DOCUMENT RESUME

ED 078 962 PS 006 627

AUTHOR Blanton, William E.
TITLE Preschool Reading Instruction: Information for the Administrator. PREP-39.
INSTITUTION Indiana Univ., Bloomington.; National Inst. of Education (DHEW), Washington, D.C.
REPORT NO DHEW-NIE-73-27625; PREP-39
PUB DATE 72
NOTE 46p.
AVAILABLE FROM Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (DHEW Publication No.: (NIE) 73-27625, PREP-39, $0.55)

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Administrator Guides; Check Lists; *Preschool Education; *Program Evaluation; *Program Planning; *Reading Instruction; Reading Tests
IDENTIFIERS PREP; *Putting Research into Educational Practice

ABSTRACT

Intended as an aid to the school administrator who is exploring the possibilities of preschool reading instruction, the first section of this guide discusses: when to begin preschool reading instruction, effects of traditional kindergarten experience on reading readiness and reading achievement, effects of perceptual motor programs on reading readiness and reading achievement, informal readiness instruction versus formal reading readiness instruction, effects of preschool reading instruction on affective behavior, educational television and preschool reading instruction, teacher aides and preschool reading instruction. The parameters of preschool reading programs are described in relation to the characteristics of the preschool population, characteristics of teachers and staff, organization of the preschool reading program, philosophy underlying the program, community involvement, length of the program, physical facilities, and cost. Guidelines in the form of a checklist are provided to aid the administrator with a framework against which the components of the various programs may be evaluated and compared and to assist him in identifying the basic components and considerations involved in establishing his own early reading program. The evaluation of the program is described as to criteria, implementation, sources on evaluation, and tests for measuring readiness and early reading skills. Seventeen promising preschool programs that offer reading instruction are described. Steps the administrator should take in, implementing change through preschool reading instruction are given. A list of test publishers is provided as are references. (DB)

Putting Research into Educational Practice



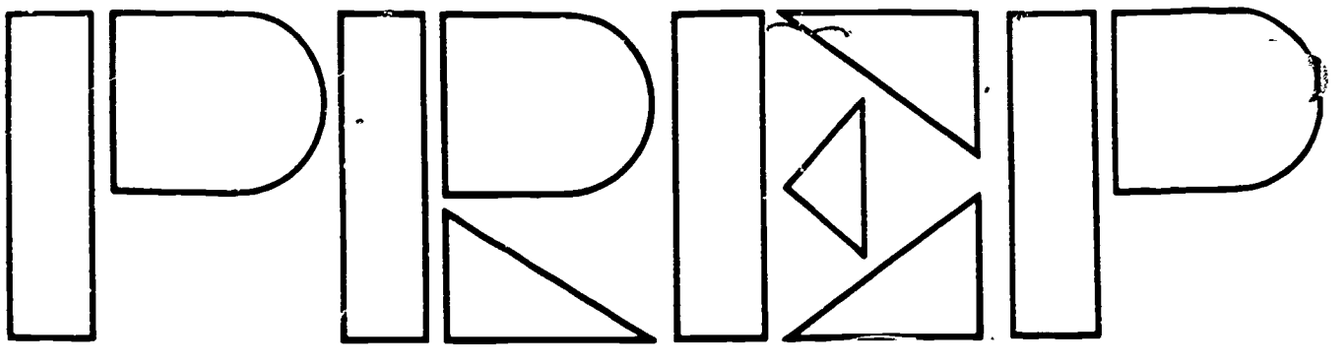
# Preschool Reading Instruction

## Information for the Administrator

Prep Report No. 39



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / National Institute of Education



PUTTING RESEARCH INTO EDUCATIONAL PRACTICE

- *a synthesis and interpretation of research, development, and current practice on a specific educational topic*
- *a method of getting significant R&D findings to the practitioner quickly*
- *the best thinking of researchers interpreted by specialists, in simple language*
- *the focus of research on current educational problems*
- *a format which can be easily and inexpensively reproduced for wide distribution*
- *raw material in the public domain which can be adapted to meet local needs*
- *an attempt to improve our Nation's schools through research*

Use of funds for printing this publication approved by the Director of the Office of Management and Budget July 27, 1970.

DHEW Publication No. (NIE) 73-27625

# Preschool Reading Instruction

## Information for the Administrator

Prep Report No. 39

by
Dr. William E. Blanton
Indiana University
Bloomington, Indiana

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE/National Institute of Education

U.S. Government Printing Office
Washington: 1972

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402—Price 55¢

# Contents

# Research on Preschool Reading Instruction

## Introduction

During the past decade there has been a growing sentiment towards changing the character of preschool reading instruction. While the advocates for change are not explicit in their specifications for change, it seems fair to say that they appear to advocate formal preschool reading instruction rather than traditional readiness instruction.

In general, the proponents of formal preschool reading instruction base their position on a number of arguments. First, they raise the question as to whether the needs of today's preschool children are being met adequately by preschool programs which they contend are still operating under a philosophy which has changed very little since the thirties and forties. Second, the critics contend that today's preschool children have acquired larger vocabularies, have traveled widely, and have been exposed to a rich verbal environment. Third, they put forth the argument that many children are already reading on entrance to first grade. Finally, they assert that formal preschool reading instruction is more efficient and more economical than traditional readiness instruction.

Opponents to formal preschool reading instruction, on the other hand, maintain that reading instruction should be postponed for children until first grade because children need a prolonged period of readiness instruction. In other words, many preschool children may be limited to their intellectual ability, experiential background, and language development. Moreover, they warn that formal reading instruction might be harmful to the social, emotional, and creative potential of young children.

In addition to the above criticisms, other potential problems related to preschool reading instruction should be considered. First, it is possible that preschool children may learn by a different means than they will at a later level. Consequently, formal reading instruction could actually provide difficulties later and interfere with the successful mastery of reading tasks at a later level. Second and along another dimension, if children are taught to read at the preschool level, it will be necessary to totally change and reorganize the reading curriculum at all educational levels. If the reading curriculum were not changed, one could conclude that the schools are not providing individualized instruction for children who learned to read early.

Regardless of whether one strongly agrees or disagrees with the position for formal preschool reading instruction, the fact remains that there is research evidence attesting to the efficacy of such instruction. In more cases than not, however, the research has stimulated a great deal of discussion and in many instances a great deal of confusion. As a result many educators are asking the following questions:

1. Should age and/or readiness be factors determining whether to commence preschool reading instruction?
2. Does kindergarten attendance affect readiness for reading?
3. Do perceptual programs commencing at the preschool level affect reading readiness and reading achievement?
4. Is formal reading readiness instruction at the preschool level more efficacious than informal readiness instruction?

5. How effective is formal reading instruction at the preschool level?
6. Is formal preschool reading instruction economical?
7. Does formal preschool reading instruction result in children experiencing emotional problems or adversely affect their attitudes toward reading?
8. What evidence is there that a child who truly learns to read prior to first grade will achieve better in reading during later school years?
9. To what extent is there evidence that formal preschool reading instruction is sufficiently effective that its practice should be widespread in kindergartens, nursery schools, and other so-called preschool education environments?
10. How effective is preschool reading instruction through educational television?
11. Should teacher aides and parents be used in preschool reading programs?

Naturally, the above questions are of particular interest to the school administrator exploring the possibilities of preschool reading instruction. The purpose of this section is to provide the administrator with information which will enable him to make decisions regarding these questions.

### When To Begin Preschool Reading Instruction

Research seems to indicate that formal reading instruction should not be delayed until a child reaches a "mythical level of readiness." Likewise, the decision to implement such instruction should not use age as an index of a youngster's readiness for reading instruction. Ideally, factors such as materials available, teaching procedures, the child's background of experiences, and the individual needs and characteristics of each child should be considered before commencing formal reading instruction. In short, the "how" of formal reading instruction should be the focal point for making decisions.

### Effects of Traditional Kindergarten Experience on Reading Readiness and Reading Achievement

The results of research on the effects of traditional kindergarten experience on reading readiness are not very clear. Instances have been reported where kindergarten experience demonstrated a facilitative effect on reading readiness. It is difficult, however, to determine how the more effective programs differed from less effective programs simply because the traditional kindergarten seldom offers the kind of documentation necessary to analyze an instructional program. With respect to the later effects of kindergarten, the research findings are more clear, indicating that the gains children made tend to "drop off" after first grade. In short, we really don't know how efficacious regular kindergarten experience is for reading readiness and reading achievement. A great deal more research needs to be conducted. Most important, the instructional program used needs to be documented. Future research should also be of a longitudinal nature.

### Effects of Perceptual-Motor Programs on Reading Readiness and Reading Achievement

A number of authorities contend that perceptual development is the primary factor underlying reading readiness and reading achievement. Their contention is based on the results of studies of children with reading disability. Taken as a whole, such studies have demonstrated a moderate correlation between perceptual development and poor reading achievement. The reader should, however, be alerted to the fact that a moderate, even a high, correlation between perceptual development and reading readiness and reading achievement does not demonstrate a casual relationship.

There exist a number of programs based on

the idea that improvement in perceptual, visual-perceptual, and perceptual-motor development leads to increased readiness for learning and reading achievement. These programs range from commercially developed instructional sequences to a potpourri of activities designed by local educators. Of particular interest is the fact that these programs do not appear to have been developed to increase children's ability to perform specific readiness and reading skills. On the one hand, these programs appear to be successful in increasing children's perceptual ability; on the other, they seem to be ineffective in increasing readiness. Likewise, perceptual training does not seem to affect later reading achievement. If one's purpose is to improve preschool children's perceptual abilities, he might do well to select any of the programs discussed. In contrast, if his purpose is to increase readiness ability and later reading achievement, he should probably select a program more closely related to the skills necessary for the successful acquisition of reading.

### Informal Readiness Instruction Versus Formal Reading Readiness Instruction

The primary goals of the traditional kindergarten program are to meet the social, emotional, and motor needs of children. Instruction is very informal and unstructured, being determined by the expressed needs of the child. This point of view is not shared by all preschool educators, however. As a matter of fact, a number of iconoclasts propose that preschool programs impose formal reading instruction upon children. Exactly what they mean by formal reading instruction is not very clear since most descriptions of formal reading programs are vaguely defined in the literature. On very limited descriptions of these programs, however, one can easily infer that one dimension of formal reading instruction employs published reading readiness workbooks. In certain instances language experience stories and other prereading activities are used.

It should be understood by the reader that it is impossible to make any substantial generalizations from the research contrasting traditional informal readiness programs to formal readiness programs simply because they have usually been defined as being either sub-first grade, informal or formal, phonics-oriented, structured and sequential, individualized, or permissive. In contrast, some generalizations can be made from the research comparing informal programs to formal programs that utilize workbooks in instruction.

The research suggests that preschool reading programs falling under the rubric of formal readiness instruction are more effective than informal readiness programs, particularly when criteria for success are readiness test scores. With respect to later reading achievement, the results are not as clearcut. In more cases than not, studies were terminated at the end of the first grade. Still, it should be pointed out that the longitudinal studies reported indicate that the positive effects of formal readiness instruction on reading achievement can be identified as late as third grade.

There is no definitive evidence attesting to the fact that readiness for learning to read can be facilitated by using commercially published readiness materials at the preschool level. Likewise, there is no firm evidence indicating that gains made by children exposed to such instruction are maintained through elementary school. Probably the most reasonable interpretation of the research is that some formal readiness programs are more effective than some informal readiness programs. Since investigators have consistently failed to elaborate on the informal and formal programs used in their research, it is difficult to make generalizations from their findings to other populations. More than likely, there are also a number of effective formal and informal readiness programs which have not been compared.

### Formal Reading Instruction Versus Formal Readiness Instruction

In contrast to informal and formal readiness instruction is formal reading instruction. Formal reading instruction consists of carefully sequenced presentations of planned activities to accomplish predetermined reading goals. Unlike informal and formal readiness instruction, formal reading instruction proceeds along a continuum from readiness to specific reading skills. In short, the learner is actually taught to read.

