The subject of this paper is the schooling of children of the poor. In the past most children of the poor obtained very little education in the school; in fact it operated largely as a sorting agency for them. With the increasing demand for universal education, the schools and the public have become conscious of the schools' inadequacy in reaching disadvantaged children. As public attention focused on this problem and funds were appropriated to help in dealing with it, extensive efforts were made to improve the education of the poor. At first few programs were successful; now many more effective programs are in operation, but they are still in a minority. The slow development of successful efforts has partly been due to the wide acceptance of the notion that a child's capacity to learn is the chief factor in limiting his education rather than the inadequacy of the learning experiences. Also the notion that the learning programs that work with middle-class children need only minor revisions to be effective with the disadvantaged has misdirected many projects. What has been found in the last 10 years is that effective learning programs for children of the poor can be constructed by designing them so as to provide the essential conditions for learning. (Author/JM)
Until the 1960's, the American public gave little or no attention to the problems involved in the schooling of children from homes of poverty. When compulsory attendance laws were finally enacted in all the states of the nation, most people assumed that universal education had been assured, at least through the elementary school. Actually, a sizeable minority of children, most of whom were poor, were not learning what the elementary schools were expected to teach, but this was not brought forcibly to public attention until several events all indicated that a considerable number of American children and youth were not able to read, to write, and to handle quantitative problems; and did not understand their responsibilities and rights as American citizens. In the late 50's and early 60's the rate of rejection of military draftees because of illiteracy was reported to be very high in certain parts of the country, particularly in pockets of poverty. At the same time, the hard-core of unemployed workers was found to be composed of a large proportion of illiterates who were natives of America, presumably a product of universal education. Finally the heightened public concern over the denial of civil rights to many Americans led to the discovery that among minority groups with low incomes, illiteracy was one of the criteria used to deny their right to vote. By 1960, the fact that many children of the poor were not obtaining an elementary education was painfully evident.
Schooling as Sorting

Educational doctrines and practices in the United States were developed largely before 1945 and in terms of the structure of the society and the characteristics of the clientele of earlier times, when most people were employed as unskilled or semi-skilled labors and only 56% were in professional or managerial occupations, most persons could survive with little or no formal education, and only a few would utilize college education in their work. Under those conditions, a major function of schools and colleges was to sort children and youth, pushing out those who were judged least promising for further education and encouraging a few to go on. The lock-step progress of instruction and the grading system used were developed to sort students rather than to help every child and youth to get an education. By moving the whole class at the same rate from topic to topic, pacing the movement in terms of the performance of the average students, those with more difficulty in school learning would be certain to get farther and farther behind, and most would give up trying. This was reinforced by the grading system, which year by year gave low marks to those having difficulty, thus helping further to discourage them from going on while assigning high marks to those who learned school tasks easily and quickly, thus encouraging them to continue their formal education.

These policies and practices have existed for so long that we rarely note how sharply they differ from those of an institution devoted wholly to teaching and learning. For example, if you or I want to learn to play golf, we go to a golf "pro", whose job is to teach us. We don't
expect that after a few practice periods he will say, "You are getting a "D" in your work. I may have to fail you if you don't improve." Instead, we expect him to say, "You are making progress on your drive, but you need to bring your full body into the swing. A little later I'll give you further practice on your putting to increase accuracy and decrease power." An institution concerned primarily with learning and teaching follows procedures based on the available knowledge of how people learn, whereas our schools and colleges have been only partly concerned with helping each student learn and were likely to be preoccupied with grading, classifying and other sorting functions.

This was appropriate from the point of view of society in an earlier stage when the positions available for the occupational, social and political elite were few in number. Then the schools and colleges were a major means for rationing educational opportunities to conform to the social structure. It seemed sensible then to give everyone a chance to jump the hurdles and to record the results, reporting them in a way that would influence children, youth and their parents to seek further educational opportunities only as they were clearly successful in previous years.

Today we have a different situation. By the use of science and technology, we are producing our nation's need for food and fiber using only 5% of the labor force. Less than 5% is employed as non-farm, unskilled labor. Less than 40% of our total labor force is employed in producing and distributing material goods. More than 60% is furnishing non-material services for which there is an ever-rising demand—health services, educational services, social services of various sorts, recreational services, accounting, and administration. A young person
without the competency of one who has completed elementary education finds very few jobs available. On the other hand, employment in the fields where demand is increasing requires more than high school education. The critical task is no longer sorting students but educating a much larger proportion to meet current opportunities.

