DI Follow Through Students Show Fewer Dropouts, Fewer Retentions, and More High School Graduates

Russell Gersten and Tom Keating

Project Follow Through began in 1967, at the height of Lyndon Johnson's presidency; it was the largest, most expensive educational social experiment ever undertaken by any government. Since then, almost half a million students from low-income families have been enrolled in Follow Through classrooms at a cost of 700 million dollars. Over 180 low-income communities have been involved, ranging from inner-city areas in New York, Washington, D.C., and Philadelphia, to Native American towns such as Cherokee, North Carolina, to obscure rural areas like Rippon, Arkansas, and Williamsburg County, South Carolina. The latter is the poorest county in the contiguous 48 states, with median yearly income of approximately $2,400 for a family of five. The purpose of Follow Through was to continue to build on the academic and social gains made by Head Start, by providing exemplary educational programs for disadvantaged students through third grades. Twenty universities and educational laboratories were funded to test model programs. Each university or laboratory served between 1 and 20 communities. These models represented the entire range of approaches to early childhood education. Models ranged from the Bank Street College of Education's psychodynamic approach—where children learn to read by being provided with an environment that stimulates them to want to read—to the University of Oregon's Direct Instruction Model (developed by Siegfried Engelmann and Wesley Becker), which used programmed, highly structured, small group instruction.

This Issue of ADI NEWS Goes to 30,000

The Association of Direct Instruction was started nearly two years ago. At the end of summer conference, we had a little over 200 members. A year later at the same time we were up to 600 members. Our goal this year is to reach 1,500 by September. To that end we are using this SPECIAL SPRING ISSUE to tell more teachers, administrators, and professors about us. We will be mailing to 20,000 directly, and we will distribute another 3,000 copies of this issue through conventions and friends.

ADI is a not for profit corporation dedicated to the dissemination of training, program, and research information on the systematic application of learning technology to the problems facing education—and especially the promising technology of Direct Instruction represented by the work of Siegfried Engelmann. The Association publishes this NEWS four times a year (Fall, Winter, Spring, and Summer). So far, issues have been 16 pages long, except for this special promotional and conference issue. We expect to follow this pattern in future years. Those who join at this time will receive issues through Summer, 1984, for the annual fee.

Besides publishing the NEWS, the Association sponsors workshops, makes DI related books available to members at discount, provides informational services to members, runs a preschool for handicapped children, and will provide training services to school districts at a reasonable fee plus expenses. In the coming year we hope to prepare several booklets made up of collections of research, training, or supervision related articles published previously in the NEWS.

During the past year, workshops were held by ADI in Eugene and San Diego. The Western Michigan group, under Walter Alesci, independently held a DI training workshop in Kalamazoo, MI, and the Australian Association for Direct Instruction, under Richardia Mac and Joe Moore held their third workshop in Sydney. Planned for this summer are workshops in Eugene, San Diego, Albuquerque, and Kalamazoo (see announcements in this issue.)

The purpose of the Follow Through was to continue to build on the academic and social gains made by Head Start, by providing exemplary educational programs for disadvantaged students through third grades. Twenty universities and educational laboratories were funded to test model programs. Each university or laboratory served between 1 and 20 communities. These models represented the entire range of approaches to early childhood education. Models ranged from the Bank Street College of Education's psychodynamic approach—where children learn to read by being provided with an environment that stimulates them to want to read—to the University of Oregon's Direct Instruction Model (developed by Siegfried Engelmann and Wesley Becker), which used programmed, highly structured, small group instruction.
Dear Editor:

I'm just a mom who is absolutely sold on DI. Approximately two years ago, I read Siegfried Engelmann's book "Give Your Child a Superior Mind." My oldest son was almost four at the time, and I knew I had to do something different. I bought the program and taught my son how to read and write. It was the best decision I ever made. I have since found that bright, even very young children, it works very well.

