A brief paper presented at the American Educational Research Association Annual meeting (April 1977) describes the development, and analysis of the Instructional Management System (IMS) which is used in the Lansing elementary schools. The report is divided into three sections: a historical overview of the program, a description of IMS, and an assessment of the advantages, disadvantages, and outcomes as assessed by the teacher. In an effort to make the lowest achieving students successful, the teaching of 30,000 elementary students of diverse backgrounds and socioeconomic status in 56 schools was achieved by decentralization of decision making on a school-by-school basis, teacher participation, parental involvement, and implementation of IMS. These actions were mandated by Elementary Secondary Education Act, Title I funds used for the program. The implementation of the IMS includes 140 reading objectives and 150 math objectives which are representative of skills students in all schools should master. Accompanying each objective are pre-tests and post-tests. Additionally, record keeping cards for reading and math are utilized to plot pupil progress through the system. Advisory committees are comprised of teachers, administrators, parents, and evaluators who review items, suggest time-saving testing techniques and effective management practices. The positive and negative results of the development and implementation of IMS are reported. The advantages of IMS are: immediate information on skill level, appropriate educational objectives, greater test reliability, and better communication between teachers and parents. The disadvantages enumerated by the teachers are: feelings of being pressured to achieve a certain number of objectives, and very little input into the development of the IMS components. Additionally, students are occasionally overtested; time required to master particular objectives is not equal; and collecting, recording, and analyzing data is too time consuming. In the IMS program, teacher confidence is increased and teacher morale is strengthened as a result of greater teacher participation. As a result of the success of this IMS program a system similar to it is being developed for the secondary level. (Author/JP)
Individualization, Desegregation and Educational Decision-Making In An Urban, Decentralized School System

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Lansing School District

This paper describes the development and implementation of a program evaluation model which provides for 1) local teacher ownership, 2) on-going revision for validity and reliability, 3) testing appropriate to teaching, 4) meaningful achievement information for parents, and 5) one evaluation design for all compensatory education programs. The work described in this paper was built upon the premise that it is appropriate and necessary to "re-invent the wheel" when planning and implementing objectives-based evaluation designs which serve both instructional decision-making and funding source accountability.

To put the information in perspective, a demographic description of the school district seems appropriate. Lansing is the capital city of Michigan, located near the center of the lower peninsula. The Lansing School District serves some 30,000 students in 56 school buildings. The student composition is a most diverse one by any criterion. In terms of race, the Lansing School District enrollment is comprised of approximately 18% Black, 10% Latino, 2% Native American and Oriental and 70% Caucasian. Socio-economically, the students range from ADC and welfare (20%) to the offspring of professional and upper level managerial families.

Three efforts in the past five years have been designed to better

serve this diverse population. First, decentralization of decision-making, called Responsible Autonomy, has called for instructional decisions to be made as close as possible to the students, that is at the building level. Finances and personnel are allocated to individual buildings and educational priorities are established with input of staff, principal and community. Second, desegregation which began as a voluntary effort and became court ordered has resulted in two-way bussing of students in 20 of 46 elementary schools. The other elementary schools have been integrated through neighborhood housing patterns and the secondary schools have been integrated through boundary adjustments. The third effort, the development of the Instructional Management System (IMS), is the major topic of this paper.

The Instructional Management System, IMS, was designed to have a timely impact on decision-making at the classroom, school and district level. To do so, it first had to have the support of teachers. Several approaches were adopted to achieve this objective. The most important was accepting the necessity of "Re-Inventing the Wheel". The importance of writing "Lansing" objectives was recognized, even though these might prove quite similar to others already available. Teacher-developed items were chosen over commercial or expert-written items. In each instance, it was decided to focus on effectiveness rather than efficiency. That is, it was more important that an IMS have credibility in the schools than it was to develop the material efficiently.

A second aspect of these efforts was the necessity for the evaluation design to support the district policy of responsible autonomy, i.e., to move instructional decision-making to the building level. This meant
that the IMS would have to have impact on what happens daily in the classroom. Further, it meant that the system would have to respect, indeed encourage, diverse approaches to teaching.

Third, the obligations imposed and the funds granted by the federal and state compensatory education programs (Title I and Chapter 3) were used as levers to achieve these changes in the district as a whole. When possible, demands imposed by these programs were viewed as opportunities to improve the district's capacity to serve students. It was essential that the IMS be acceptable to outside funding agencies.