The research findings on formal preschool reading instruction is far from unanimous and less than clear. In fact the best that can be said at this point is that informal preschool reading instruction is probably just as effective as formal preschool reading instruction. This argument notwithstanding, we might also add that the paucity of longitudinal research on the topic adds little evidence supporting the long-term effects of formal preschool reading instruction. The jury, then, is still out. More evidence is needed.

### Effects of Preschool Reading Instruction on Affective Behavior

The majority of the research reported thus far has been designed to determine the effects of early reading instruction, not to prove its value. Although the focus of concern has been on the learning of reading skills, researchers have also been concerned that the effect of early reading instruction is not detrimental to the social and emotional development nor the creative development of the children involved.

*Emotional problems*—A widely held belief among opponents to preschool reading instruction is that early reading instruction may result in adverse side effects. For example, Smith (1955) argues the possible emotional problems resulting in teaching very young children to read. Smith bases her argument on reviews of more than 260 studies which indicate that the incidence of emotional problems among retarded readers ranges from 42 to 100 percent. It should be noted, however, that the basis for this position stems from data on children who, for the main part, were not exposed to preschool reading instruction. In other words, a causal relationship among reading disability, emotional problems, and preschool reading instruction has not been demonstrated.

The warning that young children who are exposed to preschool reading instruction might eventually have emotional problems must come from research on teaching preschool children to read. Unfortunately, only a few studies have reported data relevant to this question.

Mason and Prater (1966) examined the psychosocial effects of reading instruction upon kindergarten children. The results of the study revealed that boys displayed less acceptable classroom behavior as a byproduct of reading instruction.

In contrast to the above study, a number of studies (Brzeinski, 1964; Durkin, 1966; Sutton, 1969) have failed to find that formal preschool reading instruction does result in harmful effects on the emotional behavior of children. In short, the hypothesis that emotional problems are related to early reading instruction is still tentative. It would be very unwise to suggest that there exists a causal relationship between early reading instruction and emotional problems until more research is reported.

*Dislike for reading*—Closely related to the argument of possible emotional effects is the argument that teaching preschool children to read may result in a chronic dislike for reading. Although this belief has been widely accepted among opponents to preschool reading instruction, it has not been substantiated by research. In fact, research to date suggests that early exposure to reading does not result in later negative attitudes toward reading. Once again, however, only a few studies dealing with an important area of preschool reading instruction have been reported.

In summary, research exploring the effects of early reading instruction suggests that exposure to such instruction builds positive

attitudes toward reading. Consequently, early reading instruction may provide a basis for better adjustment toward school work in later years.

### Educational Television and Preschool Reading Instruction

As many educators well know, the expense of providing formal reading instruction to all preschool children is almost prohibitive. The use of educational television, however, may well be one technique to make the task financially feasible. It is not surprising, therefore, to find support for formal preschool reading instruction through the television media in the literature.

The most recent undertaking in educational television for the preschool child is *Sesame Street,* a production of the Children's Television Workshop, which is televised over most educational television stations in the United States. Founded by Mrs. Joan Cooney, and financed by the Carnegie Corporation, the Ford Foundation, and the U.S. Office of Education, *Sesame Street* was first presented in November of 1969. The program makes use of the principles of repetition and discontinuity. Brief sequences, lasting no more than 6 minutes, present information on body parts, geometric forms, relational concepts, and various skills related to reading. This broad scope of skills is taught in a multitude of ways by a variety of characters, ranging from the main human personalities in its integrated cast to cartoon-animated characters and moppet puppets. Quick and unrelated segments are presented in tachistoscope fashion and are based upon the style of television commercials that have been so effective with young children. The viewer, during these 1-minute commercials, is bombarded with flashes of numbers and letters which sponsor the program for the day. The popularity of the broadcast is revealed by its Neilson ratings which estimate its preschool viewing audience at over six million viewers daily.

Undoubtedly, *Sesame Street* is a popular success: the viewing audience has doubled and the series is now being aired in over 20 foreign countries. More important, however, are the positive results of the evaluation of the programs.

After an extensive analysis of the data collected by the Educational Testing Service, Bail and Bogatz made the following conclusions: (1) *Sesame Street* has demonstrated that television is an effective medium for providing instruction for preschool children, (2) children who watched the most programs learned the most, and (3) the best learned skills were skills receiving the most program time.

To summarize, preschool reading instruction through educational television has been accepted by the public and by many educators with some enthusiasm. The effectiveness of instruction through this medium has been praised and questioned, sometimes with more passion than objectivity. The educational community would be well advised to withhold judgment on the effectiveness of this approach until additional evidence is offered. For example, it is not clear how first-grade programs should be articulated with the content of preschool reading instruction provided by television. Moreover, the real worth of this method must be determined by longitudinal studies.

### Teacher Aides and Preschool Reading Instruction

A reoccuring topic relevant to preschool reading instruction deals with the appropriate ratio of teacher and/or adult to pupils. Although no definitive evidence exists regarding what a desirable ratio might be, many educators maintain that a ratio of one to six is ideal. Indeed, a ratio of one adult to six children is costly. Many administrators, therefore, consider preschool reading instruction to be impractical.

The most obvious way of alleviating the cost referred to above is to utilize teacher aides and/or parents in the preschool reading program. Administrators are aware of the positive effects teacher aides have had on regular school programs. However, they may not be aware of the effects aides and parents have had on preschool reading readiness and reading programs.

The effectiveness of teacher aides in readiness programs has been examined in a few studies. In general, the help of aides has resulted in greater achievement, perhaps because of increased attention given to individual children.

Goralski and Terl (1968) compared readiness results of kindergarten classes having none, one, or five teacher aides. Inservice instruction was given to teachers on the proper use of aides. Analysis of pretest and posttest gains showed the greatest achievement in classes with one aide, followed by classes with five aides. While differences between classes with and without aides were significant, differences between classes with one and five aides were not. These results could be interpreted as meaning that it is difficult for the preschool teacher to effectively manage more than one aide.

The use of parents as aides in readiness programs is an intriguing variation of the aide theme which has had mixed success. Keele and Harrison (1971) used parent tutors with one group of kindergarteners and first graders and student tutors with another. Tutors were trained in less than 2 hours and given a manual to follow. For 6 weeks tutors worked with children, teaching letter naming, sounding, and blending. Analysis of pretest and posttest results on readiness tests indicated that the tutoring had made significant differences in scores, but that the kind of tutoring had not. In a structured program, then, the use of parents or students as tutors might add to the precision of instruction.

A less structured approach to the use of parents as tutors was investigated by Niedermeyer (1970). A group of 91 volunteer parents from eight schools was given instruction in the use of exercises involving words, beginning and ending sounds, and blends which would appear in the 12 weekly lessons of the program. Each week the 74 participating children brought home packets of exercises which they and their parents were to use. School-to-home feedback and degree of parent accountability were varied among the parents. Pupil reading performance, amount of parent participation, and pupil attitudes were used to evaluate the program. Pupil performance and attitudes were significantly higher among participating pupils as compared to pupils in the control group. The highest performance was found in children whose parents had received feedback and were held most accountable for their children's progress. It was concluded that parents can assist their children in readiness activities and that the degree of organization of a parental program is a factor in its success.

To sum, the limited amount of available research tends to support the belief that teacher aides and parents can be used effectively in a preschool reading program. Optimum success appears to be achieved when the teacher has only one aide to manage. As might be expected, structure and feedback have a facilitative effect on the performance of teacher aides. Consequently, if aides are to be used in the preschool reading program, administrators should provide inservice education for aides and teachers.

## Conclusion

This section reflects on the questions for administrators posed earlier.

The keynote question is: Should age and/or readiness be factors in determining whether to commence preschool reading instruction? Frankly, the only perspective from which to view this question is that the research very

definitely indicates that preschool children can and do learn to read.

A question that is not so easily resolved deals with whether informal or formal readiness experiences are more appropriate for preschool children. The literature reveals that both have positive effects on readiness for reading and reading achievement. Probably the best way to answer this question is to ask the following question: To what extent are administrators ready to insure that their schools will articulate the formal preschool reading program with the first-grade program? Obviously, if the formal reading readiness program is not commensurate with the first-grade reading program, an informal readiness program would be more desirable. If, on the other hand, first-grade instruction systematically builds upon what the child has learned and first-grade teachers are willing to provide individualized instruction for the child who acquires reading skills early, a formal readiness program might be more desirable.

How effective is formal reading instruction at the preschool level? Research reports indicate that formal preschool reading instruction is effective. In fact, it is apparent that many preschool children respond to and enjoy actual reading instruction. Very little is known, however, about formal preschool reading instruction. As a matter of fact, in more cases than not, preschool reading instruction is achieved by simply moving the first-grade curriculum downward. Certainly, moving first-grade reading instruction downward does not constitute a desirable preschool reading model. Formal preschool reading instruction should be guided by principles of learning and development rather than by existing first-grade models.

The above argument notwithstanding, very little is also known about the scope of formal preschool reading instruction—that is, what skills should be taught? The same is true concerning the task steps the child must go through to acquire reading skills.

Closely related to the above statements is the fact that the age placement of reading skills has not been identified. In other words, there are no answers to the following questions:

1. What reading tasks can the preschool child learn with reasonable success?
2. What student characteristics are prerequisite to the preschool child's mastery of a given reading task?
3. What prerequisite characteristics are amenable to training?
4. What alternative training procedures can be imposed upon children who lack the prerequisites for learning reading tasks?

Another area about which we know little is the timing of preschool reading instruction, that is, how fast each reading skill should be taught. Within this same area, answers to the following questions are unknown: (1) how long a session of formal reading instruction should last, (2) with what frequency should preschool children be exposed to sessions of formal reading instruction, and (3) whether training on particular activities should be continued until all task steps related to a particular reading skill are mastered to a reasonable degree of efficiency.

Moving on to another important area, it seems safe to say that knowledge is limited on how reading skills should be taught at the preschool level. In other words, more information is needed on the various methods which could be used to teach the preschool child so that he can master reading skills more efficiently. Similarly, there is a need to define which method would enable the child to master a particular reading skill most efficiently.

There is also disparity in knowledge about the various instructional materials which could be used to teach the preschooler so that he can master reading skills more efficiently.

Another area about which knowledge is severely lacking concerns the sequence in which reading skills should be taught to the preschool child. To be more precise, given a series of reading skills to be taught to the preschool child: (1) What is the order relation or dimension underlying these skills? (2) Which of these order relations can be altered? and (3) If the order relations of these skills can be altered, what sequence would be most conducive to most efficient mastery of these skills?

Finally, knowledge concerning organization for preschool reading instruction is close to nil. Since research has only scratched the surface on this important area, every attempt should be made to determine the most effective procedures for deploying staff and facilities in order to create an environment most conducive to the preschool child's mastery of reading skills.

In light of the above, the question "how effective is formal reading instruction at the preschool level?" must be answered ambiguously. In many situations such instruction is definitely profitable; in others, it is not. The information is just not available at this time to serve as the knowledge base for answering this question.

Concerning the question, Is formal preschool reading instruction economical?: if early reading instruction contributes to the reading success of children, it should reduce the need for subsequent remedial reading instruction. From this perspective, early reading instruction might be viewed as an investment. Unfortunately, no definitive evidence has been reported attesting to the relationship between early reading instruction and the prevention of reading disability or to how much might be saved by such instruction. Clearly, what is sorely needed is cost-benefit analysis research. Until such research is conducted, the answer to the previous question must be purely speculative. Parenthetically, one might also add that cost-benefit analysis research would probably provide the best information for making decisions concerning the kind of preschool reading instruction local education agencies might impose on children. From the review of the research, it appears that most all types of preschool reading instruction seem to be effective at one time or another.

A perennial red herring in the literature on preschool reading instruction is whether such instruction has an adverse effect on the affective behavior of young children. At least this is the criticism most often raised by critics of preschool reading instruction. It is this writer's conclusion that this criticism is rather passionate, stemming from subjective opinion rather than objective observation. As a matter of fact, the preponderance of information available on the subject indicates that preschool reading instruction has a neutral effect on affective behavior. This should not be interpreted to mean harmful effects are not possible, however. Much more research is needed on this question.

