February 16, 1990

The Honorable
William Goodling
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Goodling:

Since you will be involved in any companion legislation
to the bill passed by the Senate appropriating monies in the
amount of $25 million to the private National Board for Professional
Teaching Standards, I felt I should write to you immediately
concerning information relating to Lee Shulman of Stanford University.
(Mr. Shulman is the principal person working on the new teacher exam.)

The enclosed sheet relating to Shulman's background should
be of great concern to your committee. Should you want the
complete "failed" Chicago project file, I will send it to you.
My question is: "Should American taxpayers be funding a
project headed up by an educator responsible for what Education
Week refers to as an "Enormous Human Tragedy." Were Professor
Shulman's past activities taken into account by the U.S. Senate
when they approved such funding? Or, is it possible the Senate
doesn't even know who Shulman is, or that there was a "human
tragedy" due to his "Continuous Progress-Mastery Learning"
program developed back in 1968? At this point I believe it is
important to obtain Professor Shulman's curriculum vitae, and
would appreciate very much your assisting me in obtaining it.

Needless to say, all Americans should be appalled that
their tax money is going to be co-mingled with private monies,
thereby eliminating any possibility of Congressionally-mandated
accountability to the people who pay the bills.

Please let me hear from you.

Thank you.

Sincerely,

Enclosures

P.S. Please call for a public
hearing prior to considera-
tion of any legislation.

CHICAGO MASTERY READING:
A Case Against a Skills-Based
Reading Curriculum

BY GEORGE N. SCHMIDT

On April 21, 1982, Chicago's superintendent of schools, Ruth Love, released the results of the city's first high school reading test in seven years. The scores were abysmally poor: More shocking, however, is the fact that a version of the reading program responsible for the failure was—and still is—being marketed to schools across the country.

On the Tests of Academic Progress (TAP) administered in the fall of 1981, Chicago's eleventh graders in 64 high schools scored at the 25th percentile—a drop of 5 percentile points from the last time the test was given, in 1975. The details are appalling:
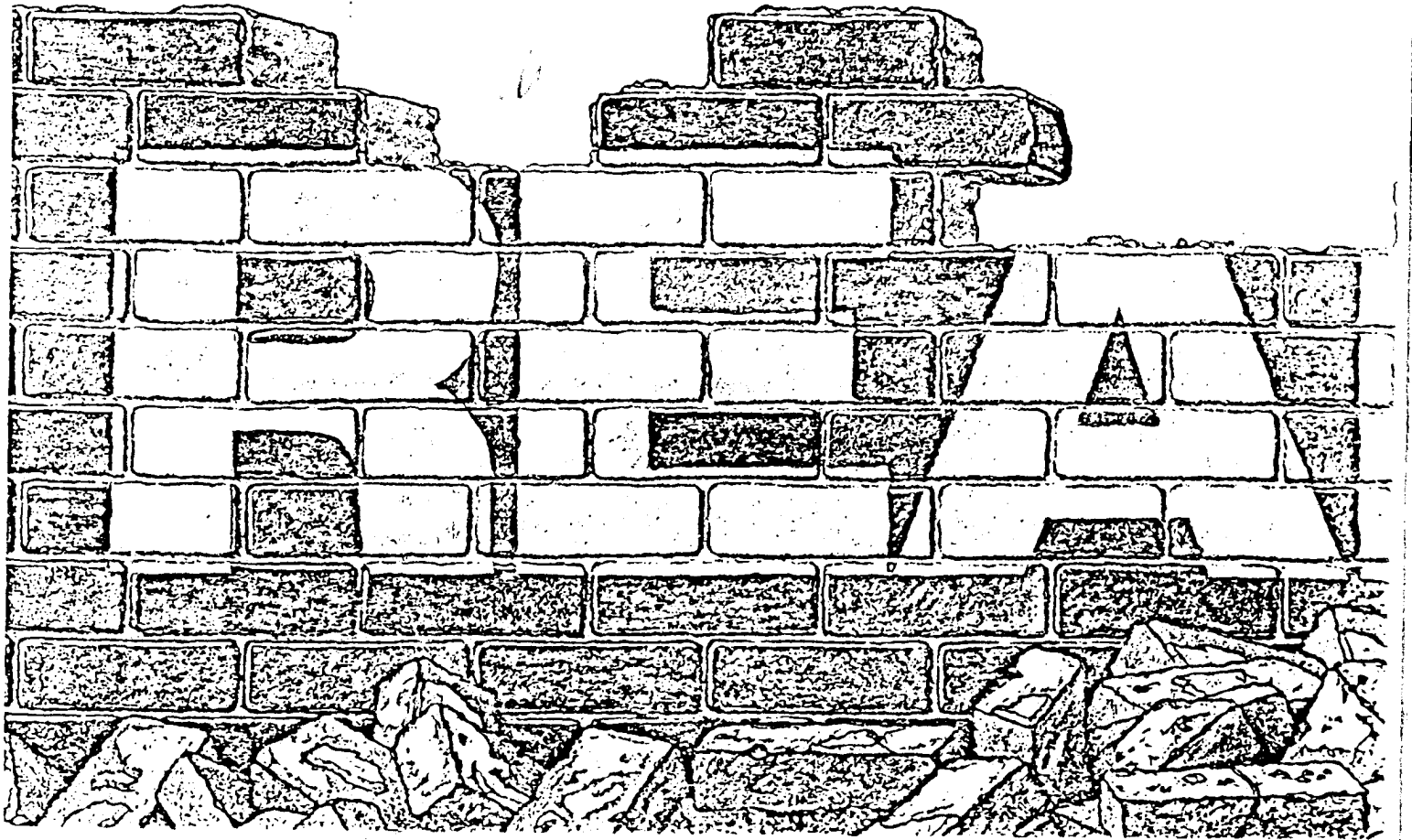
• Of the city's 64 high schools, only 4 were above the 50th percentile, and only 1 was above the 60th.
• Of the city's 60 high schools below the 50th percentile, 34 were below the 20th percentile.
• Five schools, with a total enrollment of more than 7,500, were reported at the 10th percentile (a score, according to researchers, students could have achieved simply by completing the TAP answer sheets at random).

"The results presented here," Superintendent Love told the school board, "indicate a strong need to upgrade the high school program. I have established a task force under the direction of Alice C. Blair [deputy superintendent] to prepare recommendations for strengthening the high school program." Several weeks later, Blair indicated that her plan to "strengthen the high school program" meant introducing criterion-referenced testing and a version of the city's elementary reading program into the high schools.

But parents and teachers long critical of Chicago's skills-based program were quick to point out that the more plausible explanation for the citywide drop in reading scores was the program itself, implemented in the elemen-

tary schools. To blame the high schools instead of the elementary schools for the city's obvious reading problem was as illogical as it was evasive. Said one critic, "Prescribing an expansion of the elementary program into the high schools to 'upgrade' them was like prescribing smoking to a patient with lung cancer."

A "National Pacesetter"

"It has been ten years in the making," the *Chicago Tribune* reported enthusiastically on November 16, 1977, "but Chicago school officials now believe they have in place a complete, sweeping program to teach children to read—a program that may be a pacesetter for the nation."

The Continuous Progress–Mastery Learning (CP–ML) program praised by the *Tribune* had in fact been around for more than ten years by 1977, although it had gotten off to a slow start. In 1964, the Chicago Board of Education first approved the program in theory. In 1971, it was mandated for use in all of the city's 500 elementary schools, which at that time served nearly 400,000 children. But it wasn't until 1974 that school officials completed the last of the program's 525 criterion-referenced tests (CRTs)—each keyed to a particular reading subskill and together the backbone of CP–ML.

The program worked like this: Each elementary school student was accompanied by a "skill card" listing various reading skills at different levels from kindergarten through eighth grade. The traditional K–8 elementary school organization had been abolished; instead, students progressed from level A through level N during their nine years in elementary school. Teachers were required to teach each skill to individual children (or, given actual class size in Chicago, to reading groups); then the children were tested on each skill. Those who scored 80 percent or better on a skill test moved on to the next skill; those who mastered 80
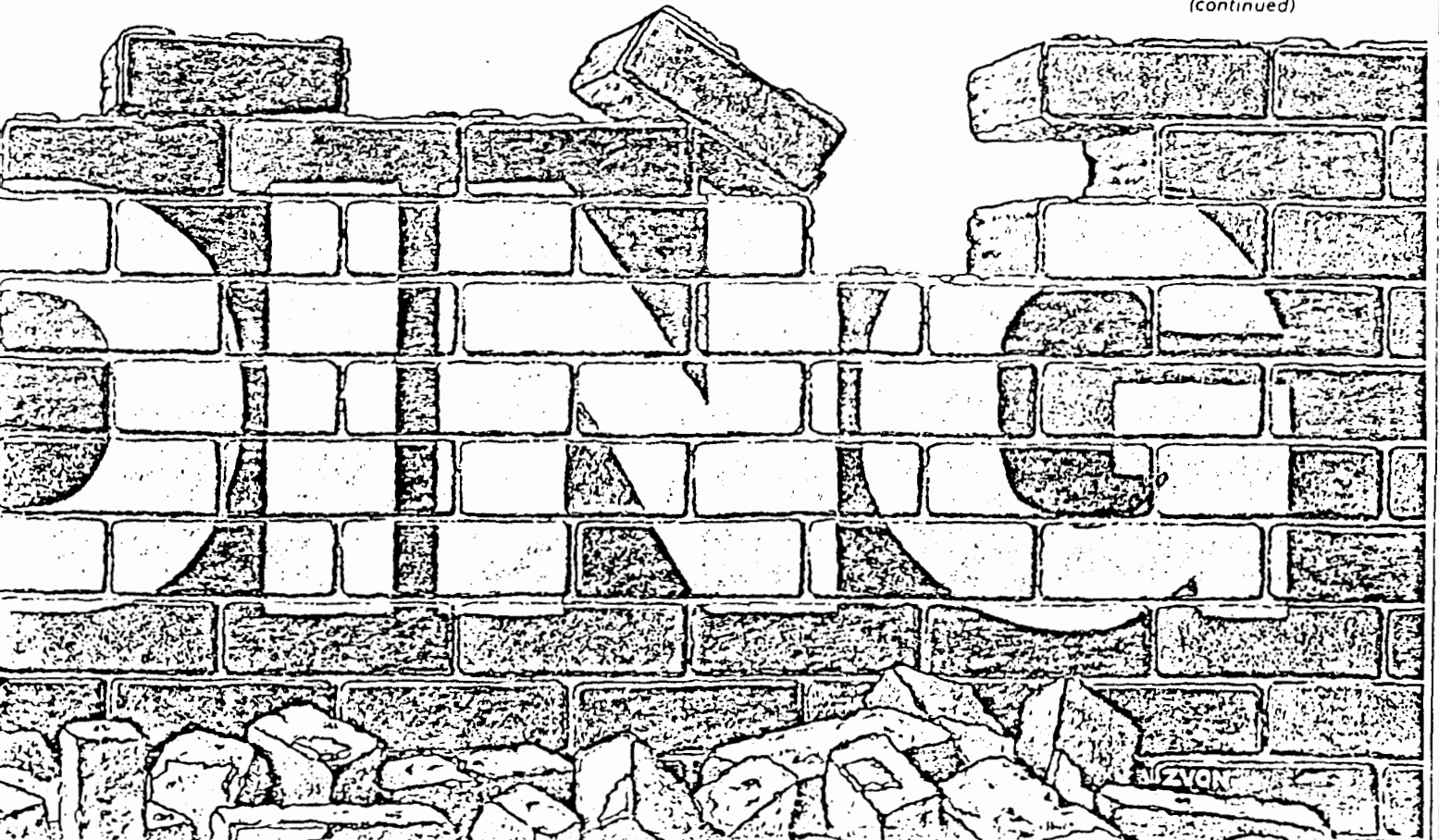
percent of the skills at any given level moved on to the next level; and those who mastered 80 percent of all the skills moved on to high school, theoretically able to read.

Originally, the Continuous Progress–Mastery Learning curriculum was supposed to represent the best of two popular learning theories: Fred Keller's Continuous Progress and Benjamin Bloom's Mastery Learning. The Continuous Progress side of the program did away with the traditional elementary grade structure, replacing it with the A through N continuum that students were supposed to travel along at their own pace. The 80-percent requirement for passing CRTs was to ensure mastery.

