This report describes the theory and 1st-year operation of the Educational Management System, a district-developed approach designed to identify and structure instructional program needs by emphasizing decentralized decisionmaking and focusing on intended program results. The report observes that educators using EMS will continually improve their ability to respond to student needs by (1) regularly identifying the most pressing student needs in the classroom, (2) establishing objectives for student learning in high priority areas, (3) allocating personnel and materials according to objectives, and (4) demonstrating measurable improvements in student performance. The report outlines the steps to be taken by each teacher and principal in preparing his EMS statement, and reproduces several sample statements. (Author)
ACCOUNTABILITY AT THE LOCAL LEVEL

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The pressing need for change in education—dramatized in best-sellers such as Charles Silberman's *Crisis in the Classroom* and documented by the nationwide thrust for accountability—has prompted some pioneering school districts to initiate aggressive new programs in educational management.

One of these programs—currently underway in San Bernardino, California—employs systems approaches to meet the need for change. The new approach is based on the recognition that student needs vary from time-to-time and place-to-place. Instead of relying on centrally standardized instructional programs which cannot possibly meet the needs of all students at all times, the new approach emphasizes decentralized decision-making and focuses on intended program results.

The purpose of the Educational Management System (EMS) is stated as follows:

"Educators using EMS will continuously improve their ability to respond to student needs by (1) regularly identifying the most pressing student needs at the classroom, building, and district levels, (2) establishing objectives for student learning in high priority areas, (3) allocating personnel and materials according to objectives, and (4) demonstrating measurable improvements in student performance. The EMS will be fully developed by June 1974."

The initial steps in developing the EMS were taken by Central Office personnel during the summer of 1970. Their efforts were supplemented during the school year by a group of teachers and a group of principals who regularly evaluated the functioning system. These groups helped in identifying long range plans for EMS and in planning and revising strategies for implementation.

In presenting the proposed Educational Management System to the staff, the nationwide thrust for accountability was documented and several alternate responses were identified.

The first alternative had to do with sort of laying low and waiting for the accountability tide to pass. It was noted that the tide could very well leave San Bernardino with State mandated objectives and an imposed system of evaluation.
The second alternative involved accepting some politically appealing educational innovations including the Voucher Plan and Performance Contracting.

The third alternative involved doing the job in San Bernardino. It was suggested that teachers and parents in San Bernardino could best judge the needs of their children and select appropriate objectives. Also, they could make better informed decisions about instructional programs suited to student requirements. A commitment to decentralized decision making within a framework of accountability pointed to the need for developing staff members' skills in systematic planning and humanistic management.

In order to ensure that system development was compatible with staff needs, it was proposed that all staff participate in developing and revising the Educational Management System. The Superintendent stated his expectation that all staff should participate in development by trying the proposed system on for size and providing feedback regarding classroom experiences in implementing systematic approaches to instruction. He established a November 1, 1970 deadline for teachers to turn in EMS plans to Principals and for Principals to turn in EMS plans to the Superintendent.

In preparing EMS statements, it was proposed that staff members follow "Seven tentative steps toward a Humanistic System":

1. **Define a Mission.** This involves identifying one's essential contribution to the organization. It includes answering the question, "If I weren't here, what wouldn't happen?"

   Principals usually selected effective management of a school. Teachers selected effective management of the classroom or learning environment. It was suggested that a mission should include what is being done to what unit of the organization.

2. **Identifying Areas of Performance.** This includes describing the categories of activities for which one feels responsible. Statements identifying areas of performance should include the broad spectrum of activities that one engages in including both those which one enjoys and does not enjoy.

   Principals chose such things as pupil personnel, plant, program, and public relations. Teachers focused on student cognitive and affective behavior. Some teachers also included community-school relationships.

3. **Identifying Key Results.** This involves identifying the most important things to be accomplished in the following year. Key results were defined as intended accomplishments of highest priority, usually a demonstrable change in skills, knowledge or appreciations.

   Principals' key results turned to the Superintendent included improvement of teachers' instructional skills in science, improvement of teachers' skills in innovating within the classroom setting, and increased parent involvement in the educational and social activities of the school. Teachers selected
key results included increased student skill, analysis, and solution of problems; improved attitude toward learning; increased competence and ability to read; and increased fluency in written expression.

