation took place. At their urging, it was decided to slow down the non-staff training program, permitting those currently enrolled to continue, but holding off on further sessions until the second half of the school year. Teachers were thus given more time to organize their programs and to prepare means of best employing outside assistance.

The district's Central Curriculum Council also dealt with several issues relating to POP at their November meeting. The term "behavioral" in "behavioral objectives" was seen to be making parents associate the program with Skinnerian Behaviorism and it was decided to eliminate use of this term, relying on "performance objectives."

The POP Administrator identified a need to broaden the sources of POP by getting more leadership from principals. He sought to encourage principals to prepare mini-papers, but this was not welcomed by the principals. The point was made, however, that principals must take a more active leadership role.

⁴⁰Ibid.

Principals stated that their teachers needed much more in-service training to provide them with the help they needed to implement POP. It was decided to develop a comprehensive in-service program through POP for the second semester, hopefully including graduate credit through the University of Massachusetts.

December

On December 2 and 7, public meetings were held in an attempt to clear up some of the misconceptions concerning POP and to expand our list of parents who would later take our non-staff training program. In both meetings, the Superintendent gave a one-hour presentation describing the program, and this was followed by questions from those attending. In the first session which was devoted to those interested in the secondary schools, a panel of secondary administrators, central office administrators and POP staff was present to answer questions. In the second session, elementary principals replaced the secondary administrators. Typical of the questions asked were:

"To what degree is this program now in effect?"

"How will it affect grading?"

"Have you noticed that teachers do more paperwork with POP?"

"Do you see any hope that this extraordinary community will ever have a say in what happens in our school system?"

"What is the difference between what I use to write as goals as a teacher and what POP represents?"

"Are you encouraging students to become more independent?"

"Can we maintain this project after the initial implementation?"

"What becomes of the student who doesn't set objectives?"

Panel members responded to questions from the audience, and numerous parents volunteered to take an active part in the project.⁴¹

Also during December, parent groups which had begun training in November continued to meet. For example, the Amherst Human Relations Council attended classes so that they could prepare themselves to write objectives concerning race relations, and sensitivity to racial problems. This group planned to submit curriculum materials to the system for adoption.

On December 8, a session was held with the Audio-Visual Staff, the Librarians, and the Instructional Materials Program personnel. This session, and similar sessions scheduled with the Guidance Department, dealt with the writing of service objectives. It was decided to conceptualize these objectives as service to 1) students, 2) teachers, 3) administrators, and 4) parents. Each category would be subdivided into "continuous objectives" or those considered as the continuing aspects of the job, "this year's objectives" or those that the individual wants to initiate within a given school year, and "provisional objectives" or those which the individual wishes to incorporate but which require material assistance. These service areas proceeded to create banks of service objectives describing the objectives of their positions.

⁴¹Open Meetings of Amherst Citizens with District Administrators, Minutes of Meetings of December 2 and 7, 1971.

Throughout December, elementary curriculum committees and secondary departments held numerous meetings attempting to establish statements of their general learning goals. Rather than making separate lists for high school, junior high and elementary levels, later to be synthesized, the staff decided to make one list per subject area to represent K - 12 goals. These were to be presented before the Regional School Committee. It was found that once involved in this task, teachers found it very rewarding, and felt that this should have been done before ever writing objectives. A great increase of communication and coordination resulted from this exercise.

On December 13, the Art Department was the first to present its framework of general learning goals to the school committee. This presentation was on a K - 12 basis and done very well. It was evident that this task, while making clearer the goals of the Art program, further coordinated and unified the group, giving elementary and secondary teachers clearer perceptions of what each other were doing. Additionally, it offered the School Committee and the public opportunities to question the Art teachers on their goals and methods. The committee members more than welcomed the chance to talk to teachers and to come to a better understanding of the Art program.

The principal of Pelham Elementary School asked the POP Administrator to talk to teachers, helping them individually with various difficulties. On December 16, the POP Administrator met with each teacher in Pelham for about twenty minutes each to help in any way possible. Most questions dealt with the wording of specific objectives,

and the staff seemed to be grappling with the difficulties of implementing continuous progress education in their classes.

During the month of December, outside interest in the Performance Objective Program was evidently increasing. This was shown by an increase of letters of inquiry, visits, and requests of the Superintendent, Assistant Superintendent and POP Administrator to give presentations explaining the project. Apparently many communities were considering adopting a performance objective approach to education, and information relating to the institution of such a program was difficult to find.

January

On January 5, the chairman of the High School Mathematics Department, the chairman of the Junior High Mathematics Department, and the chairman of the Elementary Mathematics Curriculum Committee met with the Assistant Superintendent and the POP Administrator. The general goals of the three levels were discussed, and plans for producing one K through 12 goal statement were made. In conjunction with the teachers working with them, these three people combined their general goals into one document and presented this statement to the Regional School Committee on December 10. A discussion of these goals ensued, and a major part of the School Committee meeting was devoted to committeemen questioning the teachers concerning the effects POP was having on their classes. "Exactly what would I experience if I entered your class as a student?" was typical of the questions which followed.

The Central Curriculum Council met on January 7, and among the

agenda items was the formation of the committee to screen and fund Research and Development proposals for the summer. Also discussed was the progress being made on the development of a revised system-wide testing program. The present schedule of testing was compared to a proposed schedule, and it was decided that further consideration, and evaluation was necessary and that the proposed design would be discussed again soon. Also considered was a request of the Amherst-Pelham Teachers Association that a part of the January 24 Curriculum Day be set aside to discuss POP and the teachers' reactions to it. Opposition to this was voiced, since plans had been made which would have to be canceled in order to permit this meeting. Finally it was decided that much harm might be done by refusing this request, and it was granted.

Also discussed was the need for a POP in-service program for the second half of the year. Principals were asked to try to determine the topics which needed coverage and to "volunteer" or to find "volunteers" to teach these sessions. The program was to be coordinated by the POP Administrator.

At the January 14 meeting of the elementary principals, the in-service program was discussed and an attempt was made to identify the specific issues which should be covered. It became evident that some of these administrators did not feel enthusiastic about personally teaching a class. One expressed the opinion that a good administrator is not necessarily a good teacher of teachers, and that he had been out of the classroom for several years.

Another issue dealt with was the elementary report card, and the writing of an R & D proposal to revise it. It was strongly felt that

revision was absolutely necessary, and the elementary principals agreed to support such an R & D proposal.

On Curriculum Day, January 24, one parent who had attended POP training met with the Physical Education department. He had prepared numerous performance objectives and descriptions of learning activities, and he was urging them to accept his suggestions. The suggested objectives showed an entirely different philosophy of physical education than that being practiced. Where the program appeared to emphasize competition, the suggested approach was one in which physical well-being was of prime importance, with competition de-emphasized. At this meeting, the department chairman described the present program, and the parent described the program he was advocating. Both attempted to justify their positions, and a future meeting of the department chairman, the parent, and the POP Administrator was planned.

Also on that day, the APTA held an open meeting for the purpose of discussing POP. All professional employees present were separated into small groups. The general feeling expressed was one of a vague discontent, but there was not a general dislike of POP. In fact comments seemed to show a positive attitude toward the performance objective approach to teaching. However, teachers felt pressure due to POP. Teachers felt that too much was coming from the administration and that they did not have enough control over what occurred in the system. They felt a need for more in-service assistance to help them implement this program. It appeared that teachers were seeking more of a leadership role in the introduction of POP.

On January 28, the Central Curriculum Council met to discuss, among other things, the in-service program for the coming semester. A filmstrip-tape program had been ordered from Vimcet Associates of Los Angeles, and the topics of these sessions were offered as a base from which a more detailed in-service program might be developed.⁴² District administrators were asked to choose topics to teach. Fifteen sessions were thereby scheduled, with administrators and teachers sharing the instructional duties.

The Massachusetts Department of Education sent to all superintendents information relating to their requirements for progress toward a results oriented system of education. They clearly had mandated that school systems define their goals, more specifically define their objectives, and relate these to Massachusetts' ten common goals for all schools. In January they sent tentative guidelines to local systems requiring that objectives be defined and categorized into programs under the common goals, that these objectives be written in measurable performance terms, that the cost per pupil for all programs be determined (thereby mandating a program budget), and that the degree of success in attaining these objectives be determined and reported. The requests for this information as of June, 1972, was seen as totally unrealistic by the Connecticut Valley Superintendents Service Center, and by unanimous vote they supported a position statement advocating that more time be allowed to complete this reorganization, and that programs be

⁴²Vimcet Associates, Inc., P.O. Box 24714, Los Angeles, California 90024.

formed under existing titles - Language Arts, Mathematics, etc. - rather than under the ten common goals. This was forwarded to the Commissioner of Education. In fact, then, there was general agreement expressed toward the performance objective approach to education, but again, the implementation of such a program caused much dissatisfaction.

February

On the seventh of February, the Language Arts Program was presented to the Regional School Committee for consideration. Presentations were made by elementary, junior high, and senior high representatives, and the work done to coordinate these three levels was described. Teachers were questioned concerning the goal statement, but primarily the questions related to the implementation methods and the educational changes resulting in classrooms from this work. Questions indicated the committeemen were curious as to the teachers' perceptions of POP and the value of this work. In response to this questioning, the Language Arts staff was enthusiastically positive about the program and their use of it. A high degree of support for the Performance Objective approach was evident among the teachers.

The elementary principals met throughout February and dealt with several issues relating to POP. On February 1, this group discussed several of the proposals which had been submitted to the R & D Committee. Support for certain of the proposals was expressed. A high priority consideration of this group at each of their meetings was the development of a new general testing program for the school district. The Language Arts Director and the school Psychometrist spoke frequently concerning

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this subject, and recommendations were developed. The Psychometrist was to submit this proposal to the Superintendent and to the Central Curriculum Council.

Parent interest and participation increased during the month, perhaps resulting from several newspaper articles concerning happenings in the schools. The Pelham Parent Council asked the POP Administrator and several school committeemen to meet with them to discuss the program. Although this session was well advertised, relatively few parents attended. Nevertheless, a lively discussion took place. Questions indicated openmindedness toward the program and that much of the doubts or antagonisms resulted from misconceptions or purely emotional responses to the manner in which they had first been introduced to the program. It was stated that large group presentation of the program, where discussion is inhibited and where questions are responded to defensively, had antagonized several parents. In contrast, parents wanted small group presentations in which opinions and questions would be welcomed by school personnel. Nearly everyone present actively participated in the discussion, and it appeared that the opportunity to be heard and to have their questions answered had pleased and satisfied those present. Very little negativity was shown toward the program, but rather an open and honest questioning of its goals and methods took place.

Also during February, a parent group attended classes on the preparation of objectives. Interest in Physical Education and Language Arts was expressed, and work was begun to prepare these people to participate most actively in the program. The parent who had already

submitted a proposal of objectives and activities to the Physical Education Department also met with this group of parents and encouraged their participation and support. He also met with the chairman of the Physical Education Department and the POP Administrator to continue the discussion begun in January concerning this curriculum. It appeared that the teachers were still discussing his suggestions, but that no decisions had been made and that no action had been taken.

On February 24 and 25, curriculum days, teachers of all levels met by discipline area to coordinate their programs. This exercise was most enthusiastically engaged in by the staff, with highly positive feelings expressed. Many stated that this should come prior to any writing of objectives. Most groups were pleased, too, with the resulting frameworks of goals, and believed that use of such a framework would give a coordination and unity to the objectives, avoiding a "piecemeal curriculum."

On the twenty-fourth, the secondary Science, Social Studies, Home Economics, Industrial Arts, and Physical Education Departments met with the elementary Health Curriculum Committee. It was pointed out that the Health curriculum in Amherst was designed on a K through 6 basis, and that those departments present were dealing with it on the secondary level. In order to coordinate on all levels, a plan had to be devised to inform the secondary people of what the elementary committee had prepared, and to inform the elementary group of what the secondary programs already covered. It was decided that the elementary teachers who had prepared the Health materials would describe their

program, and explain the concepts they had identified. Then the secondary departments would analyze their programs, and report back on the Health material which was already being dealt with on the secondary level. After this, those concepts which still needed to be developed in the junior and senior high levels would be identified, and work would begin on insuring a continuous Health program K through 12. Department chairmen agreed to send written reports to the POP Administrator describing their present coverage of Health.

Due to discussions during the curriculum days in which teachers expressed a need for in-service help, the Superintendent decided that the POP in-service program should be mandatory for all professional personnel. Consequently, accompanying the schedule of sessions was a letter to the faculty announcing that the program would be offered during the spring semester, beginning on February 14, and repeated in the fall of 1972. During these two semesters, all professional staff members would be required to attend each of the fifteen sessions.

Teachers were quite upset about this unexpected requirement. Making the program mandatory for all was seen as unfair and a threat to teachers' professionalism. Some felt that this was changing the working conditions and therefore a breach of their contract.

The Amherst-Pelham Teachers Association reacted strongly to this notice through a letter to the Superintendent questioning the validity of mandating this program for all professional staff members. It was argued that this was violation of the current teachers' contract, and a meeting to discuss alternatives to this program was requested. The situation was further polarized when the APTA letter was distributed

to all teachers. The Superintendent first agreed to meet with the Representative Council of the APTA, then refused to meet with them due to the release of the letter, and finally agreed to meet with them as scheduled. At that meeting, also attended by the POP Administrator, some interesting negotiations occurred. The Superintendent pointed out that the release of that letter was a breach of all rules of such bargaining, since positions were now entrenched and face-saving became an issue. The APTA felt that such a release had been necessary to insure all members that their bargaining unit was in fact strongly supporting the view of its members. They argued that they were not opposing the Performance Objective Program, that they agreed with the philosophy and methodology of the program, but that they challenged the way in which it was being introduced. They felt the teachers should have a greater say in the planning, and that this in-service program should have had more teacher input. The biggest complaint was that attendance at in-service sessions would be mandated.

The Superintendent argued that the contract in no way limited the length of the school day, and it was therefore his prerogative to require attendance at these sessions. Furthermore, since competent teaching was being defined within the philosophy of individualized instruction as espoused by the district through APTA sanction and through vote of the school committee, the skills being taught in these sessions were mandatory for all staff members. After much discussion, the following agreements were reached.

1. The sessions would begin on February 28 instead of February 14 and repeated in the fall. (See Appendix B for

a schedule of the sessions.)

2. Objectives of the sessions would be defined, and teachers would be free to pursue them through attendance at the sessions, or through other forms of independent study.
3. Although attendance was not required, the knowledge would be, and that after January, 1973, teacher evaluation would be based on actual successful implementation of the performance objective approach, rather than on progress in trying this approach. In this light, the in-service sessions were seen as a service offered to the teachers.

After reaching these agreements, the POP Administrator pointed out that there existed a difficulty within the community such that mixed understandings and interpretations of POP were resulting in a negativity among parents. Many felt that this program was strongly disliked by teachers and was not helping the learning of their children.

The fact that the APTA letter to the Superintendent had been released, meant that there was an excellent chance that the local newspaper and the community would interpret this as further evidence that POP was opposed by teachers and that the parents should fight the implementation of the program. However, this group had claimed quite the opposite - that the teaching staff strongly supported POP. If this was true, and if this Representative Council wished to protect the professional staff from undue criticism of their use of POP, it was suggested that APTA make their position extremely clear. If they in

fact supported the philosophy and methods advocated by POP, it was requested by the POP Administrator that they publicly and independently state this. It was agreed that they would do so. All appeared to be quite satisfied with the agreement.⁴³

As a result of this meeting, a joint statement was released by the APTA and the Superintendent, explaining the terms of this agreement. As predicted the local newspaper received information concerning the discussions about the required in-service attendance, and published an article under the headline "POP Not Working Well?" The reaction of the APTA Representatives to this article was both anger at the paper for misinterpreting their position, and agreement with the administration that the teachers association should provide refutation of the article. Consequently, the President-elect of the APTA, in a letter to the editor, stated that the APTA strongly supported the philosophy of the Performance Objective Program. To guarantee proper interpretation of the APTA position, the letter explained the nature of the recent discussions, and said that "to suggest that successful experiences with POP were rare is to cast unwarranted aspersions upon a dedicated staff of professional teachers. Our teachers are committed to the POP philosophy and are making giant strides toward the successful implementation of the program."⁴⁴

⁴³Meeting of the APTA Representative Council with the Superintendent, Minutes of February 16, 1972, Meeting.

⁴⁴Arthur Leland, "Letter to the Editor," Amherst Record, February 23, 1972.

The results of this issue and its consequent discussions were quite far-reaching. Clearly the teachers association had taken a more militant position than they had done previously, and they felt encouraged at their progress. Perhaps for the first time, this group felt a sense of unity and a sense of satisfaction in the results of that unity. Moreover, the administration was quite pleased that an agreement resulted which produced a much more professional approach to the in-service program, and to teacher evaluation. Also, the teachers were finally taking more of a leadership role in the planning and implementation of the program. The relationship between the teachers and the administration appeared to be much healthier as a result of this conflict.

March

On March 16, the K - 12 Social Studies curriculum goals were presented to the Regional School Committee. By this presentation, the fourth such discussion, the school committee members had grown greatly in their understanding of the curriculum building process and in their understanding of the meanings and implications of the issues being discussed. Questions were much more to the point, and the discussion truly dealt with curriculum issues. It was felt by several administrators present that this was by far the most sophisticated discussion of educational issues that they had ever witnessed between a group of teachers and a group of laymen.

On March 27, the Pupil Personnel Services and the Physical Education Department presented their goals to the Regional School Committee. Again, an interesting and sophisticated exchange occurred. Administrative

reactions indicated that it was perceived that the School Committee had raised important questions concerning the goals and philosophies discussed. With the Pupil Personnel Services staff, the committee questioned the staffing needs to accomplish the stated goals. This was especially true concerning the implementation of these goals in a new elementary school, presently under construction. Connections between goals, personnel, and budget were being made. In questioning the Physical Education staff, the level of individualized instruction was sought. Committeemen wanted to know if students were being offered choices and if the girls' program offered the same options as the boys' program. It appeared to those administrators present that the School Committee wanted assurance that alternatives were offered to students as much as possible, and that the Physical Education teachers would continue efforts to increase such alternatives.

While one group of parents continued to meet to learn how to write objectives, others expressed interest in learning more about the program. The Parent Council of one of the elementary schools invited the POP Administrator to discuss the entire project, and in that invitation it was made clear that any presentation should be limited to ten minutes so that the majority of time might be spent on questions. It was felt by the president of the parent group that many people wished to express themselves and to have their questions answered directly. This was agreed. Fifty-three people attended this session, including the principal of the school, two school committee members and three teachers. A lively discussion resulted, and the president of this

council kept the topic directly related to POP, at times having to interrupt when questions related more to the elementary reporting system. People were clearly dissatisfied with the new report card format, but it was emphasized that this was not the issue to be considered at this meeting. The topic was held to the rationale of the Performance Objective Program, and to the methods being used to implement this form of instruction in the classes of this school.

It was obvious that several people had come with the intention of discrediting the project. The majority of those present, however, came out of genuine concern and curiosity, with serious doubts and honest questions. The support of two teachers and a school committee member was evident. All questions were answered in a direct and brief manner, with total honesty concerning the benefits seen and the problems encountered. Many of the questions raised showed a great deal of misconception of the basic tenets of POP. Some felt that it was an approach which would attempt to define the end product, the child, after twelve years of conditioning. Others felt that by encouraging children to write their own objectives, the system was allowing entirely too much freedom. It was pointed out that the position of this program was at neither extreme, but rather more moderate. Teachers would plan instruction, but in terms of performance objectives to be sought and learning activities to reach them, and that children would be encouraged to contribute to that planning by submitting suggested objectives or activities. The authority to decide on final instruction still belonged to the teacher. Parents too were being encouraged to help in the preparation of curriculum, and to analyze that which was being offered.

Furthermore, in response to the feelings that use of performance objectives implied defined end products, sample open-ended objectives were discussed, and it was pointed out that creativity and critical thinking skills can be encouraged in this manner. In response to the suggestion that independent study was encouraged and class discussion discouraged by POP, some of the teachers present argued that specifying your objectives did not reduce discussion at all, but rather gave purpose to that discussion.

At the conclusion of this meeting, several parents expressed the feeling that they now understood POP much more clearly, and were no longer threatened by it. Many stated their appreciation of this open discussion, and were quite satisfied by the responses given. The principal of the school said that he had been quite surprised at the number of antagonistic people who attended and at the realization that this session could easily have been a major setback for the program. He expressed the view that it was handled very well, and was in fact the best parent session he had seen in six years in the community. The teachers present also expressed gratitude that their curriculum work had been defended well to a threatening audience. In general, this session appeared to have gained some support, allayed many fears and misconceptions, and disappointed several who had planned to discredit the program.⁴⁵

To further increase understanding of POP throughout the community, a pamphlet entitled "Questions and Answers on POP - A Basic

⁴⁵From the Log of the Project Investigator.

Primer" was distributed through all school children. Prepared by the Superintendent of Schools, this primer stated and answered the most frequently asked questions concerning the program.

The Research and Development Funding Committee met throughout March to evaluate all R&D proposals. As directed, proposals for new programs or projects had been submitted in a PPBS format, and the committee analyzed those proposals, choosing from among suggested alternatives, and determining which projects would be of the greatest value to the school system. Final decisions were reached, presented to the Regional School Committee for approval, and R&D awards were announced.

As communications from the Department of Education continued to require a results-oriented, performance objective approach to instruction and management, communities continued to contact project staff for information concerning the implementation of such a program. In addition, a representative of the Department of Education came to discuss ways of introducing programs like this throughout Massachusetts. In that discussion, it was brought out that the development of a state-wide masterbank of objectives was being seriously considered, and because of the experience gained through POP, it was felt that this school system would be an excellent site for that masterbank. The possibility of developing a computerized access system of objectives available to all teachers in Massachusetts was generally proposed.

April

Conferences with individual teachers, visits from other school systems, and requests to explain POP to the teaching staffs of other districts were frequent throughout April. The In-service Staff Development Program continued, with evaluations being highly favorable. Also, the presentations of general goals to the Regional School Committee continued, with Science on April 10, and Foreign Language and Business on April 24.

At the April 7 meeting of the Central Curriculum Council, officers of the APTA presented a request to dismiss school five days early in June to permit the staff, which was tired and frustrated due to curriculum work, to have five more days to plan and coordinate their programs. A heated discussion followed, with secondary administrators opposing this request since it conflicted with the planned Mini Course Program. Others expressed the view that the community would be angered at the notion of a reduction in the number of school days. The cost of salaries for a school day was \$10,000, and many in the community saw this as worthwhile only when the children were being instructed, but not when teachers were planning that instruction. The Council refused to support the request.

At the April 10 meeting of the School Committee, the APTA again requested five curriculum days, and the Committee granted either two or three days to be determined by the administration, and not to be at the end of school. The Central Council supported three days, and a list of events was discussed. Time was set aside for K - 12

coordination, for student involvement in curriculum planning and evaluating, for analyzing our relation to the State Goals, and for teachers to work on the planning of the curriculum work for next year. In fact, then, much of the time would be spent planning the second year of the Performance Objective Program, with teachers involved in that planning.

On April 11, the Superintendent and the POP Administrator met to discuss teacher involvement in the planning and functioning of the second year of the Performance Objective Program. The POP Administrator expressed a desire 1) to include teachers in the planning of the second year and in the writing of the continuation proposal, 2) to form a panel of teachers who would take a leadership role in the program, and 3) to redesign the evaluation component for the second year. It was decided that attempts would be made to encourage teachers to take an active role in the planning of the second proposal, and to encourage the development of a Teacher Advisory Council, through the APTA. Although this group would officially serve in an advisory role to the program administrators, it would clearly provide a greater source of power to the teaching staff. It was further decided that the director would meet with the chairman of the Evaluation Council to explore alternative designs for evaluation of the second year.

On April 24, the POP Administrator met with the Representative Council of the Amherst-Pelham Teachers Association and suggested several options to them concerning the project proposal. This group saw the formation of a Teachers Advisory Council to POP as a viable way to gain a degree of control over the planning of curriculum

development projects in the district. Although recognizing a difficulty concerning negotiated administrative powers, it was felt that this Council offered them a "way in through the back door." They definitely welcomed the opportunity to assist in the design of the second year of the program, and decided to shift all priorities, making this their top concern. All representatives were to meet with the staffs of their schools, determine what teachers wanted, and put this into writing. This Representative Council was then to assimilate all suggestions and to submit one proposal to the POP Administrator who would use it in the design of the second proposal. It was made clear that a formal and documented "establishment of need" was needed to establish a strong argument for redesigning components of the program. It was felt by this Council that the main need was for more released time for teachers to work on curriculum. Nevertheless, specificity about this need, and about other felt needs, would have to be clearly established. The APTA was quite desirous of devoting major efforts to stating needs and to increasing their influence in the program.

Subsequently, at a meeting of the Junior High Staff to which the POP Administrator was invited, the teachers 1) strongly supported the formation of a Teacher Advisory Council, 2) identified the need for released time, especially for those on the advisory council, 3) stated that the time could come in the form of more curriculum days, substitutes for teachers, or more teacher aides, preferably the latter, and 4) identified a need for in-service help, specifically in demonstrating classroom procedures in the use of continuous progress

individualized instruction. Similar meetings were held in other schools, and the Representative Council planned their report.

On April 25, the project Administrator met with the chairman of the Evaluation Council to discuss the evaluation design for the second year. The chairman of the council agreed that the present design, with four parents and one intern, was too expensive and inefficient. He further believed that all members of the council, including himself, intended to resign due to the excessive amount of time required by the tasks. It was suggested that a total redesign of the evaluation component might alleviate this misuse of personnel, and that a possible approach might be to employ a project evaluator empowered to allocate the evaluation funds as he deemed necessary to accomplish the evaluation. It was decided that the redesign of the evaluation component would begin by identifying the evaluation tasks, and then considering staffing needs.

May

During the three curriculum days granted to the teachers by the School Committee and the administration, May 15, 16, and 17, work was undertaken which strongly effected the plans for the second year project proposal. While some sessions were devoted specifically to designing means of utilizing parent assistance in curriculum development, Human Relations Sessions directed by an outside consultant were especially effective. The entire professional staff, in groups of twenty, took part in group activities which dealt with "how I affect different others," and demonstrated convincingly the need for efforts in developing the affective curriculum. Response was so enthusiastic that this group

leader was asked to remain with the program on a consultant basis throughout the second year. There appeared to be widespread recognition of a need to emphasize humanistic education as a part of the Performance Objective Program.

A parent group was scheduled to meet twice in May and by the May 10th meeting four parents had submitted objectives as evidence of their ability to prepare curriculum materials. Clearly each had a valuable perspective, distinct from that shown by the existing curriculum teams, which made their objectives doubly useful. Not only were their objectives technically acceptable, they were, in general, high level taxonomically and extremely valuable for the children for whom they were intended. The high quality of these performance objectives was considered further supportive evidence of the value of encouraging parent participation in the preparation of curriculum materials.

After numerous meetings of teachers throughout the district, the APTA Representative Council prepared a "needs analysis" which outlined the desires of the teachers for the second year project proposal. APTA officers clarified these needs as seen by the teachers, and all such contributions, both through the teachers association and by individual teachers, were welcomed and analyzed by the project Administrator. These were shared with the district administrators, who, in several meetings including a Central Council meeting on May 5th, discussed the content of the second proposal. The POP Administrator assimilated all recommendations and, at the May 8th Regional School Committee meeting, presented a statement of proposed general goals for 1972-1973. The goals presented were as follows:

1. Project emphasis will be on quality of operation in our instructional programs.
2. Support for teachers will be provided in the form of (a) in-service staff development programs, (b) teacher assistance teams.
3. Planning time for teachers will be sought in the form of additional bought time.
4. Efforts to increase the levels of parent and student involvement in the preparation and evaluation of curricular materials will continue.
5. Funds will be sought to design and implement a data retrieval mechanism in which objective and activity banks may be processed.
6. Efforts will be made to analyze and further develop the Affective Education in the Amherst-Pelham schools.

At the same meeting, a group of thirty-two local parents presented a petition to the School Committee in which it was requested that the Performance Objective Program be modified or discontinued. It was further petitioned that open discussion be permitted prior to final decision regarding submission of a continuation proposal.