From the beginning, the program praised by the *Tribune* worked better in theory than in practice. Although supported by the media, public school administrators, and official school organizations like the PTA, it left most parents confused and most teachers overworked. Teachers complained that the enormous test-giving and record-keeping requirements (a single teacher with a class of 30 or 35 students could end up administering between 2,000 and 3,000 CRTs each year) left little or no time actually to teach students to read. Pupils, for their part, were becoming very astute at taking and passing subskill tests, but not at reading. A growing number of students, many teachers said, were entering high school having successfully completed the CP–ML program without ever having read a book and without being able to read one.

For a long time, however, most people didn't criticize the basic premises of the plan: that the act of reading is equivalent to the mastery of numerous distinct skills, and that one centralized program is best for all of Chicago's elementary schools. Consequently, school officials dealt with all early criticisms of the system in the same manner: they blamed teachers for not working hard enough. When criticism became too widespread to dismiss in this manner, they

attempted to solve the problem by streamlining, rather than replacing, the program.

The first major challenge to Continuous Progress–Mastery Learning came in 1977, when elementary teachers finally forced a reluctant Chicago Teachers Union to fight against the paperwork burden. Elementary teachers charged that their paperwork had increased 300 percent or more under Continuous Progress. During the summer of 1977, the union negotiated a reduction in the number of reading skills (and therefore in the number of criterion-referenced tests and records to file) from 525 to 273.

At the time, virtually nobody asked how the Chicago Board of Education had decided that the "mastery" of 273 (let alone 525) reading skills equaled reading. Nor was there more than a flicker of scientific interest in the fact that the number of "essential" reading skills could be reduced by half through the collective bargaining process. And few people in power were asking whether Chicago's schoolchildren, after years in this "pacesetting program," could read.

Continuous Progress
Proves Continuous Failure

By 1979, the results of the Continuous Progress–Mastery Learning experiment had become quite evident in the high schools. Students were arriving in ninth grade able to call words, but unable to derive meaning from what they had "read." Several schools began testing their entering freshmen using whatever nationally normed reading test was available, usually the Nelson, the Metropolitan, or the Iowa. What teachers discovered was a slowly growing gap between students' scores on the word attack section and their scores on the comprehension section of the test.

Nonetheless, when the 1979–1980 school year began, Continuous Progress was running at full steam in the elementary schools, and school officials were preparing to introduce criterion-referenced testing in the high schools.

The expansion of the program into the high schools stalled in November 1979, about the same time that the Chicago schools went bankrupt. In December, the superintendent, two top deputies, and the president of the school board resigned. In February, after a tumultuous two-week strike against cutbacks in local school programs, the system reopened under the control of the Chicago School Finance Authority, which instituted massive layoffs, effectively increased class size, and eliminated special programs. In May 1980, the entire board of education resigned, and a new one was appointed in its place. For a while, the plan to begin criterion-referenced testing in the high schools was put on a back burner.

By early 1981, however, the reading program was making news again. A group of black parents organized a boycott of a Chicago elementary school, charging that the principal had turned the school into a "factory of failure" where students weren't learning to read. When the parents began their fight, they were demanding that the principal move the children along the Continuous Progress treadmill faster. But as the situation dragged on, they studied the reading program and decided that Continuous Progress itself was the problem. In February 1981, a month before Ruth Love became superintendent of schools, the parents filed a lawsuit demanding that Continuous Progress be removed from the Chicago public schools because, they said, the program constituted "educational malpractice." The plaintiffs, who charged that the program itself was a design for failure, offered to show that children successfully completing it couldn't read.

In May 1981, Ruth Love surprised the city by asking the

school board to eliminate Continuous Progress, return the elementary schools to the old K-8 grade system, and replace the old reading program with a "new" one called Chicago Mastery Learning Reading (CMLR)—a curriculum that initially had been developed to make Continuous Progress more effective.

Love was vague about why she recommended the end of Continuous Progress, telling reporters only that it had been "confusing" to some and that it was time to return to traditionally organized elementary schools.

One observer who did comment, albeit succinctly, on the Chicago reading program was Benjamin Bloom of the

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> ## There was no more than a flicker of scientific interest in the fact that the number of "essential" reading skills could be reduced by half through the collective bargaining process.

University of Chicago. Less than six months before Continuous Progress was dumped, Bloom wrote in answer to a reporter's question: "The original Continuous Progress–Mastery Learning curriculum had *little* of continuous progress in it and *no* mastery learning. I was never consulted about it."

CMLR: Chicago's "New" Reading Program

When Superintendent Love recommended replacing Continuous Progress–Mastery Learning with something called Chicago Mastery Learning Reading in all Chicago elementary schools, many wondered where this "new" program had come from so suddenly. The answer was that it had been in the works within the Chicago Board of Education for several years as part of an ongoing streamlining of Continuous Progress.

Chicago Mastery Learning Reading began in this way: In 1975, when most tinkering with Continuous Progress was being done at the management level, a special team of young scholars from the University of Chicago was assembled by then-superintendent Joseph Hannon to streamline Continuous Progress at the instructional level. Among the project members was Michael Katims, a graduate student at the time, who is now director of the mastery learning office of the Chicago public schools.

Katims and his colleagues were sent into an all-black ghetto elementary school to try to help solve the "reading problem" among the urban "disadvantaged." What they found was that teachers were having difficulty implementing the Continuous Progress program because classroom reading books weren't compatible with Continuous Progress objectives and skill sequences.

"The publishers," said Katims, "hadn't bothered to arrange those things they teach in their books in the same order or according to the same levels as Continuous Progress."

To solve that problem, Katims and his associates undertook the task of producing materials specifically designed to teach the Continuous Progress behavioral objectives.

With the new materials, according to Katims, students began mastering the Continuous Progress objectives, and

teachers' enthusiasm increased, although Iowa test scores were not improving to any significant degree. Then, in the summer of 1978, came the program's first big boost: 10,000 children who had failed eighth grade took an eight-week program using the Chicago Mastery Learning materials and passed the Continuous Progress tests. Although high school teachers asked what the children had mastered, since reading scores and reading ability had not improved significantly, the question was never addressed by school officials or the media. In truth, though, what the children had passed were criterion-referenced tests they were given after being taught from lessons prepared with the objective

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First the school system established objectives; then it wrote tests for each objective; and finally, it produced materials to teach the answers to the tests that tested the objectives.

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of having them pass those tests. The development of the materials and the expansion of the mastery learning project continued after the 1978 success.

By 1980, the materials were almost complete, but because the school system had gone broke the previous winter, there was no money to continue the project. On the recommendation of then-interim superintendent Angeline Caruso (Ruth Love's immediate predecessor), the Chicago Board of Education voted to enter into a contract with a Massachusetts corporation called Education for Management, Inc. The corporation gave the school board a grant of more than $100,000 to complete the writing of Chicago Mastery Learning Reading; in exchange, it received exclusive rights to market the program nationwide. In addition, the contract stipulated that the Chicago Board of Education held the copyright on all the materials it had produced, and thus would receive royalties on all sales outside of Chicago as well as get a discount on all of its purchases.

A few months after the August 1980 contract was signed, the corporation changed its name to Mastery Education Corporation. Ten months later, Ruth Love recommended that the Chicago reading program be changed from Continuous Progress–Mastery Learning to Chicago Mastery Learning Reading. Soon after, Chicago purchased more than half a million CMLR books from the corporation.

When the CMLR materials were distributed to all Chicago elementary schools in the fall of 1981, there were just enough obvious differences between the "new" program and the "old" one to permit some school officials to claim that they were different. The elementary schools had gone back to grades kindergarten through 8, instead of the levels A through N (although the materials were still indexed to the levels, as well as to grades); record keeping had been streamlined, which made many teachers happier; and for the first time, the school system had provided teachers with "teaching materials" keyed exactly to the curriculum they were supposed to follow.

But as the school year progressed, school officials made fewer and fewer claims that CMLR was completely different from Continuous Progress. The behavioral objectives were the same, although in some instances two objectives had

been subsumed under one criterion-referenced test. The skills sequence was the same. The criteria for "mastery" were the same. In fact, CMLR culminated the streamlining of Continuous Progress–Mastery Learning. First the school system established objectives; then it wrote tests for each objective; and finally, it produced materials to teach the answers to the tests that tested the objectives.

A Nonbook Approach to Reading

Thanks to a vigilant parent group called Parent Equalizers of Chicago (PEOC) and teachers who had been reviewing the Chicago curriculum for some years, the public debate on CMLR began almost as soon as the materials were in the schools. One of the first questions parents and teachers raised after reading through the more than 5,000 pages of materials that made up the CMLR curriculum was: How will this program teach children to read? Terry Czernik, editor of *Substance: Monthly Journal for the Chicago Public Schools*, summed up the problem with the CMLR "books" by saying, "They aren't really books at all. They are collections of lessons, bound in book form, that were written to teach Continuous Progress objectives."

It was the content of some of the lessons, however—not their "nonbook" character—that first attracted widespread attention to the weaknesses of CMLR. A fourth grade comprehension lesson, for example, featured a story called "Whiskey and Sweets," which depicted a drunken father tricking his son into buying him whiskey and sweets by feigning a heart attack. A third grade spoof on *Cinderella* ended with the hero fitting the slipper on the foot of "an ugly forty year old lady who weighed three hundred pounds" and living "unhappily ever after." Junk food was mentioned frequently ("A Big Mac is heaven on a bun"); lessons of urban life were reduced to the basest levels.

Despite critics' claims that many of the stories were cynical, racist, sexist and poorly written, members of the school board's mastery learning staff—Michael Katims and Beau Jones among them—continued to defend the CMLR stories, charging critics with censorship.

Ruth Love herself, however, ordered a revision of the materials and the elimination of the stories most often cited by the program's critics.

But the controversy did not end. Pressed for information about how the program had been "field tested," as school board officials claimed it had been, Beau Jones replied: "These materials have been proven effective. Children in the schools where they have been tested—in Chicago, Dallas, New York, Kansas City, Philadelphia and elsewhere—have shown positive results."

Jones's claims were immediately challenged by Gene Borucki of the Chicago Teachers Union. Borucki charged Jones with "public relations puffery," saying, "You mentioned Kansas City. I don't think there are any results from Kansas City. I followed you there and ran an in-service for the teachers. They started their pilot program on January 8 or 9—three days ago. In New York, it is being used in one district with 20,000 children out of the whole city. In Philadelphia, in one school. . . . By using references throughout the United States, there is an implication that it must work here. . . . the P.R. that's coming out isn't backed up."

The 1981–82 school year ended with CMLR as controversial as when the year began, but Chicago Board of Education officials promised its return in the fall—and they've kept their promise. ∎

George N. Schmidt is a freelance education writer who taught for nine years in the Chicago public schools.

LEARNING AND INSTRUCTION IN CHICAGO
INNER-CITY SCHOOLS

A POSITION PAPER
(Draft Copy, for Review and/or Revision)

Prepared for the Planning Staff
of the Chicago Public Schools at the
Request of Dr. Donald J. Leu

By

William W. Farquhar and Lee S. Shulman
Michigan State University

and

Chicago Public Schools Committee

Evelyn Carlson, Associate Superintendent
Laura Ward, Chairman
Sophie Bloom
Angeline Caruso
MacNair Grant
Marjorie Lerner

June, 1968

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PREFACE

School programs must reflect the educator's responsibility to work with the people of the community in molding the nature of the emerging society. The educational program of today for the inner-city must thus contribute to the erosion of the walls of social and economic deprivation which entrap whole segments of a society living in large cities.

We fully support the goals of integrated education and recognize that many necessary objectives cannot be obtained without social, economic, and ethnic integration; we further believe that during the present transition period a large measure of the cognitive and affective objectives of education can and must be achieved within the segregated settings that now exist.

The paper is organized into three sections. In Section I the most important recommendations are summarized with little elaboration. These recommendations focus on changes in the school curriculum for the early years and a means for training teachers to implement that curriculum. Section II contains the details, elaboration and rationale for the recommendations presented in the first section, as well as a series of additional analyses and recommendations. Therefore, a reader of Section I wishing to examine a particular recommendation in further detail may turn immediately

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to the appropriate portion of Section II. Section III of this

paper concerns a plan for implementation of the recommendations

including suggestions for school reorganization. The paper

concludes with a list of references in which are reported the

research findings upon which many of the recommendations made

herein are based.

The ideas contained in the present paper reflect our

attempt to combine knowledge of a) the psychological and social

characteristics of inner-city youth and b) well-validated principles ?!

of learning, motivation and instruction, in order to create a

meaningful program of instruction for our children. The Chicago

Schools Advisory Committee, as well as other sources, provided

us with many more ideas than could feasibly be included in the

pages which follow. The experience, creative insights and

judgment of the members of the Advisory Committee were irreplace-

able ingredients for generating the programs described in this

report.