4. Determining Performance Indicators. This involves selecting the kind of evidence to be used in demonstrating the accomplishment identified by the key result. It involves answering the question, "When the key result is accomplished, what sorts of things should I be able to observe?" Performance indicators are directly related to key results.

Principals chose sources of evidence including records of teacher-initiated in-service training, requests for resources to reach objectives, and number of parents volunteering tutoring services. Teachers relied on evidence from locally constructed cognitive and affective measurement instruments, behavioral observations, and sociometric devices.

5. Statement of Objectives. This requires specifically stating as precisely as possible what one intends to accomplish and how the accomplishment will be assessed. An objective is:

"Specific and measurable outcome characterized by identifying (1) who is going to demonstrate the intended behavioral change, (2) what behavior and capabilities are to be acquired, (3) in what area, (4) when the change will be accomplished, (5) how the behavioral change will be measured or demonstrated, and (6) what proficiency level is appropriate.

One Principal identified the following objective:

"Teachers will improve their skills in the use of classroom aides by June 1 as measured by (1) 90% of the faculty preparing a use schedule outline of their aide's time allotment in the instructional component, (2) all qualified faculty members increasing attendance at in-service meetings regarding improvement of aides' effectiveness, and (3) increasing frequency of positive evaluation comments by aides as they react to their assignments.

A teacher identified the following objective:

"At the end of the 35-week period, given a simple subject, 85% of the students will be able to write an original paragraph of at least 50 words in length containing a topic sentence, a well-developed body, and a concluding sentence.

It was emphasized that the important issue was one of identifying an intended behavioral change and the evidence that one would be willing to accept in demonstrating that change.
6. Development of a Work Plan and Monitoring System. This involves identifying the sequence of activities necessary to achieve the objective including (1) identification of required resources and (2) milestones for collecting evidence to reflect interim progress toward objectives. These plans identify the general strategies to be used in accomplishing objectives. Most importantly, they schedule periodic collection of information regarding progress of the program. These interim progress reports provide an opportunity to revise programs in midstream.

7. Performance Review. These reviews include a comparison of actual with intended results together with the setting of priorities for the following year. The most important component, however, is the opportunity for Principals to discover how to help teachers.

The staff was able to draw on the resources of the Central Office in planning educational management systems. Central Office personnel worked with Principals on an individual basis and provided some group presentations to faculty meetings. Principals were responsible for delivering the program to teachers.

It was noted that the EMS was systematic in that measurable objectives were identified and regular feedback was collected. Work plans associated with each objective were intended to encourage consideration of alternative programs. Also work plans specified strategies, resource requirements and monitoring procedures. Systematic management required a results orientation, consideration of alternative programs, and regular collection of feedback regarding program progress.

The Educational Management System was considered humanistic because practitioners were asked to identify what, in their minds, were their essential or key results. Staff members were asked to identify what their most important intended accomplishment was and what they would accept as evidence of having achieved that accomplishment. Discussions between teachers and administrators identified how administrators might help teachers and what expectations were mutually acceptable.

Staff members were justifiably concerned that EMS might be used to threaten positions. This was alleviated, in part, by emphasizing that the system was developed to improve instruction. If persons failed to reach objectives, some changes in instructional program were indicated. The point was to find a program to improve student learning. Further, EMS provided teachers with a vehicle for communicating concerns, problems, and priorities to administrators. Mutual agreement regarding program strategy, resources, and objectives enhanced mutual commitment to programs and mutual responsibility for results.

The Superintendent held individual conferences with each of the District's 66 Principals. These conferences were critical in communicating his commitment to helping Principals and provided a model for Principals to use the EMS conference with teachers. These first of the year
conferences were followed by individual midyear conferences to assess interim results. Also, end-of-year small group conferences were scheduled for sharing experiences and planning for the next year.

The strategy for implementation involved a broken field approach in which it was recognized that some individuals would pick up the system and run with it, while others would be more resistant to changes. In view of these expectations, the Superintendent accepted and supported both limited and highly sophisticated EMS statements.

First Year Results

The initial developmental steps succeeded in focusing attention on intended program results. All Principals and a large number of teachers wrote objectives which specified what was supposed to be learned, when it was supposed to be learned and how it would be measured. Examples of EMS statements written by Principals and teachers are included as an appendix.