What evidence is there that a child who truly learns to read prior to first grade will achieve better in reading during later years? The obvious answer to this question is that there is very little evidence. Since most researchers discontinue their research after children enter first grade, it is virtually impossible to provide a meaningful answer to this question. The Denver Study, however, is an exception. It revealed that children maintain reading gains through grade six. Other than this study, longitudinal research has just not been done.

To what extent is there evidence that formal preschool reading instruction is sufficiently effective that its practice should be widespread in kindergartens, nursery schools, and other so-called preschool education environments? Given the situation where one strongly advocates preschool reading instruction, the answer to this question would still have to be that there is very little evidence. The main reason for this point of view is the

fact that most schools are simply not prepared to take advantage of the early reading achievement children make in preschool. In more cases than not, this situation could be obliterated by inservice education. Until schools are ready to respond appropriately to children who learn to read early, there is really no reason for such instruction to be widespread.

What about preschool reading instruction through educational television? It should probably be encouraged for a number of reasons. First, the cost is not prohibitive; second, it reaches great numbers of children; third, it reaches children at all socioeconomic levels; fourth, children seem to enjoy it. Last, the instructional content of programs such as *Sesame Street* is available for analysis by educators. Consequently, there should be no problem for the schools to blend first-grade content with the content of preschool television.

What about the role of teacher aides and parents in the preschool reading program? The answer to this question is obvious. These people, if used properly, add to the success of the preschool reading program. Moreover, when these people are used, the community is involved.

To recapitulate two statements made earlier and supported by a review of the literature: First, negative criticism of formal preschool reading instruction is invalid so long as the social, emotional, and creative potential of the children involved is maintained. Second, negative criticism of formal preschool reading instruction which does not force children in the direction of acquiring reading skills for which they have not fulfilled the prerequisites, and which does not disregard the social, emotional, and creative potential of the children, is not valid.

# Parameters of Preschool Reading Programs

Prerequisite to making any decisions with regard to implementing a preschool reading program, the administrator should first determine the parameters of his local situation. In other words, he needs information which will reveal to him the degree to which the program being considered will fit his local situation. Among the parameters the administrator should be concerned with are: (1) characteristics of the preschool population, (2) characteristics of teachers and other staff, (3) organization of the preschool reading program, (4) philosophy undergirding the preschool reading program, (5) community involvement, (6) length of the preschool reading program, (7) physical facilities, and (8) costs.

The following descriptions of the above parameters are not exhaustive. They are merely intended to suggest guidelines for defining the local situation and for reviewing preschool reading programs which the administrator might be considering.

### Characteristics of the Preschool Population

This parameter deals with the nature of the preschool population the local education agency serves. Examples of variables included under this category are: age, sex, socioeconomic level, ethnic group, urban or rural students, physical and mental health, and the like. This is a very important parameter for a number of reasons. For example, a number of preschool reading programs are now in existence which were designed for specific populations. Therefore, it is more than possible that a preschool reading program which has been successful for one population may not be appropriate for another. Too often, preschool reading programs designed for disadvantaged populations have been used with advantaged populations. One might well question the impact such a mismatch between program and population might have on young learners.

### Characteristics of Teachers and Staff

Under this parameter are teacher and staff qualifications, descriptions of teacher roles, experience, attitudes and beliefs regarding preschool reading instruction, and teacher recruitment. To illustrate the importance of this parameter, one might consider the fact that some preschool reading programs are comprised of very structured instructional packages. For such programs, the teacher's prior experience may not be important, as much planning has already been done for her. On the other hand, her belief system must be incompatible to formal and structured preschool reading instruction. In other cases, the preschool reading program might offer explicit objectives for reading instruction, leaving the responsibility of planning learning alternatives for children to the teacher. In this case, the teacher's prior teaching experience might be an important variable to consider.

### Organization of the Preschool Reading Program

Included under this parameter are important items such as staff deployment, organization of reading activities, deployment of materials, whether instruction is individualized, how children are grouped for reading instruction, etc.—in short, the preschool reading curriculum.

### Philosophy Undergirding the Preschool Reading Program

This parameter refers to the school of

thought followed by the reading program. Of special interest here is the learning theory which serves as a framework for instruction. Some examples of preschool reading programs displaying diverse philosophy beliefs range from formal programs such as the Denver Project (using workbooks), the Salt Lake City Project (using SRA's DISTAR program), and the Cypress, California, Project (using Open Court's Correlated Language Arts Foundation Program) to informal programs found in Montessori Schools and traditional kindergartens. Indeed, one whose philosophy is contrary to formal reading instruction would want to pay particular attention to this parameter.

### Community Involvement

This describes the role of the local community in making decisions concerning the preschool reading program. Examples of other important variables under this heading are: community education, degree of community involvement in the project (volunteers, teacher aides, etc.). The importance of this parameter can be easily understood when one considers the fact that the longevity and support of most preschool reading programs is usually determined by the degree and extent to which the local community is involved.

### Length of the Preschool Reading Program

Variables relevant to this parameter include length of the schoolday and number of schooldays per year. As might be expected, some preschool reading programs call for daily reading instruction; others alternate reading instruction with other subjects. And, in some cases, reading instruction is provided during the last semester of the kindergarten year.

### Physical Facilities

Under this heading are included variables such as the amount and type of space needed for reading instruction and the size of classrooms. For example, ungraded or open classrooms have space requirements that differ greatly with programs employing programed instruction.

### Cost

The last, and probably most important parameter, refers to the actual cost of the preschool reading program. Examples are the actual cost of materials, physical facilities, maintaining the desired teacher to pupil ratio, and staff training.

The above parameters should be considered in formulating guidelines for developing or reviewing preschool reading programs. Ideally, the administrator should consult his professional staff as he begins to identify information for input into definitions of the above parameters. Certainly, there will be great argument concerning the philosophy which should be adhered to in a preschool reading program. Likewise, consideration must be given to the children to be served by the program.

Once parameters have been defined, the administrator has information in hand which will enable him to make responsible decisions. He is then ready to visit, observe, and consider a preschool reading program for adoption to his local situation.

# Guidelines for Observing Preschool Reading Programs

The selection of a preschool reading program from a mere written description is very unwise. The program should be selected after a number of onsite visits have been made and information has been collected and reviewed.

For his first site visit, the administrator should request that an itinerary be planned for him, including a briefing by the project staff, visits to classrooms, and informal interviews with teachers, children, and parents. Before returning to his local site, the administrator should obtain written and/or audio-visual material to use in discussing his visit with his staff. If at all possible, it would also be desirable to have staff members from the program being considered visit the local education agency so that questions of immediate interest can be answered.

After a discussion of his first site visit, the administrator and his staff may or may not be interested in the particular program. If interest runs high, a second site visit should be made by the administrator, members of his staff, supervisors, teachers, and parents. The purpose of the second visit should be to collect detailed and accurate information on the project.

The following guidelines are intended to serve two basic purposes: First, they are designed to aid the administrator interested in observing early reading programs by providing a fairly comprehensive framework against which the components of the various programs may be evaluated and compared. Second, they may assist the administrator in identifying the basic components and considerations which will be involved in establishing his own early reading program.

Used as a checklist, the guidelines consist of three types of statements or questions which must be responded to: (1) *Descriptions:* the observer must compile information from his observations and/or his interviews with program personnel and respond in narrative form. It is recommended that these responses be written on a separate sheet. (2) *Checklists:* most of the items on this form ask the observer to check any or all responses to a particular statement or question. (3) *Rating on a continuum:* several items ask the observer to respond to a statement by indicating his observation on a continuum between two extremes.

I. Preschool Reading Program Goals and Objectives

A. General reading goals

_____ Mainly informal readiness (social and cultural experiences)
_____ Formal readiness program with provisions for beginning reading (direct instruction using published reading material)
_____ Emphasis on developing actual reading skill (readiness assumed)

B. Degree of specificity of reading readiness and/or reading objectives

Very explicit (behavioral definitions) ____ : ____ : ____ : ____ : ____ Global, general (loosely defined)
Instructional sequence predetermined ____ : ____ : ____ : ____ : ____ Instructional sequence planned by teacher

C. Objectives expressed in terms of
*(check as many as apply)*

1. Teachers and other adults
   _____ Disseminators of knowledge
   _____ Sources of reinforcement (rewards, knowledge of results)
   _____ Guides to children's learning
   _____ Models with which to identify
   _____ Other *(specify)*
2. Materials and equipment
   _____ Facilitate lesson and drill sessions
   _____ Serve as self-correcting guides to learning
   _____ Other *(specify)*

D. Of the reading goals and objectives, which are considered most important by the onsite team? by the observer?

E. What is the expected time span for attaining the goals and objectives of the program?

1. _____ Time span not stated
   _____ 3 months
   _____ 6 months
   _____ 1 year
   _____ More than 1 year *(explain)*
2. _____ Time span is same for all goals and objectives
   _____ Time span varies for all goals and objectives
3. _____ Time span same for all children
   _____ Time span varies for different groups of children *(explain)*

II. Principal Components and Procedures of the Preschool Reading Program

A. Assessment of reading readiness and/or reading achievement

1. Time of assessment
   _____ On entry into the program
   _____ Continually during the year
   _____ At year's end
2. Type of assessment
   Informal (teacher-made test) _____:_____:_____:_____:_____ Formal (standardized test)
   Haphazard _____:_____:_____:_____:_____ Carefully planned
3. Assessment based on
   _____ Teacher judgment
   _____ Work samples
   _____ Work completed
   _____ Checklists
   _____ Standardized tests
   _____ Observation schedules
   _____ Student conferences
   _____ Other *(specify)*
4. Assessment performed by
   _____ Student self-evaluation
   _____ Teachers
   _____ Aides
   _____ Parents
   _____ Specialists
   _____ Supervisors
   _____ Other *(specify)*
5. Criteria used
   Narrow range _____:_____:_____:_____:_____ Full range
6. Purpose of assessment
   _____ As integral part of instructional program
   _____ Feedback
   _____ For periodic reporting only (e.g., to parents)

B. Reading materials and equipment

1. Description of kinds of reading materials and equipment used in the program:
   _____ Specifically programed
   _____ Appropriate for independent pupil use
   _____ Requires adult direction and supervision

2 List reading materials and equipment most frequently used.

C Use of time in program

Highly structured schedule ____ ____ ____ ____ ____ Flexible schedule
_____ Blocks of time designated for specific activities *(explain)*

D Utilization of space

_____ Single classroom
_____ Areas of classroom designated for reading and other activities

E. Reading activities

1 Rank, in order of importance, the main sources of structuring for the children's activities which are intended to contribute most toward the achievement of the reading program's objectives
_____ Materials and equipment accessible to students for their use
_____ Direct instruction by teacher
_____ Direct instruction by other adults
_____ Teachers as guides
_____ Interaction with peer group
_____ Other *(specify)*

2 Who chooses reading activities and materials
_____ Children _____ Varies _____ Teacher

3. Degree of relationship between reading activities
High ____ ____ ____ ____ ____ Low

4 Degree to which reading program can be correlated with other areas of instruction
High ____ ____ ____ ____ ____ Low

F Provisions made for individual differences and backgrounds of children

1 Amount of individualization
Very little ____ ____ ____ ____ ____ Highly individualized

2 Individualization achieved by *(check all that apply)*
_____ Student choice
_____ Teacher choice
_____ Other *(specify)*

3. Rank, in order of importance, the main means of achieving individualization
_____ Materials available
_____ Level of materials
_____ Pacing
_____ Grouping
_____ Tutoring

III Administrative and Organizational Requirements

A. Community involvement

1. Degree of community involvement
Direct ____ ____ ____ ____ ____ Indirect

2. Kinds of community involvement *(check all that apply)*
_____ Selecting program
_____ Selecting objectives
_____ Decisionmaking
_____ Mainly advisory
_____ As part of staff (teachers and/or aides)
_____ As volunteers