We view this paper as a set of preliminary guidance and

strategies rather than a fully developed program in comprehensive

detail. The precise articulation of such a program should be

undertaken as the next step in a carefully considered process of

cooperative planning involving teachers, school administrators,

and the people of the Chicago community.

Recommendations

1. Continuous Development - Mastery Learning

The curriculum for the primary years of the public schools
must be tilted in the direction of much greater emphasis
upon the language arts. Top priority must be given to teaching
inner-city children the skills of speaking, listening, reading
and writing. This emphasis should be accomplished within the
context of a truly ungraded structure which we shall denote
by the terms Continuous Development - Mastery Learning. This
approach has the following characteristics:

(a) Beginning with Chicago's present concept of Continuous
Development, the objectives of the language arts
curriculum must be much further differentiated and
articulated in the manner currently being conducted by
Sophie Bloom in Chicago, and Pittsburgh's Individually
Prescribed Instruction Project. In the Continuous
Development - Mastery Learning approach, a large number
of sequentially designated objectives, tied into
specific capabilities to be mastered by pupils, are
identified. This is done by curriculum development
specialists in collaboration with instructional
personnel.

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(b) Each objective is then concretized in a ~~teaching~~
    package which includes diagnostic tests, both
    self-instructional, and group teaching materials as
    appropriate, sequential diagnostic tests and
    evaluative posttests.

(c) The individual teaching packages are organized into
    instructional learning laboratories for teachers,
    through which children move at the best rate possible.
    For those children who have learning difficulties, the
    packages include prescribed remedial exercises and
    alternative programs. Testing is used to provide
    continuous and standardized feedback of success for
    both student and teacher.

(d) The use of these packages cannot be left to the
    option of schools and teachers, as is currently the
    case with Continuous Development. When operational,
    Continuous Development - Mastery Learning must be
    made a standard school policy.

    Force!

(e) Such an approach will not only implement the most
    effective principles of cognitive and subject-matter
    mastery, but also embodies those strategies most likely
    to effect positive changes in the general affective
    functioning of the children. Through continued feedback
    to the students and teachers in situations where
    success is highly probable, we should expect to observe

improvements in self-concepts, abilities to delay
gratification, and general motivation.

2. Early Intervention

The primary school years must begin for inner-city children
no later than age three. There must be no artificial divisions
between preschool, kindergarten and elementary school years.
A continuous and articulated program of instruction beginning
at age three and continuing through at least early adolescence
should constitute elementary education. The present conception
of the experimental child-parent centers in Chicago seems to
be prototypical of this kind of approach; it is recommended
that the entire inner-city educational program be directed
toward such an approach.

(a) There is an increasing body of evidence that severe
nutritional deficits in the preschool years lead to
serious learning disabilities in later years. There
is no question but that many inner-city children
suffer from either general caloric or protein malnutrition,
or both. Such malnutrition has both short-term and
long-term consequences. Over the long haul, those
neurological deficiencies that are the consequences
of chronic malnutrition will lead to such marked cognitive
deficiencies that later programs of compensatory education
may be totally inadequate to reverse them. We strongly
recommend a program for providing minimal daily require-
ments of proteins for all youngsters in school programs

beginning at age three. If it is possible to ~~initiate~~ ~~the nutritional supplement program~~ before children be-gin school, it should be done. Such a program could forestall many later problems in learning.

1968 3. Teacher Training and Support

OVER abundance of teachers 1975

It does not seem likely that large numbers of fully certified professional teachers will become increasingly available in the immediate future. Nor is it likely that a major decrease in the teacher-pupil ratio can be achieved if only fully certified four-year graduates are used. We therefore recommend that a number of alternatives be explored to increase the direct contacts between instructional sources of many kinds and the individual pupil.

(a) Educational technology is increasing rapidly. Such techniques as programmed instruction, computer-assisted instruction, and cluster television instruction can be used to instruct and monitor the learning of children far more effectively than is currently the general case. In anticipation of the inevitable growth of educational technological innovations in the public schools, we must ~~begin immediately to introduce these procedures in the Chicago inner-city programs.~~ They are far more necessary in the inner-city than they are elsewhere.

(b) Paraprofessional teacher aides can be joined with professional teachers, teaching interns, mechanized and non-mechanized instructional media and more advanced pupils to form highly flexible man-machine instructional teams. In this way, the currently available teacher force can be redeployed for most effective use in the schools. By more careful packaging of the instructional programs | as described in 1 a) and 1 b)| , the small pool of subject-matter specialists can be redeployed more effectively.

(c) Internships must be established cooperatively with teacher-training institutions for the purposes of improving the capabilities of new teachers, facilitating the recruitment of new staff and improving instructor-pupil ratios.

(d) New patterns of in-service training for instructional personnel at all levels must be implemented in order to make the new instructional approaches effective. Cooperative agreements with universities and industry would include plans for in-service training.

4. **Community Involvement**

The community is a vital force in supporting educational programs. We propose that there be a clear separation between those aspects of programs to which the lay person can contribute and those aspects which the profession is uniquely equipped to

support and develop. There certainly are many methods of using indigenous personnel in conducting an educational program, i.e., aides, paraprofessionals, and volunteers. We propose that the Continuous Development program be left to the professionals who have the knowledge of learning dynamics necessary to build such a program. We further propose that a system of community electives be instigated whereby special aspects of the curriculum could be provided by the request of the community. The result would be an intelligent balance between the responsibility of the educational system to the community-at-large and the unique demands of a segment of that community.

Assumptions

1. The purpose of inner-city educational programs is not only to assist each child in reaching his own potential, but also to increase that potential as much as is possible, through the use of massive environmental intervention.

2. The cognitive deficits brought to the school by the inner-city child are the product of environmental deficiencies in the areas of nutrition, language experience, general cognitive stimulation and opportunity to exploit the genetic potential he possesses. Therefore, the early introduction of specific environmental forces is the most promising avenue for reversing such deficits.

3. It is understood that any sharp distinction between cognition
   and affect, thought and feelings, is untenable. We are proposing:

   (a) strategic emphasis upon the cognitive areas, not a focus
       upon intellectual development to the complete exclusion of
       social and emotional growth. The reasons for cognitive
       emphasis are:

       (1) The traditional charge of the schools is cognitive
           in nature and is thus the one that the institution
           and its teachers are best prepared to handle.

       (2) In the vicious circle of cognitive deficiencies leading
           to motivational problems leading to self-concept
           problems leading to more learning problems, improvements
           in the cognitive domain itself show best promise for
           consequent improvements in other areas.

   (b) Social skills must be taught as part of the educational
       process. We view these skills as being imbedded in the
       school system as a part of all learning tasks. Specifically
       the child must be taught how to work in groups so that he
       promotes harmony and reduces irritations. Furthermore,
       the child must be taught in such manner that he gains
       confidence in his ability to control, observe, and give
       reactions to his environment.

Goals and Objectives

Education must provide for every child the cognitive and emotional
tools which will 1) allow him to select for himself those options

which he perceives as leading to the goals he desires, 2) permit him
to make a productive contribution to the general society, and 3) help
him to develop a conception of himself and others that will lead both
to personal feelings of self-esteem and to a sense of interdependence
with other human beings. The purpose of education is to assist
youngsters in reaching the limits of their human potential, and when
possible, to increase that very potential. When the society in which
the educational system is operating cripples the potential of certain
children, it is the responsibility of the educator to take whatever
constructive action possible either to correct those aspects of the
society, or at the very least, to reverse their consequences.

The educator cannot excuse his inability to educate effectively
on the grounds that the material provided him is deficient in pre-
paration, any more than the physician can argue that cure is impossible
because the patient was brought to his office already ill. In a
society where many people do not possess the prerequisites for health,
the physician's responsibility is to go out into the society and
correct those conditions. In a society where many children do not
possess the prerequisites for learning, the educator's responsibility
is to deal directly with those underlying conditions.

The preceding condensation of recommendations does not give the rationale for the position taken in this paper, nor does it permit adequate description of the components of the plan. To aid in the explanation a flow chart (a rudimentary systems analysis) which specifies the relationships among the components is provided (See Figure 1). This analysis serves as the framework within which the discussion which follows has been organized.

We view the child with his defined characteristics as input to a school organization which modifies his capabilities toward certain goals and objectives as output. The school organization is an optimal deployment of teachers employing a special subject matter who attempt through instruction with the aid of selected elements of the community to achieve specified outputs. The joint participation of the children, school and community leave none of these elements unchanged.

Premises

This position paper is based on a number of premises. We fully support the goals of integrated education and recognize that many necessary objectives cannot be obtained without social, economic, and ethnic integration; we further believe that during the present transition period a large measure of the cognitive and affective objectives of education can and must be achieved within the segregated settings that now exist. Despite our attempts in the Chicago schools to achieve meaningful racial integration through a

SCHOOL ORGANIZATION

INPUT

OUTPUT


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┌──────────────┐      ┌──────────┐ ┌──────────┐      ┌──────────────┐
│  TEACHERS    │      │ TEACHERS │ │ SUBJECT  │      │  TEACHERS    │
│ WITH CERTAIN │ ───▷ │          │ │ MATTER   │ ───▷ │ WITH DESIRED │
│CHARACTERISTICS│     └──────────┘ └──────────┘      │CHARACTERISTICS│
└──────────────┘                                     └──────────────┘

┌──────────────┐          ┌──────────────┐           ┌──────────────┐
│  STUDENTS    │          │              │           │  STUDENTS    │
│ WITH CERTAIN │ ───────▷ │ INSTRUCTION  │ ────────▷ │ WITH DESIRED │
│CHARACTERISTICS│         │              │           │CHARACTERISTICS│
└──────────────┘          └──────────────┘           └──────────────┘

┌──────────────┐          ┌──────────────┐           ┌──────────────┐
│  COMMUNITY   │          │              │           │  COMMUNITY   │
│ WITH CERTAIN │ ───────▷ │  COMMUNITY   │ ────────▷ │ WITH DESIRED │
│CHARACTERISTICS│         │              │           │CHARACTERISTICS│
└──────────────┘          └──────────────┘           └──────────────┘
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FLOW CHART OF EDUCATIONAL PROCESS & NEEDS

Learning and Instruction Chicago Inner City Schools
June 1968 Position Paper Planning Staff Chicago
by Dr. Donald Lue, Wm. Farquhar, Lee Shulman
Chicago and Michigan State University collaboration,

combination of cultural-educational clusters, magnet schools and other educational innovations, for the immediate years more Negro pupils will be educated in the segregated areas than in the integrated settings in the city of Chicago. This observation neither attacks nor supports present Chicago educational plans. It only insists on accepting realistically the most likely state of affairs so that action programs can be started where they are needed.

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The objectives of education in the inner-city must be to provide for every child the cognitive and personal tools which will allow him, when he reaches maturity, to select for himself those options which he sees as leading most effectively to the kinds of goals that he would personally most prefer and which are at the same time productive within the general setting of the society in which he lives.

The Student and the Subject-Matter

There will be certain cognitive skills which can be considered axiomatic in this setting. That is, irrespective of the personal objectives of the pupil and the specific conditions under which he is developing, there are certain skills which will be indispensable. The most important of these will be <u>linguistic</u> or <u>language related</u>. These will include the ability to use and comprehend standard English in both its written and spoken forms. It appears both from an

tangible closure or reinforcement is experienced frequently and
unambiguously.

1. <u>Instructional Requirements: Continuous Development - Mastery
   Learning</u>

   The form such instruction takes must follow the most effective

   known methods for individualizing the learning process.   The

   methods require:

   (a) Subdividing and refining the units of instruction into

       many relatively small steps, while maintaining the overall

       structure within which the small steps are organized.

   (b) The opportunity to <u>practice</u> the steps of instruction until

       each is mastered.

   (c) The provision for immediate feedback upon each response

       made, both to confirm the correct response and to correct

       the inaccurate response.

   (d) A wide range of effectively <u>distinctive</u> <u>instructional</u>

       approaches.   These are necessary to provide flexible

       alternatives to deal with individual differences among

       pupils as well as to preserve a feeling of novelty in

       any one approach as a major source of motivation.

   (e) Sufficient systemic flexibility to allow different

       individual rates of progress appropriate to the eventual

       goal of the pupil achieving a state of subject matter

       mastery within a reasonable length of time.

(f) Overall systemic organization so that the materials
learned in small steps do not result in fractionized
pieces of knowledge but rather in well organized
principles, concepts, problem-solving skills and inquiry
strategies.