Federal Aid for Educating Disadvantaged Children

Since today only a small fraction of those with limited education can find work, many are unemployed and on welfare rolls. By 1965, the public was seeing this condition as a social and economic problem rather than only a personal tragedy and was demanding that greater efforts be made to educate children of the poor.

In response, the federal government enacted several pieces of legislation. The major one was Title I of the Elementary and Secondary Education Act of 1965. This act stated, "it to be the policy of the United States to provide financial assistance to local educational agencies serving areas with concentrations of children from low income families." The amount appropriated in the first year was less than one billion dollars and in subsequent years has increased to about $1.5 billion. This represents about 4% of the total annual school expenditures. Assuming that 20% of American school children are disadvantaged, the current appropriation, if divided equally among them, would provide a supplement of $150 per year for each disadvantaged child.

In the first two years of operation of this program, it became apparent that most local schools had not analyzed the complex problems that are involved in improving the education of disadvantaged children.
The plans of many schools in the first year or two were simplistic ones, such as adding teachers or teacher aides to the school staff, or using more audio-visual materials. Then, they identified some of the more obvious problems of the children such as, inadequate nutrition, need for eye-corrections, frequent illness. After the second year, more attention was given to the problems arising from the differences between the child's experience in school and in the home and neighborhood. For example, many disadvantaged children had had no experience with books in the home. The familiar vocabulary in the home was often different from that the child heard in school: it might be a different language, like Spanish, or a different dialect of English. In many neighborhoods, the attitude was negative toward the school. It was not considered helpful or even relevant to the matters of real concern to the children or their families. Mothers frequently viewed the school as a place where the children might get into trouble and pleaded with them to be quiet in school and not do anything bad.

As local school authorities began to identify the variety of difficulties disadvantaged children were encountering, they recognized that their initial efforts were not adequate to compensate for the range of problems that were identified. Gradually, more and more of the programs began to be designed to deal with the actual problems identified in the particular schools. By the end of the 1968-69 school year, sample studies indicated that approximately 1/4 of the programs were producing measurable results in reading and arithmetic and by 1970-71 about 1/3 were reporting positive results. The Office of Education published descriptions of successful state programs that were
evaluated in 1970-71. In May, 1973, the New York State Education Department reported a study of a sample of 58,289 pupils in Title I programs who achieved "far more than expected." For example, more than 45,000 elementary school pupils who had previously made only six-month gains in reading for every 10 months of instruction, after entering the Title I program achieved 13 month gains in 10 months. For 5000 secondary school students, the increase in reading and mathematics achievement was 3 times that of the previous year.

An examination of the Office of Education reports, the state reports and the published reports of other investigations all point to the same conclusions. There has been a steady increase in the number of Title I programs that are showing measurable improvements in the educational achievements of disadvantaged children although there are still many programs that appear to be ineffective.
These results may seem incredible to those who have gained a contrary impression from the reports of recent large scale studies, particularly the Coleman report on Equality of Educational Opportunity, and the Jeucks Report on Inequality in Education. However, there is no real contradiction. Neither of the two large scale investigations dealt with the amount of school learning achieved by disadvantaged children in the period since the Elementary and Secondary Education Act of 1965 became operative. Both the Coleman and the Jeucks studies examined differences in scores on standard tests among different groups of children. They did not ask what different groups of children had learned but rather what measured variables were related to differences in scores. The standard tests used were norm-referenced tests. In building these tests, items are eliminated that most children answer correctly and items are retained which approximately half the children answer correctly and half do not. This is done to spread the scores as widely as possible so that children can be arranged on a scale from highest to lowest. The purpose of norm-referenced tests is to sort students, not to assess what they have learned. It happens that many of the items that are effective in sharply sorting students are those that are not emphasized in a majority of schools.

As an illustration, by age 13 about 80% of American children can read and comprehend a typical newspaper paragraph. Such an exercise is included in the National Assessment Educational Progress for its purpose is to report what proportion of children have acquired this useful reading skill. The exercise is not included in standard tests for 13 year old children because it does not sharply separate the very skillful readers from others. Standard tests will include items with unusual vocabulary, complex sentence structures, or other reading tasks which are not emphasized by most schools and are not
answered correctly by a large proportion of the age group. Coleman and Jeucks were using these tests because they show largest difference among groups. They found that family background factors were more related to these differences than school factors, but neither the test data nor the method of analysis of variance which they used could answer the question of what most children learned in school.