B. Types and qualifications of personnel

1. Type/education level

| | M.D. Ph.D. | M.A. | B.A. | H.S. | Other | Staff-Child Ratio |
|---|---|---|---|---|---|---|
| Supervisor/adviser | ____ | ____ | ____ | ____ | ____ | ____ |
| Reading specialist | ____ | ____ | ____ | ____ | ____ | ____ |
| Early childhood specialist | ____ | ____ | ____ | ____ | ____ | ____ |
| Teacher | ____ | ____ | ____ | ____ | ____ | ____ |
| Aide/assistant | ____ | ____ | ____ | ____ | ____ | ____ |
| Volunteer | ____ | ____ | ____ | ____ | ____ | ____ |
| Psychologist | ____ | ____ | ____ | ____ | ____ | ____ |
| Other *(designate)* | ____ | ____ | ____ | ____ | ____ | ____ |

2. What amounts and kinds of experiences are parts of the desired qualifications for each of the above types of personnel?
3. What personal qualifications are sought in each of the types of personnel?
4. What number of children can be served effectively by one staff member in each of the above categories?
5. How is the staff involved in planning and implementing the reading program. *(check all that apply)*
   - ____ Selects the program to be implemented
   - ____ Plans the process of implementation
   - ____ Develops policy positions
   - ____ Develops program materials and selects equipment
   - ____ Develops and implements evaluation procedures
   - ____ Develops dissemination procedures
   - ____ Other *(specify)*

C. Space and time requirements

1. Describe type or room or other space needed for reading instruction
2. Time requirements
   - ____ Full schoolday
   - ____ One-half schoolday
   - ____ Full school year
   - ____ Other

D Staff development

1. List the knowledge and competency requirements for supervisors
2. List the knowledge and competency requirements for teachers
3. List the knowledge and competency requirements for aides
4. Inservice training required for
   - ____ Teachers ____ Aides ____ Others
5. Resources required for inservice
   - ____ Local supervisors
   - ____ Outside consultant (early childhood and reading)
   - ____ Kits of materials and other packages
   - ____ Film and video equipment
6. Timing of inservice
   - ____ Daily ____ During working hours
   - ____ Weekly ____ After working hours

E. Costs for installing and maintaining the reading program (based on number of children)
   - ____ Staff ____ Reading materials
   - ____ Inservice training ____ Supervision
   - ____ Equipment ____ Evaluation

F. Time required to implement the preschool reading program
   - ____ Community involvement and planning
   - ____ Staff involvement and planning
   - ____ Inservice education

To sum, information of the kind outlined above should be collected during the second onsite visit. After the information has been compiled, it can be used as a sound knowledge base for making decisions concerning whether to adopt a particular preschool reading program.

# Evaluating the Preschool Reading Program

Whether evaluation is a formal component of the preschool reading curriculum, some sort of evaluation should take place. It may be as informal as a discussion among administrators, teachers, and parents as they identify and describe what they think is, or is not, happening in the reading program. On the other hand, it may be formalized to the extent that data are collected by administrators, supervisors, and teachers to determine the progress the reading program is making. Hopefully, the evaluation is an integral part of the total preschool program, regarding its objectives, procedures, and criteria for determining the degree to which objectives are achieved. Thus, decisions regarding the objectives of the program, procedures, and criteria should be a part of the total planning for the reading program, as opposed to an evaluation conducted at the end of the year.

The purpose for evaluating the preschool reading curriculum is to gather relevant data which support the decisionmaking process and determine the degree to which objectives of the curriculum have been reached. Presumably the results of the evaluation are made public to defend decisions made during the program.

The fundamental impediment to effective evaluation of preschool reading programs is the lack of a conceptual understanding of the evaluation process on the part of most administrators. Indeed, if responsible decisions concerning the management and administrative efficiency of the preschool reading program and the degree to which the program brings about educational and attitudinal change are to be made, some conceptual framework must be employed to gather and interpret data.

The literature reveals that a number of theoreticians in education, especially in the area of evaluation, have been concerned with the problems of evaluation. Bloom (1969) for example, distinguishes between summative and formative evaluation. Summative evaluation identifies terminal inspection of objectives to determine whether progress has been achieved. Formative evaluation, on the other hand, is the continuous process of collecting relevant data to make decisions while the project is in progress.

Provus (1969) provides a model which describes evaluation as a process of seeking harmony. The process includes:

- Agreeing upon program standards
- Determining whether a discrepancy exists between aspects of the program
- Using discrepancy information to identify the weaknesses of the program

Guba and Stufflebeam (1970) view evaluation as a process involving four basic decisions: "*Planning decisions* specify major changes that are needed in a program." These decisions commonly relate to goal setting and goal review processes. "*Structuring decisions* specify the means to achieve the ends." These decisions relate, typically, to program objectives, priorities, and alternatives. "*Implementing decisions* are those involved in carrying through the action plan." These decisions represent the continuous input of information relevant to program progress. "*Recycling decisions* are those which are used in determining the relation of attainments to objectives." These decisions provide answers to the question "do we continue or do we alter our course?"

The above decision types also identify the following four stages of program evaluation critical to effective management:

1. *Context evaluation*—to define the environment in which change is to occur, to depict unmet needs, and to identify the problems that result in needs not being met.
2. *Input evaluation*—to determine how to utilize resources to meet program goals.
3. *Process evaluation*—to provide periodic feedback to project managers and others responsible for continuous control and refinement of plans and procedures.
4. *Product evaluation*—to measure and interpret attainments not only at the end of a project cycle but also as often as necessary during the project term.

Although the above does not represent an exhaustive review of the literature or all the theoretical positions which explicitly or implicitly deal with the concept of evaluation, it does provide some insights into the information available which could be applied to current problems in evaluating the preschool reading program.

### Criteria for Evaluation

As mentioned earlier, evaluation matches data collected to a model and determines the degree to which they fit. It is necessary to decide upon what variables in the instructional program will be used to define the model and the program. The variables and objectives chosen represent the criteria used for evaluation. Listed below are examples of appropriate variables which may be used to define models and programs:

- Expected outcomes in terms of changes in children's reading readiness as a result of being exposed to the preschool reading program.
- Expected outcomes in terms of changes in children's later reading achievement as a result of being exposed to the preschool reading program.
- Expected outcomes in terms of affective behavior as a result of being exposed to the preschool reading program.
- Procedures for implementing and managing the preschool reading program:
  - Desired behaviors of teachers
  - Descriptions of materials and how they will be used
  - Physical facilities needed
  - Desired community involvement

### Implementing the Evaluation

As suggested earlier, the purpose for evaluation is to determine the extent to which the objectives of the program have been accomplished. Ideally this means that data must be collected which enable the administrator to justify his decision to continue, terminate, or modify phases of the preschool reading program.

The purpose of the evaluation determines the time schedule for collecting information. In most cases, however, data are collected according to one of the following schedules:

- Data collected at one time period, usually after the completion of the preschool reading program
- Data collected at two points in time, usually immediately prior to the beginning of the preschool reading program and immediately after the program terminates
- Data collected periodically, usually at critical points during the process of the preschool reading program

There are points of strength in using any of the above schedules for data collection. First, data collected at one time period allow one to compare the degree to which the program is meeting or has met expected objectives. Second, data collected at two points in time enable one to make comparisons of observed and expected changes in behavior. Third, data collected at critical points during the project provide the opportunity to observe changes and make decisions at critical intervals in the program. Parenthetically, it might be added

that the later schedule is the most desirable since it allows one to make observations and decisions during the entire process of the program as opposed to making decisions after the program completes a full cycle.

Another consideration which must be taken into account in implementing an evaluation is the instruments used to gather information. A frequently occurring problem in program evaluation concerns the validity and reliability of the instruments. Briefly, they must have a demonstrated relation to the variables being considered and measure them accurately. Of course the purpose of the evaluation and the variables being considered dictate the kinds of instruments one should use. Listed below are categories and types of instruments generally used in evaluation:

Instruments to determine changes in behavior:
- Standardized tests
- Informal tests
- Observation schedules
- Interviews
- Questionnaires
- Rating scales

Instruments to determine the effectiveness of personnel
- Observation schedules
- Questionnaires
- Rating scales
- Interviews

Instruments to determine the appropriateness of facilities
- Observation schedules
- Rating scales
- Questionnaires

Instruments to determine the degree and quality of community involvement
- Interviews
- Questionnaires
- Observations

To summarize, in planning and implementing the evaluation of a preschool reading program, one must consider the purposes of the evaluation, variables to be considered, time schedules for data collection, and instruments to collect data. Moreover, the evaluation itself should be monitored in order to insure that, as the objectives of the program change, there is a corresponding change in the procedures for evaluation.

### Sources of Information on Evaluating Programs

Although there are a number of available sources on evaluation, very few deal with the evaluation of preschool programs. An exception, however, is the *Handbook on Formative and Summative Evaluation of Student Learning* written by Benjamin S. Bloom, J. Thomas Hastings, and George F. Madaus and published by McGraw-Hill Book Company. This book devotes over 100 pages to the evaluation of preschool instruction.

The reader might also consult organizations which are actively involved in evaluating preschool programs. The following are offered as contact points for evaluative services for preschool reading programs:

Office of Reading and Language Studies
Reading Program/Institute for Child Study
Indiana University
Bloomington, Ind. 47401

Center for the Study of Evaluation
Graduate School of Education
University of California at Los Angeles
Los Angeles, Calif. 90024

### Tests for Measuring Readiness and Early Reading Skills.

The reader seeking in-depth information on tests designed to measure readiness and early

reading skills is referred to the following publications:

**CSE-ECRC Preschool/Kindergarten Test Evaluations.**
Ralph Hoepfner, Carolyn Stern, and Susan G. Nummedal, eds. Los Angeles: UCLA Graduate School of Education, School Evaluation Project, Center for the Study of Evaluation, 1971.

**Tests of Reading Readiness and Reading Achievement.**
Roger Farr and Nicholas Anastasiow, eds. Newark, Del.: International Reading Association, 1969

In addition to the above sources, publishers of tests for measuring readiness and early reading skills are presented in the last section of this report.

# Promising Preschool Programs Offering Reading Instruction

The following programs offer innovative approaches to preschool education. Although reading instruction is usually a component of these programs, there is no significant pattern of preschool reading instruction among them. In fact, the reading instruction offered ranges from highly structured reading lessons provided with commercially produced materials to the informal language experience approach. Similarly, reading instruction is found to be configurated within a number of administrative organizations. For example, preschool reading instruction is found in schools grouping children according to the ungraded classroom procedure, integrated schoolday, open classroom, and the like. The administrator, then, can consider a number and variety of preschool reading programs for the preschool population he serves.

**Cypress School District, Cypress, Calif.**

The Cypress School District serves approximately 7,000 children in 12 different schools, from kindergarten to grade six.

In 1967, Cypress' first-grade classes became involved in a year-long pilot program in reading, using the Open Court *Correlated Language Arts Foundation Program*. The pilot program was a success and the Open Court Program was put into kindergarten, first, second, and third grades of the district.

The Open Court Program is an academically oriented instructional program that attempts to isolate the elements that will make 5-year-olds self-confident, eager, and happy to learn. The program focuses on skills that will benefit all children and lead to some intrinsic reward motivation, skills which all children can learn so that they will develop confidence in their own abilities, skills which require a minimum effort by the teacher and that can quite often be taught by self-correction, and skills that are basic to beginning reading and success in later reading.

Subject matter of the Open Court Program introduces kindergarteners to children's literature that stimulates curiosity about all other subjects, that shows the interrelationships among subjects, and that lends itself to stimulating classroom discussions. The program utilizes a strong phonics base for instruction, including ear training and spelling instruction. This enables children to establish word recognition skills early in their academic career—often before the end of first grade. The program also places a great deal of emphasis on comprehension and creative writing.

Total class presentation of new concepts and skills followed by total class discussion is used in the Open Court Program. This is then followed by small-group and individual work. The program is particularly effective for conceptual development and for learning beginning reading skills.