The models for school learning suggested by Bloom and
Carroll provide adequate structure for the above approach.
The more specific models of Gagné and others provide the
taxonomic structure for the instructional aspect of such
techniques. The successful experiences which recently have
been demonstrated by Glaser, Atkinson, and Suppes are adequate
testimonies to the effectiveness of such approaches when they
are appropriately used. The question of cost, though important,
must be weighed against the observation that of all the
approaches currently being considered, these are the only
kinds we know work, at the present time.

Chicago Public School curriculum guides already contain
the principles of Continuous Development, which are consonant
with the approach recommended here. For Continuous Development
to function effectively, it must be implemented in the carefully
designed, small-step mastery learning strategy, represented by
the work of Bloom in her Chicago project and the Oakleaf School
project of Glaser and his colleagues.

The conception of Continuous Development - Mastery Learning
thus combines two basic ideas: A non-graded organization for

instruction wherein pupils move through the sequences of objectives at appropriate rates[1] and a careful sequencing and packaging of all the instructional components to make the task of instruction feasible for the teacher. This concept differs from the current Chicago Schools program of Continuous Development in two ways. First, the instructional objectives are much more carefully defined and differentiated. Where currently a single broadly-stated objective may direct the instruction for many weeks of class, four or five more articulated objectives would replace that single general statement. Second, the instructional materials for each of the finely stated objectives would be supplied to the teacher for classroom use. These materials would include diagnostic pre-tests, programmed teaching materials, audio-visual aids, quizzes and final tests, remedial materials, etc. Whenever possible the lessons would be self-instructional thus freeing the teacher from many merely didactic responsibilities. Instead, she would now be able to concentrate on activities involving planning, remediation, group and individual projects, discovery learning experiences and the like.

We believe that this has always been the intent of most proposed individualized non-graded programs. However, although

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[1]In a non-graded program of instruction, the judgment of the teacher is critical in determining when a pupil's progress is adequate and when extraordinary means must be enlisted to accelerate a growth rate that is leaving a pupil too far behind his peers in a high priority learning area.

such teaching is often prescribed in curriculum guides, the teachers are rarely provided with the materials and guidance necessary to accomplish the goals. They are, as it were, sent into battle unarmed.

A program of Continuous Development - Mastery Learning would afford teachers in Chicago with the materials for truly individualizing their instruction. Far from encumbering teachers and inhibiting their autonomy, it would free them to engage in the challenging and stimulating aspects of instruction for which they have so little time presently.

It is important to note that the term individualization applies to the manner in which the instruction is prescribed, not necessarily the manner in which it is implemented. Thus, when appropriate, truly individualized instruction can be effective in small or large groups, as well as in single-person situations.

2. Long Range Effects

Success begets success. More important, success in learning leads to motivational changes in the learner. Knowledge that future success is likely (based on past reinforced success) results in an increased ability to delay immediate gratification for the now-assured greater future success. This is why we anticipate that a well implemented Continuous Development - Mastery Learning approach in the early school years will become less necessary in later grades because of the cognitive,

linguistic and motivational benefits deriving from it.

3. <u>Instructional Requirements: Continuous Development - Social Skills</u>

The social developmental tasks for the child growing up in a highly complex, urban society must be defined within the limits of the distinctive characteristics of that society. The salient features of the areas of skill demands are: (a) increased degree of specialization resulting in <u>interdependence</u> and <u>need for cooperation;</u> (b) the fast pace and quick nature of societal change; and (c) the anonymity present in our society.

The social skill developmental tasks of both a group and individual nature must be achieved by each child in order to <u>secure productive membership in the society</u>.

Group Social Skills

In a society where the work of one person is closely related to that of his co-workers, where individuals work in close contact with each other, skills are needed which promote harmony and reduce minor and major irritations. For example, one developmental task is to learn to work together in a supportive relationship. Another developmental task is knowledge and performance of expected levels of personal habits, work habits, and daily routines.

Individual Social Skills

In our non-personal automated society, there is a great need for development of the unique characteristics of the individual, a positive self-image, and for the enhancement of the personal dignity of the individual. To this end, the essential developmental task would be to help each child to: (a) gain a feeling of success and control over

his environment; (b) nurture confidence in the integrity of his own observations; and (c) give assurance that his ideas are worthwhile.

Educational Implications for the Inner-City Schools

These social skills should be imbedded into the school system and become a part of all learning tasks. They should not be thought of as separate elements from the mainstream of learning. The children must be expected to practice regularly the group skills defined above. The individual social skills are likely to develop when children are rewarded regularly for all dimensions of achievement.

Instructional Staff

The strategies of instruction for the achievement of cognitive mastery are not the entire answer. The school is ultimately a human concern dictated by human events and human values. The Chicago schools need a program which combines a careful selection, screening and training of administrative and instructional personnel who would work in inner-city schools. In the inner-city we have a different culture, similar in many ways to that of the general American culture, yet unique in many ways as well. This culture has some of its own economic and social values, a different literature both folk and formal, different art forms from which many of our more general art forms have developed, a different spoken language with its own complete yet contrasting grammatical system, and thus generally different

patterns of communication and social control. The conclusion follows that both white and black educators who would function in the inner-city must have an understanding of that culture and of the youngsters who have grown up in the school district.

The implementation of <u>Continuous Development - Mastery Learning</u> programs in Chicago's inner-city schools will require teachers with special qualities. Those teachers who already possess the necessary capabilities can be discovered. Many more will have to be recruited and trained. This section will deal with the problems of selection, orientation and training of inner-city teachers.

1. <u>Selection</u>

Present conditions constrain our freedom to select teachers for the inner-city because the supply of already qualified people is so limited. Salary, travel, environment, materials, motivation and other factors play varying roles in determining who will and who will not teach inner-city children. However, since major teacher training institutions are so rapidly moving into the preparation of teachers in and for inner-city instruction a growing supply of potential recruits is becoming available. We in Chicago must learn to <u>reorient</u> and <u>retrain</u> those inner-city teaching recruits who are not yet capable of using <u>Continuous Development - Mastery Learning</u> approaches; we must also exert the influence we already have with the <u>training institutions</u> to modify their programs in the direction of our objectives.

The recruitment means already used by the Chicago systems must be continued concurrently with the provision that all those who have no training or background in working in inner-city segregated areas must be given special training. This training should begin with a diagnostic period to assess the trainee's effectiveness and trainability. If the candidate is found to be ineffective or judged not trainable for inner-city under existing economic contingencies, he would be assigned to the non-inner-city classroom. (Perhaps a modified form of the methods employed by the Peace Corps could be developed for this simultaneous screening and training process.)

Selection must be a continuous process. Those who fail to meet the requirements of effective teaching should be given re-training. If retraining fails, re-assignment should be considered. If re-assignment fails, then a method of removal, particularly during the probationary period, should be found.

2. Recruitment and Cooperative Training Through Internships

We are currently faced with a series of problems which are sufficiently interrelated to admit of a possible simultaneous solution. There is a great problem in finding qualified candidates for teaching positions in the inner-city who have received the proper training at universities and colleges. There is then the problem of attracting them to the excitement of teaching in Chicago. Once in Chicago there is still the problem of continuous pre-service and inservice training. Quite independently we are faced with a

severe manpower shortage in the inner-city if we are to increase dramatically the scope of our effectiveness without putting a burden upon the school budget that would be impossible to carry.

We would recommend the following strategy for all of the above-mentioned problems. This strategy would involve the development jointly with a large number of midwestern universities and colleges of a cooperative undergraduate educational internship program for teachers-in-training in Chicago.

Such a program would have the following characteristics: (1) students in participating universities would complete two full 12-month years of academic work in the liberal arts before entering the program (equivalent to 8 terms). (2) They would spend the last two academic years of their college programs as intern teachers in the Chicago schools during which time they would (a) serve as assistant teachers during their first internship year and have responsibility for a regular elementary school classroom during their second year, (b) be under the supervision of a master teacher, (c) receive formal seminar training in educational psychology, instructional methods, etc.,(d) receive a salary approximately one-half that of a regular beginning teacher during their first year and somewhat more than half during the second year.

It is not inconceivable that one thousand new participants each year could be handled. Michigan State University currently has a program such as this in operation around the State of

Michigan for upwards of five hundred candidates in teacher education. In the case of Chicago this would mean an increment of two thousand teachers well on the way toward being excellent professionals in any one year. By their second year of internship they would probably be safer bets as teachers than four year graduates who had no previous experience teaching in the inner-city.

The advantage of such a program to the participating universities and colleges would be its provision of a far more promising training program than anything that can currently be provided within a university setting. It would combine all the characteristics of the finest training programs in any field: the interpenetration of theory and practice, and performance of the desired skill in exactly the setting in which it will be applied.

The advantages to the Chicago schools seem rather obvious. Two thousand additional teaching personnel in any year would convert to approximately eight extra teachers for each of 250 schools. Teachers so trained could be recruited into permanent professional participation in the inner-city and would be well trained and self-screened. Such a group of teaching interns would not require a transition into the unique instructional patterns we are recommending for the inner-city Chicago schools, since they would have two years of training in the new approaches.

The Michigan State University Elementary Intern Program (EIP) is a model for this kind of training program. By combining the

EIP internship model with a Hunter College type inner-city emphasis, a truly unique Chicago-centered training program can be developed. We must recognize, as has industry, that products of the universities are not automatically qualified for front line work. An intervening training period is indispensable.

3. Pre-Service Training

The major emphasis of pre- and inservice training will be on (1) modifying the negative self-fulfilling prophecy both black and white teachers bring to the teaching of inner-city youth by structuring their initial set of training experiences, (2) imparting a thorough understanding of and commitment to the principles of Continuous Development - Mastery Learning, and (3) preparing teachers and administrators for the optimal redeployment of existing personnel which is needed to capitalize on the advantages of flexibility in class size and instructor competencies.

New recruits who lack experience and special training in inner-city schools should be given a summer's internship prior to being placed in the classrooms. These internships could be conducted cooperatively with a number of teacher-education institutions.

The internship would provide a chance not only to learn about the unique needs of the inner-city child from segregated areas, but a chance to practice appropriate behaviors with children under supervision. The new teacher should have her expectancies about her students' future achievement success made conscious and

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tangible. Knowledge of Negro and other minority cultures and language should be taught, not didactically, but through direct confrontation and experience. Finally, the principles of Continuous Development - Mastery Learning should be learned to the point of skillful application.

(a) Expectancies

It has been demonstrated that the expectations teachers hold for student achievement have a marked effect on the subsequent performances of the students. In that sense teacher expectancies for pupil performance often act as self-fulfilling prophecies. When the teachers anticipate pupil success, they unconsciously teach in a manner that makes pupil achievement of objectives much more likely. When they expect failure, they often will teach in a way that lowers the probability of achievement. This latter phenomenon is called the negative self-fulfilling prophecy.

The negative sets should be changed in a supervised practicum. Such a practicum would begin by providing the teachers of the culturally disadvantaged themselves with a period of personal educational failure similar to what their students experience. (With the teachers' knowledge of what is transpiring.) Material can be presented too fast, the gaps in their readings can be too big, concepts can be vaguely taught in an unfamiliar dialect of English, and the instructors can give the impression that the students

(i.e., the teachers) could not learn the material under any conditions anyway.

Subsequently with the teachers' help the curriculum could be modified to raise the probability of successfully learning the material. After experiencing both failure and success, the teachers would be placed in training groups to discuss and reflect on the dynamics of success and failure in learning as related to teacher behavior and attitudes. In this manner they would become sensitized to the subtle ways in which learning can be either facilitated or debilitated.

(b) Principles of Mastery Learning

A major objective of the inservice program should be to instruct teachers in the principles and practices of Continuous Development - Mastery Learning. Attitudes and expectancies are critical to the success of both students and innovative teaching methods. Evidence indicates that teachers' expectancies are often established by their first few encounters with students responding to a new learning unit. Therefore, we suggest that both students and materials used in the training period be carefully selected so that success is practically guaranteed for both the teacher and the students. This will result in a reinforcement of positive expectancies toward both the students and the instructional approach on the part of the teachers.

(c) Culture and Language

Any teacher working in a school which serves a community with

a distinctive culture and/or language pattern should be
expected to understand that group's culture--current and
historical, as well as the indigenous language pattern.
Reading is one method of learning about cultural background,
but spending time in the community itself will have a more
extended impact on the method and content of instruction--
particularly if the translations of the observations to
teaching method are solicited immediately after the
community participation.

Teachers complain about the language of the inner-city
youth, but few have acquired skill in understanding the
forms of communication indigenous to their students. Tapes
are available which can be used to make the teachers' under-
standing more flexible and thus give guidance in making
dialect shifts. The teachers need to know the predominant
grammar, vocabulary, and pronunciation of inner-city youth
so that they can communicate effectively. This is not to
say that teachers ought to instruct using exclusively or
predominantly inner-city dialects. Rather, if our objective
for students is that they master the ability to shift
dialects, we ought to expect that their teachers also
mirror aspects of that skill. Most often, however, the
teachers will be expected to provide clear models of "standard"
English in the classroom.