Another matter that is sometimes overlooked in discussions of these reports is their use of historical, not current data. The test results analyzed both by Coleman and Jeucks were obtained before schools became greatly concerned with the problems of learning encountered by disadvantaged children. Since schools have identified the problem more effort has been focused on it. What is now becoming available is information regarding the effects of greater effort and new programs. Disadvantaged children can master school learning but they require assistance that is designed in terms of their backgrounds and experiences that are often significantly different from those of middle income families.
Factors Inhibiting Effective Efforts

The relatively slow progress made in developing effective programs for educating children of the poor is not only due to the recency in recognizing the problem but also to widespread acceptance of certain inappropriate psychological constructs and a common practice of making only minor revisions in teaching practices rather than constructing comprehensive teaching strategies to provide the essential conditions for poor children to learn what the schools seek to teach. Psychological theories regarding school learning were influenced much more by Darwinian perspectives and genetic views of individual differences than by examination and interpretation of classroom experiences. Only John Dewey, among the educational theorists, developed his major concepts and guiding principles from reflections upon his own efforts and observations in conducting a school. His writings place major emphasis upon experience as the key to learning. Most influential psychologists of the earlier generation emphasized the individual's capacity as the limiting and determining factor in learning.

The result of the emphasis upon the individual's capacity for learning, whether it be called intelligence, scholastic aptitude or the "G Factor", has been to perceive school learning as primarily dependent upon the presumed ability of the student rather than upon the relevance and effectiveness of the learning experiences. From this perspective so-called compensatory education is viewed as futile for children who do not have the capacity for learning. Explanations of inadequate educational achievement are made in terms of the low abilities of the children rather than by analyzing the adequacy of the learning conditions provided.
Three lines of evidence are emerging that sharply challenge the validity
of the construct of learning capacity and particularly its usefulness in
guiding curriculum and instructional practices. The first is the belated
recognition that all children, excepting those with serious brain damage,
learn many things, some of which are seemingly complex. Every child who
lives to be of school age has learned at least the skills, attitudes and
understandings required for survival in a complex society. Not the least
of his learning accomplishments is the acquisition of oral language skills.
To understand an oral communication requires the child to decode the spoken
words, to recall the sentence after it ends since it has little meaning
until it is completed and the oral punctuation is given, and to use several
specific intellectual processes in constructing a meaningful sense for each
oral unit of expression. It is difficult to accept the view that a child
who can handle oral speech has a learning capacity too low to acquire
what the school seeks to teach.

Neurological studies also lend little or no support to the notion
that many children who are not brain-damaged have neural mechanisms in-
adequate for learning what is taught in schools and colleges. Instead,
investigations reveal human learning going on in a wide range of settings by
widely varied individuals. Human beings appear universally able to learn
from experience, that is, to acquire new patterns of behavior when they
find them rewarding and have opportunity to practice them and to inhibit
behavior which brings pain or dissatisfaction. Learning turns out to be as
natural to a human being as is the digestion of food.

A third line of evidence is the success achieved in learning by children
who have been labeled as "very low IQ", "slow learners", "uneducable". Not
only are the records of laboratories and centers working on learning dis-
abilities replete with cases of children who made remarkable progress when
appropriate conditions for learning were provided, but the increasing number
of successful Title I programs suggests that ways can be formed to help large
numbers of children to learn in school who have not been learning before.
Unfortunately, the notion that the learning capacity of the child is the
limiting factor in his school achievement serves to justify children's
failures and inhibits the various efforts of teachers and other educators
to improve the education of children of the poor.

Another inappropriate psychological concept which has widespread acceptance
among educators is that the patterns of teaching and learning which are pre-
sently effective with middle-class children are the proper ones and that other
children must develop "readiness" for school learning in the same way that
middle-class children do. Acceptance of this concept leads to the practice of
assessing the "deficiencies" of children, that is, the respects in which they
deviate from the norms of middle-class children. These "deficiencies" must
be overcome, it is agreed, before this child is really "ready" for learning
what the school seeks to teach. Among the "deficiencies" commonly recognized
are a limited oral vocabulary of standard English words, unfamiliarity with
the sentence structure of standard English, lack of acquaintance with the
stories found in "Children's Classics", lack of motivation for school work,
etc.