A sequel to the program is the Open Court *Breaking the Code Program* which is designed for upper elementary grades. This program has had very good results in improving reading ability and extending the child's ability to express himself in writing. Results of the program used with kindergarteners and first graders showed that these students achieved a minimum score of 1 year and 8 months higher than controls using basal readers. The measure used to determine achievement was the Wide Range Achievement Test.

Strengths of the program lie in the teaching techniques and instructional strategies which are used with all materials in the Open Court classroom organizational plan.

Kramer School, Little Rock, Ark.

The Kramer School project is a combined education and day care project serving children who range in age from 6 months to 12 years. A total of 236 children from families whose annual incomes are $3,000 or less attend Kramer; 59 percent are black, and 41 percent are white. The primary goals of the program are to help each child acquire a love for learning, develop the ability to adapt to group experiences, master the rudiments of reading and mathematics, and enjoy his childhood years while he is making progress toward becoming a responsible citizen.

Instruction in the rudiments of reading and mathematics is centered around SRA's DISTAR reading program, the Peabody Rebus Reading Series, and Montessori materials. Concentrated activities are carried on before lunch, while physical education, speech, and ecology are reserved for after lunch. Afternoon field trips are a part of the curriculum for the older children in the program.

Children in the program are divided into various levels, with those at the first level given major emphasis on the program. These children visit the Learning Resources Center and library three times a week for diagnoses and remediation of learning difficulties. Other children attend the center twice weekly. Activities at the center are varied every 15 minutes during the hour-long visits, and include concentration on perceptual activities, auditory discrimination, and listening activities designed to increase the child's attention span. While children are participating in the center's activities, their classroom teacher systematically observes them in these situations so that she can better plan activities for them in the classroom.

The Kramer School project features in-service training sessions for its staff twice weekly. At these 50-minute sessions the philosophy of the program, teaching techniques, research projects, and methods of observation are discussed.

To date, the only evaluation procedure that has been completed is that of the Stanford-Binet IQ Test on an experimental and control group of preparatory school children (preschoolers) in the fall of 1969 and spring of 1970. The test showed IQ gains of 15 points for the experimental group, while the controls who were home with their mothers gained only two points. Gains are also being measured on the basis of several other standardized tests, but these evaluations have not yet been completed.

Kramer School is a special facility operating within the Little Rock Public School System. The school system provides the building, administration, faculty, cafeterias, and operating and maintenance funds for the schoolage children, while the U.S. Department of Health, Education, and Welfare and the University of Arkansas provide funding for research, day care, and preparatory education portions of the center. Cost per child of the program is about $1,500 per year, in comparison to the $586 the Little Rock School District normally spends per child per year.

Exemplary Center for Reading Instruction, Salt Lake City, Utah

The Exemplary Center for Reading Instruction (ECRI) serves children in grades K-12. The center itself provides remediation of reading difficulties for about 45 children, but it serves primarily as a teacher-training institution.

ECRI is constantly looking for new and innovative methods of instruction, and consequently is involved in a great deal of research. At present, ECRI is emphasizing kindergarten and first-grade programs in which SRA's DISTAR reading program is being utilized. According to research studies conducted at ECRI, the more responsive the child is, the better learner he is. With this in mind, ECRI personnel have developed an instructional program that requires kindergarteners and first graders to respond many times during a

class period.

Perhaps the strongest feature of the ECRI program is its teacher training function. ECRI works directly with two local school systems, but also serves a resource facility for school systems throughout the Southwest. Workshops are conducted all year long at the center, at nearby schools, and at schools throughout the State. In addition, teacher training programs that teach teachers at the center and send demonstration teachers out to the schools are conducted. Interested parents are also provided with inservice training.

ECRI, governed by a five-man board, is funded at $159,000 a year primarily by two nearby school systems that contract for its services. Two board members are from each of the school districts and one member is from the State Board of Education.

### Carle Place, N.Y.

In Carle Place beginning reading instruction is based on the tenet that the children of this generation are prepared to read well before they enter school and are past the stage of readiness when they begin their formal education. This might not have been true 15 years ago, but today with children being exposed to a great deal of television and easily obtained reading materials, many children demonstrate surprising skills related to reading in kindergarten.

In this program, children are assumed to be past the readiness stage in kindergarten, and phonic instruction in reading is begun almost immediately. A pilot program which had striking results convinced school officials of the value of introducing reading in kindergarten. Children are now going into the first grade with reading levels up to grade three.

Teachers are taught to teach reading via the phonics method. No published materials are used in the program; all materials are a compilation of teacher-made materials. Teachers are pleased with the program and feel that they are teaching academics rather than socialization skills. Many parents are also involved, working with their children at home to improve reading achievement.

Reading is taught for about 15 or 20 minutes each day. Motivation has been supplied by fascinating audiovisual aids, pictures, and sketches. Children who do not grasp the material in the program are never pushed into it; they are always given the amount and kinds of work they can easily handle. Grouping is used a great deal in providing for individual differences in learning rate.

### Marks Meadow School, Amherst, Mass.

The Marks Meadow School serves 100 kindergarten children who are predominantly middle class, coming from families connected with the University of Massachusetts.

Through the use of materials developed specifically for the program by the staff, the program is attempting to create an ungraded version of a combination kindergarten-first grade which rejects any notion of lockstep approaches, teacher-centered approaches, and grade and ability grouping. The guiding principles of the program are that children learn at different rates and that they learn something only when they are ready for it.

The curriculum is divided into five categories: mathematics, scientific observation, creative arts, writing, and reading in *all* subject areas. Observations of the children's overt behavior are analyzed frequently. The program does not emphasize reading as the only route to knowledge—all learning achievements are encouraged and praised.

Reading instruction in the Amherst program covers a wide range of activities. There are general areas in reading that each child will be working at, and specific objectives in each general area. Work with vowels, consonants, and structural analysis is used with those children requiring help in word recognition. Reading itself is approached through work in listening comprehension, silent reading, oral reading, oral reading comprehension,

and silent reading comprehension. Creative expression and motor skills are also stressed. Teachers in the program meet about once a week to plan techniques, methods, and materials.

Formal evaluations of the program are underway at the present time utilizing the Metropolitan Reading Readiness Test, the Frostig Test of Visual Perception, and the DeHirsch Reading Test. Evaluations of the individual children are for the most part informal statements telling the parent of the child's progress.

The school is a laboratory school for the University of Massachusetts but is supported by public school funds, with the city of Amherst taking over more of the cost each year. At present, the cost estimate per class is between $2,500 and $3,000 for the kindergarten, and around $500 more for the combined kindergarten and first-grade program. Title III funds are also being utilized.

### Prereading Skills Program, University of Wisconsin, Madison

The Prereading Skills Program now under development at the Wisconsin Research and Development Center for Cognitive Learning at the University of Wisconsin is designed to diagnose and overcome deficiencies in prereading skills at the kindergarten and preschool levels. The program was developed on the assumption that reading is not a single skill, but a complex of skills which can be analyzed and broken down into various component skills. The program also assumes that an individualized method of teaching these skills is required. Skills selected for investigation include the visual skills of attending to letter order, letter orientation, and word detail, and the sound skills involving sound matching and sound blending. These skills are considered to be the basic prerequisites of beginning reading.

For each basic skill, the program contains a sequence of games and other activities that lead children from a simple application of the skill to a more complex and abstract form. With sound matching, for example, picture-sound pairs are introduced using pictures, narrative stories, and songs. Once the sound is learned, pictures are utilized in sound matching exercises. Then the pictures are gradually removed so that children will eventually match sounds in auditory forms only, without the aid of visual props.

The Wisconsin program is attempting to insure that, once a child has gone through the program, he will be ready for formal reading instruction and will experience little difficulty in acquiring initial reading skills. Once through the program, children are expected to perform such operations as matching letters, letter strings, or printed words and to take into account the order of the letters and word configuration in their word attack. Children should also be able to match words on the basis of constituent sound. to decide whether or not a given word contains a particular sound, and to blend sounds into real words, using letters as stimuli for the sounds. Secondary skills within the program include the teaching of concepts, a small sight vocabulary, and certain social behaviors.

The complete program includes a teacher's handbook and resource file, visual and sound schedules, games and materials for teaching each separate skill, and a recordkeeping system. Built-in systems of assessment are also provided. Practice sheets and skill tests allow the teacher to chart each child's progress and plan additional instruction for him.

### DOVACK Program, Monticello, Fla.

The DOVACK Program serves black children exclusively, about 75 percent of whom are from poverty families. Children in the program are housed in two different schools, one school serving kindergarten through fourth-grade youngsters, and the other serving fifth- through 12th-grade children.

DOVACK is a computer-assisted language experience approach which allows children to create their own reading lessons. Because black children speak an Afro-American dialect, traditional approaches to the teaching of reading have limited success. DOVACK tries to overcome this difficulty by enabling students to start with the concepts and vocabulary they already know.

In the program, children are encouraged to become familiar with the equipment needed to implement the program. They dictate their own stories on dictaphone belts, and are furnished a computer printout of the story. With each story, the computer keeps a record of each new word the child uses; thus a continuous record of a child's vocabulary development is created. Later the dictated stories are transcribed to standard English for the child so that he might see how his own dialect differs from standard English. The DOVACK approach accepts the pupil as the one who controls the learning environment and encourages independence, self-reliance, and self-sufficiency on the part of the learner.

Specific objectives of the program are to develop skill in manipulating equipment and materials; to develop favorable attitudes toward reading; to develop proficiency in word recognition, word attack skills, and general reading achievement; and to become independent and self-pacing. Classroom activities are geared to the achievement of these specific objectives, but the child determines the content of the lessons and his rate of achievement himself. Inservice training sessions attempt to instill in the teachers the overall philosophy of the program.

Testing is underway to determine the effect of the program on the children, but no specific results are yet available. Staff members report, however, that students are becoming more independent as learners and are taking books home to read. Outside observers have indicated there are noticeable signs of progress toward achieving the major student objectives of the program.

The two schools in which the program was housed were part of the local school system which provided the usual expenditure of $658 per child per year. The cost of the program was $770 per child per year over and above the normal expenditure.

**Interdependent Learner Model, Harlem, N.Y.**

The Interdependent Learner Model at Public School 76 serves kindergarten through second-grade students, all of whom are from minority groups. Most of the children are from low-income families on welfare, and racial composition is 99 percent black and 1 percent Puerto Rican.

General goals of the program include making the student an independent learner and giving him a good self-image. Through the use of PAT (Performance Aids in Teaching) materials—which contain 60 structured lessons that teach reading skills, various programed materials, and the Bank Street readers and workbooks, the program concentrates on beginning reading and language arts skills.

The program's approach is to use language to solve problems, explain the problem-solving process, and so on. Other methods such as role playing and positive reinforcement are utilized by teachers and aides to promote learning and to enhance the self-image.

A 1-week summer workshop and weekly meetings during school are held for teachers and aides. At the weekly meetings, staff members share ideas, discuss current problems related to the program, and watch demonstration teachers present new ideas and techniques.

Informal tests have been given to experimental and control first and second graders. It was found that more experimental first-graders were above grade level in reading achievement than control first-graders.

The entire program served 125 kindergarteners and 180 first-graders the first year at a total cost of $343,770, or around $1,125 per child per year. The program is federally

funded, but still a part of the local school system.

### Hopi Action Council, Oraibi, Ariz.

The Hopi Action Council serves 140 preschoolers and 400 children from kindergarten through grade three. The program's goal is to supply each child with the basic academic and social skills he needs in order to succeed in school. To attain this broad goal, the three basic skills of reading, mathematics, and handwriting are studied by all students each day, with frequent additional "backup" activities.

At the core of the program is an instructional technique called Behavior Analysis which provides for systematic reinforcement of desired behavior as identified in specific learning objectives of the program. In short, the system is one of rewards or tokens which can be exchanged for participation in activities the child likes. The Behavior Analysis program was developed at the University of Kansas under the direction of Dr. Don Bushell, Jr.