The petition charged that (1) POP was introduced without full discussion of its philosophy, (2) there were no control groups to permit proper evaluation, (3) POP might have a debilitating effect on the staff, (4) POP caused fragmented learning and a weakening of classroom dynamics, (5) POP adversely affected students who are not strongly self-motivated, and (6) subject matter was being fragmented into specific objectives which reduces learning to accumulating objectives. In light of this petition, as well as the need for School Committee validation of the project proposal, it was decided by the Committee

to hold an open hearing on May 15th to permit discussion of the Performance Objective Program and its continuation. It was determined that the format of this meeting would be that a petitioner would make a statement concerning each of the six allegations of the parent petition and that a district spokesman might then reply to that statement. Further statements or questions might then be permitted, with the chairman of the School Committee acting as moderator.

On the evening of May 15th approximately seven hundred fifty people were present for this hearing. Unannounced by the district administrators was an agreement to restrain from commenting, so as to encourage teachers to speak. It was realized that this meant that the program would either be publicly supported and defended by the teaching staff, or it would most likely be cancelled by the School Committee. The response of the teachers was not only strongly supportive, it further demonstrated an understanding of and commitment to this program beyond expectation. Confronted with prepared philosophical criticism, the staff responded in clear support of the program. The School Committee agreed to continue a close monitoring of the project and to be sensitive to parental criticisms, but directed the continued development of the refunding proposal.

Clearly, more than School Committee support had been won. As important was the emerging confidence and power of the teaching staff. As a result of this hearing, teachers felt more in control of the program and more content that they, as a body, had chosen it.

The general goals, as presented on May 8th, were then further defined into specific objectives. Although this was done primarily by

the Superintendent of Schools and the POP Administrator, that list was discussed and revised by district administrators and interested teachers. On May 22nd the POP Administrator presented the following ten objectives to the Regional School Committee:

Objective 1: Given the present ability of district personnel (staff and students) to formulate technically correct student performance objectives, local teachers will increase their use of higher order objectives - those that deal with critical thinking and creativity as opposed to simple recall and recognition.

Objective 2: Given the present ability of district personnel (staff and students) to formulate technically correct student performance objectives, local teachers will increase their use of affective objectives - those that deal with student attitudes and values.

Objective 3: Given the present ability of local students to formulate goals and objectives, local teachers will increase the number of opportunities for students to select and/or to propose objectives and/or learning activities of their own choosing.

Objective 4: By January of 1973, district administrators will begin utilizing an expanded teacher evaluation format that emphasizes basic principles expounded in the POP in-service training program.

Objective 5: Given the parts of the curriculum presently defined in terms of goals and performance objectives and alternative learning activities, staff members will measure and record student achievement.

Objective 6: Given the plans developed by each department for involving persons from the community in the curriculum building process, each curriculum committee will implement these plans and increase the level of parent, employer, and/or student involvement in the planning of curriculum.

Objective 7: Given the experience, information and materials both gathered and developed in this Title III project and given the State Board of Education's mandate that all districts throughout Massachusetts

will develop a results-oriented approach to education, the staff of the project schools will provide assistance to other school districts designing or implementing a results-oriented approach.

Objective 8: Given the present levels of understanding and misunderstanding about the performance objective program among district citizens, the level of public understanding will be raised, and the level of misunderstanding will be lowered.

Objective 9: Perceived time pressures on teachers caused by the comprehensiveness of this project and the usual initial stresses associated with changing operating procedures will be decreased by providing teachers with additional time for planning and implementation of new procedures.

Objective 10: A process will be designed and introduced by which performance objectives and alternative learning activities will be placed on data processing materials such that objectives may be retrieved as organized under general learning goals, and learning activities may be organized under the code number of any given objective.

After some clarifying questions and discussion, the School Committee voted that the proposal be completed and submitted to Title III.⁴⁶

June

In June it was decided to collect a masterbank of objectives and alternative learning activities and to store them in the POP Center. Its presence was seen as a means of facilitating duplication of materials and of providing easy access to these materials for project evaluators. Further, if Title III did fund data processing of these materials, they

⁴⁶Ibid.

would be already gathered. Department chairmen and elementary curriculum committee chairmen were asked to forward these materials to the POP Center, where secretaries would begin transcribing them, when needed, onto cards for convenience in storage.

Throughout June the Superintendent and the project Administrator worked on preparing the Continuation Grant Proposal. This was found to be extremely demanding since requirements included detailed reporting of the previous year's activities, extensive definition of proposed objectives, activities, and budget, as well as demographic data on the population to be served. Completion of this proposal consumed most of June, and the completed product was submitted to the funding agency on June 27, 1972.

Conclusion

Throughout the summer months, R & D projects, which had been funded through district accounts, were working primarily on curriculum development tasks. One of these projects, whose goal was the development of a new elementary report card, was directly addressing an objective of this project.

Several communications were received from Title III requiring additions to the submitted proposal, and a negotiation session was scheduled for July 18. At that time, one objective, the development of data processing capabilities for the POP materials, was removed from the proposal. Budgetary requests were cut drastically, but a workable agreement for the second year was reached, and refunding was set for September 1, 1972 through August 31, 1973.

C H A P T E R I V

A DESCRIPTION OF THE METHODOLOGY EMPLOYED TO ASSESS THE PERFORMANCE OBJECTIVE PROGRAM

In Chapter III, an historical description of the development and implementation of the Performance Objective Program was presented in narrative form. This narration provides a background for the second phase of this study, which is a multi-faceted assessment of the effects of that program. The purpose of Chapter IV is to describe the methodology employed to determine those effects.

Fourteen program objectives were stated in the original proposal.¹ A combining and rewording of some objectives permitted the final selection of five as the most appropriate for the purposes of this study. In addition to determining the effectiveness of the program in meeting these five objectives, a second aspect of this study was to assess the perceptions and attitudes of the parents, students and teachers concerning the Performance Objective Program. Chapter IV will describe the methodology utilized both in the assessment of the program's effectiveness in meeting five selected objectives and in the assessment of the perceptions and attitudes existing concerning the project.

¹Amherst-Pelham Regional School District, Systems Approach to Individualizing Instruction, pp. 9-12.

The Assessment of the Project's Progress in
Meeting Five Selected Objectives

The five objectives which were selected are as follows:

1. Secondary students in the Amherst-Pelham Regional School District will be able to differentiate between a properly defined and an improperly defined student performance objective and will be able to write properly constructed performance objectives.
2. The teachers in the Amherst-Pelham Regional District will:
 - a. Demonstrate the abilities necessary to utilize performance objectives, and
 - b. Develop the materials necessary to implement a high quality individualized instructional program.
3. Each secondary department and elementary curriculum committee will arrange opportunities for students to accomplish learning objectives in topics selected by the students. On the secondary level at least, this will include the opportunity for students to create these objectives.
4. District administrators and their staffs will create specific programs to report the progress of individual elementary students to their parents in terms of accomplishment of specific learning objectives.
5. Parents will be provided the opportunity and needed skills to participate in the curriculum building process.

Objective Number One

Secondary students in the Amherst-Pelham Regional School District will be able to differentiate between a properly defined and an improperly defined student performance objective and will be able to write properly constructed performance objectives.

Assessment Design

To assess progress in meeting this objective, student abilities were measured in January and in May by means of similar test questions. These questions required 1) differentiating between properly defined and improperly defined performance objectives and 2) writing properly constructed performance objectives.

Instrument Utilized

Designed specifically to measure progress in meeting this objective, two test items were administered in January and two in May. To measure the ability to write objectives, identical questions were asked. Specifically, those being tested were asked to write three proper performance objectives. To measure the ability to differentiate between objectives, students were asked to identify the proper objectives from a list of ten statements. The lists were extremely parallel in form, with slight changes in statement content.

In assessing these two abilities, consistent criteria were employed. As had been frequently defined, a properly constructed objective must state or imply three components: a visible or audible student behavior, the conditions under which that behavior will be expected, and the

required quality of that behavior. In the list of ten statements used to measure the ability to differentiate between properly and improperly defined objectives, statements which met this definition were identified as properly defined. In assessing the objectives submitted as demonstration of the ability to write properly constructed objectives, the same criteria was employed. Responses rated "low" meant that much work was needed for proficiency, and they were so judged when no evidence of an attempt to include these three components could be found. Responses rated "medium" meant that some work was needed for proficiency, and they were so judged when attempts to include the three components were evident yet clarity was missing or questions concerning the outcome remained. Responses rated "high" meant that proficiency was displayed and they were so judged when clear useful objectives were submitted.

Procedure

Instruments were administered in January and in May to selected secondary students. Testing procedure was uniform in presentation and time, administered to selected classes of students. Classes were selected such that the students tested would include all secondary grades, seven through twelve, and all five phase levels. Selection of classes was made cooperatively by district administrators and project evaluators with the intent of identifying a representative sample without disrupting large numbers of secondary classes. Furthermore, similar selection procedures in January and May permit the assumption of no differences between the two groups.

Treatment of the Data

The data concerning the ability to differentiate properly defined objectives were tabulated by grade level with mean scores in January compared with the same figures as determined in May. Raw scores, with a possible high score of 10.0, were used in this comparison. An electronic calculator was used to prepare and analyze the data, including the measurement of standard deviation within grade level, difference in mean scores between January and May, and determination of the value as a measure of significance of change between January and May.² It should be recognized that in assuming no group variables, differences may be seen as due to time. Tabulation was to compare differences due to time.

The data concerning the ability to write properly constructed objectives were analyzed in terms of numbers and percentages of respondents receiving low, medium or high ratings. These data were presented in both tabular and graphic form in order to permit comparative analysis of January results with results in May. Further, the data presentation was designed to depict movement in student achievement of these abilities and emergent trends in these areas.

Objective Number Two

The teachers in the Amherst-Pelham Regional School District will:

- a. demonstrate the abilities necessary to utilize performance objectives, and
- b. develop the materials necessary to implement a high quality individualized instructional program.

²Robert H. Koenker, Simplified Statistics (Totowa, New Jersey: Littlefield, Adams & Co., 1971), pp. 87-94.

Assessment Design

To assess progress in meeting this objective, a pretest-posttest design was combined with an achievement test and an analysis of the materials produced during the period of this study. Identical tests were administered in September and in May to a sampling of staff members. In May, an achievement test was administered to staff members, and throughout the year a sampling of the materials produced - performance objectives and alternative learning activities - were carefully inspected to determine quality of the materials and trends in their production.

Instrument Utilized

The pretest-posttest design utilized an instrument developed for this study designed to measure three skills: 1) the ability to identify properly defined objectives, 2) the ability to correct improperly defined objectives, and 3) the ability to write properly defined objectives. Five statements were presented and teachers were asked to identify those which were properly defined objectives and to correct those which were not properly defined. Also, teachers were asked to write three properly defined objectives. The criteria for a properly defined objective was the same criteria as described under Objective Number One, as was the definition of high, medium, and low ratings.

The achievement test administered in May only was designed for this study to measure teacher abilities in six skill areas addressed in the POP in-service program for staff members. These skills had been incorporated into the planning of the in-service program by the district administrators and teachers involved, and were deemed

necessary to utilize this approach to education. The abilities measured and criteria for evaluation are as follows:

1. To place in a proper sequence objectives ranging from low to high order.

This ability was judged "low" if four or more objectives were out of order, "medium" if two or three objectives were out of order, and "high" if one or no objectives were out of order.

2. To write a valuable cognitive objective.

This ability was judged "low" if the submitted objective was technically poor - the three components neither stated nor implied, "medium" if it was technically good but representing only the knowledge level of Bloom's taxonomy, and "high" if it was technically good, higher than the lowest level of Bloom's taxonomy, and valuable relevant in the world outside of the classroom.

3. To write a valuable affective objective.

This ability was judged "low" if it was technically poor, "medium" if it was technically good but either not valuable or poorly measured, and "high" if it was technically good, valuable and included an imaginative means of measurement.

4. To identify in a performance objective the standard of student performance.

This ability was judged "low" if the criterion of performance part of the objective was not identified, "medium" if it was identified but was included with other parts of the objective, and "high" if this part of the objective alone was identified.

5. To design an analogous learning activity for a given performance objective.

This ability was judged "low" if the student behavior was entirely different from that in the objective, "medium" if the behavior was similar but not close enough to help in attaining the objective, and "high" if differences in the specific material existed but the behaviors sought were very similar.

6. To identify the most appropriate medium of activity (large group, small group, independent study) for a given learning goal.

This ability was judged "low" if four or more errors were made, "medium" if two or three errors were made, "high" if one error or less were made.

The analysis of the materials produced consisted of informal observations of those materials several times during the study period. Since a masterbank of materials was not created until the end of the year, samples of materials had to be gathered from various sources

such as individual teachers, department chairmen and curriculum materials developed by curriculum committees. The attempt was made to include materials from each discipline area. Observations included consideration of the technical quality of the objectives, their value to the learner, the domain represented, and the level represented according to Bloom's taxonomy.

Procedure

The junior high school staff was selected as the test group for the pretest-posttest design. In September, this was administered by department and therefore in relatively small groups. The May administration took place at a faculty meeting, and therefore all those participating took the test at the same time. There was no time limit imposed, and everyone seemed to have plenty of time to complete the questions.

The achievement test was included in a length questionnaire administered to all professional staff members in May. Anonymity was guaranteed and these questionnaires were delivered to staff members through their Teachers Association Representative. Several weeks were allowed for return.

Study of the materials produced during the project was continuous, with the investigator collecting samples of materials frequently throughout the school year. Observations and written recordings were made numerous times so that trends could be identified.

Treatment of the Data

Results of the September and May administrations of identical tests were presented in tabular and graphic form to permit comparison,

and to assist in identifying general changes in the abilities of the staff. In addition to this, however, was the question of movement of individuals. How many people had increased, decreased or unchanged skill development? In response to this, the September and May tests of individual teachers were compared and in each of the three skill areas it was determined if skills had increased, decreased, or remained the same.

The May achievement test scores were tabulated and analyzed in terms of the six specified abilities. Further, they were separated into two groups: those attending the in-service program, and those not attending. In this way a comparison of groups could indicate the level of success of the in-service program in providing specified skills.

The observation of the materials produced during the study period were described in narrative form.

Objective Number Three

Each secondary department and elementary curriculum committee will arrange opportunities for students to accomplish learning objectives in topics selected by the students. On the secondary level at least, this will include the opportunity for the students to create these objectives.

Assessment Design

To assess progress in meeting this objective the following two methods were utilized:

1. Questionnaires were administered to students and teachers with items designed to determine their perceptions as to whether students were given opportunities to choose and to create their learning objectives, and
2. The observations and conclusions of the project evaluators were analyzed to determine if those opportunities were available in the classrooms.

Instruments Utilized

Teachers and secondary students were asked to respond to statements concerning opportunities students have in class. Responses to statements were one of five: strongly agree, agree, undecided, disagree, or strongly disagree. Analysis of the reported observations and conclusions of the project evaluators also was utilized in assessing progress in Objective Number Three. Their studies included interviews of participants and in-class observations.

Procedure

Items related to perceptions of classroom opportunities were included in more extensive questionnaires administered to both students and teachers in May. Thus the testing and sampling procedures utilized in administering these items to students are the same as those described in detail under Objective Number Two.

Added data are provided by project evaluators whose conclusion also relied on their informed interviews with many project participants and their in-class observations of instructional programs.

Treatment of the Data

Results of questionnaire items administered to students and teachers to measure their perceptions of student opportunities were presented in tabular form to permit comparative analysis of those perceptions. The five possible responses were grouped for purposes of analysis into "favorable" or "unfavorable" categories. Since the undecided response was seen as unfavorable, two of the five responses were considered favorable and three of the five were considered unfavorable.

Observations and conclusions of the evaluators were analyzed and synthesized by the investigator and discussed in narrative form.

Objective Number Four

District administrators and their staffs will create specific programs to report the progress of individual elementary students to their parents in terms of accomplishment of specific learning objectives.

Assessment Design

To assess progress in meeting this objective, the investigator identified the programs designed to develop systems to report progress of elementary students. Since one reporting system was created in 1971 and another in 1972, these two systems were compared and contrasted to determine if either of them meets this objective.

Procedures Utilized

In addition to identifying the programs through which the two reporting systems were developed, the two systems were analyzed by

comparing both of them as to how they met established criteria. Primarily, the criteria consisted of description stated in this objective: that the system be a realistic means of reporting the progress of individual elementary students to their parents in terms of accomplishment of specific learning objectives. A realistic means of reporting requires that the system not be excessively detailed such that undue efforts or lengths of time be required of the teacher to complete the forms. The forms need apply only to elementary students. Reporting student progress should be the goal of the format. The progress report should be in terms of accomplishment of specific learning objectives. Against these criteria, then, both reporting systems were compared.

Treatment of the Data

A description of the programs which produced the reporting systems and an analytical comparison of the two systems in reference to stated criteria were presented in narrative form.

Objective Number Five

Parents will be provided the opportunity and needed skills to participate in the curriculum building process.

Assessment Design

To assess progress in meeting this objective, existing documents, written communications and the project log were analyzed to determine the number of opportunities offered to parents. Further interviews of parent participants and analysis of resulting products were used to assess the attitudes, understandings and skills of parents.

Procedures Utilized

Responses to parent questionnaires, newspaper articles, notices sent home to parents, letters to and from parents, records of parent meetings, and the project log were all gathered by the investigator. These were analyzed to identify the number and types of opportunities offered to parents to participate in the curriculum building process. The number of parents who fully participated in the instructional program was identified, and these individuals were interviewed to measure their feelings toward their experience and their understanding of the project. To more fully evaluate the skills of these participants, these parents were each asked to submit at least ten properly defined performance objectives which were analyzed for quality. Materials submitted to fulfill this request were studied not only for technical correctness, but also for educational value, creativity, and overall usefulness.

Treatment of the Data

The various data were analyzed and synthesized by way of assessment of this objective. The findings were then organized into narrative form.

The Assessment of the Perceptions and Attitudes Existing Concerning POP

To determine the perceptions and attitudes that existed concerning the Performance Objective Program, questionnaires were administered to teachers and students both in January and again in May, and to parents in May only. These instruments were cooperatively designed

by the project evaluators, the project administrator and district administrators to determine the feelings of the teachers, students and parents toward POP. Each of these three groups will be handled separately in determining the results of those questionnaires.

The Staff's Perceptions and Attitudes Concerning POP

Partially parallel questionnaires were distributed in January and in May to the two hundred twenty professional staff members of the district. Both "open-ended" and "closed" questions were asked, with the "open-ended" questions designed to be general enough to elicit voluntary responses which would truly reflect the feelings of those replying. The "closed" questions consisted of more specific statements to which reactions might be "strongly agree," "agree," "undecided," "disagree" or "strongly disagree." A balance between negative and positive, favorable and unfavorable statements was sought. However, for clarity of analysis and presentation, the results were tabulated with some items reworded such that all statements were favorable to the project's goals. This was done by changing negative statements to positive or positive statements to negative whenever needed, and responses were correspondingly reversed. In tabulation, then, responses were recorded as "strongly favorable," "favorable," "undecided," "unfavorable" or "strongly unfavorable." The percent of responses was recorded under each category for each statement. In calculating the weighted mean score for each statement, a scale from five to one was utilized, extending from "strongly favorable" to "strongly unfavorable."

Questionnaires were distributed to all professional staff members, both in January and May, by the building representatives of the Teachers Association. They were answered anonymously and returned in sealed envelopes. Responses were received from one hundred thirty-three staff members in January, sixty-one percent, and from ninety-nine staff members in May, forty-five percent.

In analyzing these data, questionnaire items were clustered by similar topic. Those four categories and the number of items placed in each are shown in Figure 4.

Number	Category	Number of Questions
1.	The staff's reactions to statements concerning the general concepts and related ideas underlying POP	12
2.	The staff's reactions to statements concerning the operation of POP	5
3.	The staff's reactions to statements concerning the practical operation of POP goals	4
4.	The staff's reactions to statements concerning the degree of implementation of POP in their classrooms	4
	Total	<hr/> 25

Figure 4 - The categorization of the twenty-five statements on the staff attitude survey.

Following are the statements, as tabulated in Chapter V, by category, with item numbers as they appeared on the questionnaire. The original wording may be seen in Appendix D.

The staff's reactions to statements concerning
the general concepts and related ideas underlying POP

- (1) Use of performance objectives helps a teacher to plan instruction that encourages critical thinking.
- (4) Students are capable of evaluating their own progress when given critical.
- (6) Performance objectives are not limiting and narrowing to the educational process.
- (8) "Teaching for the test" is not necessarily detrimental, provided the test is a valid measure of the teacher's instructional outcomes.
- (11) Performance objectives can deal with values.
- (13) Where performance objectives are used, the student knows precisely what is expected of him, what he is to master and what constitutes the minimum level of acceptable performance.
- (14) Students should be involved in the curriculum building process.
- (16) Most purposes of education can be expressed in terms of measurable or observable student performance or behavior.
- (18) Given sufficient time, the slower student would be able to perform the same tasks as students whose progress is more rapid.
- (19) Parents should be involved in the curriculum building process.
- (21) Students achieve more when they know exactly what is to be learned.
- (22) Teachers who specify learning outcomes are less likely to dwell on unimportant issues.

The staff's reactions to statements concerning
the practical operation of POP goals

- (9) The time that a teacher must invest in POP is worthwhile in view of the return from that time investment.

- (10) If feel secure in how I will be evaluated in implementing POP.
- (20) The training I have received in POP has assisted me in developing the program in my area.
- (24) Teachers should have more say in setting the direction for POP.
- (25) POP should be continued next year.

The staff's reactions to statements concerning the practical operation of POP goals

- (5) Parents understand POP.
- (7) My teaching style readily lends itself to the use of performance objectives.
- (15) Performance objectives are useful to me when I communicate with fellow professionals.
- (17) Students understand POP.

The staff's reactions to statements concerning the degree of implementation of POP in their classrooms

- (2) Students have the opportunity to create their own objectives in my classroom.
- (3) I use performance objectives more now than in January 1972.
- (12) I have written as many affective and psychomotor objectives as cognitive objectives.
- (23) Students create their own objectives in my classroom.

Within each category, statements were ordered from most favorably rated to least favorably rated. Percent responses of each of the five possible reactions were recorded, and these were further grouped to demonstrate positive, neutral and negative responses.

The staff's reactions to "open-ended" questions concerning the implementation of POP

In addition to the "closed" questions, "open-ended" questions were asked to elicit voluntary responses reflecting attitudes toward POP. Responses to four questions from the staff questionnaire were analyzed. Categories of similar responses were determined. Categories of similar responses were determined, responses were categorized, and the number and percent responses were tabulated. Following are the four "open-ended" questions as they appeared on the parent questionnaire:

1. How could POP be improved?
2. How has your teaching (or administrative) behavior been affected by POP?
3. How has POP affected how students learn in your classroom?
4. If there are certain students for whom the performance objective approach does not work well, please describe those students.

Data gathered from these questions are presented in tabular and narrative form in Chapter V.

The Students' Perceptions and Attitudes
Concerning POP

Partially parallel questions were administered to two hundred thirty-five secondary students in January and to one hundred ninety-seven secondary students in May. Attitudes and perception questions were limited to "open-ended" questions in January, but included both "open-ended" and "closed" questions in May. These questionnaires were administered to selected classes, chosen cooperatively by administrators and evaluators, with the intent of identifying a representative sample

without disrupting large numbers of classes. Classes were chosen such that the students surveyed would include all secondary grades, seven through twelve, and all five phase levels. One hundred percent return was virtually guaranteed by the method of administration, yet of course individuals might fail to respond to specific items.

"Closed" questions consisted of statements to which reactions might be "strongly agree," "agree," "undecided," "disagree," or "strongly disagree." As described in the preceding section dealing with the staff questionnaire, results were tabulated with some items reworded such that all statements were favorable to the project's goals. Negative statements were changed to positive and positive to negative wherever needed and responses were correspondingly reversed. In this way, for clarity of analysis and presentation, responses were recorded as "strongly favorable," "favorable," "undecided," "unfavorable," or "strongly unfavorable." As previously, the percent of response was recorded under each category for each statement, and weighted mean scores were calculated.

In analyzing these data, questionnaire items were clustered by similar topic. Those categories and the number of items placed in each are shown in Figure 5.

Number	Category	Number of Questions
1.	Secondary students' reactions to statements concerning the degree to which the use of performance objectives has affected the classroom situation.	4
2.	Secondary students' reactions to statements concerning the personal effect that the use of performance objectives has had on their own learning in the classroom.	6
3.	Secondary students' reactions to statements concerning the degree to which they use or have the opportunity to use performance objectives in the classroom.	3
Total		13

Figure 5 - The categorization of thirteen statements on the student attitude survey.

Following are the statements, as tabulated in Chapter V, by category, with item numbers as they appeared on the questionnaire. The original wording may be seen in Appendix E.

Secondary students' reactions to statements concerning the degree to which the use of performance objectives has affected the classroom situation

- (1) Some classes are not taught differently because performance objectives are now used.
- (3) The Performance Objective Program has helped to improve the instruction at school.
- (9) In classes where performance objectives are used, there are increased opportunities to have individual conferences with the teacher.
- (14) Performance objectives give students more opportunity to have a say in what they want to learn and in what the school will teach.

Secondary students' reactions to statements concerning the personal effect that the use of performance objectives has had on their own learning in the classroom

- (4) When performance objectives are used, I get more chance to work at my own pace.
- (5) In classes where I learn the most, performance objectives are used.
- (7) When performance objectives are used, there is a clear relationship between my assignments and the objectives.
- (11) Where performance objectives are used, I know precisely what is expected of me.
- (12) When I work on performance objectives, it is clear how my work will be evaluated.
- (15) Where performance objectives are used, I know precisely what is to be mastered and what constitutes the minimum level of acceptable performance.

Secondary students' reactions to statements concerning the degree to which they use or have the opportunity to use performance objectives in the classroom

- (2) I have a chance to create and work on my own performance objectives in school.
- (6) I am free to choose which performance objectives I will work on.
- (17) I have tried to create my own objectives.

Within each category statements will be ordered from most favorably rated to least favorably rated. Percent responses of each of the five possible reactions were recorded and these were further grouped to demonstrate positive, neutral and negative responses.

Secondary students' reactions to "open-ended" questions concerning the implementation of POP

"Open-ended" questions were asked on the student survey in an attempt to elicit voluntary responses which reflect attitudes toward POP. Categories of similar responses were determined, responses were categorized, and the number and percent of responses were tabulated. Following are the three "open-ended" questions, the responses to which are analyzed in Chapter V:

1. What is the best thing about the Performance Objective Program?
2. Has the Performance Objective Program affected your learning in school? If so, how?
3. How could the Performance Objective Program be improved?

The Parents' Perceptions and Attitudes
Concerning POP

Questionnaires were mailed to parents in May, 1972, to determine the perceptions and attitudes of parents toward POP. There were one hundred fifty-two questionnaires returned, for a twenty-five percent return. "Closed" and "open-ended" questions were asked, with the "closed" questions directed to specific issues. Statements were offered which required "strongly agree," "agree," "undecided," "disagree," or "strongly disagree" responses. Again a balance of positive and negative, favorable and unfavorable statements was sought, and the data were treated in the same manner as it had been for staff and student questionnaires. Again, questionnaire items were clustered by similar topic. The three categories used and the number of items placed in each are shown in Figure 6.

Number	Category	Number of Questions
1.	Parents' reactions to statements concerning their feelings about the general concepts underlying POP.	7
2.	Parents' reactions to statements concerning their feelings about related ideas to the general concepts underlying POP.	6
3.	Parents' reactions to statements concerning the effects of POP in the school which their child attends.	5
	Total	18

Figure 6 - The categorization of eighteen statements on the parent attitude survey.

Following are the statements, as tabulated in Chapter V, by category, with item numbers as they appeared on the questionnaire. The original wording may be seen in Appendix D.

Parents' reactions to statements concerning their feelings about the general concepts underlying POP

- (1) Performance objectives help to individualize instruction.
- (5) Most purposes of education can be expressed in terms of measurable or observable performance or behavior.
- (8) Performance objectives can deal with values.
- (10) Performance objectives are not limiting and narrowing to the educational process.
- (12) Performance objectives will not prevent us from reaching the really important goals of education.
- (14) When performance objectives are used, the student knows precisely what is expected of him, what he is to master and what constitutes the minimum level of acceptable performance.

- (15) The use of performance objectives will not stifle spontaneity.

Parents' reactions to statements concerning their feelings about related ideas to the general concepts underlying POP

- (3) Students can benefit from writing performance objectives.
- (6) Children should have a say in what they learn in school.
- (11) Parents should be involved in curriculum development.
- (16) Parents should have a say in what their children learn in school.
- (17) It is wise to plan in advance how the learner should behave after instruction.
- (20) Parents should be included on curriculum committees.

Parents' reactions to statements concerning the effects of POP in the school which their child attends

- (2) POP makes a difference in my child's school life.
- (7) My child's teacher(s) are using POP effectively.
- (9) POP helps the teacher to motivate my child to do his school work.
- (13) POP meets the educational needs of my child.
- (18) The Performance Objective Program has increased discussion among parents and teachers about important educational matters.