Anyway, when I began teaching my son the DISTAR Arithmetic, he was just 4 years old and couldn't tell a 7 from a 9. With 9 months, and while he was still 4 years old, he was doing simple multiplication problems, word problems, telling time, subtracting with borrowing, adding with carrying, doing double digit addition and subtraction, and doing single digit division. Not only so, but he was reading DISTAR level 3 readers (the old copies with the science in them) when he was 5. He scored 250 on a Stanford-Binet and he is now a kindergarten in the kindergarten, first, and second grade combination class for highly gifted children.

However, more impressive to me is that I found DI and began teaching my youngest son. He is now 17 months old, and he is reading books that he can barely hold. We are using the combination class for highly gifted children. He is now 3 years old and can easily read level 3 DISTAR. Not only so, but I feel he reflects that a better method was used to teach him than to teach my older son. His decoding is very sound and instantaneous—much more so than my older son's had been when he was reading at the same level, even though my older son was a year older at the time.

Many of my friends have been inspired by my boys to do the same with their bright preschoolers, and they are having similar, though not quite so dramatic, results.

Anyways, needless to say, the teaching of reading has become my avocation and I am on the board of directors of the DISTAR, Inc., and I talk to every educator I can, write letters to the newspaper, and do public speaking, and I have been a real pest of myself, naively hoping that someday the schools will act in the best interests of the children. This is why I'm writing you. Today I received my first copy of DIRECT INSTRUCTION NEWS. It seems to me that you would be happy to send copies to those who would like to circulate it. Please send me a few copies to circulate around 20 copies.

Angelica Fazio
San Diego, Calif.

Dear Mrs. Fazio:

Your letter is truly inspiring. The Association Board has been hoping to set up a parent membership group for the Association and to include more features for parents in the NEWS. Parents can join now at the regular membership fee ($15), or can take the NEWS-only option ($5). However, I want you to know that we will provide free membership to truly needy parents and those who have a strong interest in the students' education (as long as we don't go broke). Twenty copies of this special Spring issue are on their way to you.

You will note that there is an ad in this issue for Engelmann and Haddock's new book for parents. The book is "Read in One Hundred Easy Lessons." The book is published by Simon and Schuster and is due to be on the bookstores soon at $14.95. Maybe the Association can get some training sessions going for parents using this book as the starter.

Wes Becker
Editor

The Direct Instruction News is published Fall, Winter, Spring and Summer, and is distributed by mail to members of the Association for Direct Instruction. Teachers are invited to submit articles for publication relating to DI. Send contributions to: The Association for Direct Instruction, P.O. Box 10352, Eugene, Oregon 97440.

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Springfield News

Effective immediately, ADI Board members are no longer available to work for free. These include a "DI Hotline," a tape review and feedback service, and the ability to volunteer experience for DI Trainers/Consultants for in-service training in your area. These services are offered to give present members even more value for their money and to attract new members. The services are being offered on a trial basis and will be monitored for cost, use, and consumer satisfaction. If, after a period of time, we find that the services are being used and that we can offer satisfactory services at an affordable price, the services will be made permanent. Each of the services is described briefly.

DI Hotline

Several people have suggested that we start a "DI Hotline." The initial suggestion was for a toll-free line, and we would like to offer this service on such a basis. The costs of such a service would surpass our payroll—it would break our bank in a month. Instead of a toll-free line, we have initiated the next best alternative. The service consists of a 24-hour telephone answering service. The service will be available continuously from 9:00 p.m. Monday through 9:00 a.m. Pacific time. It will be turned off on weekends and holidays. The service allows you to phone in any question you have about Direct Instruction at any time that is most convenient for you. If no one is available to take your question when you call, you may leave a message on a recording device. The next working day, your message will be given to someone who can answer it. This person will call you back or write you with an answer to your question. Every effort will be made to do this within a day of your call. We cannot afford to accept collect calls, but the 24-hour nature of our service allows you to call at a time when the rates are cheapest in your area. We hope this service will allow you to get quick answers to your Direct Instruction questions. This service is satisfactory and affordable. Call 503-485-1299.