The San Bernardino Teachers Association commented in their January Newsletter that,

"An accountability system has within it the potential for destroying paternalism within the school system. The crucial question is the teacher's ability and desire to make accountability flow upward and not downward. The problem is less one of teachers being held accountable and more one of administrators being held accountable. They should answer for books, materials, supplies, building design, bus schedules, and all the other components which give the teacher the time and flexibility he needs to do the best possible job imaginable. Let's stop being defensive; we are not here to serve administrators; they are here to serve us. Accountability used in this way should rightly destroy paternalism; only time will tell if administrators and teachers are capable of this kind of change."

There is evidence that the San Bernardino management turnaround from centralized control to decentralized decision-making had a demonstrable impact on organizational climate. An assessment of organization climate was conducted in midyear with Likert's Survey of Organizational Climate. Principals' anonymous responses to the survey collected in midyear revealed significant changes in leadership processes, decision-making processes, interaction-influence processes, and control functions. Principals consistently viewed the organization as moving from McGregor's Theory X styles of management toward Theory Y styles of management.

The ultimate impact of EMS will be observed in student learning. The District's standardized testing program has been adjusted to sample student learning at the end of the third, sixth, ninth and twelfth grades. Also, following recent Board approval of policy level goals of
education, the District is proceeding to construct districtwide objectives with accompanying criterion-referenced measuring instruments. This step will complete the loop from prioritizing through program planning and objective setting to feedback of results for further prioritizing.

EMS has placed in relief the pressing need for more valid measures of educational outputs. It is recognized that standardized tests have a number of drawbacks in assessing short term changes in individual student learning. Criterion-referenced instruments provide more pertinent information; however, local development of these instruments requires substantial commitment of personnel and material resources.

The problem of assessing educational inputs must also be confronted in developing an accountability system. It is recognized that the school is only one of a number of institutions affecting student achievement. The social and cultural milieu in which a child grows up makes an important contribution to behavioral changes. These out of school factors, which are rarely assessed, must be considered in efforts intended to link educational inputs to student learning outputs.

Long Range Plans

The long range developmental plans for EMS include establishment of a Management Information System to regularly collect and disseminate information regarding student needs and progress. The policy level goals adopted by the Board of Education will provide a framework for reporting on student progress. The Curriculum Council is providing task forces for identification of districtwide objectives in each goal area. These objectives will include measurement instruments for collection of data on student progress. Concurrently, Data Processing resources are being adjusted to handle item analysis of teacher-constructed and standardized test data. The Management Information System will generate the data needed for interim and final progress reports on individual student, classroom, building, and district performance.

Also, in accordance with long range developmental plans, a task force is working on a Resource Allocation Model. It is recognized that the resource allocation system must distribute personnel and material resources according to identified student needs. The system will be constrained by the necessity of (1) providing for basic comparability between resources allocated to different schools and (2) providing for special allotments according to building level and district priorities. Present thinking involves the development of two subsystems: (1) the Basic Allocation System (BAS) and (2) the Special Allocation System (SAS). It is suggested that BAS would allot personnel and materials to a building by a formula including factors such as enrollment, subscription to free lunch, age of plant, and socioeconomic variables. SAS would allot personnel and materials to a building depending on established district
and building priorities. A pool of resources would be allocated to improve district performance in the high priority goal areas. Buildings could draw on these resources in accordance with demonstrated student needs.

Summary

It seems apparent that San Bernardino's Educational Management System has offered staff members the freedom to be responsible. It was predicated on the belief that the teachers know best what kids need and how to meet their needs. Administrators adopted a service orientation, helping teachers to reach their objectives. Teachers and administrators jointly agreed upon objectives, resource requirements and instructional strategies. There was a sharing of accountability for results.

In conclusion, it should be noted that the notion of sharing accountability for results can be expanded to include skeptical legislators and questioning parents. Legislators must recognize the importance of supporting school districts who are willing and able to demonstrate results in terms of student learning. Parents must recognize that their interest and support for the instruction program is crucial for the occurrence of successful learning. A public, understandably concerned about how well its schools are doing their job, must realize that it too has to be held accountable.
EXAMPLES OF EMS STATEMENTS:

Example 3:

3.0 **Key Result Area**

3.1 Increased faculty involvement in planning the schools' instructional program.

4.0 **Performance Indicators for KRA 3.1**

(1) Increase in frequency of department meetings.