As previously done, statements were ordered from most favorably rated to least favorably rated within each category. Percent responses were recorded and further grouped to show positive, neutral and negative reactions.

The parents' reactions to "open-ended" questions concerning the implementation of POP

To elicit voluntary responses from the parents, reflected their perceptions and attitudes toward POP, "open-ended" questions were included on the questionnaire. Three of those questions have been presented, with responses to them categorized, and the number and percent responses tabulated. Following are those questions as they appeared on the parent questionnaire:

1. How has the Performance Objective Program affected your children this year?
2. What is the best thing about POP?
3. How could POP be improved?

The data will be presented in Chapter V in tabular, graphic, and narrative form, with numbers of responses, percentages, and the results of analysis to determine the level of significance between percents of responses. Significant difference was determined in comparing results which indicate change due to time, in items administered in January and again in May to the same population. Level of significance was also determined in comparing percent responses of different populations such as parents and teachers.

In order to determine the level of significance, the following formula was used:

$$t = \frac{P_1 - P_2}{\sqrt{\frac{P_1 q_1}{N^1} + \frac{P_2 q_2}{N^2}}}$$

P_1 = percent of group one that possess same trait

q_1 = percent of group one that does not possess the trait

P_2 = percent of group two that possess same trait

q_2 = percent of group two that does not possess the trait

N^1 = number of participants in group one

N^2 = number of participants in group two

The D.F. was calculated using the following formula:

$$D.F. = N^1 + N^2 - 2$$

Any "t" score that had a level of significance above the .01 level was so signified.¹ In Chapter V the data which were gathered as assessment of five selected objectives and of the attitudes and perceptions of parents, students and teachers toward the Performance Objective Program will be presented and analyzed.

¹R. H. Koenker, Simplified Statistics (Bloomington, Illinois: McKnight and McKnight Publishing Co., 1961), pp. 100-101.

C H A P T E R V

PRESENTATION AND ANALYSIS OF THE FINDINGS

In this chapter is presented an analysis of the data related specifically to the assessment phase of the study. In the previous chapter the five selected program objectives were identified, and a description of the methodology employed for assessing each of the objectives was laid forth. In addition, a description was made of the procedures used for assessing the perceptions of the teachers, students, and parents concerning the Performance Objective Program. The following sections will focus on 1) the assessment of the progress made in achieving the five selected program objectives, and 2) the assessment of the perceptions of the teachers, students, and parents concerning various aspects of the Performance Objective Program.

Presentation and Analysis of the Findings Related to the Achievement of the Five Selected Program Objectives

In this section is presented an analysis of the data that was collected for the purpose of assessing each of the five selected objectives of POP. A separate presentation and analysis of the data related to each of the objectives is provided in the following sections.

Presentation and Analysis of the Findings
Related to Objective Number One

The first selected program objective was, "Secondary students in the Amherst-Pelham Regional School District will be able to differentiate between a properly defined and improperly defined student performance objective, and will be able to write properly constructed performance objectives." In order to assess this objective, a sampling of secondary students were tested in January and May to determine skills of recognizing properly defined performance objectives, and the mean scores, by grade level.

In Table 3 are presented the data indicating the mean scores, by grade level, achieved by the students on these tests. As is illustrated by the data in this table, the difference between the mean scores achieved in January and those achieved in May did not reach a level of statistical significance. On the other hand, there is an indication that May scores were slightly lower than those achieved in January, with the eleventh grade difference of -1.1 being the greatest change. It must be taken into consideration that prior to the January testing, a concentrated effort had been made to develop student skills, whereas during the January to May period this effort was intentionally de-emphasized by project and district administrators. The decision to do this was made because teachers had expressed the opinion that student attitudes would be adversely affected if concentration on skill development continued. Rather, instruction in related skills was dealt with solely by teachers and in most cases this was done as tangential learning with other primary objectives.

TABLE 3
 MEAN SCORES, BY GRADE LEVEL, OF AMHERST SECONDARY STUDENTS TO TEST QUESTIONS GIVEN IN JANUARY AND MAY 1972,
 ASSESSING THE ABILITY TO RECOGNIZE PROPERLY DEFINED PERFORMANCE OBJECTIVES

Grade Level	Mean Raw Test Scores				Difference in Scores	
	(N)	January (N = 238) Raw Score*	S.D.	May (N = 197) Raw Score		S.D.
7	(34)	7.2	1.69	7.0	1.45	-.2
8	(52)	7.0	1.80	6.7	1.85	-.3
9	(35)	7.1	1.81	6.2	1.29	-.9
10	(35)	6.7	1.90	6.2	1.81	-.5
11	(53)	7.3	1.88	6.2	1.65	-1.1
12	(29)	7.3	2.50	7.3	1.67	0.0
		7.1		6.5		-.6**

*The percent score is the raw score x 10

**Not significant

Data presented in this table also indicate that twelfth grade students attained the highest mean score, 7.3, and the least loss of skills between January and May. In light of their approaching graduation, their achievement and retention levels are both above expectation.

Table 4 sets forth the data gathered for this investigation concerning the ability of Amherst secondary students to write properly defined performance objectives. Since there was little difference between grade levels on this ability, the table represents grades seven through twelve. In the accompanying Figure 7, these data are presented graphically to indicate motion or change of ability level. The differences in the percentages shown in Table 4

TABLE 4

A COMPARISON OF THE PERFORMANCE OF THE PERFORMANCE OF AMHERST SECONDARY STUDENTS TO TEST QUESTIONS GIVEN IN JANUARY AND MAY 1972, ASSESSING THE ABILITY TO WRITE PERFORMANCE OBJECTIVES

Rated Score	Number and Percent of Those Attaining Rated Score				
	January (N = 235)		May (N = 197)		Difference
	#	%	#	%	%
High	49	21	79	40	+19
Medium	151	64	81	41	-23
Low	35	15	37	19	+4

indicate an increasing polarity, with the percent rated low increasing by four and the percent rated high increasing by nineteen. As clearly indicated in Figure 7, the greatest change was a reduction of medium scores, followed by an increase of high scores. The movement indicated then, is primarily upward from the medium to high rating. Again,

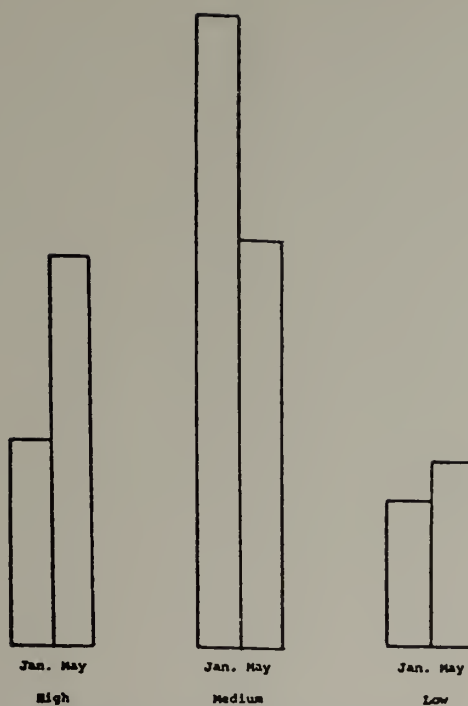


Figure 7 - A comparison of the Percentages of high, medium and low scores, in January and May, of students' ability to write performance objectives.

it should be remembered that the development of related skills in students was de-emphasized by the administration in the period between these tests. While statistical analysis indicated that changes in the scores on questions measuring ability to recognize properly defined objectives were not significant, this does not necessitate a conclusion that Objective Number One has not been met. Mean scores of 7.1 and 6.5, while not wholly satisfying, do indicate a level of success which may or may not be a realistic and acceptable level of success. Greater success in this objective was demonstrated by the movement toward higher scores in the writing of performance objectives. This movement, considered in light of the decisions made not to concentrate on skill development, indicate a possible altered school environment

which encourages the development of this skill. The slight decrease in the ability to recognize properly written objectives, simultaneous to an increase in the ability to write objectives, suggests that students had practiced the more useful skill of writing objectives. This appears to support the decision, initiated by the teaching staff, to de-emphasize skill development. Nevertheless, the decrease of skills demonstrated in Table 3 demands close monitoring to determine if skills are being slowly lost.

Presentation and Analysis of the Findings Related to Objective Number Two

The second selected program objective was, "The teachers in the Amherst-Pelham Regional School District will: a) demonstrate the abilities necessary to utilize performance objectives, and b) develop the materials necessary to implement a high quality individualized instructional program." In order to assess this objective, three methods were employed: 1) identical tests were administered to a sampling of teachers in September and in May to assess abilities in three basic skills, 2) a test was administered to all staff members in May to assess abilities in six skill areas, and 3) inspection of the materials produced during the project was made, and recordings of those observations were used in the analysis.

In Table 5 and in Figure 8 data are presented which were gathered as partial measurements of the abilities of teachers involved in this project. Three skills were assessed in September and May by means of identical tests, and, as described in Chapter IV, performance was judged as high, medium, or low. It of course must be taken into

TABLE 5

A COMPARISON OF THE PERFORMANCE OF ATHERST TEACHERS ON IDENTICAL TESTS ADMINISTERED IN SEPTEMBER AND MAY 1972, MEASURING STATED SKILLS (N = 38)

<u>Skill</u>	<u>Rating</u>	<u>Percent of Those Attaining Rated Score</u>		
		<u>September</u> <u>%</u>	<u>May</u> <u>%</u>	<u>Difference</u> <u>%</u>
#1 To identify properly defined objectives.	High	36.8	44.8	+8.0
	Medium	55.3	52.6	-2.7
	Low	7.9	2.6	-5.3
#2 To correct improperly defined objectives.	High	21.0	28.9	+7.9
	Medium	58.0	58.0	0
	Low	21.0	13.1	-7.9
#3 To write properly defined objectives.	High	31.5	55.3	+23.8
	Medium	58.0	36.8	-21.2
	Low	10.5	7.9	-2.6

consideration that the fact that teachers were taking the same test may have resulted in improved scores. However, due to the considerable time between tests and since none of the teachers had seen these questions since the original administration of the test, it is believed that the second testing was not contaminated. Nevertheless, this possible familiarity with the questions may contributed to the general increase in scores.

Analysis of Table 5 shows that in the September results, in all three skill areas, over half of those tested demonstrated a medium level of achievement. At that time, the largest percent of high scores were in the ability to identify properly defined objectives (36.8%),

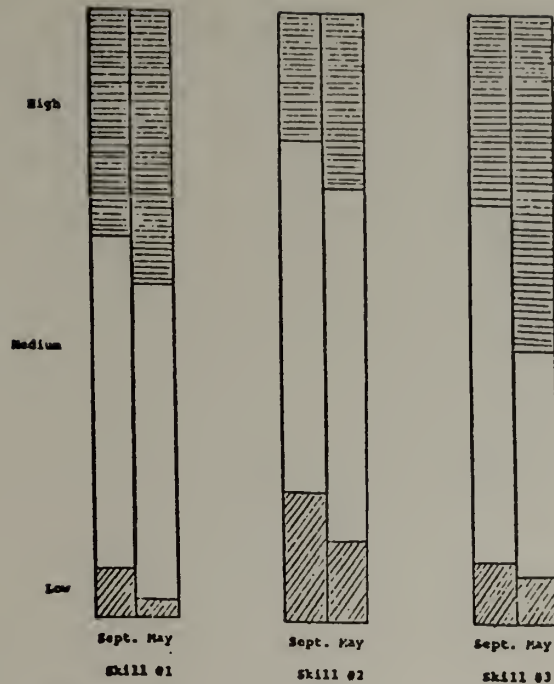


Figure 8 - A comparison of the percentages of high, medium and low scores, on tests administered in September and May, of teachers demonstrating three skills.

while the largest percentages of low scores were in the ability to correct improperly defined objectives (21.0%). By the May testing, the percentages of the medium rated scores had decreased in two of the skills and had stayed the same in the third. Those rated "low" had decreased in all three. Perhaps most significant was the difference in high scores on the third skill, the ability to write properly defined objectives. In this skill, which many would judge to be the most important, the percents had increased by 23.8, nearly triple the increase in any other area. It would seem that this skill would be least affected by the repetition of the same test and most affected by the practice of preparing curriculum materials.

A comparison of the percents of those ranked high, medium, or low in September and in May is clearly depicted in Figure 8. Most noticeable here is the large percent of those ranked "high" in ability to write objectives in May, and the small percentage of those ranked "low" in the ability to identify properly defined objectives in May. This appears to indicate a clear improvement in the measured skills on a district-wide basis.

Undescribed by previously discussed data is the level of individual change - the numbers and percentages of teachers whose skills increased, decreased, or remained the same. This information is presented in Table 6. By comparing the September and May tests of each person involved, change of ability could be identified. As indicated in Table 6, several people were found to have decreased in ability. The reason for this is unclear, but in spite of administrative pressure and available in-service assistance, some teachers performed worse in May than at the beginning of the project.

TABLE 6

FREQUENCY DISTRIBUTION OF STAFF MEMBERS WHO DEMONSTRATED INCREASED, UNCHANGED OR DECREASED SKILLS ON ASSESSMENT TESTS GIVEN IN SEPTEMBER AND MAY 1972 (N = 38)

<u>Skill</u>	<u>Numbers and Percentages of Staff Members</u>					
	<u>Increased</u>		<u>Unchanged</u>		<u>Decreased</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
#1 To identify properly defined objectives.	14	36.8	15	39.5	9	23.7
#2 To correct improperly defined objectives.	11	28.9	24	63.2	3	7.9
#3 To write properly defined objectives.	15	39.5	20	52.6	3	7.9

As may be further noted from Table 6, although the largest percentages are found in the "unchanged" category, those showing an increase in ability are quite numerous. Again considering the third skill to be the more valuable, the fact that 39.5 percent of those tested increased in their skill is quite important.

The results of a further measurement of teacher skills are set forth in Table 7. Six skills were measured, and analysis included a comparison of the scores of those teachers attending the in-service program with those not attending the in-service program. With the exception of ability #4, there were more "high" scores in the group attending in-service, and there were more "low" scores in the group not attending. High ratings in ability #4 on the other hand, the ability to identify in a performance objective the standard of student performance, were found more often in those not attending, and low ratings were equally frequent in both groups. While indicating that mere attendance will not guarantee success in all measured skills and that this test did not merely separate those attending from those not attending, these results also evidence a confusion resulting from the in-service program. Clearly in one case, the ability sought is in fact not being developed by those attending the in-service program.

In general, however, the results of this measurement show a higher level of ability among those attending the instructional sessions. The ability to write affective objectives and the ability to design learning activities were clearly more frequent in the attending group.

TABLE 7

FREQUENCY DISTRIBUTION OF STAFF MEMBERS, ATTENDING OR NOT ATTENDING IN-SERVICE TRAINING PROGRAM, WHO HAVE DEMONSTRATED LOW, MEDIUM OR HIGH SCORES ON A SKILLS ACHIEVEMENT TEST ADMINISTERED IN MAY 1972 (N = 88)

Ability	In-Service Attendance	Number and Percent of Those Attaining Rated Score					
		Low		Medium		High	
		#	%	#	%	#	%
#1 To place in a proper sequence objectives ranging from low to high order	Yes	7	15	11	23	30	62
	No	8	<u>20</u>	16	40	16	<u>40</u>
	Difference		5				22
#2 To write a valuable cognitive objective	Yes	5	10	17	36	26	54
	No	11	<u>27</u>	15	38	14	<u>35</u>
	Difference		17				19
#3 To write a valuable affective objective	Yes	14	29	7	15	27	56
	No	25	<u>62</u>	7	17	8	<u>20</u>
	Difference		33				36
#4 To identify in a performance objective the standard of student performance	Yes	7	15	16	33	25	52
	No	6	<u>15</u>	5	12	29	<u>73</u>
	Difference		0				21
#5 To design an analogous learning activity for a given performance objective	Yes	15	31	11	23	22	46
	No	30	<u>75</u>	5	12	5	<u>12</u>
	Difference		44				34
#6 To identify the most appropriate medium of activity (large group, small group, independent study) for a given learning goal	Yes	4	8	10	21	34	71
	No	6	<u>15</u>	9	22	25	<u>63</u>
	Difference		7				8

In attempting to assess the development of materials necessary to implement a high quality individualized instructional program, it was thought that this would include evaluation of objectives, learning activities, and test items. Initially banks of all three categories were begun, but within one month of project operation, teachers asked that the defining of test items for each objective be largely dropped. After much discussion, it was decided that a well-written objective usually had within it a clear description of the means of measuring success. Since a properly defined objective contains a description of the minimum level of acceptable performance, it was decided that in most cases stating a test item was redundant, and consequently separate test items would be included in objective banks only when the teacher felt a need for them.

Primarily, then, the materials developed for instructional purposes include the performance objectives and the alternative learning activities. Inspection of the banks of objectives prepared prior to June, 1972, indicate many well-prepared and well-organized objectives resulting from summer research and development projects and numerous but less skillfully written and less thoroughly organized objectives prepared during the school year. Approximately five thousand objectives were contained in the master bank by June of 1972. Inspection of this bank throughout the year indicated that the quality of objectives being prepared was changing. While many of those written by R & D teams were of a high quality, prior to January, 1972, the general quality of the bank was questionable. Numerous objectives, for example, failed to indicate a level of acceptable

performance. Seemingly, difficulties in the technical aspects of writing objectives were common. In consideration of the educational value of the objectives, analysis by domain and taxonomic level, using criteria established by Bloom and his associates, was undertaken with a small sampling of objectives. It was immediately evident that the vast majority of the bank consisted of low level cognitive objectives. An inspection of the objectives developed between January and May, however, revealed some interesting changes. While the affective and psychomotor domains were largely ignored, an improvement occurred in the cognitive area. Many more high order cognitive objectives were noticed, and apparently teachers were avoiding the rote memory or knowledge level objective. This broadening of the types of cognitive skills sought is seen as a healthy sign, perhaps encouraged by the in-service program; yet the lack of affective and psychomotor objectives indicates a difficulty worth watching.

Study of the banks of alternative learning activities indicates, again, a difference between materials prepared in summer R & D projects and those prepared during the school year. Generally, materials developed during the summer include several alternative activities for each objective, whereas those developed during the year more often are limited to fewer alternatives. Furthermore, activities appear to be common textbook or classroom activities rather than widely creative alternative approaches. Although movement towards non-print materials may be demonstrated, there is little evidence in inspection of activity banks that this has yet reached the

point of being organized and categorized into banks which correspond to established performance objectives.

While much work, in form of publications, in-service programs, consultant help and research and development projects has been done to meet this objective, it is clear that much work remains. It is evident that a high degree of relevant skills are present in the Amherst-Pelham teaching staff, but it is further evident that much remains to be done to develop the skills necessary to implement high quality individualized instruction. While this investigation dealt only with skills measurable in writing, beyond the scope of this study is the assessment of the in-class implementation skills which are required. A high level of technical skills have clearly been demonstrated by numerous teachers throughout this district. Nevertheless, some have shown that they have not attained these skills, and more work must be done in this area. Beyond that there is an evident need for the development of skills of implementation which were not emphasized to any extent during the study period.

Inspection of the materials developed to permit individualized instruction indicates the following:

1. A great deal of work has gone into the preparation of these materials.
2. Contributions from R & D projects have been excellent.
3. A high level of technical skill exists among the teaching staff.
4. Growth is occurring in the quality of cognitive performance objectives.

5. There has been a lack of materials produced in the other domains, with affective materials notably missing.
6. Alternative learning activity banks have not been developed sufficiently.
7. Much work remains in developing skills and methods needed to implement a high quality individualized instructional program.

Furthermore, the decision not to encourage the development of separate test items with each objective has not been studied in practice to discover if in fact it was based on sound assumptions. Although it is reasonable that the behavior stated in the objective should be the criterion for evaluation, actual marking procedures have not been assessed to determine if teachers in fact evaluate children on the criteria stated in objectives. This of course is most difficult to do when evaluation is through informal observation; yet no attempt has been made to compare written test items, where they are used, to stated performance objectives. Unanswered, then, is the question of whether teachers are really evaluating their students on the criteria expressed in the performance objectives.

Presentation and Analysis of the Findings Related to Objective Number Three

The third selected objective was, "Each secondary department and elementary curriculum committee will arrange opportunities for students to accomplish learning objectives in topics selected by the studentss. On the secondary level, at least, this will include the opportunity for students to create these objectives." Assessment of this objective

included the following two procedures: 1) responses to questionnaires administered to teachers and students were analyzed to determine their perceptions as to whether students were given opportunities to choose and to create their learning objectives; and 2) the observations and conclusions of the project evaluators were analyzed to determine if these opportunities were available in the classrooms. In Tables 8, 9, and 10, the perceptions of students and teachers are presented such that comparisons may be made. While respondents could choose responses of strongly agree, agree, undecided, disagree, or strongly disagree, it was decided that for the purposes of this study, "undecided" responses would be considered as a response unfavorable to attainment of project goals. Therefore, two of the five possible responses will be considered as favorable and three of the five will be considered unfavorable. As may be seen in Table 8, only twenty-seven percent of the responding students felt that they were free to choose which performance objectives they would work on, leaving seventy-three percent unfavorable responses.

TABLE 8

RESPONSES OF SECONDARY STUDENTS TO A STATEMENT CONCERNING THEIR PERCEPTIONS OF CLASSROOM OPPORTUNITIES

Statement	Percentages of Responses						
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Favorable	Unfavorable
	A	B	C	D	E	AB	DE
	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>
I am free to choose which performance objectives I will work on.	6	21	17	34	22	27	73

A comparison of student and teacher perceptions as to whether students create their own objectives in class is presented in Table 9. Little difference between the two groups exists, with a general indication that about half of the secondary students have created their own objectives.

TABLE 9

A COMPARISON OF STUDENT AND TEACHER RESPONSES TO STATEMENTS CONCERNING THEIR PERCEPTIONS OF CLASSROOM ENVIRONMENT

Statement	<u>Percentages of Responses</u>						
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Favorable	Unfavorable
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>AB</u>	<u>DE</u>
Student - (N = 197) I have tried to create my own performance objectives.*	19	36	11	23	11	55	45
Teacher - (N = 99) Students create their own objectives in my classroom.	16	37	15	28	4	53	47

*Originally worded negatively, this statement was changed to affirmative and its responses were reversed for clarity of presentation.

In Table 10 is a comparison of student and teacher perceptions as to whether students have opportunities to create their own objectives. Different perceptions are evident. Although students are divided in opinion on this question, forty-seven percent did believe they do have this opportunity. However, much more extreme is the teacher response, with seventy-one percent signifying that students are afforded the opportunity. It is noteworthy that over

half of the responding students do not indicate that they are being offered this opportunity.

TABLE 10

A COMPARISON OF STUDENT AND TEACHER RESPONSES TO STATEMENTS CONCERNING THEIR PERCEPTIONS OF CLASSROOM ENVIRONMENT

Statement	Percentages of Responses						
	Strongly Agree A	Agree B	Undecided C	Disagree D	Strongly Disagree E	Favorable DE	Unfavorable ABC
Student - (N = 197) I never have a chance to create and work on my own performance objectives in school.	10	19	24	34	13	47	53
Teacher - (N = 99) Students do not have the opportunity to create their own objectives in my classroom.	4	15	10	51	20	71	29

Project evaluators have identified a limited degree of success in this objective, indicating that some students do have the opportunity to choose from various sources of objectives. Utilizing questionnaires and in-class observations, the evaluation team determined that students are given choices of resource centers or courses within a subject area, and some are given choices from among objectives prepared by the teacher. However, forty percent of the students observe no changes in school due to the program, and agree that the program would be improved if students were given more training and were allowed to make up more of their own objectives.

Data from teachers, students and evaluators indicate limited success with this objective. Although some students are being offered opportunities to choose objectives and to create their own objectives, numerous students are not being offered these opportunities. Discrepancies between student and teacher opinion on student opportunities to create their own objectives may indicate that activities seen by teachers as such opportunities may be seen by students as assignments. For example, teachers may have directed students to write objectives, seeing this as instruction in the program as well as an opportunity for students to contribute ideas for the course. If little or no follow-up takes place, the student may see this as merely another assigned task, and not as an increased opportunity to have a say in the course of study. Whether or not this is the case, evidence demonstrates a need for further emphasis in this area so that the limited number of students given these opportunities will increase.

Presentation and Analysis of the Findings Related to Objective Number Four

The fourth selected objective was, "District administrators and their staffs will create specific programs to report the progress of individual elementary students to their parents in terms of accomplishment of specific learning objectives." In order to assess progress in meeting this objective, the specific programs implemented to attain this objective were traced. The products of those programs - the resulting reporting systems - were then compared and evaluated, with the evaluation based on stated criteria.

During the summer of 1971, a team of teachers undertook the task, as a Research and Development Project, to design an elementary report card which would report student achievement in a means consistent with this objective and this program. Their product was a multi-sectioned report, designed such that Mathematics, Reading, Language and Spelling sections would be sent home at a given time, and Science, Social Studies, Music, Physical Education, Art and French sections would be sent at alternate times. (For an example, see Appendix C.) This form was implemented in November, 1971, and was soon found to have deficiencies. In designing it, the team had tried to report in terms of specific objectives, found this to be too lengthy to be practical, and instead utilized categories which were content areas within each discipline. Achievement was indicated by a check in one of three columns: 1) ... has successfully achieved the objectives in this area, 2) ... has been working on objectives in this area but improvement is needed, or 3) ... is currently working on objectives in this area but no evaluation has been made at this time. Reactions of both parents and teachers indicated that revision was needed. Consequently, elementary administrators designed a questionnaire which sought comments and suggestions from parents and teachers. An R & D project for the summer of 1972 was designed to analyze the information gathered and to develop a more satisfying reporting system. The product of that team was implemented in October, 1972. (For an example of this reporting system, see Appendix C.) While teacher, student, and parent reactions could not be measured until much later in the year, a comparison of the two

systems of reporting, and an assessment of whether or not the new report meets the criteria established in Objective Number Four is in order.

Both reporting systems were the result of R & D projects which resulted from proposals by administrators and teachers. Both attempted to design a report card which would report in terms of performance objectives. Both categorized the report into Language Arts, Mathematics, Science, Social Studies, French, Physical Education, Art, Music, and Attitude. The new system added Health to that list. Due to the questionnaire responses, the more recent project had the advantage of having more objective data available to provide direction, suggestions, and preferences. Whereas the earlier report utilized statements or phrases of general content area within each discipline (e.g., numeration, measurement, mathematical application), the more recent design incorporates a list of "the major objectives in this unit." Where the earlier report offered three columns, previously defined, which could be checked off after each content area, the latest report, after each major objective, indicates that the student "has met the objectives" or "has not met the objectives." Furthermore, the latest report presents a description of each unit, definitions of terms used, and space for comments by the teacher. Keyed to parent conferences with the teachers, the report is scheduled such that the Language Arts, Mathematics, Attitude, French, Physical Education, Art and Music sections will be sent home in January and in May, while the Science, Health and Social Studies sections will be sent home, page by page, as the child completes units in that area. Additionally, those who developed this

system state that it should also become the record keeping system for each elementary teacher, such that these forms would be used as a continual recording of student progress. This would of course not only organize the difficult task of recording student achievement, but greatly simplify the filling out of a report card. Two tasks become greatly unified.

Although reaction to the new reporting system is unknown at this time, the product itself clearly meets the criteria established for it. Reporting of student progress is in terms of specific learning objectives, and the use of a few major objectives for each area or unit makes the task of filling out the report to be realistic. Further, combining the record keeping and reporting tasks into one operation will, if it works, reduce greatly the time spent on both. As agreed upon by the project evaluators, this new reporting system fulfills Objective Number Four.

Presentation and Analysis of the Findings Related to Objective Number Five

The fifth objective was, "Parents will be provided the opportunity and skills to participate in the curriculum building process." To assess progress in meeting this objective, the history of parent involvement with the project was traced, and the opportunities provided for parent participation were identified.

In January, 1971, a questionnaire was sent to all parents of children in the local schools. It asked, among other things, for volunteers to assist in developing curriculum materials. One hundred eighty-seven parents signified a willingness to help. An "Education

Newsletter" was published in September, 1971, and here too, parents were encouraged to participate. Through invitations to all those who had signified an interest, two groups of parents were scheduled for meetings on October 5th and 7th. The program was discussed, questions answered, and parents were requested to return for further training so that they would be qualified to assist teachers in curriculum development. Subsequent sessions were scheduled, and the original groups of about thirty soon reduced to four. It appeared that many participants wished to debate the virtues of the project or to hear explanations of it, but few were willing to attend instructional sessions.