This paper consists of: an historical sketch of the development of the IMS, a description of the IMS as it operates now, and finally an analysis of the advantages and disadvantages of the approach taken with a preview of next steps.

A History, 1971-1975

During the 1971-72 school year, each school building was asked to select one district goal, set a behavioral objective related to the goal, develop a pre-test, instructional unit, and a post-test for this objective and, finally, carry out this teach, test and recycle, if necessary, model. The approach was low key. The choice of content was wide open, the number of students and staff involved was decided at the building level. The evaluation unit focused its efforts on working with those buildings which indicated an interest. This first step resulted in several positive outcomes. Awareness of instructional objectives and the test/teach/test model increased. Staff, enthusiastic and capable in these aspects, were identified and recognized. A first
Handbook of Objectives, was produced. Evaluators and teachers were working together.

The same year all Lansing elementary schools became involved in the state-funded compensatory education program, Chapter 3. For many staffs this was the first contact with special programs. It meant more money, but more testing. It meant trying to make the lowest achieving students successful. Most controversially, it threatened to penalize schools that did not perform well on norm-referenced tests. There was considerable support among the teaching staff for finding an evaluation design which was not based on norm-referenced gain scores. Such a design would have to provide feedback before the end of the year. It, too, would have to take into account the range of achievement within each grade.

In the following years several opportunities were found for developing an objectives-based evaluation design. During 1972-73, criterion referenced tests were mandated by the State Department for evaluating the kindergarten and first grades of Chapter 3. These objectives and test items were developed by Lansing teacher committees and foreshadowed further efforts. The Office of Evaluation Services provided leadership; technical and (very important) clerical support to these efforts. During this time, also, several pilots of commercial objective referenced testing systems were made.

During the school years 72-73 and 73-74, the Middle Cities Consortia, of which Lansing was a member, was awarded Title III grant to develop instructional management systems, including objectives, tests, teaching
prescriptions, and inservice packages. Housed in a Lansing elementary school, this project provided considerable opportunity for teachers to work on developing this system.

As the result of extensive discussion with the Michigan Department of Education, Lansing was able to plot student progress in the "Middle Cities" system as the Title I evaluation for 1974-75. Building on what had been developed in the Middle Cities model and what had been developed internally in the Lansing School District, the Instructional Management System was packaged and disseminated to all Lansing schools for implementation during 75-76.

A Description of the IMS
And Further Developments

The Instructional Management System in its present form, has three (3) parts. It should be pointed out that this system is neither final nor ideal. It is simply where we are now. First there are 140 reading and 150 math objectives which have been identified as "critical". These are considered to represent skills which students in all school buildings should master. Additional objectives may, and usually are, set by a particular teacher or school. The objectives are not tied to grade levels, but rather are considered to be hierarchical; students may be working anywhere along the continuum. Accompanying each objective are a pre-test and a post-test. Finally, record keeping cards, one for math and one for reading, are used to plot pupil progress through the system. Instructional activities were not provided in keeping with the plan for each building to determine the best way to provide for instruction.

Progress of all elementary students, particularly those in specially funded programs, is plotted against the IMS objectives. The objectives
and tests, then, are common to all buildings. At the same time, supplemental objectives and curricula are the responsibility of individual buildings.

Once the implementation of the IMS became a district-wide requirement, teacher resistance occurred. Teachers complained of not being involved in either the development of the system or in the decision to implement it district-wide. They felt unprepared to participate on such a large scale and questioned the quality of the objectives and items. It became clear that if the IMS was going to be given a chance to succeed, teacher involvement and teacher in-service had to occur on a larger, more systematic scale. A first step was the establishment of the Joint Committee on the IMS.

This committee was comprised of teachers (one per grade level), administrators and parents. A number of recommendations grew out of the committee. The recommendations focused on four basic areas: 1) the improvement of reading test items, 2) the incorporation of teacher judgment as a means of assessment for kindergarten and first grade objectives, 3) the reduction of the pre-testing in math as much as was possible and 4) the inservicing of all teachers at the beginning of 1976-77 to familiarize them with changes and the requisite management skills to implement the system. Each of these recommendations was adopted and implemented as suggested.