Tape Review and Feedback

Somebody asks us for "long-distance supervision" of their Direct Instruction lesson presentations. We are offering an evaluation and feedback for supervision purposes, they are often not possible. As an alternative, we are now piloting a tape review and feedback service. Here's how the service works:

Take one of your presentations from any of the Direct Instruction programs you have in your library. Send the tape along with a blank cassette to ADI. Enclose a note with your name, address, and a few words about anything in the lesson you might have been having particular difficulty with or that you especially want feedback on. An ADI-approved trainer/consultant will review your tape and record his/her feedback on the blank tape, then return both tapes to you. Please do not send us more than one lesson per tape. You should include all possible of the lessons on which there is student responding, including the teacher-led portions of DI instruction.

This service will require a considerable amount of consultation. Thus, we must initiate a page $15 per taped session to compensate consultants for their time and effort. We will review this service and our pricing structure within several months to assess the feasibility of continuing the service.

Training/Consulting Services

Many of the people who act as trainers at Direct Instruction conferences also do training and/or consultation on a fee-for-service basis for local or county school systems. Training on virtually any of the topics offered at conferences or any of the Direct Instruction programs can be purchased through ADI. Meeting on a fee-for-service basis is available through ADI. Contact us at P.O. Box 10352, Eugene, OR 97440 or call us at (503) 485-1299.

We hope that you use these services, and we hope that you find them useful. You are welcome to consult with us, and we invite your suggestions on other services which you would like to see ADI provide to its members.

DI Gaining Momentum in Southern Alabama

By Marie Scott

Mobile County Public Schools

DI is "the new kid on the block" in the Mobile County Public School System. A DI interest group has been formed and is meeting on a monthly basis. The purpose of the meetings is to provide interested individuals an opportunity to exchange information on the origin, structure, instructional implications, and potential impact on student achievement of Direct Instruction. The current membership includes approximately twenty central office and local school administrators, staff development supervisors, and teachers, and classroom teachers.

There is an obvious need among educators in our region for in-depth understanding of the components of DI and curriculum which contribute to its effectiveness. In addition, a strong interest exists in the expertise needed for adapting traditional curriculum materials to increase their effectiveness.

Surprisingly, getting educators interested in programs has been easy. When a teacher or administrator walks into a DI classroom and sees a teacher with a group of previously low-achieving students (who everyone knows "can't learn to read") moving briskly through a reading or math activity with every student participating, responding, and "getting it right", they immediately get interested. The hard part

Continued on Page 3
Teaching Comprehension Skills

Reported by Wes Becker

This report is a summary of a study by Ed Kemmerer, Doug Carnine, and Alex Magis entitled: Instructional procedures for teaching reversible passive voice constructions and clause constructions. The study was published in The Exceptional Child, 1980, 27, 20-40. Quotes are made with permission of the authors.

The study examined the effectiveness of providing a Direct Instruction strategy for teaching three children to correctly interpret passive voice constructions and clause constructions. The study was designed to use each subject as his own control.

The students were a boy and a girl in third grade, and a boy in fifth grade. Two were called learning disabled and one mildly handicapped. In the first stage of the study, students were screened with a reading test consisting of four 60 to 80 word passages on each of two days. Each passage included two passive voice constructions and two clause constructions. Students were not taken into the study if they answered three or more of the four questions for any passage correctly.

A baseline condition followed the screening. This was basically a practice condition. Each day, in 20 minute sessions, the student would read three passages and answer four questions about each. For the first two passages, they would be told if their answers were right or wrong. For the third (the probe), they were given a feedback.

A Direct Instruction training condition followed the baseline. Prior to prepassage training, each child was given a visual aid relating constructions and two clause constructions, prepassage training was given first on passive voice constructions then on clause constructions. When a mastery level was reached, passages were performed and test questions were used to probe performance.

The training procedure for passive voice constructions was as follows:

1. Experimentor: Listen, I'll read a sentence and you follow along. Gronk was teased by Bubbles. Gronk teasing Bubbles.
   Listeners: You say the sentence the other way. Child: Bubbles teased Gronk.