The project Administrator spoke to several parent councils throughout the school district, as well as to smaller groups of parents. In general, most wanted to discuss the philosophical implications of the program, the resulting instructional methods, and the effects on their children. A few had specific areas of the system that they wished to affect, but most were unwilling to develop the skills required. Parents were asked to attend four instructional sessions.

Mini-paper #14 was issued which signified three means a parent could contribute to school offerings:

1. If he feels his objectives apply specifically to his child, he may send them directly to the teacher involved.
2. If he feels his objectives apply to a wider range of students, and should be considered for school-wide or district-wide adoption, he may send them to the appropriate curriculum committee chairman.

3. If he feels that he would like to meet with a curriculum committee or secondary department, he may contact the chairman and then meet with the curriculum committee.

Again, the project Administrator gave several presentations to groups of parents, and numerous newspaper articles appeared concerning the program. Additionally, the Superintendent of Schools gave two widely publicized presentations, December 2nd and 5th, explaining this project and encouraging participation, District administrators were also on stage at these meetings, and all questions were answered. Names of those who wished to take part in classes were collected, and a group began to meet. Although this group reduced in size, commitment existed, and several excellent products resulted.

In total, six parents completed training. The first product from this group was an innovative approach to Physical Education previously discussed in Chapter III. Here a parent advocated de-emphasis of competition and concentration on personal growth. A rationale, some well-prepared performance objectives, and several learning activities were included. This proposed program brought a great deal of pressure onto the Physical Education Department to change. It resulted in numerous discussions, some new offerings, and some beginning of innovation in the department.

Other parents in this group prepared materials which presented a truly different perspective than teachers usually employ. Creative writing objectives were submitted. Objectives for elementary students concerning appreciation of literature was another area of development. In general, the parents who did take part in the full training program did in fact prepare extremely creative suggestions.

Interviews with those parents who had completed training indicated a fairly thorough understanding of the program and positive attitudes toward its goals. Although many reservations remained concerning the viability of this approach, increased understanding appeared to result in greater willingness to try it and a more openmindedness about its possibilities. While these parents considered POP to be primarily designed to clarify goals and to provide accountability, they agreed with its fostering of individualized instruction and increased self-direction. Several identified a need to emphasize quality of instruction; yet in general it was felt that the project does improve teaching.

While numerous opportunities were offered to parents to participate in the program, the fact that only six completed training indicates a difficulty. The materials produced by those parents have demonstrated that the skills were being provided and that the parental perspective can be an extremely valuable addition to a curriculum committee of teachers. Evidence further indicates that the more positive understanding and attitudes resulting from these sessions could provide a base of parental support needed to encourage further growth of the project.

Nevertheless, the small number of participants suggests that alternative means of involvement should be considered. The fact that numerous people signified a willingness to participate, yet did not, would imply that participation might increase if a form of less in-depth participation, not requiring preparatory instruction, presented a more immediate means of offering positive input. Those

parents who would like to make suggestions relating to the curriculum yet are willing to spend only one or two evenings to do so, are not presently offered this opportunity.

Presentation and Analysis of the Findings
Related to the Existing Perceptions
of the Performance Objective Program

The preceding section has presented and analyzed the data gathered as it relates to each of five selected objectives. In this section, data will be presented and analyzed as they relate to the perceptions of the Performance Objective Program among three groups: the teachers, the students and the parents. These data will be presented under the following three headings:

1. Results of the staff's reactions to statements concerning the Performance Objective Program.
2. Results of the secondary students' reactions to statements concerning the Performance Objective Program.
3. Results of the parents' reactions to statements concerning the Performance Objective Program.

The following is a presentation and analysis of data concerning the existing perceptions of teachers, students and parents of the Performance Objective Program.

Results of the Staff's Reactions to Statements
Concerning the Performance Objective Program

In January and May 1972 the professional staff members of the Amherst Schools were asked to react to a number of "closed" and "open-ended" questions. These questions were designed to elicit the staff's opinions toward various aspects of the Performance Objective Program. In the present section of this report, a summary of the results to the "closed" questions asked in May is presented and analyzed. This analysis is followed by a more detailed presentation and analysis of the staff's reactions to specific categories under which the various items may be grouped. In addition to the detailed analysis of the May results from the "closed" questions, the following information is presented: 1) comparisons with the January results from the "closed" questions, and 2) a presentation and analysis of the results from the categorization of the "open-ended" questions. This latter information is offered in an attempt to clarify the results from the "closed" questions.

In Table 11 are presented the data resulting from the staff's reaction in May to the "closed" questions relating to the Performance Objective Program. As is indicated from these data, sixty-one percent of the total responses to the statements are favorable toward the program (recorded as a "Positive Response"). Twenty-two percent of the responses are unfavorable toward the program, while seventeen percent of the total number of responses are neutral. The data in this table indicate that for forty percent of the items (ten items),

TABLE 11

A SUMMARY OF THE RESULTS OF THE PROFESSIONAL STAFF'S REACTIONS IN MAY 1972 TO STATEMENTS RELATING TO VARIOUS ASPECTS OF THE PERFORMANCE OBJECTIVE PROGRAM (N = 99)

Ranking	Focus of the Statement(Summarized)	Item (#)	Positive	Neutral	Negative	Weighted Mean Score
			Response %	Response %	Response %	
1.	Students should be involved in Curriculum building.	(14)	84	13	3	4.19
2.	Performance Objectives generate preciseness of expectations for the student.	(13)	89	8	3	4.16
3.	Teachers should have more decision-making in POP.	(24)	81	15	4	4.10
4.	Parents should be involved in Curriculum building.	(19)	80	15	6	4.09
5.	Students achieve more by knowing what is to be learned.	(21)	81	9	10	4.08
6.	Purposes of education can be expressed in Performance Objectives.	(16)	80	14	6	4.07
7.	Performance Objectives can encourage Critical Thinking.	(1)	80	14	6	4.05
8.	Performance Objectives can deal with Values.	(11)	75	14	11	3.97
9.	Students are capable of evaluating their own progress.	(4)	77	17	6	3.93
10.	Specifying Learning Outcomes causes a teacher to dwell on the important issues.	(22)	75	12	13	3.91
11.	My teaching style lends itself to Performance Objectives.	(7)	68	10	22	3.81
12.	POP should be continued next year.	(25)	63	23	14	3.75
13.	Performance Objectives are useful when communicating with fellow professionals	(15)	62	25	13	3.68
14.	Students have the <u>Opportunity</u> to create their own performance objectives in my classroom.	(2)	71	10	19	3.68
15.	"Teaching for the test" is not necessarily detrimental.	(8)	64	14	17	3.61
16.	Performance Objectives are <u>not</u> narrowing or limiting.	(6)	63	18	19	3.60
17.	I use Performance Objectives more now than in January 1972.	(3)	58	12	30	3.44
18.	Students create their own Performance Objectives in my classroom.	(23)	53	15	32	3.33
19.	My time investment in POP is worthwhile.	(9)	48	27	25	3.30
20.	The training received from POP has helped me.	(20)	54	15	31	3.26
21.	I feel secure about how I will be evaluated in implementing POP.	(10)	41	21	38	3.02
22.	Students understand POP.	(17)	27	30	43	2.77
23.	Given sufficient time, slower students should be able to perform the same as other students.	(18)	30	16	54	2.67
24.	I have written as many affective and psychomotor objectives as cognitive objectives.	(12)	28	8	64	2.52
25.	Parents understand POP.	(5)	5	36	59	2.23

seventy-five percent or more of the staff provided positive responses to the statements concerning the Performance Objective Program. Over seventy-five percent of the items (nineteen items) elicited positive responses from fifty percent or greater of the staff.

Twelve percent of the items (three items) elicited negative responses (unfavorable toward the program) from fifty percent or greater of the staff. On thirty-six percent of the items (nine items), twenty-five percent or greater of the staff provided responses which were unfavorable toward the program.

The data in the table indicate that the highest percent of positive response to any one statement was eighty-nine percent, while the highest percent of negative response to any one statement was sixty-four percent. On only two of the items, thirty percent or more of the staff members were undecided about the statement (provided a neutral response). Less than one-fourth of the items (six items) elicited a neutral response from twenty percent or greater of the staff.

In summary, these results appear to indicate that the staff members have expressed definite opinions, either positive or negative, toward the statements to which they reacted. This is surmised from the relatively small percent of neutral responses. The data also appear to indicate that for most of the statements (three-fourths of the items), the majority of staff members expressing definite opinions, have provided responses which are favorable toward the Performance Objective Program.

The statements presented in Table 11 can be clustered into four general categories. These categories are: 1) statements focused on

the general concepts and related ideas underlying POP; 2) statements focused on the operation of the POP program; 3) statements focused on the practical operation of the POP goals; and 4) statements concerned with the degree of implementation of the POP goals in the classroom. In the following sections are presented the data relating specifically to the staff members' reactions to these statements, as they are clustered within the four general categories. In addition, pertinent presentations and analysis are made of the data resulting from the staff's reactions in January and May to the "open-ended" questions, and to the "closed" questions from the questionnaire administered in January.

The Staff's Reactions to the General Concepts and Related Ideas Underlying POP

Eight of the statements presented in Table 11 are focused specifically on the general concepts underlying the Performance Objective Program. In Table 12 are presented the results of the staff's reactions in May to these statements relating to their feelings about the general concepts underlying the Performance Objective Program.

As is indicated from the data in this table, seventy-six percent of the total number of responses made to the statements in this category are positive responses. That is, over three-fourths of the responses reflect a favorable attitude toward the general concepts underlying the POP program. Eleven percent of the responses are unfavorable toward the general concepts underlying POP, while thirteen percent of the total number of responses are neutral. Two-thirds of the statements (six items elicited favorable responses from seventy-five

TABLE 12

RESULTS OF THE PROFESSIONAL STAFF'S REACTIONS IN MAY 1972, TO THE STATEMENTS RELATING SPECIFICALLY TO THEIR FEELINGS ABOUT THE GENERAL CONCEPTS UNDERLYING THE PERFORMANCE OBJECTIVE PROGRAM (N = 99)

Ranking	Revised Statement and (Item Number)	Response Pattern *						
		POSITIVE			NEUTRAL	NEGATIVE		
		S.F. %	F. %	(Total) (Pos.) (%)	(U.D.) (%)	UF. %	S.UF. %	(Total) (Neg.) (%)
2.	Where performance objectives are used, the student knows precisely what is expected of him, what he is to master and what constitutes the minimum level of acceptable performance. (13)	32	57	(89)	(8)	1	2	(3)
5.	Students achieve more when they know exactly what is to be learned. (21)	38	43	(81)	(9)	9	1	(10)
6.	Most purposes of education can be expressed in terms of measurable or observable student performance or behavior. (16)	33	47	(80)	(14)	6	0	(6)
7.	Use of Performance Objectives helps a teacher to plan instruction that encourages critical thinking. (1)	32	39	(80)	(14)	5	1	(6)
8.	Performance Objectives can deal with values. (11)	36	39	(75)	(14)	8	3	(11)
10.	Teachers who specify learning outcomes are less likely to dwell on unimportant issues. (22)	31	44	(75)	(12)	11	2	(13)
15.	"Teaching for the test" is not necessarily detrimental, provided the test is a valid measure of the teacher's instructional outcomes. (8)	17	47	(64)	(19)	14	3	(17)
16.	Performance Objectives are not limiting and narrowing to the educational process. (5)	22	41	(63)	(18)	13	5	(19)

* Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; and S.UF.=Strongly Unfavorable

percent or more of the staff members. All of these six items elicited the strongest favorable responses ("Strongly Favorable") from greater than thirty percent of the staff.

On any one item in this category, no greater than nineteen percent of the staff members expressed a negative or unfavorable response to the statement. This is also true for the neutral responses to the statements. The greatest percent of strongly unfavorable response to any one item was six percent.

The two statements not eliciting a seventy-five percent positive response related to the detrimental effects resulting from "teaching for the test", and the narrowing effects resulting from the use of performance objectives. These two statements elicited favorable responses from slightly less than two-thirds of the staff members.

Four of the statements presented in Table 11 are focused more specifically on various ideas related to the general concepts underlying the Performance Objective Program. In Table 13 are presented the results of the staff's reactions in May to the statements concerning these related items. As is indicated in this table, the highest ranking item, of the twenty-five statements in Table 11, falls within this category. This statement is, "Students should be involved in the curriculum building process." Thirty-eight percent of the staff members provided the strongest favorable response for this statement, while none of the staff members provided the strongest unfavorable response for the item.

One of the lowest ranking items also falls within this category.

TABLE 13

RESULTS OF THE PROFESSIONAL STAFF'S REACTIONS IN MAY 1972, TO THE STATEMENTS FOCUSED SPECIFICALLY ON THEIR FEELINGS ABOUT RELATED IDEAS TO THE GENERAL CONCEPTS UNDERLYING THE PERFORMANCE OBJECTIVE PROGRAM (N = 99)

Ranking	Revised Statement and (Item Number)	Response Pattern*						(Total) (Per.) (%)
		POSITIVE			NEUTRAL	NEGATIVE		
		S.F. %	F. %	(Total) (Pos.) (%)	(U.D.) (%)	UF. %	S.UF. %	
1.	Students should be involved in the curriculum building process. (14)	38	46	(84)	(13)	3	0	(3)
4.	Parents should be involved in the curriculum building process. (19)	36	43	(80)	(15)	6	0	(6)
9.	Students are capable of evaluating their own progress when given criteria. (4)	23	54	(77)	(17)	5	1	(6)
23.	Given sufficient time, the slower student would be able to perform the same tasks as students whose progress is more rapid. (18)	8	20	(28)	(16)	44	20	(64)

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; and S.UF.=Strongly Unfavorable

This statement, "Given sufficient time, the slower student would be able to perform the same tasks as students whose progress is more rapid," ranks twenty-third in the overall list of twenty-five items. On this item only eight percent of the staff members provided the strongest favorable response, while twenty percent of the staff gave the strongest unfavorable response for the statement. The statement elicited a negative response from sixty-four percent of the staff members.

In analyzing the results of the data from both Table 12 and Table 13, it is found that seven of the items from these categories fall within the top one-third (top eight items) of the ranking for

the twenty-five items. These data indicate that out of the total number of responses to the items in both tables, seventy-three percent of the responses are positive; thirteen percent of the responses are negative; and fourteen percent of the responses are neutral. With the elimination of one of the items (the item ranked #23), it is found that out of the total number of responses, seventy-eight percent of the responses are positive; nine percent of the responses are negative; and thirteen percent of the responses are neutral.

In summary, these data appear to indicate that the staff members have a positive attitude toward the general concepts and related ideas underlying the Performance Objective Program. The only single exception is their attitude toward the statement, "Given sufficient time, the slower student would be able to perform the same tasks as students whose progress is more rapid." In the following section are presented the data providing a comparison of the staff members' attitudes in May 1972 with their attitudes in January 1972, toward the general concepts underlying the Performance Objective Program.

A Comparison of the January Results with the May Results Concerning the Staff's Attitudes Toward the General Concepts Underlying POP

Six of the "closed" questions concerning the general concepts that were administered through the use of a questionnaire in May 1972, had also been included on the questionnaire administered to the staff earlier in January 1972. The reason for the duplication of these items was to determine the changes which may appear in the staff's attitude toward the general concepts underlying POP. These results are presented in Table 14.

As is indicated in this table, the percent of positive responses increased from January to May for each of the six items. For two of the items the increase in percent of positive responses reached a level of statistical significance at the .001 level. One of these two statements was, "Use of performance objective helps a teacher to plan instruction that encourages critical thinking." In January, fifty-seven percent of the staff provided positive responses to this statement, while in May, eighty percent of the staff members gave a positive response to the same statement. The second statement showing a statistically significant increase in positive responses was, "Performance objectives can deal with values." In January this statement elicited positive responses from fifty-five percent of the staff; while in May, seventy-five percent of the staff members provided positive responses to this same statement.

For one of the items, the increase in the percent of positive responses from January to May reached a level of statistical significance at the .01 level. This statement was, "Most purposes of education can be expressed in terms of measurable or observable student performance or behavior." In January, this statement elicited positive responses from sixty-five percent of the staff, while in May, eighty percent of the staff members provided positive responses to this statement. For this same statement, the decrease in the percent of negative responses from January to May (from 23% to 6%) reached a level of statistical significance at the .001 level.

As is indicated from the data in Table 14, in January nineteen

TABLE 14

A COMPARISON OF THE PROFESSIONAL STAFF'S REACTIONS IN JANUARY 1972, WITH THEIR REACTIONS IN MAY 1972, TO THE STATEMENTS FOCUSED SPECIFICALLY ON THEIR PERSONAL FEELINGS ABOUT THE GENERAL CONCEPTS UNDERLYING THE PERFORMANCE OBJECTIVE PROGRAM

Ranking in May	Revised Statement	Response Patterns*	Percent of Responses		Difference %	Level of Signifi- cance		
			January 1972 (N = 133) %	May 1972 (N = 99) %				
2.	Where performance objectives are used, the student knows precisely what is expected of him, what he is to master and what constitutes the minimum level of acceptable performance.	S.F.	35	} 87%	32	} 89%	+2	ns
		F.	52					
		U.D.	10	8	} 3%	} 3%	0	ns
		UF.	4	1				
		S.UF.	0	2				
6.	Most purposes of education can be expressed in terms of measurable or observable student performance or behavior.	S.F.	16	} 65%	33	} 80%	+15	.01
		F.	49					
		U.D.	12	14	} 23%	} 6%	-17	.001
		UF.	22	6				
		S.UF.	1	0				
7.	Use of performance objectives helps a teacher to plan instruction that encourages critical thinking.	S.F.	13	} 57%	32	} 80%	+23	.001
		F.	44					
		U.D.	20	14	} 23%	} 6%	-17	.001
		UF.	20	5				
		S.UF.	3	1				
8.	Performance objectives can deal with values.	S.F.	17	} 55%	36	} 75%	+20	.01
		F.	38					
		U.D.	28	14	} 17%	} 11%	-6	ns
		UF.	12	8				
		S.UF.	5	3				
10.	Teachers who specify learning outcomes are less likely to dwell on unimportant issues.	S.F.	24	} 67%	31	} 75%	+8	ns
		F.	43					
		U.D.	20	12	} 13%	} 13%	0	ns
		UF.	9	11				
		S.UF.	4	2				
16.	Performance objectives are <u>not</u> limiting and narrowing to the educational process.	S.F.	11	} 53%	22	} 63%	+10	ns
		F.	42					
		U.D.	21	18	} 26%	} 19%	+7	ns
		UF.	18	13				
		S.UF.	8	6				

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; and S.UF.=Strongly Unfavorable

percent of the total number of responses were neutral responses, while in May, thirteen percent of the total number of responses were neutral.

In summary, these data appear to indicate that from January to May the staff members, in general, became more positive in their attitudes toward the general concepts underlying the Performance Objective Program. It appears also that the staff became slightly more definite in their attitudes toward these general concepts. It also appear that the staff became less negative from January to May in their attitudes toward the general concepts underlying the Performance Objective Program. The statements eliciting the greatest increase in positive response were those related to 1) the use of performance objectives to encourage critical thinking on the part of the teacher, 2) the use of performance objectives to deal with values, and 3) the possibility that the purposes of education can be expressed in terms of measurable student performance.

Summary of the Results of the Staff's Reactions to the General Concepts and Related Ideas

Of the original twenty-five "closed" items on the May questionnaire, twelve of the statements were focused on the staff's attitudes toward the general concepts and related ideas underlying POP. For three-fourths of these items (nine items), seventy-five percent or more of the staff members provided positive responses for the statements, while thirteen percent or less provided negative responses.

For two of the remaining items in this category, sixty-three and sixty-four percent of the staff members gave positive responses to the

statements, while six and three percent gave negative responses. These latter two statements related to the detrimental effects resulting from "teaching for the test", and the narrowing effects resulting from the use of performance objectives. For the remaining statement, that is, "Given sufficient time, the slower student would be able to perform the same tasks as students whose progress is more rapid," only twenty-eight percent of the staff gave positive responses, while sixty-four percent gave negative responses.

From these data it appears the staff members have a definitely favorable attitude toward the following general concepts and related ideas underlying the Performance Objective Program:

- a. Students should be involved in curriculum building.
- b. Performance objectives generate preciseness of expectations for the student.
- c. Parents should be involved in curriculum building.
- d. Students achieve more by knowing what is to be learned.
- e. Most purposes of education can be expressed in performance objectives.
- f. Performance objectives can encourage critical thinking on the part of the teacher.
- g. Performance objectives can deal with values.
- h. Students are capable of evaluating their own progress.
- i. Specifying learning outcomes causes a teacher to dwell on the important issues.

The staff members have a favorable attitude, but to a lesser degree, toward the following general concepts and related ideas:

- a. "Teaching for the test" is not necessarily detrimental.
- b. Performance objectives are not narrowing or limiting to the educational process.

The staff members have a definitely unfavorable attitude toward the following idea related to the general concepts underlying POP: given sufficient time, slower students should be able to perform the same as other students.

From the data illustrating a comparison of the January results with the May results, it appears that the staff members became more positive from January to May, in their attitudes toward these general concepts. The statements eliciting a statistically significant increase in positive responses were focused on the following general concepts underlying POP:

- a. Performance objectives can encourage critical thinking on the part of the teacher.
- b. Performance objectives can deal with values.
- c. Most purposes of education can be expressed in performance objectives.

The Staff's Reaction Toward the Operation of the Performance Objective Program

Five of the statements presented in Table 11 are focused specifically on the operational aspects of the Performance Objective Program. In Table 15 are presented the results of the staff's reactions in May to the statements focused specifically on their attitudes toward the operation of the POP program.

As is indicated from the data in this table, eighty-one percent of the staff members feel that the teachers should have more to say in

TABLE 15

RESULTS OF THE PROFESSIONAL STAFF'S REACTIONS IN MAY 1972, TO THE STATEMENTS FOCUSED SPECIFICALLY ON THEIR ATTITUDES TOWARD THE OPERATION OF THE POP PROGRAM (N = 99)

Ranking	Revised Statement and (Item Number)	Response Pattern*						
		POSITIVE			NEUTRAL	NEGATIVE		
		S.F. %	F. %	(Total) (Pos.) (%)	(U.D.) (%)	UF. %	S.UF. %	(Total) (Neg.) (%)
3.	Teachers should have more say in setting the direction for POP. (24)	33	48	(81)	(15)	4	0	(4)
12.	POP should be continued next year. (25)	34	29	(63)	(23)	6	8	(14)
19.	The time that a teacher must invest in POP is worthwhile in view of the return from that time investment. (9)	17	31	(48)	(27)	15	10	(25)
20.	The training I have received in POP has assisted me in developing the program in my area. (20)	15	39	(54)	(15)	19	12	(31)
21.	I feel secure in how I will be evaluated in implementing POP. (10)	15	26	(41)	(21)	22	16	(38)

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; and S.UF.=Strongly Unfavorable

setting the direction for the POP program. Only four percent of the staff members do not feel that more teacher involvement in decision-making pertaining to POP is necessary.

On the question as to whether the Performance Objective Program should be continued, sixty-three percent of the staff feels that the program should be continued, while fourteen percent feel that it should not be continued for the next year. This statement elicited the strongest favorable response from thirty-four percent of the staff, while eight percent of the staff members gave the strongest unfavorable response for the statement.

On the remaining three statements pertaining to the operation of POP, the staff appears to be somewhat balanced in their positive and negative feelings toward the statements. These statements related to the following: 1) the time invested by the teacher in POP being worthwhile, 2) the helpfulness of the training received in POP, and 3) the teacher's sense of security about being evaluated in implementing POP. On these items a slightly higher percent of the staff members gave positive responses, as opposed to negative responses, to the statements. On the other hand, there appears to be very little difference between the percent of staff members providing the strongest favorable responses, and those providing the strongest unfavorable responses to these statements. Earlier in January, the staff reacted to these same three questions. In the following section the results of their reaction in January to the statements are compared with the May results.

A Comparison of the January Results with the
May Results Concerning the Staff's Attitudes
Toward the Operation of the POP Program

In Table 16 are presented the data which illustrate a comparison of the staff's reactions in January, with their reactions in May, to the three statements focused on their attitudes toward the operation of the POP program.

As is illustrated from the data in this table, there are some slight differences between the staff's reactions in January and their reactions in May to each of these statements, but none of the differences reached a level of statistical significance. Essentially, the

TABLE 16

A COMPARISON OF THE PROFESSIONAL STAFF'S REACTIONS IN JANUARY 1972, WITH THEIR REACTIONS IN MAY 1972, TO THE STATEMENTS FOCUSED SPECIFICALLY ON THEIR ATTITUDES TOWARD THE OPERATION OF THE POP PROGRAM

Ranking in May	Revised Statement	Response Patterns*	Percent of Responses		Difference %	Level of Signi- ficance
			January 1972 (N = 133) %	May 1972 (N = 99) %		
19. The time that a teacher must invest in POP is worthwhile in view of the return from that time investment.		S.F.	9 } 39%	17 } 48%	+9	ns
		F.	30 }	31 }		
		U.D.	38	27	+2	ns
		UF. S.UF.	13 } 23% 10 }	15 } 25% 10 }		
20. The training I have received in POP has assisted me in developing the program in my area.		S.F.	11 } 55%	15 } 54%	-1	ns
		F.	44 }	39 }		
		U.D.	14	14	0	ns
		UF. S.UF.	23 } 31% 8 }	19 } 31% 12 }		
21. I feel secure in how I will be evaluated in implementing POP.		S.F.	11 } 37%	15 } 41%	+4	ns
		F.	26 }	26 }		
		U.D.	17	21	-8	ns
		UF. S.UF.	30 } 46% 16 }	22 } 38% 16 }		

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; and S.UF.=Strongly Unfavorable

staff members felt the same in May toward these statements as they did in January. The greatest increase in the percent of positive response from January to May related to the statement, "The time that a teacher must invest in POP is worthwhile in view of the return from that time investment." The greatest decrease in the percent of negative response related to the statement, "I feel secure in how I will be evaluated in implementing POP." Again, neither of these differences reached a level of statistical significance. In an effort to determine the specific ways in which the POP program could be strengthened, the staff members were asked in January, and again in May, to respond to the "open-ended"

question, "How could POP be improved?" On Table 17 is presented a comparison of the results of the categorization of staff responses in January, with the results in May to this question.

As is indicated in this table, ninety-seven responses were volunteered for this question in January, while in May, eighty-three responses were volunteered for the same question. As one might expect, of the responses that were offered, the response which was volunteered most by the staff in both January and May related to the concern of providing more

TABLE 17

A COMPARISON OF THE RESULTS OF THE CATEGORIZATION OF STAFF RESPONSES IN JANUARY 1972, WITH THE RESULTS IN MAY 1972, TO THE QUESTION "HOW COULD POP BE IMPROVED?"

Categories	Number and Percent of Responses Made in Each Category			
	January 1972*		May 1972**	
	#	%	#	%
More time for teachers should be provided	22	23	17	21
Pressure should be reduced	18	19	14	17
Administration should be more sensitive/more consistent	12	12	14	17
Creative use of objectives should be encouraged	0	00	14	17
Sharing of ideas should be increased/duplication of effort should be reduced	7	07	11	13
Staff should be increased	8	08	7	08
Model programs should be provided	0	00	6	07
Training should be improved	16	17	0	00
It should be humanized	8	08	0	00
It should be dropped	4	04	0	00
It should be continued as is	2	02	0	00
Total	97	100	83	100

*In January, 36 persons (27% of the respondents) did not offer a response to this question.
(N = 133)

**In May, 16 persons (16% of the respondents) did not offer a response to this question.
(N = 99)

time for the teachers to work on the various aspects of POP. Slightly more than twenty percent of the responses offered in January (23%), and those offered in May (21%), dealt with this concern.

Slightly less than twenty percent of the volunteered responses in both January (19%) and May (17%) focused on the concern that the pressure on the teachers should somehow be reduced. Approximately fifteen percent of the responses offered in both January (12%) and May (17%) were related to the notion that the administration should be more sensitive to the staff's feelings, and should be more consistent in their behavior with the staff while dealing with the staff members on the various aspects of the POP program. A response which was offered in January (17%), but was not volunteered in May dealt with the concern of improving the training being conducted through the POP program. The desire for a more creative use of performance objectives was a concern of a number of the staff members in May (17% of the responses), but was not offered as a response to this question earlier in January. The opportunity to increase the sharing of ideas among the staff members was a concern offered to a less extent in both January (7%) and May (13% of the responses).