This conception overlooks the many positive characteristics of poor
children and thus furnishes no suggestions about strengths on which their
school learning can be built. In the programs in inner cities that I know
best the teachers are reminded that many poor children have recently moved
from a share-cropping economy to the modern city, a leap in history from
the serfdom of the 17th Century to the modern industrial society of today.
In the serf society the tenant farmer has no need to plan, to budget, to seek out goods and services. He is perennially indebted to the plantation store, and for the few services the plantation manager provides. When a family moves from this primitive economy to the modern city it must acquire many new patterns of behavior fundamental to its existence. The children who have experienced this drastic move and have survived must have many positive characteristics. When teachers begin to look for them, they are able to make lists of assets characteristic of poor children as long as the earlier lists they made of deficiencies. These assets include such things as the child's perseverance in carrying out projects in which he is interested, his skills in explaining things in which he is deeply involved, his skills in teaching other children, his knowledge of a variety of adult activities, his ability to establish working relations with other children, his ready responses to requests for help, etc. As teachers become conscious of these strengths, they usually find ways to build on them and to develop positive programs rather than remedial ones.

The acceptance of the ideas that many children have limited capacity for learning and that the procedures of teaching and learning which are effective with middle-class children are the appropriate ones for all children, leads naturally to the common practice of making small revisions in these practices in efforts to develop programs for educating children of the poor. In contrast to this, the recognition that all normal children can learn when effective conditions for their learning are provided stimulates an effort to construct new programs based on a systematic consideration of these conditions for effective learning. In reviewing Head Start and Title I programs that have brought about measurable improvements in the learning of disadvantaged children, I find that most appear to have been constructed in this way.
Some Conditions for Effective Learning

The general character of conscious human learning has been described in many different terms but most of these descriptions can be summarized somewhat as follows:

The individual perceives, either directly or vicariously, someone's thinkings, feelings, or actions in a way that is different from his own. When this pattern of behavior interests him sufficiently and appears to him to be something he could do, the learner attempt begins. If he carries on the new behavior successfully and finds it satisfying, he continues practicing it until it becomes part of his own repertoire. If his attempt is unsuccessful, that is, he does not carry on the new behavior properly, he may continue his efforts until he replicates the behavior he observed, or after one or more unsuccessful efforts he may give up. If he is successful in carrying on the new behavior pattern, but finds no satisfaction in it, he discontinues his efforts and the new behavior does not become part of his repertoire.

This general description seems relatively simple and without much value in designing school learning programs. However, a careful analysis will suggest many ways by which programs can be constructed which will help poor children to learn what schools seek to teach. For example, the learner's focus of attention largely determines what he perceives. By age 4, most children have established major foci of attention deriving from their experiences in the home and neighborhood. When school learning activities are concerned with behavior that has not been in the focus of a child's attention, the learning program will need to include activities that gain his active attention on matters that have not heretofore demanded it. Furthermore, the behavior that he perceives should interest him and be sufficiently attractive to stimulate his emulating it. Because many
children have not seen school activities as relevant to their own concerns and interests and have not seen friends or relatives enjoying them, they are not stimulated to emulate the behavior even when they perceive it. However, learning programs can be designed to appeal to children of the poor since what is worth learning in school can be shown to the children as relevant to their concerns and interests, and the teacher and older children can demonstrate in their own behavior, the extent of its interest to them.

For the learner to attempt the new behavior it must not only attract him but be something that he thinks he can carry on. In meeting this condition, the teacher needs to analyze the complex behavior patterns into steps that can be taken in sequence by the learner so that he can acquire the complex pattern through mastering these successive steps. Furthermore, for each step the teacher needs to show the learner just what the behavior is and how it can be carried on with only a slight modification of his present repertoire. This clarifies the learning objective and helps the learner to have confidence that he can do what is required.

The learner program must provide for positive reinforcement and feed-back for every learner. Positive reinforcement is the current term for the satisfaction or reward that the learner receives when his efforts are successful and feed-back refers to the information the learner receives about the success or lack of success of his learning effort. Typically, school learning programs have provided very limited types of positive reinforcement, mostly in the form of verbal approval by the teacher of successful efforts and good marks on the papers and report cards. These have commonly been meted out to a small fraction of the pupils and have not helped the learning of many others. By arranging the learning objectives into steps that can be taken by each learner and providing time for practice, many
more pupils can receive satisfaction from their efforts. Furthermore, the range of meaningful rewards can be increased to include such things as peer group approval, group participation, self-evaluation, interesting opportunities to use what is learned, and so on.