Inservice Training

Existing patterns of inservice teacher education have generally

fallen short of their major objectives. We believe that inservice
is such a critical aspect of a school system's functioning that new
and innovative approaches to this activity must be undertaken.

1. Inservice Time

A prerequisite for an effective program is a large increase
in the amount of inservice training time available to teachers.
Such time need not be taken from regular school days. We
can envisage several inservice time allotment patterns.

(a) The two day workshop: using two consecutive school days
of a Friday-Saturday combination. (School is closed for
the one or two days, with time made up by extending the
school year as needed.)

(b) The one week workshop: prior to opening of school or during
the year.

(c) Placing all teachers on a 12-month contract using the
summer months for inservice activities of an intensive
nature.

Additional released time during school days should be sought
for planning and innovation purposes, rather than for quickie
inservice programs of little long-term value.

2. Inservice Courses

(a) Inservice courses should carry graduate credit for the par-
ticipants whenever possible.

(b) Pre-packaged university courses in education should <u>not</u>
be used for inservice purposes. Instead, individual
schools or sub-groups of teachers across schools should be
given the option of contracting with a local college,
university, industry, or social service agency, for a
program of instruction tailor-made to the needs and interests
of that contracting group. Such courses should supplement
city-wide inservice programs, and when appropriate, replace
them. We recommend that one person in the District Super-
intendent's office coordinate these requests to eliminate
duplication of effort. We feel that this is the level for
the coordination because the person would have sufficient
contact across schools to be of help and still be close
enough to the schools to give meaningful support to
appropriate requests.

3. <u>Contents of Core Inservice Programs</u>

All inner-city teachers already in the schools should receive
a core program of inservice training whose objectives are
similar to those of the pre-service programs discussed above.
They would focus upon (1) changing teacher expectancies, (2)
teaching the methods of <u>Continuous Development - Mastery Learning</u>,
(3) orienting teachers to the culture and language patterns of
the inner-city, and (4) techniques of motivating inner-city
youth to achieve academically. Diagnostic methods need to be

developed to determine how much work in each of the above four areas each teacher needs to bring her to an effective level of functioning. That is, the principles of <u>Continuous Development - Mastery Learning</u> ought to apply to teacher inservice as well.

4. <u>Use of Technology in Workshops and Courses</u>

We must learn not to depend upon the self-contained sufficiency of the workshop or course in achieving inservice objectives. Attempts must be made to extend the effectiveness of inservice instruction beyond the time limits of individual workshop sessions.

(a) <u>Self-instructional materials</u> can be used in combination with group sessions, with the group activities designed to raise questions and generate problems. Once the problems have been confronted, packages of take-home self-instructional materials allow teachers to pursue the alternative solutions themselves. Many forms of self-instructional aids are available.

   (i) <u>Programmed texts.</u> We would recommend the more interesting branching programs for most purposes.

  (ii) <u>Records, tapes or cassetes.</u>

 (iii) <u>8 mm. film cartridges and portable players.</u>

  (iv) <u>Self-scoring diagnostic evaluations.</u>

   (v) <u>Coordinated use of Chicago educational TV for inservice purposes.</u>

  (vi) A series of available telephone <u>dial-a-lectures</u> which change weekly as a course progresses, allowing greater flexibility in time used by the teacher for his or her inservice.

Optimal combinations of live workshop sessions, taped
and programmed materials, portable problem-solving inservice
learning laboratories and both TV and telephone supplementary
lectures can sharply increase the effectiveness of inservice
training programs for inner-city teachers.

(b) <u>Micro teaching</u> should be used far more frequently as a way
of providing educational personnel with the opportunity
for feedback and reflection on their teaching methods and
their consequences. Inservice sessions involve not merely
reading or talking about good procedures, but actual controlled
practice with supportive, corrective feedback.

(c) <u>Simulation exercises</u> can be very useful in teaching important
skills concerned with <u>confrontations</u>, teacher-pupil or
<u>teacher-parent</u> (or teacher-agitator or teacher-administrator)
<u>interactions</u> and <u>other</u> <u>domains</u> where it is <u>emotion</u> and <u>action</u>
rather than book learning and reflection that count. Such
simulation can be effectively established using <u>videotape</u>
presentations.

5. <u>Implementation of Inservice Programs</u>

Such an inservice program could be part of a series of cooperative
arrangements made with colleges and universities for the estab-
lishment of teaching internships, as well as with <u>publishers</u> and
other education industries for refinement and production of
<u>Continuous Development - Mastery Learning</u> materials.

A single Chicago-area university should coordinate (though not
provide all instruction) the entire program for graduate credit
purposes. Such an arrangement has existed between the University

of Maryland and the United States Armed Forces Institute (USAFI) for years.

Community

When the school and the community share a particular set of values, commitments, and objectives, the two institutions can usually cooperate in silent harmony. When the school and community represent contrasting value systems and commitments, the resulting distrust, miscommunication and friction inevitably lead to strident discord. Education in the inner-city is currently plagued by disharmony between the school and the surrounding community. Any plan for educational change in that setting therefore must lead, not only to improved academic achievement among the pupils, but to lasting modifications in the very nature of the school, community and their interrelations.

1. Community as a Source of School Personnel

   We believe that many of the tensions between the community and the schools in the inner-city are symptoms of deep frustration with the fact that the children are not learning as they are in other settings. The focus of anger deflects to issues of doubtful long term educational relevance such as having black teachers teach black students or black administrators lead black schools. Such issues are tangential to the long term objective of helping each child develop the educational base which will permit him to reach a range of goals in the total society.

(a) <u>Aides</u>

Many of the tasks presently performed can be done by personnel with less formal training. We feel that the current strict exclusion of such personnel from all teaching and evaluative functions is unnecessarily severe. With qualified teachers giving careful supervision, some elements of instruction could be conducted by aides. The aide's role would have to be explicitly described and aides would require careful training, but the contributions such personnel could make to children's learning would make the task of training well worth the effort and costs.

Such a system has direct parallels in the evolving structure of medical practice in this country. We will soon see the emergence of a totally new job category--paramedical personnel. These individuals will be trained to carry out certain carefully proscribed medical functions for which doctors and nurses are currently responsible. The A.M.A. is slowly recognizing that the shortage of physicians must be met with a redeployment of the available medical personnel as well as a step-up in the pace of medical training.

(b) <u>Listening</u>

Many children need to have the impact of an adult listening to them. The Listening Mother's Program is an example of what has been done in this regard. However, serious consideration should be given to financially supporting the program as part of the regular curriculum. The use of older

children to listen to younger children read or talk has also been tried, but not as a regular adjunct to the instructional program. We would recommend wide use of such programs judicially applied to those who need it.

(c) <u>Reading</u>

Aides can read to children. Again both paid and volunteer adults and older children could do the reading. When appropriate, older children who need more reading opportunities could do the task, thus gaining practice in a socially accepted way.

(d) <u>Monitoring</u>

As currently done, many of the monitoring and housekeeping tasks of the teachers could be turned over to the aides. These include hall and playground supervision, test administration, reporting to parents, scoring and correcting papers, and helping students with their clothing.

Employment of indigenous aides is already a characteristic of the experimental child-parent center program. Such use of community resource people has multiple payoffs: (1) Classroom instruction is improved. (2) <u>Communication between the school and the community is facilitated.</u> (3) A new source of financial support for community members is opened up. (4) <u>Opportunities for personal development are provided for promising members of the community.</u> In these ways the school may contribute to <u>tangible changes in the character of the</u>

community itself.

2. <u>Parent Aids to Child Learning</u>

Many parents ask how they might help their child. School personnel have shied away from such offers out of fear that the parent will do the wrong thing. However, <u>kits of programmed materials which would guide the parent in his interaction with his child's</u> academic learning could alleviate the professional educator's concern for the potential misdirection such help might take. These materials can be produced fairly inexpensively and would serve the dual purpose of giving the child more practice and of helping the parent who often has the desire to help but fails to do so because of limited education and background.

3. <u>Service in the Community</u>

The <u>role of the school as a community service agency must be extended.</u> Local schools can be evolved into community schools, open 12-16 hours per day to provide adult education, recreation, training of the full gamut of paraprofessional teacher aides and centers for community activities. This extended school day would afford an increased opportunity for parents and educational personnel to exchange ideas about the needs of our children, both in school and in the community.

4. <u>Communication</u>

An important characteristic of the <u>Continuous Development - Mastery Learning</u> approach is that the objectives of instruction are stated in a concrete, specific manner which can be communicated

to parents more easily than our present global and ambiguous
categories. Instead of (or in addition to) report cards,
parents should receive frequent reports of the specific ob-
jectives mastered by their children in a preceding report
period, and those whose mastery is anticipated in the forth-
coming report period.

Parent-Teacher conferences are to be encouraged, particularly
when the school personnel are willing to use many methods of
making contact with the reluctant parent who may be the very
one with whom communication is most needed. However, only
so much of the school funds and effort can be directed toward
the ideal forms of reporting programs. Therefore we suggest
using the traditional avenue of sending home the "report card"
but in a form of reporting that is directly tied to the objectives
of the Continuous Development - Mastery Learning approach.

Standardized forms can also facilitate such reports. They
can be made part of the formalities surrounding the students'
mastery of each small unit which the educational personnel need
in their daily contact with the student. Eventually, when the
monitoring of Continuous Development - Mastery Learning is made
a function of a centralized computer facility, production of
frequent report forms can be automated in the same manner as
are the individual achievement test score profiles now produced
for adhesion to individual permanent school records.

Such a means of reporting school progress to parents would

make both objectives and attainments specific. Parents could take a much more active and focused role in monitoring both their children and their teachers given such information. Conceivably, the effect on teacher behavior could be as positive as the effect on parent understanding and involvement.

5. Community Role in School Decision-Making

What is the extent of feasible community participation in educational decision-making? We believe that the core curriculum of basic skills as represented by Continuous Development - Mastery Learning programs in language arts and mathematics is axiomatic and not a matter of community option. However, there is need for the concept of Community Electives, wherein some proportion of a school's curriculum could reflect the expressed interests or concerns of a particular community. The result would be an intelligent balance between the responsibility of an educational system to the community-at-large and the unique demands of a segment of that community.

6. Education for the Emerging Community

School programs, especially at the secondary level, must reflect the educator's responsibility for helping mold the nature of the emerging community for the next generation. That is, an educational program for today's inner-city must contribute to dissolving the problems of the inner-city of tommorrow.

Two brief examples of possible programs must suffice. The insulation of the citizen of the inner-city from the rest of the city and

its services is often as much self-inflicted as imposed from without. He is often unaware of the many resources in the city-at-large for recreation, education, entertainment or general enlightenment. School programs should include units for teaching the students about the full range of the city's resources, where they are and how they can be reached. The political and legal aspects of city life should also be strongly emphasized in such a program.

This generation must produce and rear the next generation. Many of our current problems are generated by lack of understanding of basic principles of nutrition, child-bearing and child-rearing. Child rearing courses would emphasize ways to stimulate the intellectual and physical growth of the very young. Programs in these areas must be instituted in the secondary years.

If the proposed program of education in the inner-city
is to be implemented, changes will have to be made in the school
organization.

Teacher and Administrator Selection and Training

The new organization of the schools would be predicated on the
assumption that both the teachers and administrators should focus
on a curriculum shaped to the inner-city child's special needs. To
this end, personnel who direct the program should have productive
teaching experience in these inner-city schools. The current method
of selecting school administrators will need major modification for
this project to insure an optimal fit of the individual's competencies,
experience, and attitudes to the educational requirements of the project.

1. True Non-Grading

   Prescribing non-graded continuous development primary levels is
   a simple operation. Actually achieving non-gradedness will be far
   more difficult. A curriculum so focused will require a far
   different school organizational structure than that currently
   in vogue. Students will be placed on individualized curriculum
   paths with instructional help coming to them from many sources--
   human and automated. The numerous steps and evaluations in the
   learning process will require considerable monitoring of student
   learning--a task the school must organize to perform.

2. Variable Class Size

Because the evidence is lacking that any one class size is optimal for all purposes, we subscribe to an approach which permits function to determine class size. That which can be done in large groups, should be done in large groups. That which can be done best in small groups or in one-to-one situations should be done in that manner. This approach will require redeployment of teachers, aides, and technology to free personnel to use all resources on an extremely flexible basis.