Every teacher attends a 1-week training session at the University of Kansas preparatory to teaching in the program. During the school year, workshops are held periodically. The program utilizes parents as teacher aides. Parents are trained in the program, and they serve as a strong bond between home and school, helping to alleviate the language problem at school, since English is a second language for many of the children.

Pretest and posttest scores on the Wide Range Achievement Test indicate that the program is achieving success. Federal funding of $750 per child per year covers all costs of the program.

### Experimental Pre-Kindergarten Program, New York, N.Y.

The Experimental Pre-Kindergarten Program at Community School District No. 3 began in 1966 as an attempt to study the effectiveness of preschool programs and to provide needed leadership in this area.

The program serves preschool disadvantaged children and was designed to create an appropriate learning environment in which each child, regardless of his background, experiences some measure of success and some sense of competence as a learner.

The program is based on the assumption that each child has his own individual learning style and rate of learning, and materials and experiences are provided accordingly. The program design also assumes that children learn best through activity and as a result of highly individualized contacts and relationships with adults.

Parent involvement is a major feature of the program. Meetings between staff and parents and activities involving parents, staff, and children are common.

All activities that involve the teaching of reading are based on the experiences of the children. In fact, to insure that children are constantly involved in new experiences, money is provided to the parents for activities involving the child.

The program is now funded by the U.S. Office of Education; it also receives Model Cities Program aid.

### Hartford, Connecticut, Program

More than 4,500 children from urban poverty areas are in the Hartford Program. At present the program is aimed at children 4 years old through the first grade, but it is to be extended later to second-grade children.

The program is based on the principles and philosophies of formal education beginning at age 3 and mixed-age groupings rather than grade-level designations. The program also advocates that students be placed into various interest centers that are multisensory, multi-instructional, and multidisciplinary; that rewards should be intrinsic success goals, not letter grades or promotion; and that the primary goal should be to maintain an environment that allows each child to achieve and maintain his own success identity.

The specific goal of instruction is to make the learner independent and self-directed. Reading is not stressed unduly in the classroom, which is patterned after the work of Montessori and the British Infant Schools. Students are allowed to learn at their own pace, using Montessori materials and materials developed at the center.

The reading instruction utilizes the language experience approach, which stresses skills that involve oral language, listening ability, word recognition, oral reading, silent reading, vocabulary development, and writing. Individual language development progress records are kept on each child. These records allow the teacher to chart the child's progress, follow his progress, individualize instruction, and modify instruction when the need arises.

The inservice program of the Hartford program is somewhat unique: it requires all teachers and aides, in a 3-week session, to experience the same program their students will be going through. In addition, at training sessions held before and during the school year, teachers and aides design materials for use within the program.

To date, evaluation has been on an informal basis with the kindergarteners and first graders. Once the second grade classes are implemented, evaluation by standardized instruments will begin.

The entire project is financed exclusively by the Hartford School District. The total cost of the program is $500,000, with materials and equipment costing about $900 for each classroom.

### Elizabeth Seawell School, Chapel Hill, N.C.

The Seawell School is an attempt to integrate and develop language arts skills through utilization of *all* aspects of the curriculum—reading, mathematics, science, social studies, and the arts. The school views language development not as a separate entity, but as an integral part of the child's ability to develop other skills. The program seeks to help the child relate happenings in his own world, analyze and draw conclusions about them, and express what he has learned orally or in written form.

Reading, a primary instructional concern in the Seawell program, is approached through three basic components: word attack skills, comprehension and listening skills, and study skills. Each general skill is composed of many subskills sequenced in a logical order so that the child's progress can be accurately monitored and evaluated. Statements of methods that may be used to achieve mastery of the subskills are clearly outlined.

The major goal of the program is to develop a procedure for instant feedback, whereby teachers and project staff members can suggest ways to immediately improve teaching techniques based on their classroom observation and evaluation of performance. Other major objectives include: to assess the impact of the total effort on language development, to improve practical inservice training programs, to cooperate with higher educational institutions in the development of programs, and to cooperate with other agencies in training paraprofessionals. Related objectives include developing a materials research center, disseminating results of findings on the program, and conducting field consultative efforts as a followup to the center's training sessions.

Rather than the traditional self-contained classrooms, Seawell School utilizes large areas in which children, across age and grade ranges, meet with teachers. Students are allowed to move about freely in high-interest learning activity centers, which provide activities for experiencing success.

Other techniques being utilized in this program include team teaching, intern programs, and parental involvement. The program makes excellent use of students and faculty from nearby universities.

This nonstructured classroom approach is an attempt to prescribe an educational pro-

gram for each child's needs and abilities. The program heips the child to see relationships between his life at home and his life at school, it provides the opportunity for him to make his own decisions, it offers him more freedom for interaction with peers and teachers, and it gives him opportunities to freely communicate his ideas and emotions. In addition, this approach stimulates the child to widen and expand the scope of his imagination, enriches his experiences, and develops in him favorable attitudes toward school.

### Harley Lower School, Rochester, N.Y.

The Harley Lower School serves children in the early grades, utilizing an open classroom which is synonymous with the term "integrated day." The integrated day approach views reading as only a part of the child's total language development, which also involves experiencing, listening, speaking, and writing. Harley Lower School attempts to incorporate the teaching of reading into this larger framework of language as it grows out of the child's total experiences.

The integrated day model borrowed heavily from the British Infant Schools. It focuses on the child's interests and experiences, which become the initial starting point of instruction, and provides a rich school environment for the child to discover and explore.

Three important components of an integrated language arts program become apparent. The first is a relaxed atmosphere in which children are encouraged to share ideas and experiences through verbal interaction, the simple ability to communicate ideas and in turn understand ideas that have been communicated. A second component of the program is the belief that learning is a total experience and that language must be integrated with all areas of the curriculum. A third component of the program is the recognition of stages in the development of the ability to read and write.

Three stages of reading are utilized: prereading, early reading, and independent reading. During the prereading stage the child shows interest in books, words, and letters and is thoroughly delighted when he learns his first word. He enjoys being read to and often "reads" materials using picture clues or the like. The child in the prereading stage becomes more and more adept at expressing himself verbally.

At the early reading stage (also referred to as the code-breaking stage) the focus on words, letter sounds, and symbols becomes greater. The child begins to associate sounds and symbols effectively enough to write letters and words and to attack new words. Writing at this stage serves as an important vehicle for communication and a way for the child to organize his thoughts.

Finally, at the independent reading stage, the focus shifts from word recognition to word meaning. Simply recognizing the words is not enough; the real challenge now is what the words say. At this point, reading becomes a tool for the child to explore, discover, and enjoy his world as it is represented in language.

Harley Lower School attempts to make learning to read a natural part of the entire school experience. Language is a natural part of the child's social, intellectual, and emotional maturation and is the means by which the child explores and discovers his environment. By making reading important and useful to the child, he will learn to read.

### Karnes Preschool Curriculum, University of Illinois, Urbana

A new preschool program that shows promise is the Karnes Preschool Curriculum. Still in the experimental stages, the Karnes program appliès a highly structured lesson plan to language and concept development for kindergarten children. It contains the traditional components of science, mathematics,

social studies, language, art, directed play, music and movement, and creative and productive thinking; but each area is dealt with via specific exercises designed to produce specific reactions.

The program, developed at the University of Illinois, is based on the assumption that schools need to overcome the shortcomings of homes where traditional learning values and practice opportunities are missing. Through a structured approach, the Karnes program features mental and skill development based on specific exercises in order to prepare both inner-city and middle-class children for the traditional tasks required in school.

The program utilizes structured lesson plans; structured exercises; a game format that makes use of cards, lotto games, and materials that require specific motor responses; and a built-in system that provides for daily diagnosis and adjustment of the child's program.

A formal evaluation of the program is still underway, but many initial evaluations have been made. Teachers report that, by using the program (and the classroom aides inherent in the program), they are able to know their children better and consequently design instruction for them more accurately and efficiently. Information on the program suggests that at least one third to one half of the children were ready to be exposed to formal reading by the first of February. The program was uniformly effective in the inner city schools and most appropriate for the slower and shy (but bright) middle-class child, and for the faster middle-class children for the first half of the year. In addition, children seem to like the program, and teachers and aides report fewer behavior problems than in previous years.

### Park School, Ossining, N.Y.

In contrast to the previously mentioned programs which just "offer" reading instruction, Park School "guarantees" parents of kindergarten children that 90 percent of their children will be reading at the national level. National levels of reading ability are achieved by formal reading instruction.

### Lamplighter School, Dallas, Texas

Lamplighter School, a private preschool offering formal reading instruction, has an enrollment of 485 children, ages 3 to 10. The children are primarily upper-middle class whites served by 37 staff members.

The philosophy of Lamplighter is "to have each child learn how to live his life, and with ever-increasing powers of appreciation, imagination, comprehension, and accomplishment." The concept of Lamplighter is to "keep children feeling good about themselves, to give them self-confidence, and to help them to be relaxed and flexible."

The program emphasizes reading readiness and reading instruction. Within the reading program there is a heavy concentration on phonics and programed materials. In the nursery school, skills like color recognition, shape recognition, categorizing, patterning, visual and auditory sequential memorization, and rote counting are taught. At upper levels of instruction, many of the same kinds of skills are taught, but on a more advanced level. Such materials as the Peabody Language Kit, Beth Slingerland materials, and others developed at the school are utilized.

The basic skills the children need to learn to read and to progress in reading are taught by using "fun activities." School then becomes a place for fun and work. In addition, children who are reading from books are encouraged to experience what they read.

Other program features include team teaching, individualized instruction, nongrading, and parent conferences used instead of report cards.

Evaluation of the students' progress is done primarily by conferences. Three times a year parents come in to speak to staff members about their child's progress. The nonuse of grades is based on the assumption that a child needs a lot of self-confidence before he can

effectively learn to compete. Parents are also allowed to observe their children through observation decks, and they receive their child's schoolwork throughout the year. Standardized tests are also used in charting the child's progress.

Lamplighter School is not geared to the genius-level child, but children in the program average two grade levels above normal. The school uses combinations of materials, a myriad of teaching techniques, and real-life experiences to deal with the individual differences in the children.

### Sullivan Preschool Centers

The Sullivan Preschool Centers are a network of private preschools that serve primarily middle- and upper-middle class white children. These preschools utilize programed materials, developed by Dr. Maurice Sullivan, which present simple problems that the child can solve and that provide him with a feeling of success. In the Sullivan Preschool Centers, socialization and reading are stressed in an atmosphere unlike that in the public kindergarten. "Current reading programs," says Sullivan, "make the child feel as if he doesn't have the intellectual equipment to learn to read because reading is portrayed as such a difficult task."

The Sullivan reading program takes the student step by step through the sound-symbol system of English. Basically the program is divided into three levels: readiness in language arts, readiness in reading, and reading itself. Readiness in language arts helps the child to develop preliminary skills that relate directly to reading, while the child is also introduced to the basic concepts of directions, spatial conception and color, and the alphabet. Reading readiness teaches the student to recognize printed letters and numbers, to associate these symbols with sounds, to combine these sound-symbols into words, and to decode symbols. Reading instruction continues the development of word recognition and discrimination. The programed materials of the Sullivan preschools are delivered in brief doses to the children and are liberally intermixed with play activities to reinforce learning.

Programed reading makes written English something a child can handle. The child is introduced to a few letters and sounds at a time. Once the child has thoroughly mastered a particular sound associated with the letter, other sounds that are associated with that letter are introduced. Within this program, reinforcement is a key element. Traditionally, school children have grown up thinking that it is very important to be right all the time; and if the child is not right, he feels guilty and wants to escape the situation. But with the use of programed materials, each child achieves success and is never made to feel inferior.

Besides the Sullivan programed materials, Montessori manipulation materials, Scholastic paperbacks, songs, and games are used in the preschools. Each child is motivated to respond many times during activities, because in the Sullivan preschools learning *is* responding. The Sullivan preschools have approximately one teacher for every 10 students and report virtually no nonreaders by grade three.