During this school year, 76-77, another avenue for soliciting teacher input has been the use of Grade Level Steering Committees. These are groups of teachers at specific grade levels who review items, suggest
time-saving testing and effective management practices. This system of teacher input is helping to clarify and correct some of the problems of implementation. Evaluation staff and administrators coordinate these activities in the sense that they help bring a group together and provide technical assistance and financing for these groups.

Establishing the validity and reliability of the objectives and tests was important for two reasons: teachers wanted assurance that the system they were being asked to implement was a quality one and the State Department of Education wanted similar assurance that the tests and objectives of the IMS were psychometrically sound. Content validity data were gathered through several methods. The near-daily interchange of communication between the evaluators and the teachers provided informal feedback on items. Each elementary teacher was formally invited to submit suggestions for revision in writing to the Department of Elementary Education. Further suggestions came through the Grade Level Steering Committees and from subject matter specialists. The Program for Equal Opportunity (PEO) staff at the University of Michigan reviewed all items for racial, sexual and ethnic bias.

Reliability co-efficients were computed by evaluation staff using the Kuder-Richardson 20 formula. Tests with a reliability index of less than .5 were revised. For reading that was 7% of the tests and for math 5% of the tests.

Once the validity and reliability information was gathered teachers rewrote the items determined to be either invalid and/or unreliable.
It is assumed that further revisions will be made at the end of this year based on the work of teacher committees and additional reliability checks.

An Analysis

The following and final section of this paper deals with the positive and negative results of the development and use of the IMS in Lansing. This paper will close with:

Positive Outcomes

1. Teachers are discussing instruction. In their criticisms of the system, they addressed such sophisticated issues as whether one objective is more difficult to achieve than another; whether or not four items are enough to assure knowledge.

2. As students move from one school to another and possibly from one reading system to another, the receiving teacher has immediate information on skill level. This is seen as especially important in an urban system where both the intra-district and inter-district mobility rate is high.

3. The district has a program evaluation model which reflects ongoing classroom instruction and which is approved by major funding sources. Given the fact that there are some 5600 students eligible for specially funded programs and that 43% of those students are in two or more such programs, having one testing model which interfaces with the on-going curriculum is seen as beneficial to both students and teachers.

4. The data show the tests to be surprisingly reliable given their short length. Reliability was estimated at .75 for reading and
.82 for mathematics. These data helped assure teachers and funding officials of the quality of the items.

5. Parents receive additional information on their children's educational needs during parent-teacher conferences. Teachers report that having record cards showing pupil progress on basic skills is helpful in facilitating communication.

6. Emphasis has been placed on teaching skills based on identified students needs, not on what comes next in the book.

**Negative Outcomes**

1. Many teachers feel that they are unprepared for implementing the system or that they have had no input into the development of the components. They still have concerns about the quality of the system.

2. Many teachers are not implementing the Instructional Management System as it was originally designed. There are cases of massive pre-testing or massive post-testing thereby diminishing the usefulness of results and causing overtesting of students.

3. Teachers report they feel pressured to "achieve" a certain number of objectives especially for compensatory program students.

4. During the second year of implementation teachers have complained that the previous year's results are inaccurate and that the students have not necessarily mastered the skills indicated.

5. The objectives are not "equal" in the sense that the length of time required to master a particular objective can vary considerably.
6. While there are locator and placement tests in math, these kinds of tests are not available in reading. There is a high likelihood that similar tests will be developed for the reading component.

7. Recording data is a terribly time consuming activity for teachers. Collecting and analyzing the data for program evaluation purposes, is also time consuming and costly.

Next Steps

With this the second year of IMS implementation, much of the initial hostility towards the system has subsided. Teachers seem reassured by the actions of the Joint Committee and Grade Level Committees. This does not mean everyone likes the IMS or agrees on all facets of it, but there is consensus that student progress will be assessed during the year and that the system will not simply "go away". Changes made as a result of committee work have strengthened teacher ownership because teachers can see that their input is valued and acted upon. This committee process is being continued as further changes in the IMS are made. A system similar to and based on the elementary IMS is being developed at the secondary levels. Using the title Life Role Competencies rather than critical objectives, it is planned that this system will be implemented over a three year period. This effort will be developed locally by Lansing teachers for Lansing students.