3. Role of the Teacher *Master Teachers*

With the modifications proposed above, a new type of educator will emerge--the master teacher-leader. The classroom teacher will be responsible for coordinating a complex instructional system composed of paraprofessional teacher aides, teaching interns, instructional technicians and many forms of instructional materials and technology. Traditional classroom boundaries will be necessarily blurred. New administrative conformations will be necessary to cope with these new role definitions.

The hierarchical form for instructional staffing presented in the Chicago magnet school proposal seems equally relevent to a new concept of the inner-city school. In this proposal a distinction is made between the master teacher-administrator and the regular classroom teacher. Clearly, appropriate salary differentials must be created to coincide with these newly created

responsibilities.

4. School Reorganization

We call for a school organization which is both decentralized

and recentralized. It is recentralized in its program and

materials development and general policy-setting; it is de-

centralized in program implementation and management. The

decentralization extends through having special funds (discretion-

ary accounts) available locally for materials and services which

are needed immediately. Creative instruction can only occur

where individuals are free to move when ideas are fresh and

relevant. The organization must hire people it trusts to do

the job and give them the freedom to see that it is done, even

though there is the risk that some few will take advantage

of the lack of air-tight controls in the system.

With this plan we believe that the personnel in the field

will ultimately have the responsibility as well as freedom to

accomplish the task of teaching the children. Their success

can then be evaluated on the basis of how well the children

actually achieve the objectives of instruction.

5. Flexible Physical Structure

As new schools are built or old ones are remodeled, planning

must incorporate concepts which will permit grouping children

into a wide range of unit sizes. Single carrels, small group

conference areas, traditional class size groups, and large

spaces accommodating two or more of our present classes will

be needed. Some of the flexible grouping is already occuring with cluster TV--but more avenues must be appraised. School architecture and curriculum planning must be closely coordinated if the task of instruction is to be vigorously and creatively achieved.

Implementation

The plan we propose would have expense initially which would exceed that expected to be found in the existing Chicago School budget. Therefore, we recommend using outside funds to assist in implementing the plan. The major characteristic we would put at the core would be a self-liquidating project which would train personnel in the Chicago system to perpetuate the concepts which survive rigorous evaluation.

1. Implementation Scheme

   The plan for implementation is detailed in Figure 2.

   (a) Coordination

   A central planning office would be needed which would be responsible for (1) developing and trying out Continuous Development - Mastery Learning materials, (2) training new and experienced teachers to work in the use of materials, (3) evaluating the effectiveness of the materials, (4) developing programs to train teacher aides.

   Activities of development, training and program try-out would take place in the system of "Nucleus" and "Spin-off" schools.

Figure 2.

DEVELOPMENT OF MATERIALS

CO·ORDINATION AND EVALUATION

MONITORING

EDUCATION INDUSTRIES

CONSULTANTS & UNIVERSITY LIAISON

C.A.I. DEVELOPMENT

MATERIALS, TESTS, TRYOUTS

CENTRAL PLANNING

Developing and trying out Continuous Development-Mastery Learning Materials.

Training teachers for inner-city schools, and in use of materials.

Evaluating the effectiveness of the materials.

Developing programs to train teacher aides.

COMPUTER CENTER

MONITORING FOR MASTERY LEARNING

NUCLEUS SCHOOL

NUCLEUS SCHOOL

NUCLEUS SCHOOL

SPIN-OFF SCHOOLS

SPIN-OFF SCHOOLS

SPIN-OFF SCHOOLS

PLAN FOR IMPLEMENTATION

The planning would be implemented in a center which we label the "Nucleus School." Here the programs would be carefully conducted, evaluated and refined. Subsequently, by redeploying personnel, along with those elements which survive careful scrutiny the project would move to other schools ("Spin-off Schools") for implementation and continuous evaluation. To assure continuity in the program, the personnel will have to be rotated into the Nucleus schools and out to the "spin-off" schools in a meaningful pattern. The exact nature of that pattern cannot be fully determined until the first year of implementation. However, it would appear that the teachers and administrators leaving the Nucleus schools should go to the "spin-off" schools as a team or unit. Some instructional personnel should stay in the Nucleus school to train the next incoming group. Obviously, the Nucleus school staff would have to be much larger than would be found in the on-going program if some are to be retained and some are to leave.

Schools and educational personnel should be selected to increase the diversity of economic, social, and ethnic composition of the total inner-city setting. Furthermore, because the Nucleus schools are to be sites of innovation, the educational personnel must be committed to the excitement and uncertainties of change. Furthermore, they must be cognizant of and sensitive to the dynamics of innovation and its diffusion. We recommend that over and above exceptional

educational qualifications, the personnel be volunteers
who are enthusiastic about improving the achievement of
inner-city youth. They should be committed to developing
and learning the program with the end in view of carrying
the effective programs to "spin-off" schools with a
minimum feasible lag period (one year would be desirable).
They must be capable of working cooperatively with members
of the community and other professionals.

No program is perfect at birth. The teachers
participating in the Nucleus school activities will not
only be trained in the principles of Continuous Development -
Mastery Learning--they will contribute to its development,
flesh out the precise details of its operation, trouble-
shoot its problems and adapt it to the specific needs
of new "spin-off" settings. The program must be dynamic,
not static. This approach of Continuous Development -
Mastery Learning to be successful, must itself be con-
tinuously developing in the hands of creative and committed
educators.

(b) Development of Materials

Once guidelines are set for the Mastery Learning materials
and prototypes are well developed, the subsequent development
and production of the sets could be sub-contracted to
specialists in educational media. The proximity of such
services in the Chicago area would assure quality and

appropriate materials.

In such a process the traditional roles of public schools and educational publishers would be reversed. Instead of schools passively waiting to react to whatever new materials the publishers choose to develop, the educational specifications of the materials would be developed by the Chicago Public Schools. These specifications, along with prototypes of materials, would then be provided to publishers who could then bid for the contract to produce such materials for the public schools of Chicago.

(c) Evaluation and Monitoring

It is essential that each child's progress be continually monitored. Rented time and storage in computers could accomplish this feat. This approach would have at least two advantages; one, the staff could be trained in computer processing so that when the services of these devices come within reasonable expense range, new movements to incorporate electronic aids in instruction could be made with ease. Two, within the range of current low cost computer rental from businesses which have unused capacity on their machines the monitoring could be accomplished. Teachers could be provided with packages of punched cards for each child with the Continuous Development - Mastery

<u>Learning</u> skill pre-punched along with all necessary
identifying data. Thus when a child completes a level,
the card could be pulled and placed in a hopper. As
needed, the cards could be collected and sent to the
computer for a read-out on (1) each child's progress
for both teacher and parent, and (2) the total class
performance. Thus, the educational personnel could
plan future learning activities.

MBO

2. <u>Personnel</u>

The qualifications and job description for the personnel needed
to conduct the plan are summarized in Table 1. The key to the
personnel plan is hiring back-up people for each position.
In this way two projections are covered. One, trained per-
sonnel are available in case a person in the leadership role
leaves. Two, experienced individuals can be shifted into other
schools so that the effective aspects of the program can be
rapidly disseminated throughout the Chicago School System. Of
course, we are assuming that the transfer policy of the Chicago
School System will put a premium on the qualifications of an
individual who works in the inner-city.

3. <u>Cadence of Program Development</u>

We envision a pyramiding of age levels (See Figure 3) for pro-
gram implementation. These guidelines are crude approximations
which could be accelerated greatly given adequate funds and

STAFF QUALIFICATIONS AND JOB DESCRIPTIONS

CENTRAL PLANNING	QUALIFICATIONS	JOB DESCRIPTION
Director	Administrative knowledge and ability, background in inner-city education, knowledge of Educational Psychology (Learning, Programmed Instruction, Measurement, and Cognitive Styles.) and Sociology.	Responsible for reaching sub- and ultimate goals of the program. Must hire personnel, budget funds, secure more funds when needed, maintain relationship with other personnel in central office and nucleus schools.
Assistant to the Director	Primarily administrative knowledge and ability.	Responsible for (1) helping carry out details delegated by the director, (2) monitoring the budgets, (3) recruiting candidates for staff positions, (4) being liaison person with development (II) and Evaluation and Monitoring section, (5) finding methods of expediting (cutting red tape) decisions so creative people can function
Assistant Director: Curriculum	Knowledge of Reading-Language skills materials and their development. Experience teaching in inner-city elementary schools.	Responsible for Coordinating, Developing, Implementing, and Evaluating the Mastery Learning Materials.
Assistant Director: Instruction	Knowledge about and experience in teacher training. Knowledge or use of technical aids such as video-tapes. Ability to create methods of effectively redeploying existing personnel.	Responsible for coordinating (1) Pre-service, (2) Inservice, (3) Internship, and (4) Aide training.

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CENTRAL PLANNING	QUALIFICATIONS	JOB DESCRIPTION
Monitoring Research and Evaluation Specialists	Proficiency in <u>educational measurement</u>, use of computer to gather and store information on student's progress	Responsible for (1) depositing continuous record of each child's achievement, (2) summarizing group progress, and (3) developing quick methods of feeding child's achievement back to child, teacher and parent.
Nucleus Schools Master Teacher	Experience in teaching in inner-city schools, leadership ability in class contact situations, expert ability and knowledge in teaching reading-linguistic skills.	Works within Nucleus School helping implement Continuous Development - Mastery Learning program. Is main source of feedback to central planning about the effectiveness of the materials and curriculum
Master Teacher Assistant:	Same as above, but not necessarily at same level.	Learns approach 1st year while helping in its development. Responsible for helping to disseminate more effective concepts to "spin-off" schools thereafter.
Teacher Aid Assistant:	Thorough knowledge of instructional tasks develop functional role for the various aids. Must understand <u>dynamics of close interpersonal contacts.</u>	(1) Help recruit aides (volunteers and paid from community) (2) prepares aides to work with teachers, (3) prepares teachers to use aides most effectively.
Administrator	Experience in working in inner-city schools, leadership ability in working with teacher, parent and community to accept and support sound innovation in curriculum, instruction and <u>community school design.</u>	Coordinating the school so that Continuous-Development Mastery Learning program can progress. Liaison person with the upper echelon, teacher and community

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personnel. It might be that as the staff develops increased competency a number of age levels could be added each year. We propose starting with five, six, and seven year olds because this is the traditional age level for initial reading-language instruction. Furthermore, the gradual working down toward age three is proposed because the many obstacles of public attitudes, state laws, and finance will need rectifying before the child under age five will be accepted as a part of the community's educational responsibility.

Implementation Stage	Year	Age Group
I	1st	0
II	2nd	5 6 7
III	3rd	4 5 6 7 8
IV	4th	3 4 5 6 7 8 9
V	5th	(?) 3 4 5 6 7 8 9 ?

Figure 3. Pyramided Rate of Program Development

4. Chronology of the Program

It is essential that the Program Development, Tryout and

Evaluation, and Staff Recruitment begin the first year.

The implementation would begin the following year after a

summer session of Pre-service and Internship training. In-

service training for existing staff would begin concurrently

with the full program implementation. Staff recruitment

would be continuous because of faculty attrition and program

growth. Plans for the cooperative two-year internship program

should be developed concurrently with participating colleges

and universities.

Conclusions

In this paper we have attempted to present a coordinated program

of curriculum development, cooperative pre- and inservice teacher

training and community involvement whose purpose is the improvement

of achievement for the youngsters of the inner-city. The principles

of learning, motivation, and teacher training that we have advocated

in this report are by no means suited only to the needs of the

inner-city. A modified form of such an approach would be as desirable

in the most advantaged sections of our city or suburbs as they are

for the less advantaged areas. It is in our inner-cities, however,

where the educational needs are demonstrably the greatest and therefore

it is for our inner-city children that such changes have the highest

priority. Ultimately we believe that all of Chicago's schools could

fruitfully employ the approaches we have described.

The future of Chicago rests upon the ability of its schools to fuse the needs of today with the demands of tomorrow. We will be successful in confronting this challenge if we can effectively develop a coordinated program within which pupils, instructional personnel, members of the community, and institutions of higher education work jointly for the achievement of intellectual mastery, the development of social responsibility and the reconstruction of the life of the city.

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(b) Pre-packaged university courses in education should <u>not</u>
be used for inservice purposes. Instead, individual
schools or sub-groups of teachers across schools should be
given the option of contracting with a local college,
university, industry, or social service agency, for a
program of instruction tailor-made to the needs and interests
of that contracting group. Such courses should supplement
city-wide inservice programs, and when appropriate, replace
them. We recommend that one person in the District Super-
intendent's office coordinate these requests to eliminate
duplication of effort. We feel that this is the level for
the coordination because the person would have sufficient
contact across schools to be of help and still be close
enough to the schools to give meaningful support to
appropriate requests.