Summary of the Results of the Staff's Reactions Toward the Operation of the POP Program

The data appear to indicate that the staff, in general, are favorable toward the further continuation of the Performance Objective Program. This is supported by the fact that in May, sixty-three percent of the staff gave positive responses (34% strongly favorable)

to the statement, "POP" should be continued next year," while only fourteen percent provided negative responses (8% strongly unfavorable) to this statement.

The staff members were definitely in favor of providing the opportunity for teachers to have more of a say in setting the directions for POP. This is supported by the fact that the statement concerning this matter elicited positive responses from eighty-one percent of the staff, while only four percent gave negative responses to the statement.

The staff appears to be somewhat balanced in their positive and negative feelings toward the following three concerns: a) the time invested by the teachers in POP being worthwhile, b) the helpfulness of the training received through POP, and c) the teacher's sense of security about being evaluated in implementing POP. It appears that the staff's feelings toward these three concerns has not essentially changed from January 1972 to May 1972.

The results from the staff's response to the "open-ended" question, "How could POP be improved?" indicate that the major concerns in May for the staff members who offered responses to this question are as follows: a) more time for teachers should be provided, b) the pressure on the staff should be reduced, c) the administration should be more sensitive to the feelings of the teachers, d) creative use of objectives should be encouraged, and e) the sharing of ideas among the teachers should be increased.

The Staff's Reaction Toward the
Practical Operation of the POP Goals

Four of the statements presented in Table 11 are focused on the practical operation of the POP goals. In Table 18 are presented the results of the staff's reactions in May to these statements focused on their attitudes toward the practical operation of the POP goals.

As is indicated from the data presented in this table, there appears to be a sharp contrast between the staff's reactions to the first two items, and their reactions to the last two items in the table. This sharp contrast may be due to the nature of the statements to which the staff reacted. That is, the last two statements focus on the teachers' perception as to what another person understands, while the first two statements focus on their own feelings.

These data indicate that more than two-thirds of the staff (68%) feel that their teaching style readily lends itself to the use of

TABLE 18

RESULTS OF THE PROFESSIONAL STAFF'S REACTIONS IN MAY 1972, TO THE STATEMENTS FOCUSED SPECIFICALLY ON THEIR ATTITUDES TOWARD THE PRACTICAL OPERATION OF THE POP GOALS, AFTER ATTEMPTING TO IMPLEMENT THESE GOALS IN THE CLASSROOM (N = 99)

Ranking	Revised Statement and (Item Number)	Response Pattern*						
		POSITIVE			NEUTRAL	NEGATIVE		
		S.F. %	F. %	(Total) (Pos.) (%)	(U.D.) (%)	UF. %	S.UF. %	(Total) (Neg.) (%)
11.	My teaching style readily lends itself to the use of Performance Objectives. (7)	40	28	(68)	(10)	17	5	(22)
13.	Performance Objectives are useful to me when I communicate with fellow professionals. (15)	23	39	(62)	(25)	9	4	(13)
22.	Students understand POP. (17)	1	26	(27)	(30)	35	8	(43)
25.	Parents understand POP. (5)	0	5	(5)	(36)	36	23	(59)

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; and S.UF.=Strongly Unfavorable

performance objectives, while twenty-two percent of the staff do not feel this to be true for them. This statement elicited the strongest favorable response from forty percent of the staff, while five percent provided the strongest unfavorable response to the statement. A relatively small percent of the staff members (10%) provided a neutral response to this statement.

The statement, "Students understand POP," elicited positive responses from only twenty-seven percent of the staff, while forty-three percent of the staff members provided negative responses to this statement. Approximately one-third of the staff (30%) gave a neutral response for this statement. In May the secondary students were asked to react to the statement, "I understand POP." In an attempt to determine, in a general sense, the relationship between the students' perception and the teachers' perception toward the students' understanding of POP, a comparison of the secondary teachers' response with the secondary students' response related to this concern is presented in Table 19.

As is indicated by the data presented in this table, fifty percent of the secondary teachers do not feel that the students understand POP, while thirty-one percent of the secondary students feel that they personally do not understand the POP program. Twenty-three percent of the teachers feel that the students do understand POP, while thirty-five percent of the students perceive that they personally understand the POP program. The percent of undecided responses for

TABLE 19

A COMPARISON OF THE SECONDARY TEACHERS' RESPONSE WITH THE SECONDARY STUDENTS' RESPONSE, IN MAY 1972, CONCERNING THE STATEMENT, "STUDENTS UNDERSTAND POP."*

Response Pattern	Number and Percent of Responses				Difference %
	Teachers(N=56)		Students(N=197)		
	Number of Responses	%	Number of Responsee	%	
Strongly Agree	0	0	16	8	12**
Agree	13	23	53	27	
Undecided	15	27	67	34	
Disagree	22	39	26	13	19***
Strongly Disagree	6	11	35	18	

*The students responded to the statement, "I understand POP."

** $P > .1 < .05$ ($t=1.85$) Not significant

*** $P > .02 < .01$ ($t=2.57$)

both the teachers and the students was approximately thirty percent (27% and 34%, respectively).

These data appear to indicate that, although the students perceive that they personally understand POP to a greater degree than the teachers perceive that the students understand POP, the difference between their perceptions is not very great. This is supported by the fact that the differences between the two groups did not reach the .01 level of statistical significance. One might assume from these data that approximately one-third of the secondary students have a somewhat sophisticated understanding of the POP program; approximately one-third of the students do not understand the POP program, and approximately one-third of the students are in a "fuzzy area" between the two extremes.

The fourth item in Table 18 is related to the teachers' perception

concerning the parents' understanding of POP. As is indicated from the data presented in this table, only five percent of the teachers perceive that the parents understand POP, while fifty-nine percent of the staff members feel that the parents do not understand POP. A substantial percent of the staff (36%) were undecided concerning this matter. In May the parents were asked to react to the statement, "I understand POP." Again, in an attempt to determine the relationship between the parents' perception and the staff's perception toward the parents' understanding of POP, a comparison of the parents' response with the staff's response related to this concern is presented in Table 20.

As is indicated by the data in this table, there appears to be a sharp contrast between the staff's perception and the parents' perception concerning the parents' understanding of POP. Seventy-seven percent of the parents feel that they personally understand the POP program, while only five percent of the staff perceive that the parents understand POP. Only eight percent of the parents perceive that they personally do not understand POP, while fifty-nine percent of the staff perceive that the parents do not understand the POP program. A relatively small percent (15%) of the parents appear to be undecided concerning this matter.

The questionnaires administered to the staff in January and in May included a number of "open-ended" questions related to the practical operation of the POP goals. In the following section are presented the results of the staff's responses to these "open-ended" questions.

TABLE 20

A COMPARISON OF THE PROFESSIONAL STAFF'S RESPONSE WITH THE PARENTS' RESPONSE, IN MAY 1972, CONCERNING THE STATEMENT, "PARENTS UNDERSTAND POP." *

Response Pattern	Number and Percent of Responses						Difference %
	Teachers(N=99)			Parents(N=152)			
	Number of Responses	%		Number of Responses	%		
Strongly Agree	0	0	} 5%	44	29	} 77%	72
Agree	5	5		73	48		
Undecided	35	36		23	15		
Disagree	36	36	} 59%	9	6	} 8%	51
Strongly Disagree	23	23		3	2		

*The parents responded to the statement, "I understand POP."

The Results of the Staff's Reaction to the "Open-ended" Questions Related to the Practical Operation of the POP Goals

Four "open-ended" questions relating to the practical operation of the POP goals were included in the questionnaire administered to the staff in May. The questions are a) "What is the best things about POP?" b) "How has your teaching (or administrative) behavior been affected by POP?" c) "How has POP affected how students learn in your classroom?" and d) "If there are certain students for whom the performance objective approach does not work well, please describe those students." One of these questions was included in the questionnaire administered to the staff earlier in January. This question was, "What is the best thing about POP?"

As is indicated in the following table, one hundred forty-two responses (from 120 of the respondents) were volunteered for this question in January, while in May, ninety-one responses (from 89

TABLE 21

A COMPARISON OF THE RESULTS OF THE CATEGORIZATION OF STAFF RESPONSES IN JANUARY 1972, WITH THE RESULTS IN MAY 1972, TO THE QUESTION "WHAT IS THE BEST THING ABOUT POP?"

Categories	Number and Percent of Responses Made in Each Category			
	January 1972 *		May 1972 **	
	#	%	#	%
It encourages clarity of objectives/forces the teacher to plan thoroughly	32	23	32	35
It permits individualized instruction	56	39	31	34
It encourages critical thinking about curriculum	12	08	15	17
It clarifies expectations	16	11	13	14
It permits improved evaluation	10	07	0	0
I do not know	8	06	0	0
It increases student participation	5	04	0	0
It improves communications	3	02	0	0
Total	142	100	91	100

* In January, 13 persons (9% of the respondents) did not offer a response to this question. (N = 133)

** In May, 10 persons (10% of the respondents) did not offer a response to this question. (N = 99)

respondents) were offered for the same question. Of the responses that were offered, the two general responses volunteered the greatest percent of time in both January and May dealt with the notion that the best thing about POP was a) it encourages the teacher to clarify her objectives or it forces the teacher to plan thoroughly (January - 23% and May - 35%), and b) it permits the individualization of instruction (January - 39% and May - 34%). In May each of these two responses were offered slightly more than one-third of the time, indicating that two-thirds of the responses offered for this question in May dealt with these two notions.

Two other general responses which were offered to a lesser degree in both January and May related to the notion that the best thing about POP was a) it encourages critical thinking about the curriculum (January - 8% and May - 17%), and b) it clarifies expectations (January - 11% and May - 14%).

In Table 22 are presented the results of the categorization of the staff's responses in May, to the question, "How has your teaching (or administrative) behavior been affected by POP?"

As is indicated in this table, ninety-two responses (from 92 respondents) were volunteered for this question. Of these responses, the response offered the greatest percent of the time (24%) related to the idea that POP has caused the staff to critically think about the curriculum. Seventeen of the staff members (18% of the responses)

TABLE 22

THE RESULTS OF THE CATEGORIZATION OF STAFF RESPONSES IN MAY TO THE QUESTION "HOW HAS YOUR TEACHING (OR ADMINISTRATIVE) BEHAVIOR BEEN AFFECTED BY POP?"

Categories	Number and Percent of Responses Made in Each Category*	
	Number of Responses Made	Percent of Responses Made
It has caused critical thinking about curriculum	22	24
It has had no effect	17	18
It has increased pressure	14	15
It offers more time to work with individuals	12	13
It makes me plan in behavioral terms	11	12
My expectations of students are more realistic	10	11
Children understand what I want better	6	7
Total	92	100

*Seven persons (7% of the respondents) did not offer a response to this question. (N = 99)

indicated that POP has had no effect on their teaching (or administrative) behavior, while fifteen percent of the responses indicate that POP has had the effect of increasing pressure on the staff.

One-third of the responses offered in Table 22 indicate that POP has either had no effect, or has had a negative effect on the staff's behavior; while two-thirds of the responses focus on the positive influence which POP has had on the staff's behavior. The remaining positive responses offered for this question were related to the idea that POP has influenced the staff's behavior in that a) it offers more time to work with individual students (15%), b) it makes the teachers plan in behavioral terms (12%), c) the teachers' expectations of students are more realistic (11%), and d) children understand what the teachers want better (7%).

In Table 23 are presented the results of the categorization of the staff's responses in May to the "open-ended" question, "How has POP affected how students learn in your classroom?"

Of the total number of responses offered by the staff members to this question (84 responses from 84 staff members), thirty percent of these responses indicate that the staff members are either not sure how POP has affected how students learn in their classroom, or that POP has not had an effect on the students' learning. On the other hand, twenty-four percent of the responses indicate that POP has increased individual work in the classroom; eighteen percent of the responses reflect the idea that POP has been an influence in increasing the students' motivation, and another eighteen percent of

TABLE 23

THE RESULTS OF THE CATEGORIZATION OF STAFF RESPONSES IN MAY TO THE QUESTION "HOW HAS POP AFFECTED HOW STUDENTS LEARN IN YOUR CLASSROOM?"

Categories	Number and Percent of Responses Made in Each Category*	
	Number of Responses Made	Percent of Responses Made
I am not sure/ <u>It</u> has not affected how students learn	26	30
It has increased individual work	20	24
Clarity of goals has helped children	15	18
It has increased student motivation	15	18
It permits children to learn at their own pace	5	06
It causes children to learn faster	<u>3</u>	<u>04</u>
Total	84	100

*Fifteen persons (15% of the respondents) did not offer a response to this question. (N = 99)

the responses indicate that, by POP assisting the teachers in clarifying their goals, the students have been helped.

Another "open-ended" question included in the May questionnaire was, "If there are certain students for whom the performance objective approach does not work well, please describe those students." In Table 24 are presented the categorization of the staff's response to this question.

As is indicated by the data in this table, eighty responses were offered for this question (from 74 respondents). Twenty-five percent of the staff members did not volunteer a response to this question. Thirty-one staff members (39% of the responses) indicate that the

TABLE 24

THE RESULTS OF THE CATEGORIZATION OF STAFF RESPONSES IN MAY TO THE QUESTION "IF THERE ARE CERTAIN STUDENTS FOR WHOM THE PERFORMANCE OBJECTIVE APPROACH DOES NOT WORK WELL, PLEASE DESCRIBE THOSE STUDENTS."

Categories	Number and Percent of Responses Made in Each Category*	
	Number of Responses Made	Percent of Responses Made
Slow learners - poor readers	31	39
Non-motivated students	20	25
No such students	13	16
Academically gifted	7	09
Those who need structure	6	07
Those who work best in groups	3	04
Total	80	100

*Twenty five persons (25% of the respondents) did not offer a response to this question.
(N = 99)

performance objective approach does not work well for the slow learners or the poor readers. Twenty staff members (25% of the responses) indicate that this approach does not work well with the non-motivated students. On the other hand, thirteen staff members (15% of the responses) express the notion that the performance objective approach works well for all the students. It is interesting to note that seven members of the staff (9% of the responses) feel that the performance objective approach does not work well for the academically gifted student.

A Summary of the Results of the Staff's
Reactions Toward the Practical Operation
of the POP Goals

In assessing the staff's reaction to statements concerning the practical operation of the POP goals, it was found that, in general, the staff supported the notion that their teaching style lends itself to the use of performance objectives. There was also general support for the statement that performance objectives are useful to me when I communicate with fellow professionals. On the other hand, forty-three percent of the responses opposed the idea that students understand POP, and fifty-nine percent of the responses disagreed that parents understand POP. The fact that seventy-seven percent of responses from parents indicated that parents perceive that parents do understand POP points out a large discrepancy of perception between the staff and parents.

To the "open-ended" question, "What is the best thing about POP?" two-thirds of the responses dealt with the following two notions: 1) it encourages the teacher to clarify her own objectives, and 2) it permits individualization of instruction. In response to the question, "How has your teaching (or administrative) behavior been affected by POP?" the comment most often given was that POP caused the staff to think critically about the curriculum. One-third of the responses indicated that POP has either had no effect or has had a negative effect on the staff's behavior, which two-thirds of the responses focused on positive effects. To the question, "How has POP affected how students learn in your classroom?" thirty percent of the responses indicate

that staff members are either not sure of how POP affects how students learn in their classrooms, or that POP has not had an effect. When asked, "If there are certain students for whom the performance objective approach does not work well, please describe those students," twenty-five percent did not volunteer a response, and sixteen percent of the responses suggests that it works well for all students. Of those who felt that it did not work well for some students, most commonly identified were slow learners, poor readers, and non-motivated.

The Staff's Reactions to the Statements
Concerned with the Degree of Implementation
of the POP Goals in the Classroom

Four of the statements presented in Table 25 are focused on the degree to which the staff is implementing the POP goals.

The data in this table indicate that seventy-one percent of the staff members feel that the students have the opportunity to create their own objectives in the classroom, while in twenty-nine percent of the staff members' classrooms the students are not provided this opportunity. On the other hand, fifty-three percent of the staff indicate that students actually do create their own objectives in their classroom.

Approximately sixty percent of the staff (58%) are using performance objectives more than they did in January, while approximately forty percent of the staff members (42%) are not using objectives more. Seventy-two percent of the staff members express the notion that they are writing more cognitive objectives than other types of

TABLE 25

RESULTS OF THE PROFESSIONAL STAFF'S REACTIONS IN MAY 1972, TO THE STATEMENTS ELICITING THE DEGREE TO WHICH THEY ARE IMPLEMENTING THE GOALS OF POP IN THEIR CLASSROOM (N = 99)

Ranking	Revised Statement and (Item Number)	Response Pattern*						(Total) (N=)
		POSITIVE			NEGATIVE			
		S.F. %	F. %	(Total) (Pos.) (%)	U.D. %	UF. %	S.UF. %	
14.	Students have the opportunity to create their own objectives in my classroom. (2)	20	51	(71)	10	15	4	(29)
17.	I use performance objectives more now than in January 1972. (3)	25	33	(58)	12	21	9	(42)
18.	Students create their own objectives in my classroom. (23)	16	37	(53)	15	28	4	(47)
24.	I have written as many affective and psychomotor objectives as cognitive objectives. (12)	8	20	(28)	8	44	20	(72)

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; and S.UF.=Strongly Unfavorable

objectives, while twenty-eight percent of the staff indicate that they write as many psychomotor and affective objectives as cognitive objectives.

In summary, these data appear to indicate that in approximately seventy percent of the classrooms, the opportunity exists for the students to write their own objectives. On the other hand, the students are actually creating their own objectives in approximately fifty percent of the classrooms. Approximately three-fourths of the staff are writing mainly cognitive objectives, while one-fourth of the staff are writing as many affective and psychomotor objectives as cognitive objectives. Finally, slightly less than sixty percent of the staff have increased their use of performance objectives since January.

Results of the Secondary Students' Reactions
to Statements Concerning the
Performance Objective Program

In May, 1972, the secondary students of the Amherst Schools were asked to react to a number of "closed" and "open-ended" questions on a questionnaire. These questions were designed to elicit the students' opinions toward various aspects of the Performance Objective Program. In the present section of this report, a summary of the results to the "closed" questions is presented and analyzed. This analysis is followed by a more detailed presentation and analysis of the students' reactions to specific categories under which the various items may be grouped. In addition to the detailed analysis of the results from the "closed" questions, an analysis is made of the results from the categorization of the "open-ended" questions. This latter analysis is offered in an attempt to clarify the results from the "closed" questions.

In Table 26 are presented the data resulting from the secondary students' reactions in May to the "closed" questions relating to various aspects of the Performance Objective Program. The data in this table indicate that for twenty-four percent of the items (4 items), fifty percent or greater of the students provided positive responses to the statements concerning the Performance Objective Program. Slightly less than sixty percent of the statements (59%) elicited positive responses from forty percent or greater of the students.

Eighteen percent of the statements (3 items) elicited negative responses (unfavorable toward the program from fifty percent or

TABLE 26

A SUMMARY OF THE RESULTS OF THE SECONDARY STUDENTS' REACTIONS IN MAY 1972, TO STATEMENTS RELATING TO VARIOUS ASPECTS OF THE PERFORMANCE OBJECTIVE PROGRAM (N = 197)

Ranking	Focus of the Statements(Summarized)	Item (#)	Response Pattern			Weighted Mean Score
			Positive Response %	Neutral Response %	Negative Response %	
1.	Classes are taught differently because performance objectives are used.	(1)	84	10	6	4.02
2.	Teachers agree with the use of Performance Objectives.	(8)	45	46	9	3.47
3.	When Performance Objectives are used I get more chance to work at my own pace.	(4)	58	10	32	3.36
4.	There is a clear relationship between assignments and Performance Objectives.	(7)	45	39	16	3.34
5.	I have tried to create my own objectives.	(17)	55	11	34	3.29
6.	Where Performance Objectives are used I know precisely what is expected of me.	(11)	52	21	27	3.29
7.	I have a chance to create and work on my own Performance Objectives in school.	(2)	47	24	29	3.21
8.	Performance Objectives are not limiting and narrowing to the educational process.	(10)	43	25	32	3.13
9.	Performance Objectives give students more opportunity to decide what they want to learn.	(14)	40	28	32	3.11
10.	With Performance Objectives I know what is to be mastered and the acceptable performance.	(15)	40	24	36	3.01
11.	I understand POP.	(16)	35	34	31	2.94
12.	When I work with Performance Objectives it is clear how my work will be evaluated.	(12)	36	21	43	2.81
13.	I think Performance Objectives are helpful and should be used.	(13)	25	37	38	2.73
14.	In classes where Performance Objectives are used there are more opportunities for individual conferences with the teacher.	(9)	29	18	53	2.61
15.	I am free to choose which Performance Objectives I will work on.	(6)	27	17	56	2.55
16.	POP has helped to improve instruction.	(3)	22	30	48	2.52
17.	In classes where I learn the most, Performance Objectives are used.	(5)	18	28	54	2.42

greater of the students. On forty-seven percent of the items (8 items), one-third or greater of the students provided responses which were unfavorable toward the program.

The highest percent of positive responses to any one statement was eighty-four percent, while the highest percent of negative response to any one statement was fifty-six percent. For twenty-nine percent of the items (5 items), thirty percent or more of the students were undecided about the statement (indicating a neutral response). Seventy percent of the statements (12 items) elicited a neutral response from twenty percent or greater of the students.

In summary, these results appear to indicate that the students have not expressed very definite opinions, either positive or negative, toward the statements to which they reacted. This is supported by the fact that the data indicate a relatively high percent of neutral responses to these statements. The data also appear to indicate that the students are somewhat balanced between the percent of positive responses and the negative responses made toward the statements.

The statements presented in Table 26 can be clustered into three general categories. These categories are a) statements relating to the degree to which the use of performance objectives has affected the general classroom situation, b) statements relating to the personal effect that the use of performance objectives has had on the students' personal learning in the classroom, and c) statements eliciting the degree to which the students use or have the opportunity to use performance objectives in the classroom. In the following sections are

presented the data relating to the students' reactions to these statements as they are clustered within the three general categories. In addition, pertinent analysis are made of the results from the students' reactions to the "open-ended" questions.

The Students' Reactions to Statements
Related to the Degree of Effect Performance
Objectives have had on the General Classroom
Situation

Four of the statements presented in Table 26 are focused on the degree to which performance objectives have affected the general classroom situation. In table 27 are presented the results of the secondary students' responses to the four statements in this category.

TABLE 27

RESULTS OF THE SECONDARY STUDENTS' RESPONSE IN MAY 1972, TO THE STATEMENTS RELATING SPECIFICALLY TO THE DEGREE TO WHICH THE USE OF PERFORMANCE OBJECTIVES HAS AFFECTED THE GENERAL CLASSROOM SITUATION (N = 197)

Ranking	Revised Statement and (Item Number)	Response Pattern*						
		POSITIVE			NEUTRAL	NEGATIVE		
		S.F. %	F. %	(Total) (Pos.) (%)	(U.D.) (%)	UF. %	S.UF. %	(Total) (Neg.) (%)
1.	Some classes are now taught differently because performance objectives are used. (1)	26	58	(84)	(10)	5	1	(6)
9.	Performance objectives give students more opportunity to have a say in what they want to learn and in what the school will teach.(14)	15	25	(40)	(28)	20	12	(32)
14.	In classes where performance objectives are used, there are increased opportunities to have individual conferences with the teacher.(9)	6	23	(29)	(18)	32	21	(53)
16.	The Performance Objective Program has helped to improve the instruction at school.(3)	6	16	(22)	(30)	20	28	(48)

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; and S.UF.=Strongly Unfavorable

As is indicated in this table, eighty-four percent of the students feel that some of the classes are taught differently because performance objectives are used, while only six percent of the students do not feel that any of the classes are taught differently. A relatively small percent of the students (10%) provided a neutral response for this item. On the other hand, thirty percent of the students provided a neutral response for the statement, "The Performance Objective Program has helped to improve the instruction at school." Slightly less than half of the students (48%) gave negative responses for this statement, while slightly less than one-quarter of the students (22%) provided positive responses.

The notion that performance objectives give students more opportunity to decide what they want to learn, elicited positive responses from approximately one-third of the students, while one-third of the students (32%) provided both negative and neutral responses to this statement.

In summary, these data appear to indicate that the secondary students feel that some of the classes are taught differently because performance objectives are used. The students appear to be somewhat balanced among positive attitudes, neutral attitudes and negative attitudes in their perception as to whether performance objectives produce beneficial changes in the classroom.

The Students' Perceptions Toward the
Effect of Performance Objectives on
their Own Personal Learning

Six statements presented in Table 26 are focused on the students' perceptions as to the personal effect that the use of performance objectives has had on their own learning in the classroom. In Table 28 are presented the results of the secondary students' responses to the four statements in this category.

TABLE 28

RESULTS OF THE SECONDARY STUDENTS' RESPONSE IN MAY 1972, TO THE STATEMENTS RELATING SPECIFICALLY TO THE PERSONAL EFFECT THAT THE USE OF PERFORMANCE OBJECTIVES HAS HAD ON THEIR OWN LEARNING IN THE CLASSROOM (N = 197)

Ranking	Revised Statement and (Item Number)	Response Patterns*						
		POSITIVE			NEUTRAL	NEGATIVE		
		S.F. %	F. %	(Total) (Pos.) (%)	(U.D.) (%)	UF. %	S.UF. %	(Total) (Neg.) (%)
3.	When performance objectives are used I get more chance to work at my own pace.(4)	22	36	(58)	(10)	20	12	(32)
4.	When performance objectives are used, there is a clear relationship between my assignments and the objectives.(7)	9	36	(45)	(39)	12	4	(16)
6.	Where performance objectives are used I know precisely what is expected of me.(11)	14	38	(52)	(21)	17	10	(27)
10.	Where performance objectives are used, I know precisely what is to be mastered and what constitutes the minimum level of acceptable performance.(15)	9	31	(40)	(24)	24	12	(36)
12.	When I work on performance objectives it is clear how my work will be evaluated.(12)	6	30	(36)	(21)	25	18	(43)
17.	In classes where I learn the most, performance objectives are used.(5)	4	14	(18)	(28)	28	26	(54)

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; and S.UF.=Strongly Unfavorable

The data in this table indicate that slightly less than sixty percent of the students (58%) feel that when performance objectives are used, they get to work at their own pace. A small percent of the students (10%) are neutral toward this statement, while one-third of the students (32%) do not feel the use of performance objectives allows them to work at their own pace.

The statement in this category that elicited the smallest positive response (18%), and the highest negative response (54%), is, "In classes where I learn the most, performance objectives are used." Slightly over one-fourth of the students (28%) gave a neutral response for this statement.

For the statement, "Where performance objectives are used I know precisely what is expected of me," slightly over fifty percent of the students (52%) provided positive responses, while slightly more than one-quarter of the students provided negative responses for the statement. For the statements relating to the concerns of the use of performance objectives, 1) allowing the students to know what is to be mastered with the acceptable level of performance, and 2) allowing the student to know how his work will be evaluated, approximately the same percent of students provided positive responses as negative responses to these statements.

In May the questionnaire included the "open-ended" question, "What is the best thing about the Performance Objective Program?" Eighty-seven percent of the respondents (172 students) volunteered two hundred nine responses for this question. Fifty-two students

(22% of the responses) felt that the best thing about POP was that students know what is expected. Eighteen percent of the responses relate to the notion that POP allows students to work at their own pace, while another eighteen percent of the responses reflect the idea that the best thing about POP is that it allows students to set their own goals.

In summary, these data appear to indicate that for approximately sixty percent of the students, the use of performance objectives is allowing them to work at their own pace. Forty percent or greater of the students also perceive that the use of performance objectives a) allows for a clear relationship between their assignments and the objectives, b) allows them to know what is expected of them, and c) allows them to know what is to be mastered and the acceptable level of performance. On the other hand, forty percent or more of the secondary students do not perceive that performance objectives allow them to have a clear idea as to how their work will be evaluated, nor do they perceive that they learn the most in classes where performance objectives are used.

From the responses to the "open-ended" question, it appears that the major beneficial aspects of the Performance Objective Program are a) students know what is expected of them, b) students can work at their own pace, and c) it allows students to set their own goals.

The Students' Reactions to the Statements Eliciting the Degree to which They Use or Have the Opportunity to Use Performance Objectives

Three of the statements in Table 26 attempted to elicit the degree to which the secondary students are using or have the opportunity to use performance objectives in their classes. In Table 29 are presented the results of the students' reactions to these three statements.