The Sullivan preschools provide learning opportunities through exposure to diverse activities logically developed in small sequential steps; a safe, comfortable, free environment in which the child has the opportunity to make decisions but in which none of the options can have a painful result to the child; and parent involvement.

# Leadership: The Administrator's Responsibility

The responsibility for implementing innovative preschool educational practices and bringing about effective educational change belongs to the school administrator. How, then, does he proceed in implementing change through preschool reading instruction? The following are among the logical steps he should take:

### Survey the Reading Needs of the Preschool Population

What are the major factors interfering with the reading readiness and later reading achievement of the preschool population? Examples of variables are: poor background of experiences, negative attitude toward reading, limited vocabulary, poor visual and auditory discrimination abilities, etc. To determine these factors, survey teachers, school records, and test the children with appropriate instruments.

### Determine Resources

Determine what physical resources, monies, people, and alternatives are available to meet needs. Examples of resources include: interested teachers, parents, community groups, contingency funds, and Federal funds.

### Consider the State of the Art on Needs

What does research on the topic reveal? What do authorities in the field suggest? Use consultants and consult all available literature.

### Consider Solutions

How are other education agencies approaching the problem? Examples are: traditional kindergarten, preschool readiness instruction, formal preschool reading instruction, etc.

### Involve the Community

What community groups and/or individuals should be involved in solving the problem? Examples are: interested parents, PTA, local business groups, and professional associations.

### Derive Objectives

Determine what changes in reading behavior should occur as the result of the preschool reading program. Examples include: increased reading readiness, children reading at a particular level before entering school, increased reading achievement at later educational levels, and more positive attitudes toward reading.

### Develop a Proposal

Write a formal proposal which describes all of the above elements. The proposal should also include an operational component and time schedule for all events associated with the program. Submit the proposal for approval.

### Evaluate the Preschool Reading Program

The continuation and success of the preschool reading program should be determined by evaluation. For example, to what degree were program objectives achieved? Examples of sources for data collection are: pupils, teachers, and local community.

# References


Alpert, H., Tanyzer, H., and Sandel, L. "The Effect of i.t.a. and T.O. With Beginning Reading Instruction in Kindergarten," *i.t.a. as a Language Arts Medium*, J.R. Block, ed. Hempstead, N.Y.: The i.t.a. Foundation, Hofstra University, 1968.

Angus, M.M.D. *An Investigation of the Effects of a Systematic Reading Readiness Program at the Kindergarten A Level.* Unpublished Doctoral Dissertation, Wayne State University, 1962.

Ausubel, D. "Viewpoints from Related Disciplines: Human Growth and Development, " *Teachers College Record*, 55, 1959, 245-254.

Bacci, W. "Children Can Read in Kindergarten," *School Management*, 67, 1961, 120-122.

Ball, S., and Bogatz, G. "A Summary of the Major Findings in 'The First Year of *Sesame Street:* An Evaluation,'" Princeton, N.J.: Educational Testing Service, 1970.

Bentz, D.D. *A Study of the Effect of Perceptual and Language Training upon Kindergarten Children Reading Readiness Performance.* Unpublished Doctoral Dissertation, Oklahoma State University, 1970.

Blakely, W.P., and Shadle, E.M. "A Study of Two Readiness-for-Reading Programs in Kindergarten," *Elementary English*, 38, 1961, 502–505.

Bloom, B. "Learning for Mastery," *UCLA-CSEIP Evaluation Comment I*, 1968. Center for the Study of Evaluation of Instructional Programs, 145 Moore Hall, 405 Hilgard, Los Angeles, California.

———*Stability and Change in Human Characteristics,* New York: John Wiley and Sons, Inc., 1964.

Breon, W.J. *A Comparison of Kindergarten and First Grade Reading Readiness Programs.* Unpublished Doctoral Dissertation, University of Southern California, 1967.

Brown, M.W. *A Study of Reading Ability in Pre-School Children.* Unpublished Master's Thesis, Leland Stanford University, 1924.

Brunner, J. *The Process of Education.* Cambridge, Mass.: Harvard University Press, 1960.

Brzeinski, J.E. 'Beginning Reading in Denver," *The Reading Teacher*, 18, 1964, 16–21.

———*The Effectiveness of Teaching Reading in Kindergarten.* CRP 5–0371, Research Project No. 50371, The Denver Public Schools, 1967.

Burits, E. *Effects of a Reading Program Presented Prior to Grade One on Reading Achievement and Pupil Behavior.* Unpublished Doctoral Dissertation, Rutgers–The State University, 1965.

Collins, M.L. *Determining the Relative Efficiency of a Particular Reading Readiness Workbook and a Teacher Developed Program in Promoting Reading Readiness.* Unpublished Master's Thesis, DePaul University, 1960.

Cooper, G.O. *A Study of the Relationship Between a Beginning Reading Program in Kindergarten and Reading Achievement in First Grade.* Unpublished Doctoral Dissertation, Colorado State College, 1962.

Davidson, H.P. "An Experimental Study of Bright, Average, and Dull Children at the Four-Year Mental Level," *Genetic Psychology Monographs,* 9, 1931, 125–289.

Denver Public Schools. *Three Special Projects in Reading.* A Report to the Board of Education, Denver, Colorado, November 1962.

Deutsch, M. "The Disadvantaged Child and the Learning Process," *Education in Depressed Areas,* A.H. Passow, ed. New York: Teachers College Press, 1963.

Dewey, J. *The Child and the Curriculum.* Chicago: University of Chicago Press, 1902.

Downing, J. "The i.t.a. Reading Experiment," *The Reading Teacher,* 18, 1964, 105–110.

Durkin, D. "A Language Arts Program for Pre-First-Grade Children: Two-Year Achievement Report," *Reading Research Quarterly,* 5, 1970, 534–565.

———*Children Who Read Early.* New York: Teachers College Press, 1966.

Ellerman, R.A., and Wadley, J.A. "A Readiness Experiment," *The Reading Teacher,* 23, 1970, 556–558.

Evans, J.L. "Teaching Reading by Machine: A Case History in Early Reading Behavior," *AV Communication Review,* 13, 1965, 303–308.

Falik, L. "The Effects of Special Perceptual-Motor Training in Kindergarten on Reading Readiness and on Second Reading Grade Performance," *Journal of Learning Disabilities,* 2, 1969, 10–17.

Fast, I. "Kindergarten Training and Grade 1 Reading," *Journal of Educational Psychology,* 48, 1957, 52–57.

Fowler, W. "Developmental Learning as a Concept in Early Reading." Paper Presented at the Biennial Meeting of the Society for Research in Child Development, New York, N.Y., March 30, 1967.

———."A Developmental Learning Strategy for Early Reading in a Laboratory Nursery School," *Interchange,* (in press).

———."Structural Dimensions of the Learning Process in Early Reading," *Child Development,* 35, 1964, 1093–1104.

———."A Study of Process and Method in Three-Year-Old Twins and Triplets Learning to Read," *Genetic Psychology Monographs,* 72, 1965, 3–89.

———."Teaching a Two-Year-Old To Read: An Experiment in Early Childhood Learning," *Genetic Psychology Monographs,* 66, 1962, 181–283.

Fox, R., and Powell, M. "Evaluating Kindergarten Experiences," *The Reading Teacher,* 17, 1964, 118–120.

Gabler, J.E.F. *A Study of Reading Readiness Programs in the Kindergarten.* Unpublished Doctoral Dissertation, Wayne State University, 1963.

Gates, A. "Necessary Mental Age for Beginning Reading," *Elementary School Journal,* 37, 1937, 497–508.

——— and Bond, G. "Reading Readiness: A Study of Factors Determining Success and Failure in Beginning Reading," *Teachers College Record,* 37, 1936, 674–685.

Gesell, A. *The Mental Growth of the Preschool Child.* New York: Macmillan, 1925.

———, Ilg, F., and Arnes, L. *The First Five Years of Life.* New York: Harper, 1940.

Gill, M.F. "Relationship Between Junior Kindergarten Experience and Reading Readiness," *Ontario Journal of Educational Research,* 10, 1967, 57–65.

Goralski, P.J., and Kerl, J.M. "Kindergarten Teacher Aides and Reading Readiness in Minneapolis Public Schools," *Journal of Experimental Education,* 37, 1968, 34–38.

Gruber, A.M. *An Investigation of the Learning of Kindergarten Children Taught by a Modified Fries' Linguistic Approach in Combination with Dr. Seuss' Beginner Books.* Unpublished Doctoral Dissertation, Indiana University, 1965.

Haines, L.E. *The Effects of Kindergarten Experience upon Academic Achievement in the Elementary School Grades.* Unpublished Doctoral Dissertation, University of Connecticut, 1960.

Haley, E.D., et al. *A Comparison of Scores of Kindergarten Children and Non-Kindergarten Children in Specific Background Abilities at First-Grade Entrance.* Unpublished Master's Thesis, Boston University, 1957.

Hall, G. *The Psychology of Adolescence.* New York: D. Appleton and Co., 1961.

Harckham, L.D., and Hagen L.V. "The Effects of a Phonics-Oriented Kindergarten Program on Auditory Discrimination and Reading Readiness." Paper presented at the Conference of the American Educational Research Association, Minneapolis, Minn., March 2–6, 1970.

Hess, R.D. "Cognitive Elements in Maternal Behavior," *The Craft of Teaching and the Schooling of Teachers,* The First National Conference of the U.S. Office of Education Tri-University Project in Elementary Education, Denver, Colorado, September 1967.

Hillerich, R.L. "Pre-Reading Skills in Kindergarten—A Second Report," *Elementary School Journal,* 65, 1965, 312–317.

Huey, E.B. *The Psychology and Pedagogy of Reading.* New York: Macmillan, 1908.

Hunt, J.McV. *Intelligence and Experience.* New York: Ronald Press, 1961.

Ingersoll, G.M. "'Sesame Street' Can't Handle *All* the Traffic!" *Phi Delta Kappan,* 53, 1971, 185–186.

Irving, J.V. *A Multi-Sensory Approach to Facilitating Reading Readiness in Kindergarten.* Unpublished Doctoral Dissertation, Ball State University, 1965.

Jacobs. F.N. "An Evaluation of the Frostig Visual-Perceptual Training Program," *Educational Leadership,* 25, 1968, 332–340.

Keele, R.L., and Harrison, G.V. "The Effect of Parents Using Structured Tutoring Techniques in Teaching Their Children to Read." Paper presented at the meeting of the American Educational Research Association, New York, N.Y., Feb. 4–7, 1971.

———and Chen, M.K. "An Experimental Study of Formal Reading Instruction at the Kindergarten Level," *Journal of Educational Research,* 60, 1967, 224–229.

Knudson, G.P. *Excerpt from an Evaluation of a Preschool Program.* Unpublished Master's Thesis, University of Utah, 1970.

Mason, G., and Prater, N. "Social Behavioral Aspects of Teaching Reading to Kinder-

garteners," *Journal of Educational Psychology,* 60, 1966, 58–61.

Mayfield, M.R. *Individualized Reading Instruction Within an Experimental Preschool.* Unpublished Doctoral Dissertation, University of Nebraska, 1969.

McBeath, P.L. *The Effectiveness of Three Reading Preparedness Programs for Perceptually Handicapped Kindergarteners.* Unpublished Doctoral Dissertation, Stanford University, 1966.

McDowell, E.E. "A Programmed Method of Reading Instruction for Use with Kindergarten Children," *The Psychological Record,* 18, 1968, 233–239.

McManus, A. "The Denver Prereading Project Conducted by WENH-TV," *The Reading Teacher,* 18, 1964, 22–26.

Meyerson, D.W. *Effects of a Reading Readiness Program for Perceptually Handicapped Kindergarteners.* Unpublished Doctoral Dissertation, Stanford University, 1966.

Morphett, M., and Washburne, C. "When Should Children Begin to Read?" *Elementary School Journal,* 31, 1931, 496–503.