Feedback is commonly limited in school learning programs and negative reinforcement is overused. The learner should receive information about the success of his efforts that can help him to see what was wrong, what he can do to make a better effort, and encourage another attempt. Negative reinforcement gives the learner unpleasant consequences of his efforts, such as teacher disapproval, low marks, student ridicule, but does not furnish guidance or encouragement for another effort. Children of the poor are much more likely to receive negative reinforcement when they try to learn than they are to get helpful feedback.

For something to be learned it is also necessary that the learner continue to practice the new behavior until it becomes part of his repertoire. To meet this condition the learner program must furnish ample opportunities for appropriate practice of the new behavior both within and without the school. Programs commonly in use in most school do not provide for this condition for the children of the poor. The opportunities for practice are often too few, with too little variety, without adequate sequence, without appropriate provision of time, and without careful consideration of the way the child can practice outside of school, in the home and community. When the learner finds practice routine and boring, he is likely to carry it on without giving it attention. In this case, the practice has little or no value because complex learning involves the acquisition of patterns of thought, feeling and/or psychomotor skills that require conscious attention for appropriate functioning. When the learner does not give it this attention, the
requisite behavior is not being practiced. For this reason, busy work, sometimes used to keep children occupied does not serve as helpful practice for this kind of behavior.

Complex behavior is not learned in one grand effort but is built up through sequential practice that moves from simple to complex, from limited examples to a wider variety of illustrations, from obvious applications to more subtle ones, from the use of one or two skills at a time, to the employment of several skills in an articulated fashion.

Finally, what is learned in school is not intended to be restricted to practice in school. A school is a social institution established to aid children to acquire ways of thinking, feeling, and acting that are important outside of school and throughout life. The out of school environment of poor children has been given too little consideration in developing opportunities for practice that can enrich and aid their lives at home and in the community. Constructing practice opportunities that are helpful to each child greatly increases the effectiveness of learning programs designed for children who differ from those of middle-class background.
Managing Learning Programs

Children of the poor are alike in being in families with limited income but they vary in many other respects. For this reason, group instruction that focuses on the "average children" in a class and is not a procedure that can furnish the essential conditions of learning for all the children in the class, the learning program must provide for a considerable degree of individualization. In reviewing a large sample of successful Title I programs, I find variety and ingenuity in the way in which programs involving considerable individualization are managed. Some of the variations are due to the different degrees of self-instruction that are possible with children of different ages, some employ older children as tutors for younger children and the use of children of the same age teaching each other is quite common. Many schools employ adult teaching aids to manager placement and mastery testing, and to help in the distribution and maintenance of instructional materials.

Multi-level reading materials on the same subject permit students with different degrees of reading skills to prepare for common discussions of significant topics. A small group focusing on a common learning problem with the aid of a teacher is often employed while the rest of the children in the classroom are working on plans for a project or on individual practice materials. Equipment of various sorts that can be used by the pupils without adult assistance also helps make individualization manageable. Although the management problem is a serious one that teachers face when they develop learning programs designed to help every child learn, it seems clear that a practicable procedure can be designed that provides for a considerable degree of individualization and thus enables the teacher to provide opportunities and helpful guidance for all or almost all children.
In Conclusion

The subject of this paper is the school learnings of children of the poor. It does not deal with the financing of these learning programs although it is clear that they cost more than those designed for middle class children. It does not touch upon problems of administration, staffing, the continuing education of school personnel or the role of parents and the lay public. It does not mention the important questions of what should be taught and what responsibility the school has for the educational and occupational guidance of children of the poor.

This paper has pointed out that in the past most children of the poor obtained very little education in the school, in fact it operated largely as a sorting agency for them. With the increasing demand for universal education, the schools and the public have become conscious of the school's inadequacy in reaching disadvantaged children. As public attention focused on this problem and funds, especially federal funds, were appropriated to help in dealing with it, extensive efforts were made to improve the education of poor. At first few programs were successful, now many more effective programs are in operation but they are still in a minority.

The slow development of successful efforts has partly been due to the wide acceptance of the notion that a child's capacity to learn is the chief factor in limiting his education rather than the inadequacy of the learning experiences. Also the wide acceptance of the notion that the learning programs that work with middle-class children need only minor revisions to be effective with the disadvantaged have misdirected many projects for improvement. What
we have found out in the last ten years is that effective learning programs for children of the poor can be constructed by designing them so as to provide the essential conditions for learning. The limitations, if any, are not in the children but in our lack of inventiveness in the use of what we already know about human learning.