TABLE 29

RESULTS OF THE SECONDARY STUDENTS' REACTION IN MAY 1972, TO THE STATEMENTS ELICITING THE DEGREE TO WHICH THEY USE OR HAVE THE OPPORTUNITY TO USE PERFORMANCE OBJECTIVES IN THE CLASSROOM
(N = 197)

Ranking	Revised Statement and (Item Number)	Response Pattern*						
		POSITIVE			NEUTRAL	NEGATIVE		
		S.F. %	F. %	(Total) (Pos.) (%)	(U.D.) (%)	UF. %	S.UF. %	(Total) (Neg.) (%)
5.	I have tried to create my own objectives.(17)	14	38	(55)		34**	11	(45)**
7.	I have a chance to create and work on my own performance objectives in school.(2)	13	34	(47)	(21)	19	10	(29)
15.	I am free to choose which performance objectives I will work on.(6)	6	21	(27)	(30)	20	28	(48)

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; S.UF.=Strongly Unfavorable

**This statement is an "either-or" situation; either the student did try to create an objective or he didn't. Consequently, the Undecided responses were included as an Unfavorable, rather than a neutral response. There were 11% Undecided responses to this statement.

These data indicate that fifty-five percent of the students have tried to create their own objectives, while forty-five percent of the students have not attempted to create their own. Forty-seven percent of the students perceive that the opportunity is available to them to create their own objectives in their classes, while almost thirty percent (29%) are uncertain as to the availability of this opportunity in their classes.

Concerning the matter of being able to choose among a number of available objectives, slightly less than one-half of the students (48%) do not feel free to choose the performance objectives on which they will work, while slightly over one-quarter of the students (27%) do feel free to choose their own objectives. Thirty percent of the students are undecided concerning this matter.

The Students' Perception toward
Further Use of Performance Objectives

One of the statements in Table 26 is, "I think performance objectives are helpful and should be used." In Table 30 are presented the results of the students' reactions to this single statement.

TABLE 30

RESULTS OF THE SECONDARY STUDENTS' RESPONSE IN MAY 1972, TO THE STATEMENT, "I THINK PERFORMANCE OBJECTIVES ARE HELPFUL AND SHOULD BE USED." (N = 197)

Response Pattern	Number and Percent of Responses	
	Number of Responses #	Percent of Responses %
Strongly Agree	20	10
Agree	29	15
Undecided	73	37
Disagree	28	14
Strongly Disagree	47	24

As is indicated by the data in this table, one-quarter of the students (25%) gave a positive response for this statement, while slightly less than forty percent of the students (38%) gave a neutral response for the statement. These data appear to indicate that there is neither a clear mandate for the use of performance objectives, nor one against the further use of performance objectives.

In an attempt to discover ways of improving the use of performance objectives in the classroom, the students were asked the "open-ended" question, "How could the Performance Objective Program be improved?" The result of the categorization of the students' responses to this question indicated the following general suggestions: a) there should be a greater use of performance objectives in the classrooms (37 students), b) students should have more opportunity to write their own objectives (29 students), and c) performance objectives should not be used in all classes (24 students).

A Summary of the Results of the Students'
Reactions to the Statements Concerning POP

In the "closed" questions designed to measure student attitudes toward POP, the spread of responses appears to indicate that students have not expressed definite opinions, either positive or negative. This is supported by the high degree of neutral responses and the relative degree of balance of positive and negative responses.

Students' reactions to statements concerning the effect of performance objectives on the general classroom situation indicate that eighty-four percent of the responses acknowledge a difference in classes, while six percent identified no difference. One-third of the responses indicate the performance objectives do offer students more opportunities to decide what they desire to learn. Secondary students appear to feel that, although some classes are taught differently, it is unclear whether the change is beneficial.

Concerning the effect of performance objectives on their own learning, slightly more than half of the responses indicate that

objectives permit students to work at their own pace, and to know precisely what is expected of them. One-fourth of the responses were negative on this point. The responses to the "open-ended" questions point out that students perceive the following as the major benefits of POP: a) it lets them know what is expected of them, b) it permits them to work at their own pace, and c) it allows them to set their own goals.

In determining the degree of use of POP, the data indicate that about half of the students (55%) have tried to create their own objectives, while twenty-nine percent do not feel that this opportunity exists. One-fourth of the responses indicate a positive reaction toward the statement, "I think performance objectives are helpful and should be used," while thirty-seven percent gave a neutral response. Again, there is not a clear mandate for or against POP.

The Results of the Parents' Reactions to Statements Concerning the Performance Objective Program

In May, 1972, the parents of the students in the Amherst Schools were also asked to react to a number of "closed" and "open-ended" questions on a questionnaire. These questions were designed to elicit the parents' opinions toward various aspects of the Performance Objective Program. In the present section of this report, a summary of the results to the "closed" questions is presented and analyzed. This analysis is followed by a more detailed presentation and analysis of the parents' reactions to specific categories under which the various

items may be clustered. In addition to the detailed analysis of the results from the "closed" questions, an analysis is made of the results from the categorization of the "open-ended" questions. This latter analysis is offered in an attempt to clarify the results from the "closed" questions.

In Table 31 are presented the data resulting from the parents' reactions in May to the "closed" questions relating to various aspects of the Performance Objective Program. The data in this table indicate that for fifty-two percent of the items (11 items), fifty percent or greater of the parents provided positive responses to the statements concerning the Performance Objective Program. Over eighty percent of the statements (81%) elicited positive responses from forty percent or greater of the parents.

On none of the items (0%) did fifty percent or more of the parents provide a negative response (unfavorable toward the program). For approximately one-quarter of the statements (24%), one-third or more of the parents provided negative responses.

The highest percent of positive response for any one statement is eighty-four percent, while the highest percent of negative response to any one statement is forty-six percent. On twenty-nine percent of the items, one-quarter or more of the parents were undecided about the statement (indicating a neutral response).

In summary, these data appear to indicate that the parents have expressed rather definite opinions, either positive or negative, toward the statements about the Performance Objective Program.

TABLE 31

A SUMMARY OF THE RESULTS OF THE PARENTS' REACTIONS IN MAY 1972, TO STATEMENTS RELATING TO VARIOUS ASPECTS OF THE PERFORMANCE OBJECTIVE PROGRAM (N = 152)

Ranking	Focus of the Statements(Summarized)	Item (#)	Response Pattern			Weighted Mean Score
			Positive Response %	Neutral Response %	Negative Response %	
1.	I understand the Performance Objective Program.	(4)	79	15	8	3.96
2.	Parents should have a say in what their children learn in school.	(16)	82	8	10	3.96
3.	Parents should be involved in curriculum development.	(11)	76	10	14	3.88
4.	Parents should be on curriculum committees.	(20)	67	13	20	3.67
5.	Most purposes of education can be expressed in measurable student performance or behavior.	(5)	74	9	20	3.63
6.	Children should have a say in what they learn.	(22)	63	13	24	3.56
7.	Performance Objectives help to individualize instruction.	(1)	61	17	22	3.45
8.	Performance Objectives will <u>not</u> prevent us from reaching the important goals in education.	(12)	55	22	23	3.37
9.	With Performance Objectives the student knows what is expected & the acceptable performance.	(14)	57	19	24	3.37
10.	POP has increased parent-teacher dialogue concerning important educational matters.	(18)	54	20	26	3.31
11.	Students can benefit from writing objectives.	(3)	50	23	27	3.24
12.	POP makes a difference in my child's school life.	(2)	49	20	31	3.16
13.	The use of Performance Objectives will <u>not</u> stifle spontaneity.	(15)	49	18	33	3.16
14.	POP should be continued next year.	(21)	40	31	29	3.10
15.	Performance Objectives are not limiting and narrowing to the educational process.	(10)	45	22	33	3.08
16.	Performance Objectives can deal with values.	(8)	43	25	32	3.06
17.	It is wise to plan in advance how the learner should behave after instruction.	(17)	42	17	41	2.95
18.	Most teachers agree with the idea of using Performance Objectives.	(19)	18	61	21	2.94
19.	My child's teacher is using POP effectively.	(7)	24	47	29	2.91
20.	POP meets the educational needs of my child.	(13)	24	33	43	2.68
21.	POP helps the teacher to motivate my child to do his school work.	(9)	27	27	46	2.62

This is concluded from the fact that a relatively small percent of the parents provided neutral responses to the statements. Although the parents have not provided a strongly positive reaction toward the program, the data does appear to indicate that for over eighty percent of the statements, the percent of favorable responses is greater than the unfavorable responses toward the Performance Objective Program.

The statements presented in Table 31 can be clustered into two general categories. The categories are a) statements focused on the general concepts and related ideas underlying POP, and b) statements related to the effects that the operation of POP has had in the school. In the following sections are presented the data relating to the parents' reactions to these statements as they are clustered within these general categories. In addition, pertinent analyses are made of the results from the parents' reactions to the "open-ended" questions.

The Parents' Reactions to the General Concepts and Related Ideas Underlying POP

Seven of the statements presented in Table 31 are focused specifically on the general concepts underlying the Performance Objective Program. In Table 32 are presented the results of the parents' reactions to these statements.

The data in this table indicate that for all of the statements relating to the general concepts underlying the Performance Objective Program, greater than forty percent of the parents provided positive responses for any single item. On the other hand, none of the items

TABLE 32

RESULTS OF THE PARENTS' REACTIONS IN MAY 1972, TO THE STATEMENTS RELATING SPECIFICALLY TO THEIR FEELINGS ABOUT THE GENERAL CONCEPTS UNDERLYING THE PERFORMANCE OBJECTIVE PROGRAM (N = 152)

Ranking	Revised Statement and (Item Number)	Response Pattern*						(Total) (Neg.) (%)
		POSITIVE			NEUTRAL	NEGATIVE		
		S.F. %	F. %	(Total) (Pos.) (%)	(U.D.) (%)	UF. %	S.UF. %	
5.	Most purposes of education can be expressed in terms of measurable or observable student performance or behavior.(5)	18	53	(74)	(9)	14	6	(20)
7.	Performance objectives help to individualize instruction.(1)	13	48	(61)	(17)	15	7	(22)
8.	Performance objectives will <u>not</u> prevent us from reaching the really important goals of education.(12)	15	39	(55)	(22)	12	11	(23)
9.	Where performance objectives are used, the student knows precisely what is expected of him, what he is to master and what constitutes the minimum level of acceptable performance. (14)	10	47	(57)	(19)	18	6	(24)
13.	The use of performance objectives will not stifle spontaneity.(15)	10	39	(49)	(18)	23	10	(33)
15.	Performance objectives are <u>not</u> limiting and narrowing to the educational process.(10)	11	34	(45)	(22)	18	15	(33)
16.	Performance objectives can deal with values.(8)	6	37	(43)	(25)	21	11	(32)

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; S.UF.=Strongly Unfavorable

(0%) in this category elicited negative responses from more than one-third of the parents.

The statement, "Most purposes of education can be expressed in terms of measurable or observable student performance or behavior," elicited a positive response from approximately three-fourths of the parents, while twenty percent provided negative response to this statement. Only nine percent of the parents provided a neutral response for this item.

Three statements relating to the general concepts did not elicit a positive response from fifty percent or greater of the parents. These statements related to a) the use of performance objectives causing the spontaneity in the learning experience to be stifled, b) the limiting and narrowing effect caused by performance objectives, and c) the ability of performance objectives to deal with values. Each of these three statements elicited a negative response from approximately one-third of the parents.

Again, none of the statements relating to the general concepts underlying POP elicited a neutral response from more than one-fourth of the parents. The response eliciting the greater percent of neutral responses related to the notion that performance objectives can deal with values.

Six of the statements presented in Table 31 are focused more specifically on various ideas related to the general concepts underlying the Performance Objective Program. In Table 33 are presented the results of the parents' reactions to the statements concerning these related ideas.

The data in this table indicate that for all of the statements in this category, greater than forty percent of the parents' provided positive responses for any single item. Only one statement elicited positive responses from less than fifty percent of the parents. On the other hand, only one statement in this category elicited negative response from more than one-fourth of the parents.

TABLE 33

RESULTS OF THE PARENTS' REACTIONS IN MAY 1972, TO THE STATEMENTS FOCUSED SPECIFICALLY ON THEIR FEELINGS ABOUT RELATED IDEAS TO THE GENERAL CONCEPTS UNDERLYING THE PERFORMANCE OBJECTIVE PROGRAM (N = 152)

Ranking	Revised Statement and (Item Number)	Response Pattern*						
		POSITIVE			NEUTRAL	NEGATIVE		
		S.F. %	F. %	(Total) (Pos.) (%)	(U.D.) (%)	UF. %	S.F. %	(Total) (Neg.) (%)
2.	Parents should have a say in what their children learn in school.(16)	26	56	(82)	(8)	8	2	(10)
3.	Parents should be involved in curriculum development.(11)	28	48	(76)	(10)	12	2	(14)
4.	Parents should be included on curriculum committees.(20)	25	42	(67)	(13)	15	5	(20)
6.	Children should have a say in what they learn in school.(6)	22	41	(63)	(13)	19	5	(24)
11.	Students can benefit from writing performance objectives.(3)	10	47	(57)	(19)	18	6	(24)
17.	It is wise to plan in advance how the learner should behave after instruction.(17)	4	38	(42)	(17)	31	10	(41)

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; S.UF.=Strongly Unfavorable

Two statements elicited positive responses from more than three-fourths of the parents. These two statements are a) "Parents should have a say in what their children learn in school," and b) "Parents should be included on curriculum committees."

Less than one-fourth of the parents provided negative responses for the statements, "Children should have a say in what they learn in school," or "Students can benefit from writing performance objectives." For both of these statements, greater than fifty percent of the parents provided positive responses.

The statement, "It is wise to plan in advance how the learner should behave after instruction," elicited a positive response from forty-two percent of the parents, and a negative response from

forty-one percent of the parents. These results appear to indicate a polarization of the parents' attitudes concerning this statement.

Again, the relatively small percent of neutral responses toward any of the statements in this category appear to indicate that the parents have expressed rather definite feelings, either positive or negative, for these concerns.

A Comparison of the Parents' Perception
with the Staff's Perception Concerning the
General Concepts and Related Ideas Underlying
POP

Five of the statements concerning the general concepts and related ideas underlying POP, which were administered to the parents, were also included in the May questionnaire administered to the professional staff. In Table 34 are presented the data focused on the comparison of the staff's response with the parents' response to these five statements.

As is indicated by the data in this table, for every statement the staff provided a higher percent of positive responses, and a lower percent of negative responses. For three of the statements the difference between the parents and the staff, in both the positive responses and the negative responses, a statistical level of significance at the .001 level was reached. These statements related to the notions that a) with performance objectives the student knows what is expected of him, and his acceptable level of performance, b) performance objectives can deal with values, and c) performance objectives are not limiting and narrowing to the educational process.

For the statement, "Most purposes of education can be expressed

TABLE 34

A COMPARISON OF THE PROFESSIONAL STAFFS' RESPONSE WITH THE PARENTS' RESPONSE IN MAY 1972, TO THE STATEMENTS RELATING TO THE GENERAL CONCEPTS AND THE RELATED IDEAS UNDERLYING THE PERFORMANCE OBJECTIVE PROGRAM

Ranking	Revised Statement	Response Patterns*	Percent of Response		Difference %	Level of Significance
			Teachers (N = 90) %	Parents (N = 157) %		
2 (9)	Where performance objectives are used, the student knows precisely what is expected of him, what he is to master and what constitutes the minimum level of acceptable performance.	S.F.	32 } 89%	10 } 57%	+32	.001
		F.	57 }	47 }		
		U.D.	8	19	-21	.001
		UF. S.UF.	1 } 2 }	3% 6 }		
4 (2)	Parents should be involved in the curriculum building process.	S.F.	36 } 79%	28 } 76%	+ 3	ns
		F.	43 }	48 }		
		U.D.	15	10	- 8	ns
		U.F. S.UF.	6 } 0 }	6% 2 }		
6 (5)	Most purposes of education can be expressed in terms of measurable or observable student performance or behavior.	S.F.	33 } 80%	18 } 71%	+ 9	ns
		F.	47 }	53 }		
		U.D.	14	9	-14	.001
		UF. S.UF.	6 } 0 }	6% 6 }		
8 (16)	Performance objectives can deal with values.	S.F.	36 } 75%	6 } 43%	+32	.001
		F.	39 }	37 }		
		U.D.	14	25	-21	.001
		UF. S.UF.	8 } 3 }	11% 11 }		
16 (15)	Performance objectives are <u>not</u> limiting and narrowing to the educational process.	S.F.	22 } 63%	11 } 45%	+18	.001
		F.	41 }	34 }		
		U.D.	18	22	-14	.001
		UF. S.UF.	13 } 6 }	19% 15 }		

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; S.UF.=Strongly Unfavorable

in terms of measurable or observable student performance or behavior," the difference in positive responses did not reach a statistical level of significance, but the difference between the parents and teachers in the percent of negative responses for this statement was significant at the .001 level. For this statement the teachers were slightly more neutral than the parents.

The single statement on which the parents and teachers appear to meet consensus is, "Parents should be involved in the curriculum building process." Greater than three-fourths of the parents and the staff provided positive responses for this statement.

A Summary of the Results of the Parents' Reactions toward the General Concepts and Related Ideas Underlying POP

In analyzing parents' reactions to ideas related to POP, it was found that approximately three-fourths of the responses were positive to the idea that most purposes of education could be expressed in terms of measurable or observable student behavior, and twenty percent of the responses were negative. Concepts which failed to gain fifty percent positive responses dealt with a) use of objectives causing spontaneity to be stifled, b) the limiting and narrowing effect of POP, and c) the ability of performance objectives to deal with values. Each of these drew negative responses from approximately one-third of the parents.

The two statements which elicited positive responses from more than three-fourths of the parents were the following: 1) "Parents should have a say in what their children learn in school," and 2) "Parents should be involved in the curriculum building process."

More than fifty percent of the responses indicated positive support for the two following statements: 1) "Children should have a say in what they learn in school," and "Students can benefit from writing performance objectives." Parent reactions were evenly split on the statement, "It is wise to plan in advance how the learner should behave after instruction." It appears that there is much support for the notion that parents should take part in planning curriculum, and support, but slightly less, for students having a say in the planning of school programs.

In comparing parent response with staff response, it is seen that the teachers are consistently more positive and less negative than the parents. Differences were statistically significant at the .001 level in the following issues: 1) with performance objectives, the student knows what is expected of him and his acceptable level of performance, 2) performance objectives can deal with values, and 3) performance objectives are not limiting and narrowing to the educational process. These issues appear to suggest major areas of disagreement between teachers and parents. Agreement between them was found when greater than three-fourths of both groups provided positive responses to, "Parents should be involved in the curriculum building process."

The Parents' Perceptions Concerning
the Effects of POP on the School and
on the Classroom Situation

Five of the statements presented in Table 31 focus on the effects the operation of the Performance Objective Program has had in the school, and has on the school life of the parent's child. In Table 35 are presented the results of the parents' responses to these statements.

TABLE 35

RESULTS OF THE PARENTS' RESPONSES IN MAY 1972, TO THE STATEMENTS RELATED SPECIFICALLY TO THE EFFECTS THAT THE OPERATION OF THE PERFORMANCE OBJECTIVE PROGRAM HAS HAD IN THE SCHOOL IN WHICH THEIR CHILD IS LOCATED (N = 152)

Ranking	Revised Statement and (Item Number)	Response Pattern*						
		POSITIVE			NEUTRAL	NEGATIVE		
		S.F. %	F. %	(Total) (Pos.) (%)	(U.D.) (%)	UF. %	S.UF. %	(Total) (Neg.) (%)
10.	The Performance Objective Program has increased discussion among parents and teachers about important educational matters.(18)	9	45	(57)	(19)	18	6	(24)
12.	POP makes a difference in my child's school life.(2)	7	42	(49)	(20)	22	9	(31)
19.	My child's teacher(s) are using POP effectively.(7)	5	19	(24)	(47)	20	9	(29)
20.	POP meets the educational needs of my child.(13)	4	20	(24)	(33)	26	17	(43)
21.	POP helps the teacher to motivate my child to do his school work.(9)	3	24	(27)	(27)	24	22	(46)

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; S.UF.=Strongly Unfavorable

As is indicated in this table, four of the statements elicited positive responses from less than fifty percent of the parents, while three of the statements elicited negative responses from more than thirty percent of the parents. A relatively high percent of parents provided neutral responses for the statements in this category.

Approximately sixty percent of the parents (57%) feel that POP has increased discussion among parents and teachers about important educational matters, while slightly less than one-fourth of the parents (24%) do not feel this to be so. The statement eliciting the greatest percent of neutral responses (48%) was, "My child's teachers are using POP effectively."

Two statements eliciting over forty percent negative responses, and only one-fourth positive responses were, "POP meets the educational needs of my child," and "POP helps the teacher to motivate my child to do his school work." Approximately thirty percent of the parents were undecided about these concerns.

One of the "open-ended" questions to which the parents reacted was, "How has the Performance Objective Program affected your child this year?" For this question, one hundred seventy-one responses were volunteered from one hundred forty-seven of the respondents (nine parents did not offer a response). Forty-seven parents stated that their child enjoys POP, while forty-nine parents state that the influence of POP has caused their child to become discouraged or to learn less. The notion that POP has had no apparent effect on their child was offered by forty-six of the parents. Seventeen of the parents were unsure of the effect that POP has had on their child.

Another of the "open-ended" questions to which the parents reacted was, "What is the best thing about POP?" For this question, one hundred thirty-three responses were offered from one hundred thirty-three of the respondents (nineteen parents did not volunteer

a response). Forty-one of the parents felt that the best thing about POP was its attempt to individualize instruction. Twenty parents felt that it causes an effective learning environment, while another twenty parents stated the notion that it causes children to learn to set goals. Fourteen parents felt that it improves teaching and nine parents stated that it has caused an increased interest in education on the part of parents. Thirteen of the parents stated that they were not sure what the best thing about POP was, while sixteen parents expressed the feeling that there was nothing good about the program.

In an attempt to solicit from the parents some suggestions as to how the program could be improved, the "open-ended" question, "How could POP be improved?" was asked. For this question, one hundred twenty-one responses were offered from one hundred four respondents (forty-eight parents did not offer a response).

Of the constructive responses which were offered, the following suggestions were provided: a) teachers should provide more guidance to students (17 parents); b) POP should be a voluntary alternative to traditional classes (16 parents); c) there should be more parent involvement (15 parents); d) teachers should be given more time to implement POP (14 parents); e) it should be explained more clearly (13 parents); f) let students write their own objectives (8 parents); g) emphasize higher order, open-ended objectives (5 parents); h) add additional staff (5 parents); and i) improve the reporting system (4 parents). Twenty-four of the parents stated that POP should be discontinued.

A Comparison of the Parents' Perception
with the Staff's Perception Concerning
the Future Use of Performance Objectives

In Table 36 are presented the results of a comparison of the parents' perceptions with the staff's perceptions concerning the further use of performance objectives, and the continuation of the POP program.

TABLE 36

A COMPARISON OF THE PARENTS' PERCEPTIONS WITH THE PROFESSIONAL STAFFS' PERCEPTIONS CONCERNING THE FURTHER USE OF PERFORMANCE OBJECTIVES, AND THE CONTINUATION OF THE POP PROGRAM

Ranking	Revised Statement and (Item Number)	Response Pattern *						
		POSITIVE			NEUTRAL	NEGATIVE		
		S.F. %	F. %	(Total) (Pos.) (%)	(U.D.) (%)	UF. %	S.UF. %	(Total) (Neg.) (%)
18.	Most teachers agree with the idea of using performance objectives. PARENT RESPONSE (19) N = 152	3	15	(18)	(61)	15	6	(21)
12.	POP should be continued next year. TEACHERS RESPONSE (25) N = 99	34	29	(63)	(23)	6	8	(14)
14.	POP should be continued next year. PARENT RESPONSE (21) N = 152	16	24	(40)	(31)	12	17	(29)

*Key to the Response Patterns: S.F.=Strongly Favorable; F.=Favorable; U.D.=Undecided; UF.=Unfavorable; S.UF.= Strongly Unfavorable

As is indicated in this table, approximately two-thirds (63%) of the staff feel that the Performance Objective Program should be continued, while only fourteen percent do not feel that it should be continued. Over one-third of the staff provide the strongest favorable response for the continuation of POP. On the other hand, only eighteen percent of the parents feel that most of the teachers agree with the idea of using performance objectives, while over twenty percent

(21%) feel that the teachers do not agree with using objectives. Over sixty percent of the parents (61%) are undecided about the teachers' perception toward performance objectives.

The parents appear to be somewhat balanced among the positive responses (40%), neutral responses (31%), and negative responses (29%), in their attitude toward the notion that the Performance Objective Program should be continued. The parents appear to be much less enthusiastic than the teachers about the continuation of the program.

A Summary of the Results of the
Parents' Reactions to the Performance
Objective Program

It appears that large numbers of parents do support the basic philosophical tenets on which the Performance Objective Program is built, yet that many seriously question the practical implication. Support is strong for the ideas that most purposes of education can be expressed in terms of measurable student behavior, parent involvement in planning curriculum, and students having a say in their learning. Negativity increases, however, in questions of spontaneity being reduced, learning becoming limited, and this approach's ability to deal with values. Relatively high percents of neutral responses were recorded for statements such as, "My child's teacher(s) are using POP effectively," "POP meets the educational needs of my child," and "POP helps the teacher to motivate my child to do his school work." Here it appears to be practical questions of implementation which are not being positively responded to by parents.

It was signified by a fifty-seven percent positive response that parents felt that POP had increased discussion among parents and teachers about important educational matters.

Voluntary parent responses to "open-ended" questions indicate that about one-third (forty-seven parents) of the parents stated that their children enjoy POP, while one-third (forty-nine parents) of the responses indicate that parents feel POP has caused their children to become discouraged or to learn less. Forty-six parents believed that POP had had no effect on their children.

Approximately one-third volunteered praise for POP as an attempt to individualize instruction, while twenty thought that it caused children to learn to set goals and fourteen thought it improved teaching. Sixteen argued that there is nothing good about POP.

In considering how POP could be improved, parents are extremely divided and no strong recommendations surfaced. Suggestions such as the following were offered: a) have teachers provide more guidance to students; b) make POP voluntary; c) increase parent involvement; d) explain POP more clearly; e) let students write their own objectives; and f) emphasize higher order objectives. Twenty-four responses stated that POP should be discontinued.

Also evident was parent concern for the effects of POP on teachers. While only fourteen percent of the staff feel that POP should be discontinued, twenty-one percent of the parents believe teachers do not agree with using objectives. Sixty-one percent of the parents are undecided about teachers' perceptions toward POP.

In general, parents are divided somewhat equally in their attitudes toward whether or not POP should be continued, and they are definitely less enthusiastic than the teachers are toward the program.

C H A P T E R VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The major purposes of this study were: 1) to identify the major actors and incidents influencing the development and implementation of the Performance Objective Program, and 2) to determine the relative degree of effectiveness in achieving the five selected program goals. A related purpose of the study was to determine the perceptions of the teachers, students, and parents concerning various aspects of the Performance Objective Program (POP).

In the previous chapter the findings related to the assessment phase of the study were presented and analyzed. In the present chapter the methodology used in the study is reviewed briefly, a summary of the findings is presented, and the conclusions reached from these findings are set forth. This is followed by a presentation of the recommendations based on the findings and conclusions of the study.

Summary and Conclusions

In this section the methodology and findings are briefly summarized, followed by the conclusions reached from these findings. These summaries and conclusions are provided separately for each of the following aspects of the study: 1) the historical-descriptive study of the Performance Objective Program, 2) the assessment of the

five selected program objectives, and 3) the assessment of the perceptions of the teachers, students, and parents concerning the Performance Objective Program.

The Historical-Descriptive Study of the Performance Objective Program

In Chapter III of this report there is presented a detailed description of the major actors and incidents influencing the development and implementation of the Performance Objective Program. Data from a period of ten years - 1962 to 1972 - were gathered and analyzed in the preparation of this narrative. The following is a very brief summary of the procedures employed, and the findings for this phase of the study.

Summary of the Procedures

A number of unobtrusive measures were used to gather the data for the historical narration. These measures included the following:

- 1) school committee records for the past twelve years were studied,
- 2) position papers and memos from the superintendent's office were examined,
- 3) various program proposals, as well as evaluation reports were analyzed, and
- 4) correspondence and notes from meetings were studied.

In addition, several of the major actors, identified during the study, were interviewed. The purpose for these interviews was to elaborate upon the written data, and to add further insight into the development and implementation of POP.

For the 1971-72 phase of the program, a great amount of emphasis was placed on data gathered from the observations and perceptions of

the investigator. These data were systematically recorded in the form of a log throughout the 1971-72 school year. The data gathered through the use of these unobtrusive measures were analyzed, summarized, and presented in narrative form.