Naisbitt, E.C. *A Program of Pre-Reading Activities in the Kindergarten in the Colfax, Iowa, Community School,* Unpublished Field Report, Drake University, 1959.

Neuman, D.B. *The Effect of Kindergarten Science Experiences on Reading Readiness.* Final Report, Office of Education, Project OEG–5–9–595057–0038 (010), University of Wisconsin at Milwaukee, 1970.

Niedermeyer, F.C. "Parents Teach Kindergarten Reading at Home," *Elementary School Journal,* 70, 1970, 438–445.

O'Donnell, C., and Michael, P. *A Summary Report of a Pilot Study of the Effectiveness of an Informal Conceptual-Language Program in Developing Reading Readiness in the Kindergarten.* Final Report, U.S. Office of Education Project CRP–7–8426, Maine State Department of Education, 1968.

Olson, L.C. *The Effects of Non-Public School Kindergarten Experience upon Pupils in First Grade.* Unpublished Doctoral Dissertation, Pennsylvania State University, 1962.

Orton. R.E., quoted in "Headstart Moves Down to Prenatal Period," *Washington Monitor,* September 18, 1967, 17.

Perlish, H. *An Investigation of the Effectiveness of a TV Reading Program Along with Parental Home Assistance in Helping Three-Year-Old Children to Learn to Read.* Unpublished Doctoral Dissertation, University of Pennsylvania, 1968.

Pines, M. "How Three-Year-Olds Teach Themselves to Read–And Love It," *Harper's Magazine,* May 1963, 58–64.

Pratt, W.E. "A Study of the Differences in the Prediction of Reading Success of Kindergarten and Non-Kindergarten Children," *Journal of Educational Research,* 42, 1949, 525–533.

Rambusch, N. *Learning How To Learn.* Baltimore, Md.: Helicon Press, 1962.

Roy, I., and M.L. *Effect of a Kindergarten Program of Perceptual Training upon the Later Development of Reading Skills.* Washington, D.C.: Office of Education Bureau of Research. 1969.

Rutherford W.L. "Perceptual-Motor Training and Readiness," *Reading and Inquiry,* J.A. Figurel, ed. Newark, Del.: International Reading Association, 1965, 294–296.

Schoephoerster, H., Barnhart, R., and Loomer, W.M. "The Teaching of Prereading Skills in Kindergarten," *The Reading Teacher,* 19, 1966, 352–357.

Scott, C.M. "An Evaluation of Training in Readiness Classes," *Elementary School Journal,* 48, 1947, 26–32.

Shapiro, B.J., and Willford, R.E. "i.t.a.–Kindergarten or First Grade?" *The Reading Teacher,* 22, 1969, 307–311.

Shipman, V. "Early Experience in the Socialization and Cognitive Modes in Children: A Study of Urban Negro Families," *Child Development,* 36, 1965, 869–886.

Silberberg, M.C. *The Effect of Formal Reading Readiness Training in Kindergarten on Development of Readiness Skills and Growth in Reading.* Unpublished Doctoral Dissertation, University of Minnesota, 1966.

Smith, N. *Reading Instruction for Today's Children.* Englewood Cliffs, N.J.: Prentice-Hall, Inc. 1963.

———"Research on Reading and the Emotions," *School and Society,* 81, 1955, 8–10.

Spriggle, H. "Can Poverty Children Live on Sesame Street?" *Young Children,* 26, 1971, 202–217.

Staats, A. "A Reinforcer System and Experimental Procedure for the Laboratory Study of Reading Acquisition," *Child Development,* 35, 1964, 209–231.

Stanchfield, J.M. "The Development of Pre-Reading Skills in an Experimental Kindergarten Program," *Elementary School Journal,* 71, 1971, 438–447.

Stevenson, H.W. "The Teaching of Reading and Mathematics at the Kindergarten Level," *Ontario Journal of Educational Research,* 7, 1964–1965, 211–216.

Stone, M., and Pielstick, N.L. "Effectiveness of Delacato Treatment with Kindergarten Children," *Psychology in the Schools,* 6, 1969, 63–68.

Sutton, M.H. "Children Who Learned to Read in Kindergarten: A Longitudinal Study," *The Reading Teacher,* 22, 1969, 595–602.

———"First Grade Children Who Learned to Read in Kindergarten," *The Reading Teacher,* 19, 1965, 192–196.

Taylor, C.D. "The Effect of Training on Reading Readiness," *Studies in Reading,* 2, 1950, University of London Press, London, England, 64–80.

Terman, L.M. "An Experiment in Infant Education," *Journal of Applied Psychology,* 2, 1918, 219–228.

Villet, B "The Children Want Classrooms Alive with Chaos," *Life,* 6, 1969, 50–52.

Watkins, B.A. "Using Programmed Material to Teach Young Children Phonics," *Reading,* 5, 1971, 22–27.

Weeks, E.E. *The Effect of Specific Pre-Reading Materials on Children's Performances on the Murphy-Durrell Diagnostic Reading Readiness Test.* Unpublished Doctoral Dissertation, University of Connecticut, 1964.

Wingert, R.C. "Evaluation of a Readiness Training Program," *The Reading Teacher,* 22, 1969, 325–328.

Wise, J.E. *The Effects of Two Kindergarten Programs upon Reading Achievement in Grade One.* Unpublished Doctoral Dissertation, University of Nebraska, 1965.

# Publishers of Tests for Measuring Readiness and Early Reading Skills

Acorn Publishing Company
Chicago Plaza
Brockport, Ill. 62910

Allied Education Council
P.O. Box 78
Galien, Mich. 49113

American Guidance Service, Inc.
Publishers' Building
Circle Pines, Minn. 55014

American Orthopsychiatric Association
1790 Broadway
New York, N.Y. 10019

Australian Council for Educational Research
Frederick Street
Hawthorn, Victoria 3122,
Australia

The Bobbs-Merrill Company, Inc.
4300 West 62d Street
Indianapolis, Ind. 46206

Book Society of Canada, Ltd.
4386 Sheppard Avenue
Agincourt, Ontario, Canada

Brigham Young University Press
Provo, Utah 84601

Bureau of Educational Measurements
Kansas State Teachers College
Emporia, Kan. 66801

Bureau of Educational Research and Service
C-6 East Hall
The University of Iowa
Iowa City, Iowa 52240

Bureau of Publications
Teachers College
Columbia University
525 West 120th Street
New York, N.Y. 10027

California Test Bureau
Del Monte Research Park
Monterey, Calif. 93940

Center for Psychological Service
1835 Eye Street, N.W.
Washington, D.C. 20006

Chatto and Windus (Educational) Ltd.
42 William IV Street
London WC 2, England

College of Education
Ohio State University
Columbus, Ohio

Committee on Diagnostic Reading Tests, Inc.
Mountain Home, N.C. 28758

Consulting Psychologists Press, Inc.
577 College Avenue
P.O. Box 11636
Palo Alto, Calif. 94306

Cooperative Test Division
Educational Testing Service
20 Nassau Street
Princeton, N.J. 08540

Department of Educational Research
Ontario College of Education
371 Bloor Street, West
Toronto 5, Ontario, Canada

Educational Developmental Laboratories, Inc.
294 Pulaski Road
Huntington, N.Y. 11744

Educational Evaluation Enterprises
5 Marsh Street
Bristol 1, England

Educational and Industrial Testing Services
P.O. Box 7234
San Diego, Calif. 92107

Educational Studies and Development
1357 Forest Park Road
Muskegon, Mich. 49441

Educational Test Bureau
Publishers' Building
Circle Pines, Minn. 55014

Educational Testing Service
20 Nassau Street
Princeton, N.J. 08540

Educators Publishing Service
301 Vassar Street
Cambridge, Mass. 02139

Essay Press
P.O. Box 5
Planetarium Station
New York, N.Y. 10024

Follett Publishing Company
1010 West Washington Blvd.
Chicago, Ill. 60607

Garrard Publishing Company
1607 North Market Street
Champaign, Ill. 61820

Ginn and Company
Statler Building
Back Bay P.O. 191
Boston, Mass. 02117

Green and Stratton, Inc.
757 Third Avenue
New York, N.Y. 10017

Guidance Testing Associates
6516 Shirley Avenue
Austin, Tex. 78756

C. S. Hammond and Company
515 Valley Street
Maplewood, N.J. 07040

Harcourt, Brace and World
757 Third Avenue
New York, N.Y. 15017

George G. Harrap and Company, Ltd.
182 High Holborn
London W. C. I., England

Marshall H. Hiskey
5640 Baldwin
Lincoln, Nebr. 68507

Houghton-Mifflin Company
110 Tremont Street
Boston, Mass. 02107

Houston Test Company
P.O. Box 35152
Houston, Tex. 77035

Institute for Personality and Ability Testing
1602 Coronado Drive
Champaign, Ill. 61820

Instructional Objective Exchange
P. O. Box 24095
Los Angeles, Calif. 90024

Johns Hopkins Press
Baltimore, Md. 21218

Language Research Associates
175 East Delaware Place
Chicago, Ill. 60611

Lyons and Carnahan, Inc.
407 East 25th Street
Chicago, Ill. 60616

Mills Center, Inc.
1512 East Broward Blvd.
Fort Lauderdale, Fla. 33301

Joseph E. Moore & Associates
4406 Jett Road, N.W.
Atlanta, Ga. 30327

C. H. Nevins Printing Company
311 Bryn Mawr Island
Bradenton, Fla. 33505

J. H. Norman
726 Austrian Way
Grand Prairie, Tex. 75050

Ohio Testing Service
Division of Guidance and Testing
State Department of Education
751 Northwest Boulevard
Columbus, Ohio 43212

Perfection Form Company
214 West 8th Street
Logan, Iowa 51546

Personnel Press, Inc.
20 Nassau Street
Princeton, N.J. 08540

Phonovisual Products, Inc.
4708 Wisconsin Avenue, N.W.
Washington, D.C. 20007

Pioneer Printing Company
Bellingham, Wash. 98225

Pittsburgh Public Schools
Office of Research
Board of Public Education
249 North Craig Street
Pittsburgh, Pa. 15213

Priority Innovations, Inc.
P.O. Box 792
Skokie, Ill. 60076

Psychodiagnostic Test Company
P.O. Box 528
East Lansing, Mich. 48823

The Psychological Corporation
304 East 45th Street
New York, N.Y. 10017

Psychological Test Specialists
P.O. Box 1441
Missoula, Mont. 59801

Psychologists and Educators Press
419 Pendik
Jacksonville, Ill. 62650

Psychometric Affiliates
Chicago Plaza
Brookport, Ill. 62910

Public School Publishing Company
345 Calhoun Street
Cincinnati, Ohio 45221

Purdue Research Foundation
Personnel Evaluation Research Service
Division of Educational Reference
Purdue University
Lafayette, Ind. 47907

Research Concepts
Test Makers, Inc.
1368 East Airport Road
Muskegon, Mich. 49444

St. Martins Press, Inc.
175 Fifth Avenue
New York, N.Y. 10010

Scholastic Testing Service
480 Meyer Road
Bensenville, Ill. 60106

Science Research Associates, Inc.
259 East Erie Street
Chicago, Ill. 60611

Slosson Educational Publications
140 Pine Street
East Aurora, N.Y. 14052

Anna S. Starr
126 Montgomery Street
Highland Park, N.J. 08904

The Steck Company
P.O. Box 16
Ninth and Lavaca
Austin, Tex. 78767

Teachers College Press
Teachers College
Columbia University
525 West 120th Street
New York, N.Y. 10027

University of Illinois Press
University of Illinois
Urbana, Ill. 61801

University of Minnesota Press
2037 University Avenue, S.E.
Minneapolis, Minn. 55455

Webster Publishing Company
1154 Reco Avenue
St. Louis, Mo. 63126

Western Psychological Services
Box 775
Beverly Hills, Calif. 90213

Winter Haven Lions Research Foundation, Inc.
P.O. Box 1045
Winter Haven, Fla. 33881

World Book
757 Third Avenue
New York, N.Y. 15017