3. <u>Contents of Core Inservice Programs</u>

All inner-city teachers already in the schools should receive
a core program of inservice training whose objectives are
similar to those of the pre-service programs discussed above.
They would focus upon (1) changing teacher expectancies, (2)
teaching the methods of <u>Continuous Development - Mastery Learning</u>,
(3) orienting teachers to the culture and language patterns of
the inner-city, and (4) techniques of motivating inner-city
youth to achieve academically. Diagnostic methods need to be

developed to determine how much work in each of the above four

areas each teacher needs to bring her to an effective level of

functioning. That is, the principles of <u>Continuous Development -</u>

<u>Mastery Learning</u> ought to apply to teacher inservice as well.

4. <u>Use of Technology in Workshops and Courses</u>

We must learn not to depend upon the self-contained sufficiency

of the workshop or course in achieving inservice objectives.

Attempts must be made to extend the effectiveness of inservice

instruction beyond the time limits of individual workshop sessions.

(a) <u>Self-instructional materials</u> can be used in combination

with group sessions, with the group activities designed to

raise questions and generate problems. Once the problems

have been confronted, packages of take-home self-instructional

materials allow teachers to pursue the alternative solutions

themselves. Many forms of self-instructional aids are

available.

(i) <u>Programmed texts</u>. We would recommend the more interesting

branching programs for most purposes.

(ii) <u>Records, tapes or cassetes</u>.

(iii) <u>8 mm. film cartridges and portable players</u>.

(iv) <u>Self-scoring diagnostic evaluations</u>.

(v) <u>Coordinated use of Chicago educational TV for inservice</u>

<u>purposes</u>.

(vi) A series of available telephone <u>dial-a-lectures</u> which

change weekly as a course progresses, allowing greater

flexibility in time used by the teacher for his or her

inservice.

Optimal combinations of live workshop sessions, taped

and programmed materials, portable problem-solving inservice

learning laboratories and both TV and telephone supplementary

lectures can sharply increase the effectiveness of inservice

training programs for inner-city teachers.

(b) <u>Micro teaching</u> should be used far more frequently as a way

of providing educational personnel with the opportunity

for feedback and reflection on their teaching methods and

their consequences. Inservice sessions involve not merely

reading or talking about good procedures, but actual controlled

practice with supportive, corrective feedback.

(c) <u>Simulation exercises</u> can be very useful in teaching important

skills concerned with <u>confrontations</u>, teacher-pupil or

<u>teacher-parent</u> (or teacher-agitator or teacher-administrator)

<u>interactions</u> and <u>other</u> <u>domains</u> where it is <u>emotion</u> and <u>action</u>

rather than book learning and reflection that count. Such

simulation can be effectively established using <u>videotape</u>

presentations.

5. <u>Implementation of Inservice Programs</u>

Such an inservice program could be part of a series of cooperative

arrangements made with colleges and universities for the estab-

lishment of teaching internships, as well as with <u>publishers</u> and

other education industries for refinement and production of

<u>Continuous Development - Mastery Learning</u> materials.

A single Chicago-area university should coordinate (though **not**

provide all instruction) the entire program for graduate credit

purposes. Such an arrangement has existed between the University

of Maryland and the United States Armed Forces Institute (USAFI)
for years.

Community

When the school and the community share a particular set of
values, commitments, and objectives, the two institutions can usually
cooperate in silent harmony. When the school and community repre-
sent contrasting value systems and commitments, the resulting dis-
trust, miscommunication and friction inevitably lead to strident discord.
Education in the inner-city is currently plagued by disharmony
between the school and the surrounding community. Any plan for
educational change in that setting therefore must lead, not only
to improved academic achievement among the pupils, but to lasting
modifications in the very nature of the school, community and their
interrelations.

1. Community as a Source of School Personnel

   We believe that many of the tensions between the community and
   the schools in the inner-city are symptoms of deep frustration
   with the fact that the children are not learning as they are in
   other settings. The focus of anger deflects to issues of doubtful
   long term educational relevance such as having black teachers teach
   black students or black administrators lead black schools. Such
   issues are tangential to the long term objective of helping each
   child develop the educational base which will permit him to reach
   a range of goals in the total society.

(a) <u>Aides</u>

Many of the tasks presently performed can be done by personnel with less formal training. We feel that the current strict exclusion of such personnel from all teaching and evaluative functions is unnecessarily severe. With qualified teachers giving careful supervision, some elements of instruction could be conducted by aides. The aide's role would have to be explicitly described and aides would require careful training, but the contributions such personnel could make to children's learning would make the task of training well worth the effort and costs.

Such a system has direct parallels in the evolving structure of medical practice in this country. We will soon see the emergence of a totally new job category--paramedical personnel. These individuals will be trained to carry out certain carefully proscribed medical functions for which doctors and nurses are currently responsible. The A.M.A. is slowly recognizing that the shortage of physicians must be met with a redeployment of the available medical per-sonnel as well as a step-up in the pace of medical training.

(b) <u>Listening</u>

Many children need to have the impact of an adult listening to them. The Listening Mother's Program is an example of what has been done in this regard. However, serious consideration should be given to financially supporting the program as part of the regular curriculum. The use of older

children to listen to younger children read or talk has also been tried, but not as a regular adjunct to the instructional program. We would recommend wide use of such programs judicially applied to those who need it.

(c) <u>Reading</u>

Aides can read to children. Again both paid and volunteer adults and older children could do the reading. When appropriate, older children who need more reading opportunities could do the task, thus gaining practice in a socially accepted way.

(d) <u>Monitoring</u>

As currently done, many of the monitoring and housekeeping tasks of the teachers could be turned over to the aides. These include hall and playground supervision, test administration, reporting to parents, scoring and correcting papers, and helping students with their clothing.

Employment of indigenous aides is already a characteristic of the experimental child-parent center program. Such use of community resource people has multiple payoffs: (1) Classroom instruction is improved. (2) <u>Communication between the school and the community is facilitated.</u> (3) A new source of financial support for community members is opened up. (4) Opportunities for personal development are provided for <u>promising members of the community.</u> In these ways the school may contribute to tangible changes in the <u>character of the</u>

community itself.

2. Parent Aids to Child Learning

Many parents ask how they might help their child. School personnel have shied away from such offers out of fear that the parent will do the wrong thing. However, kits of programmed materials which would guide the parent in his interaction with his child's academic learning could alleviate the professional educator's concern for the potential misdirection such help might take. These materials can be produced fairly inexpensively and would serve the dual purpose of giving the child more practice and of helping the parent who often has the desire to help but fails to do so because of limited education and background.

3. Service in the Community

The role of the school as a community service agency must be extended. Local schools can be evolved into community schools, open 12-16 hours per day to provide adult education, recreation, training of the full gamut of paraprofessional teacher aides and centers for community activities. This extended school day would afford an increased opportunity for parents and educational personnel to exchange ideas about the needs of our children, both in school and in the community.

4. Communication

An important characteristic of the Continuous Development - Mastery Learning approach is that the objectives of instruction are stated in a concrete, specific manner which can be communicated

to parents more easily than our present global and ambiguous
categories. Instead of (or in addition to) report cards,
parents should receive frequent reports of the specific ob-
jectives mastered by their children in a preceding report
period, and those whose mastery is anticipated in the forth-
coming report period.

Parent-Teacher conferences are to be encouraged, particularly
when the school personnel are willing to use many methods of
making contact with the reluctant parent who may be the very
one with whom communication is most needed. However, only
so much of the school funds and effort can be directed toward
the ideal forms of reporting programs. Therefore we suggest
using the traditional avenue of sending home the "report card"
but in a form of reporting that is directly tied to the objectives
of the Continuous Development - Mastery Learning approach.

Standardized forms can also facilitate such reports. They
can be made part of the formalities surrounding the students'
mastery of each small unit which the educational personnel need
in their daily contact with the student. Eventually, when the
monitoring of Continuous Development - Mastery Learning is made
a function of a centralized computer facility, production of
frequent report forms can be automated in the same manner as
are the individual achievement test score profiles now produced
for adhesion to individual permanent school records.

Such a means of reporting school progress to parents would

make both objectives and attainments specific. Parents could take a much more active and focused role in monitoring both their children and their teachers given such information. Conceivably, the effect on teacher behavior could be as positive as the effect on parent understanding and involvement.

5. <u>Community Role in School Decision-Making</u>

What is the extent of feasible community participation in educational decision-making? We believe that the core curriculum of basic skills as represented by <u>Continuous Development - Mastery Learning</u> programs in language arts and mathematics is axiomatic and not a matter of community option. However, <u>there is need for the concept of Community Electives</u>, wherein some proportion of a school's curriculum could reflect the expressed interests or concerns of a particular community. The result would be an intelligent balance between the responsibility of an educational system to the <u>community-at-large</u> and the unique demands of a segment of that community.

6. <u>Education for the Emerging Community</u>

School programs, especially at the secondary level, must reflect the educator's responsibility for helping <u>mold the nature of the emerging community</u> for the next generation. That is, an educational program for today's inner-city must contribute to dissolving the problems of the inner-city of tommorrow.

Two brief examples of possible programs must suffice. The insulation of the citizen of the inner-city from the rest of the city and

its services is often as much self-inflicted as imposed from without. He is often unaware of the many resources in the city-at-large for recreation, education, entertainment or general enlightenment. School programs should include units for teaching the students about the full range of the city's resources, where they are and how they can be reached. The political and legal aspects of city life should also be strongly emphasized in such a program.

This generation must produce and rear the next generation. Many of our current problems are generated by lack of under-standing of basic principles of nutrition, child-bearing and child-rearing. Child rearing courses would emphasize ways to stimulate the intellectual and physical growth of the very young. Programs in these areas must be instituted in the secondary years.

If the proposed program of education in the inner-city
is to be implemented, changes will have to be made in the school
organization.

Teacher and Administrator Selection and Training

The new organization of the schools would be predicated on the
assumption that both the teachers and administrators should focus
on a curriculum shaped to the inner-city child's special needs. To
this end, personnel who direct the program should have productive
teaching experience in these inner-city schools. The current method
of selecting school administrators will need major modification for
this project to insure an optimal fit of the individual's competencies,
experience, and attitudes to the educational requirements of the project.

1. True Non-Grading

    Prescribing non-graded continuous development primary levels is
    a simple operation. Actually achieving non-gradedness will be far
    more difficult. A curriculum so focused will require a far
    different school organizational structure than that currently
    in vogue. Students will be placed on individualized curriculum
    paths with instructional help coming to them from many sources--
    human and automated. The numerous steps and evaluations in the
    learning process will require considerable monitoring of student
    learning--a task the school must organize to perform.

2. Variable Class Size

Because the evidence is lacking that any one class size is optimal for all purposes, we subscribe to an approach which permits function to determine class size. That which can be done in large groups, should be done in large groups. That which can be done best in small groups or in one-to-one situations should be done in that manner. This approach will require redeployment of teachers, aides, and technology to free personnel to use all resources on an extremely flexible basis.

3. Role of the Teacher   *Master Teachers*

With the modifications proposed above, a new type of educator will emerge--the master teacher-leader. The classroom teacher will be responsible for coordinating a complex instructional system composed of paraprofessional teacher aides, teaching interns, instructional technicians and many forms of instructional materials and technology. Traditional classroom boundaries will be necessarily blurred. New administrative conformations will be necessary to cope with these new role definitions.

The hierarchical form for instructional staffing presented in the Chicago magnet school proposal seems equally relevent to a new concept of the inner-city school. In this proposal a distinction is made between the master teacher-administrator and the regular classroom teacher. Clearly, appropriate salary differentials must be created to coincide with these newly created

responsibilities.