Summary of the Findings

It was found that the components of POP were introduced to the district slowly over a ten-year period. Clearly, the present Superintendent of Schools had led in the development of this program with philosophical development, organized curriculum development programs, and commitment to the development of individualized instructional programs.

Through his leadership, an ESEA Title III project was funded to implement an ungraded program in grades seven through twelve. In implementing this program, it was learned that ungraded individualized instructional programs required organized and structured learning activities. It was recognized by the administrative leaders, and many of the teachers, that specific objectives were necessary to make such a program work. Thus the stage was set for POP.

With some help from administrators and teachers, the Superintendent wrote the grant proposal for this project. Although structurally altered by the State Title III staff, the project was funded for September 1, 1971 through August 31, 1972. A full-time project administrator was employed.

Throughout the year, activities were planned and organized to reach the stated program objectives. In-service sessions were offered

to teachers, and training programs for parents and students were also introduced. While emphasis was placed on developing the skills necessary to implement POP, attitudes and perceptions of participants became very important. Consequently, great care was taken to foster positive attitudes toward POP in parents, students and teachers.

While parent participation in the training sessions was limited, those who completed the program demonstrated the skills necessary to prepare curriculum materials. Furthermore, their perspectives provided an excellent addition to program planning. In addition, the parents who attended the discussion sessions, but not the training sessions, brought new ideas to the school system. While it was frustrating to argue over the philosophical tenets of POP, these sessions certainly generated a critical analysis of the instructional programs.

All the students in the district participated in this program in one way or another. However, the secondary students were involved to a greater degree through their participation in training sessions focused on the technical aspects of writing performance objectives. Observations and reports indicated that the initial antagonism on the part of some students became less acute after this training approach was revised. The new emphasis was on tangential learning, within the established program framework, rather than distinct technical training in writing objectives. Secondary teachers reported greater satisfaction among the students as a result of this approach.

Teachers throughout the district demonstrated necessary basic skills, but much work was needed on advanced skills and attitudes in general. In-service programs made advanced skills available.

Perceptions of undue pressure persisted, and it really was not until two conflict situations arose that the teaching staff began to demonstrate in a united and positive manner toward the program. First, having won a concession on the attendance rules concerning the in-service sessions, the Teachers Association became more involved in the planning of POP activities. Secondly, at a public hearing, the teaching staff was provided the opportunity to defend POP against some local opponents. This sequence of events generated a new perspective on the control of the project. These two events appeared to cause many teachers to realize that the program was their responsibility, and it was not merely the administration's program. The willingness of the Teachers Association to participate in the planning of the proposal for the second year of the project, their request for a greater voice in the planning of all activities, and their cooperation in planning and implementing the program activities indicated a growth in positive feelings toward the goals of the program.

The Assessment of the Five Selected Program Objectives

A rewording and combining of several of the fourteen original program objectives permitted a selection of five as the most appropriate for the purposes of this study. The following sections will deal with each objective, summarizing the procedures utilized in the assessment, summarizing the findings, and finally developing conclusions from the analysis of the data gathered.

Summary and Conclusions Relating to Objective Number One

The first program objective selected for the study was, "Secondary students in the Amherst-Pelham Regional School District will be able to differentiate between a properly defined and an improperly defined student performance objective and will be able to write properly constructed performance objectives."

Summary of Procedures

Similar instruments were administered in both January and in May to a selected sample of secondary students. The purpose for administering these instruments was to measure the student's ability to 1) differentiate between properly defined and improperly defined performance objectives, and 2) write properly constructed performance objectives. In evaluating the students' performance, a properly defined objective had to meet the following three criteria: 1) the presence of a visible or audible student behavior, 2) a statement of the conditions under which that behavior would be expected, and 3) an indication of the required quality of that behavior.

The results from the two administrations of the instruments were processed in such a manner that the differences in the students' skills in January could be compared with their skills in May. Data were then analyzed to determine differences in attained scores due to time.

Summary of Findings

The data that focused on the students' abilities to differentiate between properly and improperly defined performance objectives indicate

that no statistically significant differences existed between the January scores and the May scores. The mean raw score of 6.5 in May was compared with the mean raw score of 7.1 in January. Although the scores in May were found to be slightly lower than the January scores, a statistically significant difference did not exist.

The data related to the students' ability to write properly constructed performance objectives indicated that in May (as compared to January) fewer students received medium ratings, while a greater number of students received high ratings. These findings were related to findings from the historical-descriptive phase of the study which indicated that prior to January emphasis had been placed on teaching students these basic skills. During the January to May period, development of these skills had not been directly emphasized, but rather dealt with as learning tangential to other primary objectives.

Conclusions

While there was a slight decrease (from January to May) in the students' ability to differentiate between properly and improperly defined objectives, there was a marked improvement in their ability to write properly constructed objectives. Continued monitoring of the first skill is undoubtedly necessary. In the second skill, however, improvement has been demonstrated. This appears to indicate that the decision to teach this skill as a tangent to other primary objectives was wise. Continued measurement of the ability must take place to assure that the skill is in fact being taught. Nevertheless, it appears that as of May, 1971, a large percentage of secondary students

demonstrated medium or high ratings (8.7) in the ability to write performance objectives. While further development of this skill is necessary to approach one hundred percent accomplishment of this objective, a level has been attained which indicates that secondary students can write performance objectives and that instruction in this skill is more successful when combined with course content.

Summary and Conclusions Relating to Objective Number Two

The second program objective selected for the study was, "The teachers in the Amherst-Pelham Regional School District will: a) demonstrate the abilities necessary to utilize performance objectives, and b) develop the materials necessary to implement a high quality individualized instructional program."

Summary of Procedures

In September and in May, a sampling of teachers were given identical tests designed to measure three basic skills and to determine change in those skills over a period of time. Those skills were as follows:

1. the ability to identify properly defined objectives,
2. the ability to correct improperly defined objectives, and
3. the ability to write properly defined objectives.

The instrument was administered to the Junior High School staff in September and in May, and data was tabulated not only to show numbers and percentages of those attaining rated scores in each skill, but also showing movement of individual staff members by comparing a subject's performances in September and in May.

In May, all teachers were given a test which measured six skills which were dealt with in the in-service program. Those skills were as follows:

1. to place in a proper sequence objectives ranging from low to high order,
2. to write a valuable cognitive objective,
3. to write a valuable affective objective,
4. to identify in a performance objective the standard of student performance,
5. to design an analogous learning activity for a given performance objective,
6. to identify the most appropriate medium of activity (large group, small group, independent study) for a given learning goal.

The results of this measurement were tabulated and analyzed under the main headings of these six abilities. The results were further separated into groups of those attending the in-service program and those not attending, thus permitting a comparison which might indicate a level of success of the in-service program in providing specified skills.

To assess the development of materials necessary to implement an individualized instructional program, analytical observations of the materials produced continued throughout the year. Samples of objectives were observed to determine the technical quality, the domain represented, the level of thought required, and the relevancy to the present society. Observations were recorded and presented in narrative form.

Summary of Findings

Analysis of the results of the pretest, posttest administration shows improvement in all three skills with the percents of high ratings increasing in each skill and the percents of low ratings decreasing in each skill.

From the perspective of individual change, it was seen that a few teachers decreased in skill, the largest percentages were in the "unchanged" category, and many teachers increased their skills. In the ability to write properly defined objectives, perhaps the most important of the three skills, it is interesting to note that 39.5 percent of those tested demonstrated increased ability.

Analysis of the achievement test administered to teachers in May, on which six skills were measured, indicates a high level of technical skill achievement throughout the district. Nevertheless, some teachers have shown that they have not mastered some of these skills. In general, there were more high scores in the group attending the in-service program and there were more low scores in the group not attending. Exceptions to this, however, make it evident that mere attendance will not guarantee success in these skills. Some skills such as the ability to write affective objectives and the ability to design learning activities were clearly more frequent in the attending group, and data support the value of the in-service program for providing these necessary skills.

In assessing the curriculum materials being developed for individualized instructional programs, frequent inspection of samplings

of the performance objectives and the alternative learning activities were made. Most striking were the perceptions that very little material related to the affective or psychomotor domains, that cognitive objectives were initially low level but throughout the year improvement occurred with more high level objectives being written, and that learning activity banks had not been sufficiently developed.

Conclusions

A high level of technical skills was demonstrated by the teaching staff. Although some need more work in the development of these technical skills, most have demonstrated sufficient knowledge. Further, those who attended the in-service program were shown to have greater skills than those not attending. The fact that this assessment dealt only with skills measurable in writing and that beyond its scope was assessment of in-class implementation skills, indicates that much further assessment is needed. Since this area was singled out by teachers as one needing emphasis, it may be assumed that much work needs to be done with in-class implementation. It would appear that more in-service assistance provided for the teachers would help in the development of the skills necessary to implement a high quality individualized instructional program.

Assessment of the materials produced demonstrates that much work has been done, but that much remains. Products of R & D teams appear to be of higher quality than materials produced during the year; yet in reality only a beginning has been made. Materials to deal with higher order cognitive skills have just begun to be produced, and

little or no materials were produced in the psychomotor or affective areas.

It may be concluded, then, in relation to this objective, that numerous teachers have demonstrated the technical skills required, that much work needs to be done in developing the in-class skills necessary to implement this program, and that the bank of materials produced during this study, while being an invaluable resource representing a great deal of work, must be greatly expanded and improved upon to include more high order cognitive objectives, more affective and psychomotor objectives, and more and better alternative learning activities. Since no data has been gathered concerning the correspondence between stated objectives and the actual marking of students, study of this relationship is needed to guarantee that objectives are in fact the criteria of student performance.

Summary and Conclusions Relating to Objective Number Three

The third program objective selected for the study was, "Each secondary department and elementary curriculum committee will arrange opportunities for students to accomplish learning objectives in topics selected by the students. On the secondary level at least, this will include the opportunity for students to create these objectives."

Summary of Procedures

To assess progress in meeting this objective, two procedures were used: 1) questionnaires were administered to students and teachers to determine their perceptions as to whether students were given

opportunities to choose and to create their learning objectives, and 2) the observations and conclusions of the project evaluators were analyzed to determine if those opportunities were available in the classrooms. Items related to perceptions of classroom opportunities were included in extensive questionnaires administered to both students and teachers in May. The results were tabulated to permit a comparative analysis of student and teacher responses. Following given statements on the questionnaires, respondents could choose from responses of strongly agree, agree, undecided, disagree or strongly disagree. These responses were further grouped, for ease of comparison, into "favorable" or "unfavorable" categories with three responses including "undecided" always considered unfavorable to the attainment of project goals.

In utilizing the observations and conclusions of the project evaluators, reports by that team were analyzed, and that information was included in the formulation of conclusions and recommendations.

Summary of Findings

Students and teachers are divided in opinion as to whether students have opportunities to create their own objectives. Where forty-seven percent of the student respondents felt they did have the opportunity, seventy-one percent of the responding teachers believed students were afforded this opportunity.

Little difference between the two groups exists in their perceptions as to whether students do, in fact, create their own objectives, with the general indication given that about half of the

secondary students have created their own objectives. Analysis of student responses concerning their freedom to choose objectives indicate that twenty-seven percent felt they were free to choose, leaving seventy-three percent unfavorable responses.

Project evaluators identified a limited degree of success in this objective, indicating that they had seen evidence that some students do have the opportunity to choose from various sources of objectives. However, they found that forty percent of the students observe no change in instruction due to POP.

Conclusion

Data indicate that, although some students are being offered opportunities to choose and to create objectives, numerous students are not. Discrepancies of perception suggest that teachers think they are offering opportunities to students, while students perceive of this as no opportunity but rather another assignment. In most classes, students are not presented with viable alternatives and consequently do not see advantages, from the student viewpoint, to the use of performance objectives. Too few perceive the choice of objectives. Too few perceive the opportunity - and take the opportunity - to write their own objectives. It is evident that much work needs to be done to accomplish this objective successfully.

Summary and Conclusions Relating to Objective Number Four

The fourth program objective selected for the study was, "District administrators and their staffs will create specific programs to

report the progress of individual elementary students to their parents in terms of accomplishment of specific learning objectives."

Summary of Procedures

To assess progress in meeting this objective, the investigator identified the programs designed to develop report systems for elementary students. Since one reporting system had been created in 1971 and another in 1972, the two systems were analyzed by comparing and contrasting them against established criteria to determine if either of them meets this objective. First, the system had to be realistic in its time and effort demands on teachers and in its legibility to parents. Secondly, its primary goal had to be to report the progress of elementary students to their parents. Third, the reporting of elementary student progress had to be in terms of accomplishment of specific learning objectives. This analysis was organized into narrative form.

Summary of Findings

It was found that two R & D projects, one in the summer of 1971 and another in the summer of 1972, had been designed to accomplish this objective. Aside from the fact that many parents were displeased with the first of these reporting systems, this reporting plan did not utilize accomplishment of specific objectives as its format. Rather, it dealt with subcategories within established discipline or content areas. The more recent report, however, does successfully meet all of the established criteria. Units are described to parents, components of this system go to the parent only on completion of

units, components of the system are timed to correspond to parent conferences, and progress is recorded as "has met" or "has not met" objectives which are clearly stated on the report. Most impressive is the fact that the system also is designed to double as a record keeping format for elementary programs, thus avoiding duplication of effort for the teacher. If it successfully works in both roles, its use as a daily recording system should greatly simplify its use as a report, and minimize the time spent on reporting.

Conclusion

Theoretically this reporting system succeeds in meeting the established criteria. Nevertheless, only its use will determine its success. All evidence at the present time suggests that it has successfully met this objective. No data were gathered in this study to determine if the stated performance objectives are, in fact, the criteria on which students are evaluated.

Summary and Conclusions Relating to Objective Number Five

The fifth program objective selected for the study was, "Parents will be provided the opportunity and skills to participate in the curriculum building process."

Summary of Procedures

Published documents, newspaper articles, written communications, records of parent meetings, and the project log were analyzed to determine the opportunities which were available to parents. Interviews with those who participated and evaluations of their resulting

products were used to determine if needed skills were provided. After analysis, the resulting data were synthesized and organized into narrative form.

Summary of Findings

Numerous invitations were extended to parents to participate in POP training sessions and in curriculum evaluation or development. A number of sessions were held in which the project was discussed in detail. Large numbers of written communication reached parents seeking their participation. While many interested people attended presentations and took part in discussions, only six parents completed the training program. Although these instructional sessions were offered throughout the school year, few people were willing to learn to prepare useful curriculum materials.

Those who did complete these sessions, however, demonstrated a thorough understanding of POP as it affected them or their children. They were positive in their attitudes toward the program, in that although some did not fully agree with all aspects of it, they could see the value and were willing to try it. Important too was the fact that all who completed the program demonstrated the ability to write valuable and useful materials. Not only were products technically correct, but the parent perspective was evident and seen as a needed component. It was fascinating to note that, different from teacher prepared objectives, those prepared by parents were usually affective or high order cognitive objectives.

Conclusions

Parents were offered numerous opportunities to participate in the curriculum building process. Those who participated to the extent of completion of the training program had developed ample skills needed to participate in curriculum development. However, the small number who did participate to this extent indicates that alternative means of participation must be provided if parent involvement is to be sought. Less demanding ways might draw more parents to the project. Suggestions from those who are unwilling to make a lengthy commitment are not likely under this structure. Further, those who participated indicate that invitations would be more effective if they originated from teachers rather than from central office or POP staff administrators. It appears that more varied means of parent involvement would improve progress in meeting this objective. Also, requests for parent participation should come from the teachers, with POP training available as the need is identified.

The Assessment of the Perceptions of the Teachers, Students and Parents Concerning the Performance Objective Program

Realizing that the perceptions and attitudes of teachers, students, and parents concerning POP were of major concern in the planning of project activities, an extensive measurement of those attitudes and perceptions was undertaken. Through the use of questionnaires administered in January and May to teachers and students and in May only to parents, the feelings of these three groups were

determined. "Open-ended" questions were asked to elicit voluntary responses which might best indicate the attitudes existing. "Closed" questions were utilized to channel thought to specific issues and to measure the perceptions and attitudes toward those issues. "Closed" questions were in the form of statements followed by a five point response scale.

Where possible, for clarity of presentation and analysis, questions worded negatively to project goals were reworded to be positive toward those goals, and the responses were reversed. This was done without altering the meaning of the data, and it permitted a clearer comparison and evaluation of the information. Responses to statements, therefore, were presented as "strongly favorable," "favorable," "undecided," "unfavorable," or "strongly unfavorable." Attitudes and perceptions of teachers, students, and parents were considered separately under the three groups involved.

Summary of the Results of the Staff Questionnaires

Data indicate that staff members have definite opinions, either positive or negative, toward concepts related to POP. Considering a response of more than fifty percent positive and less than twenty-five percent negative to be a highly positive response, it was found that sixty-four percent of the statements asked in May received highly positive responses. The seven most positive responses were to the following issues:

1. Students should be involved in curriculum building.

2. Performance objectives generate preciseness of expectations for the students.
3. Teachers should have more decision-making in POP.
4. Parents should be involved in curriculum building.
5. Students achieve more by knowing what is to be learned.
6. Purposes of education can be expressed in performance objectives.
7. Performance objectives can encourage critical thinking.

The weighted mean score for each of these items was 4.05 or above.

The lowest percentage of positive responses was eighty percent, and the highest percentage of negative responses was ten percent.

On the other hand, the five issues which received most negative responses were:

1. Parents understand POP.
2. I have written as many affective and psychomotor objectives as cognitive objectives.
3. Given sufficient time slower students should be able to perform the same as other students.
4. Students understand POP.
5. I feel secure about how I will be evaluated in implementing POP.

The weighted mean score for each of these items was 3.02 or lower. Percent of positive response spread from forty-one percent to five percent, and the percent of negative response spread from sixty-four percent to thirty-eight percent.

In comparing responses made in January with those made in May, a general movement toward more positive response was noted. The statements eliciting the greatest increase in positive response and the most significant decrease in negative response were those related to 1) the use of performance objectives to encourage critical thinking on the part of the teacher, 2) the use of performance objectives to deal with values, and 3) the possibility that the purposes of education can be expressed in terms of measurable student performance. Movement toward the positive was also noted in responses to the ideas that 1) the time that a teacher invests in POP is worthwhile, and 2) that the teacher feels secure in how he will be evaluated in implementing POP.

Results of the staff's responses to "open-ended" questions were categorized and analyzed. Responses to the question, "How could POP be improved?" indicate major concerns are as follows: a) more time for teachers should be provided, pressure on the staff should be reduced, the administration should be more sensitive to the feelings of teachers, b) creative use of objectives should be encouraged, and c) the sharing of ideas among teachers should be increased. In response to, "What is the best thing about POP?" responses most often volunteered emphasized that a) it encourages the teacher to clarify her objectives or it forces the teacher to plan thoroughly, and b) it permits individualization of instruction. Asked, "How has your teaching (or administrative) behavior been affected by POP?" one-third of the responses indicate no effect or a negative effect, while two-thirds identify positive effects. Asked how POP affects how

children learn in their classes, approximately one-third indicate that they are not sure or that there has been no effect, twenty-four percent say it has increased individualized work, and thirty-six percent feel it increases motivation or otherwise helps students. However, numerous voluntary responses indicate that many teachers feel that there are certain students for whom POP does not work well.

Conclusions

The teachers have reacted both positively and negatively to various issues concerning POP with the weight in favor of the positive. Teachers do want to involve students in planning the curriculum. They do feel that the use of performance objectives can improve instruction. They do wish to involve parents in curriculum development. However, they have identified problems of implementation. The teachers feel pressure. They feel a threat of evaluation. They want more time, and they want a say in the planning of POP. Although a movement toward more positive responses was seen from January to May, several issues continued to annoy the staff and these perceived needs were identified.

Summary of the Results of the Student Questionnaires

Using the same criteria as was used with the staff questionnaire to determine the percentage of highly positive responses - more than fifty percent positive and less than twenty-five percent negative - it was found that fewer statements received a highly positive response from the groups of secondary students. Where sixty-four percent of

the staff's statements received this highly positive response, only one statement on the student questionnaire did. Of the seventeen statements presented to the students in May, the following six items received the most positive response:

1. Classes are taught differently because performance objectives are used.
2. Teachers agree with the use of performance objectives.
3. When performance objectives are used I get more chance to work at my own pace.
4. There is a clear relationship between assignments and performance objectives.
5. I have tried to create my own objectives.
6. Where performance objectives are used I know precisely what is expected of me.

The weighted mean score for each of these items was 3.29 or above.

The lowest percentage of positive response was forty-five percent, and the highest percentage of negative response was thirty-four percent.

On the other extreme, the four items which received the most negative response were:

1. In classes where I learn the most, performance objectives are used.
2. POP has helped to improve instruction.
3. I am free to choose which performance objectives I will work on.
4. In classes where performance objectives are used, there are more opportunities for individual conferences with the teacher.

The weighted mean score for each of these items was 2.61 or lower.

Percent of positive response spread from eighteen percent to

twenty-nine percent and the percent of negative response spread from fifty-three percent to fifty-six percent.

Responses of students to "open-ended" questions continue the pattern of mixed responses with no clear patterns evident. To the question, "What is the best thing about the Performance Objective Program?" twenty-two percent of the responses indicated that students know what is expected of them, eighteen percent relate to the notion that students can work at their own pace, and eighteen percent feel that POP allows students to set their own goals. When asked, "How could the Performance Objective Program be improved?" the following general suggestions resulted: a) there should be a greater use of performance objectives in the classrooms (37 students), b) students should have more opportunity to write their own objectives (29 students), and c) performance objectives should not be used in all classes (24 students).

Conclusions

No clear mandate for or against POP has emerged. Further, no specific pattern of response has demonstrated a clear message from the secondary students. They are less positive towards POP than the teachers are. They have some serious reservations about the use of performance objectives in class. Their attitudes and perceptions of POP are clearly divided as is evidenced by the fact that to the statement, "I think performance objectives are helpful and should be used," a wide divergency was shown with twenty-five percent of the responses favorable, thirty-seven percent neutral, and thirty-eight percent unfavorable.

Summary of the Results of
the Parent Questionnaire

Using the same criteria for a highly positive response as was used in the two preceding sections - more than fifty percent positive and less than twenty-five percent negative - it was seen that forty-three percent of the statements (9 out of 21) received highly positive responses. The six most positive responses were to the following issues:

1. I understand the Performance Objective Program.
2. Parents should have a say in what their children learn in school.
3. Parents should be involved in curriculum development.
4. Parents should be on curriculum committees.
5. Most purposes of education can be expressed in measurable student performance or behavior.
6. Children should have a say in what they learn.

The weighted mean score for each of these items was 3.56 or higher. The lowest percentage of positive responses was sixty-three percent and the highest percentage of negative responses was twenty-four percent.

On the other hand, the five issues which received the most negative response were:

1. POP helps the teacher to motivate my child to do his school work.

2. POP meets the educational needs of my child.
3. My child's teacher is using POP effectively.
4. Most teachers agree with the idea of using performance objectives.
5. It is wise to plan in advance how the learner should behave after instruction.

The weighted mean score for each of these items was 2.95 or lower.

The percent of positive responses spread from twenty-one percent to forty-six percent.

The "open-ended" question, "How has the Performance Objective Program affected your child this year?" elicited forty-seven responses that their children enjoy POP, while forty-nine responses indicate that POP has caused their children to become discouraged or to learn less. Forty-six others claim no apparent effect on their children. Asked, "What is the best thing about POP?" twenty parents felt that it caused an effective learning environment, while another twenty felt it caused children to learn to state goals. Fourteen felt it improved teaching, nine said it increased parent interest, thirteen were unsure and sixteen said there was nothing good about it. When asked how POP could be improved, the following suggestions were volunteered: a) teachers should provide more guidance to students, b) POP should be a voluntary alternative, and c) there should be more parent involvement. There were other positive suggestions, but on the negative side, twenty-four of the parents stated that POP should be discontinued.

In comparing the parents' results with those of the staff, it

became evident that on all common statements, the staff responses were more positive, and had a lower percent of negative reactions. The differences in both positive and negative responses between teachers and parents reached the .001 level of significance on the following issues: a) with performance objectives the student knows what is expected of him and what is the acceptable level of performance, b) performance objectives can deal with values, and c) performance objectives are not limiting and narrowing to the educational process. The difference between teachers and parents in negative responses did also reach the .001 level of significance for the statement, "Most purposes of education can be expressed in terms of measurable or observable student performance or behavior."

Conclusions

The parents differ with the teachers in their perceptions and attitudes concerning POP. Although there is a degree of highly positive response, many of these issues deal with perceptions of what "should be." Parents were highly positive to the notion that most purposes of education can be expressed in behavioral terms.

Many of the negative responses of parents dealt with specific effects on their children. It appears that numbers of parents do not see a beneficial effect of POP on their children.

Also emerging from these data is the perception of many parents that teachers do not support POP and the use of performance objectives. Many parents appear to be concerned for the welfare of the teachers, believing that they do not want POP and that they do not have enough time to devote to this program.

In comparing parent results with teacher results, several items stand out as significant differences. Most fascinating is the observation that the statement receiving the least support from teachers was, "Parents understand POP" while the statement receiving the highest positive response from parents was, "I understand the Performance Objective Program." The fact that significant differences exist on several items indicates a communication problem. Clearly, misunderstandings exist between the teachers and the parents concerning POP.

In summary, the historical-descriptive study of the development and implementation of POP combined with the assessment of the five selected objectives have resulted in data which indicate some distinct conclusions concerning the first year of POP. A high level of technical skill has been developed by the staff. The extensive in-service programs appear to have had positive results in skill development, and the staff has demonstrated high levels of understanding and skill.

Secondary students have demonstrated improvement in the ability to write performance objectives, although there was a slight decrease in the abilities to differentiate between properly written objectives. It appears that the decision to teach the use of performance objectives through tangential learning was wise and should be encouraged. With regard to the first two objectives, then, it may be concluded that a level of success has been attained. Although much remains to be done in both areas, clear and distinct progress was shown.

In providing opportunities for students to select and write objectives, much less progress is shown. As indicated by the perceptions of the students and teachers, and as acknowledged by the project evaluators, a limited degree of success was found. Some students have these opportunities, and many do not. Much work is needed toward meeting this objective.

The most recently produced elementary reporting system appears to be an excellent product which fully meets Objective Number Four. All criteria have been attained, and only reactions to it, once it is placed in use, are awaited.

Evidence shows that parents have been provided the opportunities and needed skills to participate in curriculum development. However, the level of participation suggests that review of this objective is advisable. Since parents and teachers have both signified a desire for parent involvement, the small number of participants suggests a difficulty in the design of that involvement.

Analysis of the existing attitudes and perceptions concerning POP indicate differences between teachers, students, and parents. Teachers are by far the most positive. They strongly support the basic philosophy and practical implications. They do question the means of implementation, however, and they desire more control of the district's planning of activities. They believe POP improves instruction and is worth the added effort, but they feel that there is excessive pressure and an implied threat. Clearly, teachers want a stronger voice in planning.

Students are spread in their attitudes, with several positive views emerging and several negative. Preciseness and clarity of expectation are appreciated, but many feel negatively about the effects on their classes. It also appears that students do not perceive advantages to them of the program, and they do not have positive attitudes as to its improving their education.

Parents believe that they do understand POP, while many of their responses indicate that they do not. They want to be involved in planning school activities, but few are willing to do this through POP training. There is a clear division of parents as to the effect of POP on their children, with approximately one-third feeling that their children like it, one-third feeling that their children are discouraged by it, and one-third feeling that their children have felt no effects of POP. Many indicated uncertainties or reservations and expressed the desire that POP not be so all inclusive. Nevertheless, the fact that forty-three percent of the statements elicited highly positive responses indicates a solid base of support for many aspects of the project.

Recommendations

Recommendations resulting from this study will be directed to three purposes: 1) to provide recommendations as to the direction this program should take during its second year of operation, 2) to provide recommendations to other school districts as to means of introducing programs similar to POP, and 3) to provide recommendations

as to further research to extend knowledge gathered in this study.

Recommendations for the
Second Year of POP

The following recommendations for the second year of this project are based on the findings, conclusions, and perceptions of the investigator.

1. In-service sessions should be continued, with efforts made to relate these sessions to specific needs of the staff. This recommendation is based on data which indicate that teachers attending the in-service program attain higher scores on achievement tests than those not attending.
2. Teachers should be encouraged to teach their students to use POP in relation to normal classroom activities. In addition to skill development, emphasis should be placed on demonstrating advantages to students from the use of POP.
3. Teacher perceptions of pressure and threat should be reduced. Evaluation procedures should be spelled out explicitly to end the fear of the unknown. Completion dates should, when possible, be set by teachers rather than by administrators. POP staff should be seen as a non-threatening source of help so that

teachers will have a place to go, and people to see when a weakness is identified.