(2) More research into techniques of instruction.

(3) Number of requests for new instructional materials.

(4) Teacher requests for assistance in curricular planning.

5.0 **Objective**

5.1 Teachers will increase their participation in instructional planning by June 1 as measured by (1) in increase in the number of departmental meetings to develop plans, (2) 25% of the teachers researching new techniques in instruction, and (3) an increase in the number of requests for materials and assistance in instructional programs.

6.0 **Work Plan and Monitoring System for Objective 5.1**

Meet with department heads to develop plan for involving staff in "systems" planning. Sep 16

Staff meeting with Dr. Bonney to outline approaches and procedures for "systems" planning. Sep 25

Departmental meetings Sep 28, Oct 1

General staff meeting - Progress Review Oct 5

Departmental work meetings (as needed) Oct 7 - 16

General staff meeting - to report on plans developed. Oct 19

Turn in written plans - by Oct 21

Departmental heads meeting to review total package Oct 22

Final plans completed Oct 28

School plans to Superintendent Oct 29
6.0 Work Plan and Monitoring System for Objective 5.1 (Cont.)

General staff meeting—discuss implementation program as plan developed  

Data accumulation throughout year regarding teacher research, requests for new instructional materials, etc.  

Summary of data throughout the year.  

Report to Superintendent  

by June 10
Example 6:  

Key Result Area

3.6 Increased staff understanding of schools' course offerings.

Performance Indicators

4.1 Departmental agreement on course goals and objectives.
4.2 Course descriptions will be identified in writing.
4.3 Identification and agreement between counselors and staff members on the following:
   a. Prerequisites when appropriate
   b. Courses that fulfill established requirements
   c. Scheduling of regular departmental meetings.
4.4 Counselor use of completed course descriptions in meetings with parents and students.

Objectives

5.1 Departments will be able to complete brief course descriptions containing all requested information as measured by 100% of the departments submitting acceptable course descriptions to the administration by December 18.
5.2 The principal will provide by the first week of second semester course descriptions which can be used in the preparation of a registration handbook for the 1971-72 school year.

Development of a Work Plan and Monitoring System

6.1 Identification of priorities which support effective school management.  
   Sep 1 - 30
6.2 Discussion with Department Chairmen needs for course descriptions and request same. Set regular department meeting dates.  
   Sep 23
6.3 Development of course description form to be used by Department Chairmen.  
   Sep 25
6.4 Dissemination of information regarding requests for course information to staff.  
   Oct 19 - 30
6.5 Individual conferences as needed with Department Chairmen and members of department.  
   Oct 19 - Nov 16
6.6 Initial course descriptions due from all departments.  
   Nov 16
6.7 Review and discuss with Department Chairman questions and reactions to course descriptions presented.

Nov 16 - Dec 18

6.8 Prepare copies of course descriptions for school reference and use.

Dec 18 - Feb 15

6.9 Development of plan for use of course descriptions with guidance office and Department Chairman.

Jan 4 - 29

6.10 Performance Reviews

Mar - Apr

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MANAGEMENT SYSTEM FOR FIFTH GRADE MATHEMATICS PROGRAM

1.0 MISSION

Present a mathematics program which maximizes successful learning for students who are in the third math group in the fifth grade team.

2.0 AREAS OF PERFORMANCE

2.1 Mathematics computation
2.2 Mathematics application
2.3 Mathematics concepts

3.0 KEY RESULTS

3.1 Increase in the performance level of the group as a whole between each pre-test and its related post-test and or between successive pre-test -- post-test sequence on place value and rounding off of numbers.

4.0 PERFORMANCE INDICATORS

4.1 A greater understanding of the concept of place value as measured by pre-test -- post-test comparison
4.2 Application of the concept of place value on assigned practice sheets
4.3 Ability to demonstrate knowledge of place value by board drills
4.4 Ability to recognize values of numbers in regards to the place they hold
4.5 Ability to round off numbers

5.0 STATEMENT OF OBJECTIVES

5.1 Students in group III of the fifth grade will improve in their ability to work in the areas of 4.1 through 4.5 of the performance indicators as measured by: (1) 75% of this group will by October 16 compute with 70% accuracy place-value and rounding off performance skills 4.1 through 4.5 as measured by pre-test and post-test sequences. (2) 70% of
group will be able to demonstrate knowledge of place-value by a 75% accuracy test on 10 written problems taken from board. (3) 65% of group will be able to reach 80% accuracy on ten rounding off problems.