4. School Reorganization

1986

We call for a school organization which is both decentralized
and recentralized. It is recentralized in its program and
materials development and general policy-setting; it is de-
centralized in program implementation and management. The
decentralization extends through having special funds (discretion-
ary accounts) available locally for materials and services which
are needed immediately. Creative instruction can only occur
where individuals are free to move when ideas are fresh and
relevant. The organization must hire people it trusts to do
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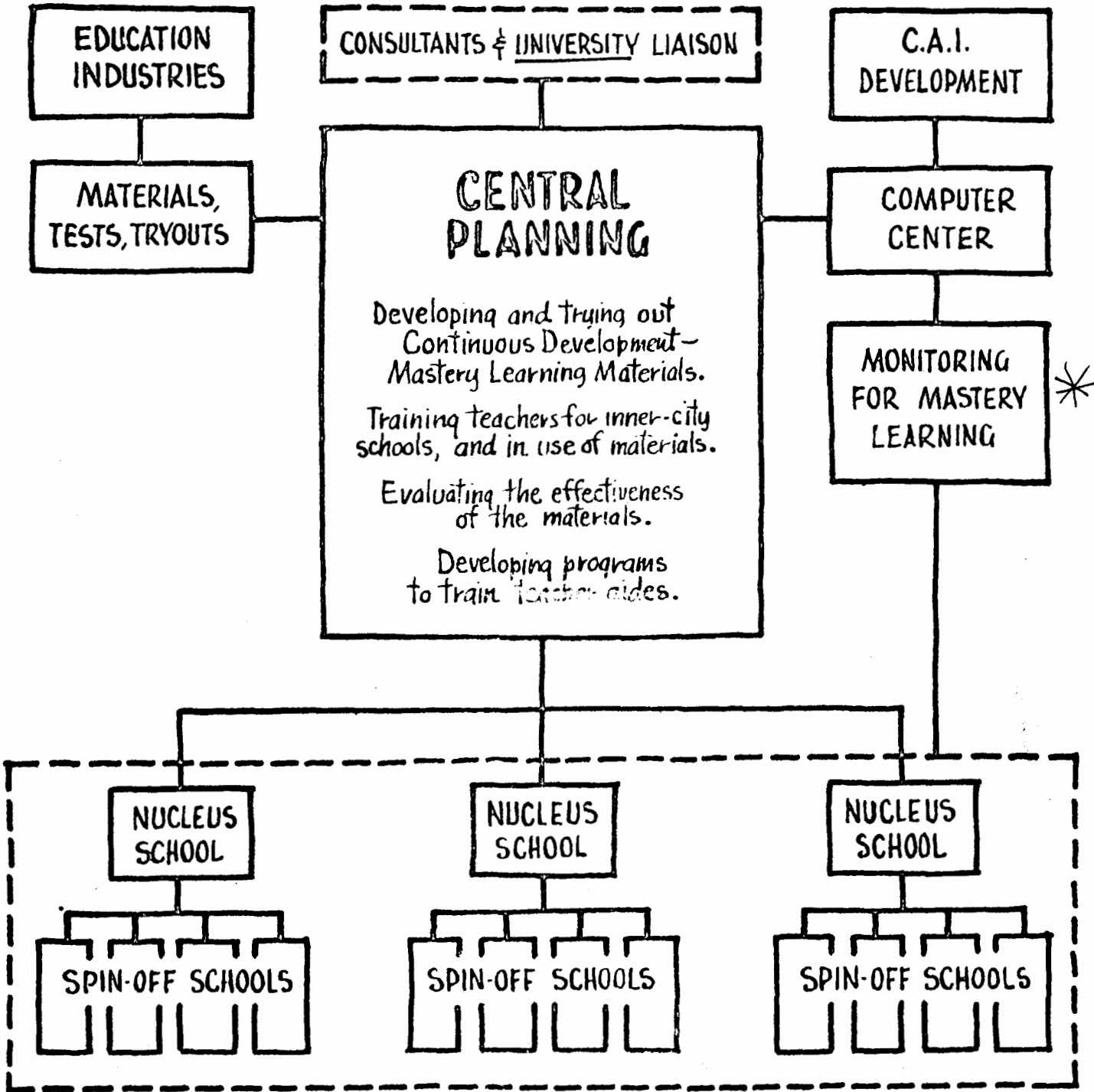
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| COMPUTER CENTER |

| MONITORING FOR MASTERY LEARNING | ✳

| NUCLEUS SCHOOL | | NUCLEUS SCHOOL | | NUCLEUS SCHOOL |

SPIN-OFF SCHOOLS   SPIN-OFF SCHOOLS   SPIN-OFF SCHOOLS

PLAN FOR IMPLEMENTATION

The planning would be implemented in a center which we
label the "Nucleus School." Here the programs would be
carefully conducted, evaluated and refined. Subsequently,
by redeploying personnel, along with those elements which
survive careful scrutiny the project would move to other
schools ("Spin-off Schools") for implementation and con-
tinuous evaluation. To assure continuity in the program,
the personnel will have to be rotated into the Nucleus
schools and out to the "spin-off" schools in a meaningful
pattern. The exact nature of that pattern cannot be
fully determined until the first year of implementation.
However, it would appear that the teachers and administrators
leaving the Nucleus schools should go to the "spin-off"
schools as a team or unit. Some instructional personnel
should stay in the Nucleus school to train the next incoming
group. Obviously, the Nucleus school staff would have to
be much larger than would be found in the on-going program
if some are to be retained and some are to leave.

Schools and educational personnel should be selected
to increase the diversity of economic, social, and ethnic
composition of the total inner-city setting. Furthermore,
because the Nucleus schools are to be sites of innovation,
the educational personnel must be committed to the excitement
and uncertainties of change. Furthermore, they must be
cognizant of and sensitive to the dynamics of innovation
and its diffusion. We recommend that over and above exceptional

educational qualifications, the personnel be volunteers
who are enthusiastic about improving the achievement of
inner-city youth. They should be committed to developing
and learning the program with the end in view of carrying
the effective programs to "spin-off" schools with a
minimum feasible lag period (one year would be desirable).
They must be capable of working cooperatively with members
of the community and other professionals.

No program is perfect at birth. The teachers
participating in the Nucleus school activities will not
only be trained in the principles of Continuous Development -
Mastery Learning--they will contribute to its development,
flesh out the precise details of its operation, trouble-
shoot its problems and adapt it to the specific needs
of new "spin-off" settings. The program must be dynamic,
not static. This approach of Continuous Development -
Mastery Learning to be successful, must itself be con-
tinuously developing in the hands of creative and committed
educators.

(b) Development of Materials

Once guidelines are set for the Mastery Learning materials
and prototypes are well developed, the subsequent development
and production of the sets could be sub-contracted to
specialists in educational media. The proximity of such
services in the Chicago area would assure quality and

appropriate materials.

In such a process the traditional roles of public schools and educational publishers would be reversed. Instead of schools passively waiting to react to whatever new materials the publishers choose to develop, the educational specifications of the materials would be developed by the Chicago Public Schools. These specifications, along with prototypes of materials, would then be provided to publishers who could then bid for the contract to produce such materials for the public schools of Chicago.

(c) Evaluation and Monitoring

It is essential that each child's progress be continually monitored. Rented time and storage in computers could accomplish this feat. This approach would have at least two advantages; one, the staff could be trained in computer processing so that when the services of these devices come within reasonable expense range, new movements to incorporate electronic aids in instruction could be made with ease. Two, within the range of current low cost computer rental from businesses which have unused capacity on their machines the monitoring could be accomplished. Teachers could be provided with packages of punched cards for each child with the Continuous Development - Mastery

Learning skill pre-punched along with all necessary

identifying data. Thus when a child completes a level,

the card could be pulled and placed in a hopper. As

needed, the cards could be collected and sent to the

computer for a read-out on (1) each child's progress

for both teacher and parent, and (2) the total class

MBO performance. Thus, the educational personnel could

plan future learning activities.

2. Personnel

The qualifications and job description for the personnel needed

to conduct the plan are summarized in Table 1. The key to the

personnel plan is hiring back-up people for each position.

In this way two projections are covered. One, trained per-

sonnel are available in case a person in the leadership role

leaves. Two, experienced individuals can be shifted into other

schools so that the effective aspects of the program can be

rapidly disseminated throughout the Chicago School System. Of

course, we are assuming that the transfer policy of the Chicago

School System will put a premium on the qualifications of an

individual who works in the inner-city.

3. Cadence of Program Development

We envision a pyramiding of age levels (See Figure 3) for pro-

gram implementation. These guidelines are crude approximations

which could be accelerated greatly given adequate funds and

STAFF QUALIFICATIONS AND JOB DESCRIPTIONS

CENTRAL PLANNING	QUALIFICATIONS	JOB DESCRIPTION
Director	Administrative knowledge and ability, background in inner-city education, knowledge of Educational Psychology (Learning, Programmed Instruction, Measurement, and Cognitive Styles.) and Sociology.	Responsible for reaching sub- and ultimate goals of the program. Must hire personnel, budget funds, secure more funds when needed, maintain relationship with other personnel in central office and nucleus schools.
Assistant to the Director	Primarily administrative knowledge and ability.	Responsible for (1) helping carry out details delegated by the director, (2) monitoring the budgets, (3) recruiting candidates for staff positions, (4) being liaison person with development (II) and Evaluation and Monitoring section, (5) finding methods of expediting (cutting red tape) decisions so creative people can function
Assistant Director: Curriculum	Knowledge of Reading-Language skills materials and their development. Experience teaching in inner-city elementary schools.	Responsible for Coordinating, Developing, Implementing, and Evaluating the Mastery Learning Materials.
Assistant Director: Instruction	Knowledge about and experience in teacher training. Knowledge or use of technical aids such as video-tapes. Ability to create methods of effectively redeploying existing personnel.	Responsible for coordinating (1)Pre-service, (2) Inservice, (3) Internship, and (4) Aide training.

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CENTRAL PLANNING	QUALIFICATIONS	JOB DESCRIPTION
Monitoring Research and Evaluation Specialists	Proficiency in educational measurement, use of computer to gather and store information on student's progress	Responsible for (1) depositing continuous record of each child's achievement, (2) summarizing group progress, and (3) developing quick methods of feeding child's achievement back to child, teacher and parent.
Nucleus Schools Master Teacher	Experience in teaching in inner-city schools, leadership ability in class contact situations, expert ability and knowledge in teaching reading-linguistic skills.	Works within Nucleus School helping implement Continuous Development - Mastery Learning program. Is main source of feedback to central planning about the effectiveness of the materials and curriculum
Master Teacher Assistant:	Same as above, but not necessarily at same level.	Learns approach 1st year while helping in its development. Responsible for helping to disseminate more effective concepts to "spin-off" schools thereafter.
Teacher Aid Assistant:	Thorough knowledge of instructional tasks develop functional role for the various aids. Must understand dynamics of close interpersonal contacts.	(1) Help recruit aides (volunteers and paid from community) (2) prepares aides to work with teachers, (3) prepares teachers to use aides most effectively.
Administrator Community ed	Experience in working in inner-city schools, leadership ability in working with teacher, parent and community to accept and support sound innovation in curriculum, instruction and community school design.	Coordinating the school so that Continuous-Development Mastery Learning program can progress. Liaison person with the upper echelon, teacher and community

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personnel. It might be that as the staff develops increased

competency a number of age levels could be added each year.

We propose starting with five, six, and seven year olds because

this is the traditional age level for initial reading-language

instruction. Furthermore, the gradual working down toward age

three is proposed because the many obstacles of public attitudes,

state laws, and finance will need rectifying before the child

under age five will be accepted as a part of the community's

educational responsibility.

Implementation Stage	Year	Age Group
I	1st	0
II	2nd	5 6 7
III	3rd	4 5 6 7 8
IV	4th	3 4 5 6 7 8 9
V	5th	? 3 4 5 6 7 8 9 ?

Figure 3. Pyramided Rate of Program Development

4. <u>Chronology of the Program</u>

It is essential that the Program Development, Tryout and

Evaluation, and Staff Recruitment begin the first year.

The implementation would begin the following year after a

summer session of Pre-service and Internship training. In-

service training for existing staff would begin concurrently

with the full program implementation. Staff recruitment

would be continuous because of faculty attrition and program

growth. Plans for the cooperative two-year internship program

should be <u>developed concurrently with participating colleges</u>

<u>and universities.</u>

Conclusions

In this paper we have attempted to present a coordinated program

of curriculum development, cooperative pre- and inservice teacher

training and community involvement whose purpose is the improvement

of achievement for the youngsters of the inner-city. The principles

of learning, motivation, and teacher training that we have advocated

in this report are by no means suited only to the needs of the

inner-city. A modified form of such an approach would be as desirable

in the most advantaged sections of our city or suburbs as they are

for the less advantaged areas. It is in our inner-cities, however,

where the educational needs are demonstrably the greatest and therefore

it is for our inner-city children that such changes have the highest

priority. Ultimately we believe that all of Chicago's schools could

fruitfully employ the approaches we have described.

The future of Chicago rests upon the ability of its schools to fuse the needs of today with the demands of tomorrow. We will be successful in confronting this challenge if we can effectively develop a coordinated program within which pupils, instructional personnel, members of the community, and institutions of higher education work jointly for the achievement of intellectual mastery, the development of social responsibility and the reconstruction of the life of the city.

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