4. Teachers should be given a stronger voice in project planning. A committee of teachers should be kept well-informed of all program plans and be encouraged to provide input. This is to improve communications problems which were demonstrated as well as to respond to teachers' requests for greater voice in the planning of project activities.
5. Parent involvement must originate with the teachers. The differences of opinion between teachers and parents, and the erroneous perceptions that parents have of teacher attitudes indicate that teachers must be heard. Teachers should be encouraged to specify plans for parent involvement, and to communicate with parents - through meetings, memos, newspapers - more frequently concerning POP.
6. Curriculum committees, coordinators, and district administrators must assume a greater role in planning further program development. To prepare for project termination, leadership within the system must begin to evolve.

Recommendations for Other Districts

The following recommendations are offered to other school districts about to embark upon similar programs, and are based on the findings, conclusions and perceptions of the investigator.

1. Philosophical commitment to individualized instruction is of paramount importance. This must be seen as the prime purpose, not accountability or budgetary ease. Before skill development begins, teachers must desire this help because of a commitment to improve instruction. Where this does not exist, curriculum development tasks will be seen as unnecessary paperwork and will not affect instruction.
2. Extensive in-service programs are necessary. Curriculum groups, within discipline or interdisciplinary and preferably on a K through twelve basis, should begin by defining the general goals that they wish to set for students. In doing this, the need to plan in terms of student change should be developed. Cognitive, affective, and psychomotor domains should be included.
3. In-service programs on the technical skills of curriculum building may then begin. Objectives should be defined and alternative activities planned. This is a giant step and

should not be rushed. Concurrent in-service programs should be teaching teachers to write higher order, more valuable objectives. Sessions should be offered to expand notions of learning activities, with non-print materials heavily emphasized.

4. Teachers should be exposed to the testing techniques, the record keeping methods, and the reporting patterns which are consistent with this approach. Report cards should be designed to reflect student progress in meeting the defined goals and objectives.
5. Teacher evaluation, program proposals and department budgets should then be brought into a consistent design.
6. Attempts should be made to provide R & D funds for summer projects such that teachers might be employed to carry out these tasks during additional bought time. This is based on the observations that R & D products are more thoroughly developed than materials produced during the school year.
7. Without the use of technical terms, students should be taught the advantages of submitting their own objectives and activities. This should

be done with care, since their reaction will be reflected quickly by their parents. Efforts should be made to minimize negative reactions to change, since this negativity can easily spread to all aspects of the educational system and effectively eliminate all change.

8. After the staff has developed a degree of comfort with the approach, or at least after it is seen that staff members can explain the program, parent involvement may begin. Parents and teachers together should plan parent involvement processes. This is to increase parent-teacher communications and understandings.
9. Throughout all such program development, primary consideration must be the welfare of the students. This approach is too easily seen as merely a management device or as psychological shaping. It must continually be emphasized that the primary goal is the further individualizing or personalizing of instruction.

Recommendations for Further Study

Based on the findings from this study, the conclusions derived from those findings, and the perceptions of the investigator, the following recommendations are made for further study.

1. The perceptions and attitudes of those affected by the program are of high importance. Affective objectives dealing with desired attitudes and perceptions should be determined and evaluated. Feedback on this should be frequently provided to decision-makers so that plans can be made to deal with this when necessary.
2. To assess progress in affective development, perceptual instruments must be developed. Since many important attitudes and perceptions are specific to a project, items must be carefully tailored to the project under study, and the major concerns of the populations involved. Therefore, interviews of samplings of the affected populations should be used to develop questionnaire items. "Open-ended" questions should generate numerous items. These items should be submitted to representatives of the populations to be surveyed to be checked for clarity, value, required time, and other considerations which may be identified. Decision-makers should also be afforded the opportunity to comment on the proposed questionnaire, possibly adding items about which they seek information. When possible, the decision-makers involved should include not only those within the district, but also those associated with the funding agency

or the State Department of Education. Finally, a final copy of the instrument should be tested on a small group representative of those to be surveyed.

3. Product evaluation provides an opportunity for further study which can be of inestimable help. The quality of the objectives being prepared and the activities being designed must be assessed. Criteria must first be established, so that these products may then be evaluated. Standardized achievement scores can be utilized to determine achievement levels prior to implementation and subsequent to implementation. Profiles established by achievement scores may then point out strengths and weaknesses of the project. Analysis of the reports of supervisors can provide data concerning changes which may correspond to new programs. If these evaluations of supervisors are organized by means of a "management by objectives" format, progress can easily be documented, and patterns may be recognized. If the supervisor and the employee together determine objectives and together assess the completion of these objectives, records of those conferences will provide detailed descriptions of personnel progress. A

further area of study is the measurement of the development of the affective curriculum and the growth of students toward the defined affective objective. This can be initiated with an evaluation of the affective curriculum materials available, and the growth of those materials. It could continue with an assessment of the record keeping and evaluation methods used by teachers in assessing student progress. Also, assessment instruments could be developed to get a reading of student attainment of these affective objectives. Comparison studies could then begin to provide data concerning the relationship between the defining of affective performance objectives and the affective growth of students.

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APPENDIXES

APPENDIX A

ILP #1

HOW TO PREPARE PERFORMANCE OBJECTIVES

- VALUE STATEMENT - The use of performance objectives permit and encourage improved instruction.
- GENERAL GOAL - Teachers will possess the skills necessary to prepare results-oriented, personalized instructional materials.

PERFORMANCE OBJECTIVES:

1. Given a written list of learning objectives, you will identify all those which are behaviorally stated and those which are not.
2. Given a list of improperly written objectives, you will rewrite them making them acceptable based on present criteria.
3. Based on any learning goal of your own choosing, you will write acceptable performance objectives.

ILP #1 PRE-ASSESSMENT

- I. In the following list of learning objectives, circle the number of those which are NOT behaviorally stated.
1. The student will read a paragraph at a rate of at least 300 words per minute.

 2. The student will develop an appreciation for abstract art.

 3. The student will demonstrate a commitment to democratic decision-making by objecting to authoritarian institution of regulations.

 4. After witnessing a varsity debate, the student will judge the consistency of the arguments by relating in writing five arguments as presented, pointing out any inconsistencies.

 5. The teacher will demonstrate the proper way to use a band saw.

- II. Now go back and rewrite those which you have circled, making them acceptable performance objectives.
- III. Next, based on any learning goal you choose, write three performance objectives.

LESSON #1

LEARNING OBJECTIVES:

1. Given a written list of learning objectives, you will identify all those which are stated behaviorally and those which are not.
2. Given improperly written objectives, you will rewrite them making them acceptable.
3. Based on any learning goal of your own choosing, you will write acceptable behavior objectives.

LEARNING ACTIVITIES:

You have read the three objectives of this ILP and you know that you will be expected to identify properly written objectives, correct unacceptable objectives, and compose acceptable objectives. Initially then, we must determine our criteria for acceptability. Unquestionably there are numerous "content" related qualifications in determining the acceptability of a learning objective.

IS THE OBJECTIVE JUSTIFIABLE IN TERMS OF OUR PHILOSOPHY OF EDUCATION?

Which of the following objectives is undesirable?

- A. The student will demonstrate respect for authority by obeying without question a seemingly unreasonable teacher command such as "Johnny, stand in the corner," or "Mary, keep walking around the room."
- B. The student will demonstrate his awareness of the limitations of science by challenging the teacher who makes authoritative statements such as "Science has proved conclusively that...."

If you did not find A to be undesirable, you perhaps have a value conflict with the Amherst Public School system. Objectives should fit within a humanistic philosophy viewing the child as a rational individual to be educated in accordance with his abilities and interests. The school system's philosophy, plus your individual values should serve as a screen for your objectives.

IS THE OBJECTIVE JUSTIFIABLE IN TERMS OF OUR KNOWLEDGE OF THE PSYCHOLOGY OF LEARNING?

Which of the following objectives is unacceptable?

- A. The student will demonstrate an understanding of the Bill of Rights by reciting any of the first ten articles when given its number.
- B. After reading various civil rights court cases, the student will demonstrate an understanding of the Bill of Rights by identifying the legal principle involved in each case.
- C. To improve his ability to learn, the student will memorize twenty lines of poetry each night.

- D. Given ten word problems and, on a separate sheet, the answers to them, the student will write the correct algebraic expression of the problem, and the solutions, using the page of answers only to check his solutions.

If you accepted B and D and rejected A and C, your "psychological screen" is in excellent working order. Hopefully you have a philosophical and a psychological criterion of learning objective acceptability. Obviously, we could make a lengthy list of criteria, but perhaps considering a few simple questions with regard to each objective is sufficient.

1. Is it important?
 2. Is it relevant to the material with which the student is involved?
 3. Is it a goal that the student SHOULD reach?
 4. Is it in accord with the student's interest and abilities?
-

Next, we must consider the technical qualifications determining the acceptability of an objective. Foremost, to be useful, the objective must be written in terms of a student behavioral goal which can be seen or heard. The following should serve as a working definition of a performance objective.

A PERFORMANCE OBJECTIVE is a student learning goal which includes three essential parts: an action, a context, and a criterion of performance.

Do you remember the three objectives of this lesson? Go back and check to see if they are acceptable according to the above definition. Determine the action, the context, and the criterion of performance of each objective.

The following might be considered a general model for a performance objective:

Given (context), the student will (Action Verb) (Criterion of Performance) (Direct Object).

e.g. Given twelve photographs of famous paintings, the student will name at least ten (or all or 80%) of the painters.

This is just a model, and need not be considered a rigid standard. Evaluate the following objective:

During English class, the student will write a descriptive essay of at least two hundred fifty words entitled "My Room".

In this objective, the context--"during English class"--is clear, as is the action of writing. The major question then is the criterion of performance. "Two hundred fifty words" is hardly a decent criterion since it says nothing of the grammar, spelling, or originality involved. If all the teacher intended to judge the student on was the completion of at least two hundred fifty words, then the objective is technically correct. Can you improve the wording of this objective?

Which of the following objectives are technically acceptable?

- A. The student will list the four reasons for the Civil War.
- B. The student will witness a demonstration of the use of a simple lever.
- C. Given ten animal specimens and a Taxonomy Key, the student will identify the Phylum of each specimen.
- D. The teacher will demonstrate the proper way to install spark plugs in an automobile engine.
- E. The student will understand the Law of Gravity.
- F. The student will develop an appreciation of classical music.

Of the six learning objectives, only C has all three essential parts--an action, a context, and a criterion of performance--and is written in terms of a measurable student behavior. The next step is a winner. Go back and correct A, B, D, E and F:

Caught you! Don't peek at the answers! Go back and correct the unacceptable objectives first!

Objective A needs a performance criterion. Are any four reasons acceptable? Perhaps it could be rewritten such that the student will list the four reasons for the Civil War as stated in his textbook.

Objective B is not a measurable goal but rather it is a learning activity. What should he be able to do after witnessing the demonstration? Does your corrected objective have the student behaving in a way which demonstrated that he has learned something?

Objective D is in terms of teacher behavior, and that is not what school is all about. Cross off "The teacher" and change it to "Given an eight cylinder engine and eight spark plugs,....the student...."

Objective E does not tell how the student understanding will be measured. Your answer should be something like the following: The student will demonstrate an understanding of the Law of Gravity by correctly predicting what will happen in various contrived situations such as a ball being released or a rock being thrown in the air.

Objective F is lacking a measurable action, the criterion of performance is unclear, and the context of the evaluation is uncertain. Consider the following objective: Given a choice of activities, the student will demonstrate an appreciation of classical music by choosing to listen to classical records on at least 5% of his choices. The context here, "a choice of activities" still is not too clear, but at least its an improvement. Out-of-class contexts where

the student chooses to purchase a record, etc., might also provide means of evaluating this objective.

By now, you should be ready to write your own objectives. So first, choose a learning goal and write it in general terms on the following line.

Be certain to apply your "Philosophical Screen" and your "Psychological Screen" to the learning goal.

1. SHOULD the student learn this?
2. Can this outcome be accomplished?

Now write at least five acceptable performance objectives. They may all contribute to the same learning goal, or you may determine new general goals. Remember to include the following in your objectives:

1. An Action -- in terms of a measurable student behavior.
2. A Context -- a description of the circumstances in which evaluation will occur.
3. A Criterion of Performance -- a predetermined acceptable level of student success.

YOUR OBJECTIVES:

It is strongly advised that you ask someone else to check your objectives for acceptability according to the described criteria. If you are satisfied that you have attained the three learning objectives of this lesson, proceed to the Post-Test. On the other hand, if you are having trouble, request an alternative learning activity from the teacher.

APPENDIX B

Staff Development Program

	TOPIC	WEEK	TOPIC
28	<u>1. SELECTING APPROPRIATE EDUCATIONAL OBJECTIVES:</u> developing skills in using modified versions of the taxonomies of educational objectives.	May 1	<u>9. INSTRUCTIONAL TACTICS FOR AFFECTIVE GOALS:</u> instructional methods for promoting attainment of affective goals.
6	<u>2. PERCEIVED PURPOSE:</u> methods of helping learners perceive the worth of what they are learning.	May 8	<u>10. HUMANIZING EDUCATIONAL OBJECTIVES:</u> using measurable objectives for social and personal development goals. NOTE: No test-out will be offered for this sessions.
13	<u>3. ESTABLISHING PERFORMANCE STANDARDS</u> for intellectual, attitudinal and psychomotor behavior.	May 15	<u>11. TESTING TECHNIQUES:</u> writing tests that measure objective, an alternative to standardized tests.
20	<u>4. DEFINING CONTENT FOR OBJECTIVES:</u> writing objectives that 1) are practical, 2) are not limited to specific contents, 3) encourage critical thinking.	May 22	<u>12. TEACHING UNITS AND LESSON PLANS:</u> a new look at useful devices.
27	<u>5. INSTRUCTIONAL DECISION MAKING:</u> how to decide on instructional activities and to evaluate their effectiveness.	May 30 Tu,W,Th Presented at a. Jr. High b. Jr. High c. Marks Meadow d. Marks Meadow -- (unless announced otherwise)	<u>13. Select one or more topics</u> a. PERFORMANCE APPROACH TO CLASSROOM DISCIPLINE. b. TEACHING READING WITH PERFORMANCE OBJECTIVES. c. IMPLEMENTING OPEN CLASSROOM STRUCTURE WITH OBJECTIVES. d. GAMES AND SIMULATION TECHNIQUES.
3	<u>6. KNOWLEDGE OF RESULTS:</u> the importance of allowing the learner to judge adequacy of his responses to instruction.	June 5 M,Tu,W, & Th, Presented at a. Jr. High b. Marks Mea. c. Wildwood d. East St. -- unless announced otherwise	<u>14. Select one or more topics</u> a. TEACHER AIDES b. NON-VERBAL COMMUNICATION c. DEVELOPING SKILLS IN LESSON CRITIQUING d. MATH LABS
10	<u>7. INDIVIDUALIZING INSTRUCTION:</u> alternative ways of individualizing in large groups, small groups, and independent study.		
24	<u>8. IDENTIFYING AFFECTIVE OBJECTIVES:</u> A strategy for designing affective objectives.		

APPENDIX C

Teacher

Student Name

School

Class of 19

Date

End of Unit Summary

Health: Safety - Level I

Your child has just completed a unit on safety. The conceptual understanding in this unit is that of learning to enjoy life to the fullest with its adventurous pursuits, but respecting the potential for hazards and accidents through adequate planning, preparation, and foresight.

Has Met the Objectives	Has Not Met the Objectives

The major objectives in this unit are as follows:

- A. Describes what accidents are and the need for their prevention and control.
- B. Detects environmental factors which affect health and safety.
- C. Indicates hazards existing in the home, school, and community.
- D. Identifies procedures which help protect personal health and safety and that of others.
- E. Is aware that groups exist to help prevent accidents and eliminate or control hazards.

No check indicates the student has not been involved with that particular objective during the stated period of time.

Comments: _____

The following symbols are used in this report

LANGUAGE ARTS

✓ a check in column #1 shows that the child has successfully achieved the objectives in this area at the level he has been working.

✓ a check in column #2 shows that the child has been working on objectives in this area but improvement is needed.

✓ a check in column #3 shows that the child is currently working on objectives in this area but no evaluation has been made at this time.

When columns are left blank it shows that the child has not been introduced to or has not been working on objectives in that particular area during the period covered by this report.

MATHEMATICS

	1	2	3
Sets			
Numeration			
Whole Numbers			
Addition			
Subtraction			
Multiplication			
Division			
Fractional Numbers			
Decimals and Percent			
Measurement			
Geometry			

Reading Level *

	1	2	3
Creative Expression			
Motor Skills			
Listening Comprehension			
Consonants			
Vowels			
Structural Analysis			
Silent Reading Skill			
Oral Reading Skill			
Oral Reading Comprehension			
Silent Reading Comprehension			

	1	2	3
Language			
Grammatical Terminology			
Composition			
Syntax (Sentence Structure)			
Phonology (Sound - Symbol)			
Punctuation			
Spelling			

APPENDIX D

May 1972

Performance Objective Program (POP) Questionnaire

Please fill in the items below with a check where appropriate.

For teachers only
(including counsellors)

For administrators only

I work in:

I work in:

Pelham or
 East Complex (East Street
South Amherst
J.H. Elem.)

Elementary Administration
 Secondary Administration
 Central Administration

Crocker Farm
 Marks Meadow
 Wildwood
 Junior High School
 High School

I am attending the POP in-service program currently being offered.

yes
 no

For each statement indicate the extent to which you agree or disagree with the statement. In the blanks provided insert the number of the comment which best describes how you feel about the statement.

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Please use one of the above numbers for each statement. It is important that we have a response from you for each item.

- (1) Use of performance objectives helps a teacher to plan instruction that encourages critical thinking.

- (2) ___ Students do not have the opportunity to create their own objectives in my classroom.
- (3) ___ I use performance (or service) objectives more now than in January 1972.
- (4) ___ Students are capable of evaluating their own progress when given the criteria.
- (5) ___ Parents do not understand POP.
- (6) ___ Performance objectives are too specific; they will narrow the educational process.
- (7) ___ My teaching style does not readily lend itself to the use of performance objectives.
- (8) ___ "Teaching for the test" is not necessarily detrimental, providing the test is a valid measure of the teacher's instructional outcomes.
- (9) ___ The time that a teacher must invest in POP is worthwhile in view of the return from that time investment.
- (10) ___ I am worried about how I will be evaluated in implementing POP.
- (11) ___ Performance objectives cannot deal with values.
- (12) ___ I have written as many affective and psychomotor objectives as cognitive objectives.
- (13) ___ Where performance objectives are used, the student knows precisely what is expected of him, what he is to master and what constitutes the minimum level of acceptable performance.
- (14) ___ Students should be involved in the curriculum building process.
- (15) ___ Performance objectives are not useful to me when I communicate with fellow professionals.
- (16) ___ Most purposes of education cannot be expressed in terms of measurable or observable student performance or behavior.
- (17) ___ Students understand POP.
- (18) ___ Given sufficient time, the slower student would be able to perform the same tasks as students whose progress is more rapid.
- (19) ___ Parents should not be involved in the curriculum building process.
- (20) ___ The training I have received in POP has assisted me in developing the program in my area.
- (21) ___ Students achieve more when they know exactly what is to be learned.
- (22) ___ Teachers who specify learning outcomes are less likely to dwell on unimportant issues.
- (23) ___ Students create their own objectives in my classroom.
- (24) ___ Teachers should have more say in setting the direction for POP.
- (25) ___ POP should not be continued next year.

Please feel free to make additional comments.

In this section you will find open-ended questions. Please answer them in the way that makes sense to you.

For those who are not classroom teachers please substitute the word school for classroom.

1. How has your teaching (or administrative) behavior been affected by POP?
2. How has POP affected what students learn in your classroom?
3. How has POP affected how students learn in your classroom?
4. Has POP affected the environment of your classroom?
5. In your opinion, how does POP relate to present practices regarding grading, scheduling, phasing, record keeping, budget planning, etc.
6. Are there areas within the subject(s) you teach for which performance objectives do not work?

7. What assistance would you need to enable you to use performance objectives more effectively?

8. What issues concerning POP have parents raised with you?

9. What is the best thing about POP?

10. How could POP be improved?

11. If there are certain students for whom the performance objective approach does not work well, please describe those students.

Please feel free to make additional comments.

The following section consists of five cognitive questions. Please respond to them in the best way you can.

1. Number the following objectives from 1 to 6, showing the progress from #1, the lowest order objective to #6, the highest order objective.

___ Given statements of the laws from two states other than his home state, concerning possession of marijuana, the student will compare and contrast these two statements, identifying five similarities and five differences.

___ Explain the legal implications of possession of marijuana.

___ Given the briefs from law journals of five trials for possession of marijuana, without the verdicts being known, the student will decide the guilt or innocence of the defendant and defend his decision.

___ Given a written description of an arrest for possession of marijuana, the student will use his knowledge of the law to describe what must be proved to gain a conviction.

___ State the law concerning possession of marijuana.

___ The student will write a proposed law which would revise present standards concerning possession of marijuana.

2. Write a cognitive objective which you think is educationally significant.

3. Write an affective objective which you think is educationally significant.

4. Given a microscope, the student will view at least two slides discussed in class and draw an accurate diagram of each.
- A. In the above objective, underline the part which describes the standard for student performance.
- B. Write a learning activity for this objective which would be analogous practice.
5. On the line preceding each of the following learning goals or activities, indicate whether large group, small group or independent study is the most appropriate medium of activity for individualized instruction.

L = large group

S = small group

I = independent
study

- _____ memorizing factual material
- _____ taking part in discussions
- _____ hearing guest speakers
- _____ hearing instructional lectures
- _____ using teacher developed self-instructional materials
- _____ planning out cooperative projects
- _____ seeing elaborate demonstrations
- _____ using commercial self-instructional materials
- _____ developing desirable attitudes
- _____ viewing motion pictures

*NOTE: Please seal this in the attached envelope and mail it by Friday, May 12.

APPENDIX E

Grade _____
Phase in English _____

- DO NOT SIGN -

Performance Objective Program (POP) Questionnaire

This questionnaire has three sections.

- I Recognizing Performance Objectives
- II Writing Performance Objectives
- III Other Questions

Please answer each question the best you can.
Thank you for your help.

I. Recognizing Performance Objectives

In this section you will find a list of ten statements. Put an "x" in front of each statement that you recognize as a proper performance objective.

- ___(a) Given a list of words the student will cross out all those which are spelled incorrectly.
- ___(b) The student will develop an appreciation for music.
- ___(c) Given a simple floor plan of the High School, the student will draw in the shortest route a man in a wheelchair could take between the Principal's office and the gymnasium.
- ___(d) The teacher will demonstrate the proper way to use a microscope.
- ___(e) The student will demonstrate his knowledge of the United States by writing a paragraph about it.
- ___(f) Within 30 seconds and taking less than 5 breaths the swimmer will do the crawl the length of the ARJHS pool.
- ___(g) At a regulation hockey rink the student will skate one full length backwards.
- ___(h) On a written final examination, the student will demonstrate an understanding of the construction of a bookcase.
- ___(i) In a small group discussion, the student will voluntarily argue his reasons for supporting a certain political candidate.
- ___(j) Each student will solve a problem in science.

II. Writing Performance Objectives

In this section please write (3) proper performance objectives for any subject you choose.

1.

2.

3.

III. Other Questions

A. For each statement indicate the extent to which you agree or disagree with the statement. In the blanks provided insert the number of the comment which best describes how you feel about the statement.

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Please use one of the above numbers for each statement. It is important that we have a response from you for each item.

- (1)___ Some classes are now taught differently because performance objectives are used.
- (2)___ I never have a chance to create and work on my own performance objectives in school.
- (3)___ The Performance Objective Program has not helped to improve the instruction at school.
- (4)___ When performance objectives are used I get more chance to work at my own pace.
- (5)___ In classes where I learn the most, performance objectives are used.
- (6)___ I am free to choose which performance objectives I will work on.
- (7)___ When performance objectives are used, I don't understand how my assignments will help me to get to the objective.
- (8)___ Teachers disagree with the whole idea of using performance objectives.
- (9)___ In classes where performance objectives are used, I get more opportunities to have individual conferences with the teacher.
- (10)___ Performance objectives are too specific; they limit what I learn.
- (11)___ Where performance objectives are used, I know precisely what is expected of me.
- (12)___ When I work on performance objectives I am often confused about how my work will be evaluated.
- (13)___ I think that performance objectives are helpful and should be used.
- (14)___ Performance objectives give students less opportunity to have a say in what they want to learn and in what the school will teach.

- (15) ___ Where performance objectives are used, I know precisely what is expected of me, what I am to master, and how I will be evaluated.
- (16) ___ I understand POP.
- (17) ___ I have not tried to create my own performance objectives.

B. Write one statement that is important to you about performance objectives.

C. Please answer the following questions:

1. What is the best thing about the Performance Objective Program?
2. How could the Performance Objective Program be improved?
3. Has the Performance Objective Program affected your learning in school? If so, how?
4. Check the course(s) in which performance objectives are given to you.

___ English
___ Social Studies
___ Math
___ Science
___ Foreign Language

___ Art
___ Physical Education
___ Home Economics
___ ALPS
___ Business
___ Industrial Arts

5. Check the course(s) where performance objectives work best.

English
 Social Studies
 Math
 Science
 Foreign Language

Art
 Physical Education
 Home Economics
 ALPS
 Business
 Industrial Arts

Please feel free to make any additional comments. Thank you again.

APPENDIX F

May 1972

Performance Objective Program (POP) Questionnaire

- DO NOT SIGN -

I have children in the following Amherst-Pelham Schools:

School	Grade
Child A	
Child B	
Child C	
Child D	
Child E	

This questionnaire is being completed by ___ father or ___ mother.
(Check one)

For each statement indicate the extent to which you agree or disagree with the statement. In the blanks provided insert the number of the comment which best describes how you feel about the statement.

- 1 - Strongly Agree
- 2 - Agree
- 3 - Undecided
- 4 - Disagree
- 5 - Strongly Disagree

Please use one of the above numbers for each statement. It is important that we have a response from you for each item.

- (1) ___ Performance objectives help to individualize instruction.
- (2) ___ POP makes little or no difference in my child's school life.
- (3) ___ Students can benefit from writing performance objectives.
- (4) ___ I do not understand what the Performance Objective Program is all about.

- (5) ___ Most purposes of education cannot be expressed in terms of measurable or observable student performance or behavior.
- (6) ___ Children should have a say in what they learn in school.
- (7) ___ My child's teacher(s) are using POP effectively.
- (8) ___ Performance objectives cannot deal with values.
- (9) ___ POP helps the teacher to motivate my child to do his school work.
- (10) ___ The use of performance objectives will narrow the educational experience.
- (11) ___ Parents should not be involved in curriculum development.
- (12) ___ Performance objectives will keep us from reaching the really important goals of education.
- (13) ___ POP meets the educational needs of my child.
- (14) ___ Where performance objectives are used, the student knows precisely what is expected of him, what he is to master and what constitutes the minimum level of acceptable performance.
- (15) ___ The use of performance objectives will stifle spontaneity.
- (16) ___ Parents should have a say in what their children learn in school.
- (17) ___ It is unwise to plan in advance how the learner should behave after instruction.
- (18) ___ The Performance Objective Program has increased discussion among parents and teachers about important educational matters.
- (19) ___ Most teachers agree with the idea of using performance objectives.
- (20) ___ Parents should be included on curriculum committees.
- (21) ___ POP should not be continued next year.

Answer "yes" or "no".

- (22) ___ My child has spoken about POP at home

Please feel free to make additional comments.

In this section you will find open-ended questions. Please answer them in the way that makes sense to you.

1. If a new family moved next door and you were asked, "What is POP about?" What would you answer?

2. How has the Performance Objective Program affected your child(ren) this year?

3. What is the best thing about POP?

4. How could POP be improved?

5. To date, there have been only a few parents involved in curriculum development. What suggestions would you have for increasing parent involvement in curriculum development?

6. Where did you get the most information about POP? (Check One)

- Newspapers and TV
- Neighbors and friends
- My child(ren)
- The school system:
 - Teachers
 - Public meetings
 - Printed material
 - POP Center
 - Other (please specify)

Please feel free to make additional comments. Thank you again.

*NOTE: Please seal this in the enclosed envelope and mail it by Monday, May 15.