6.0 DEVELOPMENT OF A WORK PLAN AND MONITORING SYSTEM

6.1 Pre-test group on place-value system and rounding off numbers Oct. 1

6.2 Assess results of test and devise a strategy for teaching sequence. Discuss results with class Oct. 2

6.3 Begin teaching concepts of place value key. Have students copy key into their notes. Assign homework as a follow-up activity Oct. 5

6.4 Correct homework with class. Monitor results on chart. Have board practice with group Oct. 6

6.5 Discuss value of numbers in relation to place number occupies in a given set of numbers. Do practice sheet related to this concept. Assign a related homework sheet Oct. 7

6.6 Correct homework from night before. Monitor results on chart. Begin discussion on rounding off of numbers. Introduce key for understanding of this concept Oct. 8

6.7 Do practice sheet on rounding off. Correct in class and monitor results on chart. Discuss and demonstrate fully. Have board drills for more practice Oct. 9

6.8 Review concepts of place value and rounding off by the use of practice ditto sheets Oct. 12

6.9 Math games which will further help to motivate students interest in place value and rounding off of numbers Oct. 13

6.10 Do ditto practice sheets on place value and rounding off of numbers Oct. 14

6.11 Use post tests to measure stated objectives as outlined in 5.1 of this mission Oct. 15

6.12 Analyse post-test results Oct. 16
7.0 PERFORMANCE REVIEW

7.1 Use test results to determine if objectives have been met and mission accomplished

7.2 Discuss results with group

7.3 Devise a strategy to close any weak gaps in students' conceptual development of place-value or rounding off of numbers
BEHAVIORAL OBJECTIVES FOR 8TH GRADE LANGUAGE ARTS

MISSION: To help the youngsters advance forward as much as their ability permits in communication skills as well as to help them develop a positive attitude toward their ability to achieve.

PERFORMANCE AREAS: The students will increase their performance ability in reading skills, research skills, writing effectively, use and understanding of basic grammar, and spelling ability.

KEY RESULT AREAS:

READING:
   a. increased knowledge of basic types of literature
   b. increased experience reading literature
   c. increased understanding of word attack skills

COMPOSITION
   a. improved ability at writing legibly
   b. increased knowledge of the dictionary and ability to use it
   c. increased knowledge of word structure to improve spelling ability
   d. increased knowledge of the basic sentence patterns
   e. increased knowledge of some common grammatical errors and how to avoid them
   f. increased knowledge of the parts of speech and their function
   g. increased knowledge and skill it using correct punctuation
   h. increased knowledge of the structure and writing of a paragraph
   i. increased fluency at expressing themselves in writing
   j. increased skill at writing simple poetry

RESEARCH
   a. increased knowledge of basic outlining
   b. increased ability at using and finding information in the library
VOCABULARY

a. increase the students' basic vocabularies

SPEECH

a. increase the students' basic understanding of correct speaking voice, volume, diction, expression, and presentation before a group.

PERFORMANCE INDICATORS:

1. Teacher-made tests
2. Teacher evaluation of demonstration by students of practical skills

BEHAVIORAL OBJECTIVES:

1. At the end of the 36 week period, 50% of the pupils will have read completely through on their own time one book of their choice but of teacher approved difficulty and length.

2. At the end of the 36 week period, given a simple subject, 85% of the students will be able to write an original paragraph at least 50 words in length containing a topic sentence, a well-developed body, and a concluding sentence. This paragraph will be written with proper indentation, legible handwriting, correct punctuation, and no errors. They will continue to correct their paragraph until it is perfect.

3. At the end of the 36 week period, given a teacher-constructed oral test on tape, 85% of the students will be able to reach 85% accuracy in identifying and describing basic phonic sounds.

4. At the end of the 36 week period, given a typewritten paragraph, 85% of the students will be able to copy the material neatly and legibly.

5. At the end of the 36 week period, given teacher-made vocabulary tests, 85% of the students will be able to pass with 85% accuracy examinations showing a knowledge of the meanings of 200 selected new words chosen from our subject matter during the year.

6. At the end of the 36 week period, given a teacher-made activity 85% of the students will be able to identify and create sentences using the four basic sentence patterns.