2. Experimentor: Listen, I'll read the sentence again. Gronk was teased by Bubbles. Now you say the sentence the other way. Child: Bubbles teased Gronk. If the child made an error, the Experimentor stopped the child and modeled the response as in step 1. The Experimentor then tested the child on step 2. Steps 1 and 2 were repeated with three new sentences. Steps 1 and 2 were repeated with three new sentences. After steps 1 and 2 had been completed with all four sentences, steps 3 to 5 were presented with all four sentences.

3. Experimentor: Now I'm going to say a sentence and ask you a question. Listen: Gronk was teased by Bubbles. Now say it the other way to yourself.


5. Experimentor: Who got teased?

The training procedure for clause constructions was as follows:

1. Experimentor: I'll read the first sentence: you follow along. Child: Gronk kissed Joan. He kissed Joan.

2. Experimentor: What is the subject? Listen: This is the sentence for that one. (Pause) Listen: Who stands for Harry. In this case, who stands for Harry.

3. Experimentor: Over the next day, the child was asked to identify the subject of each sentence. At the end of the first day the child was able to correctly identify the subject in 9 of 10 sentences. The second day, the child was able to correctly identify the subject in 10 of 10 sentences.

Alabama
Continued from Page 2

Corrective Reading
Evaluated in Birmingham, England

Reported by Wes Becker

The British Journal of Educational Psychology (1982, 52, 33-50) recently published a study by R.P. Gregory, C.S. Hackney, and N.M. Gregory, evaluating SRJ's Corrective Reading Decoding Program, Level B. While the authors had a number of problems installing the program, the initial findings, under somewhat difficult circumstances, led to program continuation into a second year.

Most of the experimental and comparison students placed into Decoding B on the pre-reading test, with the experimental group having a 4 days a week for 5 months to the experimental group of 11 students. The comparison group was divided into three subgroups: a school based remedial program, with the experimental group teacher dealing the group on 2 days and another teacher instructing the other 2 days.

The groups were comparable on all variables except sex. There were more girls in the experimental group (7), and more boys in the comparison group (6). The experimental group covered 26 lessons in the 57 days of instruction. Because of a lack of adults to listen to individual-onal reading check-ins, each day, the teacher used every other lesson to do these check-ins. According to the results, 15 of the 17 students met or exceeded passage. The average age of the students was 11 years, 10 months.

Even with the reservations which must be made about the few lessons taught, the use of two teachers for the comparison group, and the sex difference, the results of this study are striking. Using the Daniels and Black test of reading comprehension, most of whom demand teaching skills in decoding and comprehension, the experimental group reading age from 3.0 to 10.0 years (a mean gain of 1.7 years). The comparison group gained in reading age from 7.85 to 8.08 (a mean gain of 0.23). The difference was very significant (.001 level).

School attendance for the experimental group was 90% at pretest and 96% at posttest. For the comparison group, the attendance percentages were 86% and 89%. The posttest difference in attendance was significant (.05 level). The students' problem behaviors were rated by English and Math teachers on the Russell-Elliot's Behaviour Questionnaire. Scores for the experimental group were from a mean of .39 to .91, while for the comparison group, they were from 1.12 to 3.75. The posttest difference was significantly different (.02 level), indicating the Corrective Reading group was better behaved.

The gain of 1.7 years in 57 days of instruction offers strong support for the Corrective Reading Decoding B program.

Table 1

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DIRECT INSTRUCTION NEWS, SPRING, 1983
Early Childhood Day Care Center
University of Alabama

Direct Instruction has been advocated for use in early childhood education to give disadvantaged children a head start in educational experiences (Blacks & Engelman, 1966). Critics claim that when this is done, too much emphasis is placed on academic skills at the expense of "creative" skills, such as drawing, painting, and other expressive activities. One reply to this criticism is that, within the limited amount of instructional time in a preschool day, those basic academic skills are learned in the blocks for later academic success should be given priority over less academic activities. But academic and expressive activities are not necessarily mutually exclusive or incompatible. In fact, they may, in a sense, be related. Since DISTAR-trained preschoolers are adept in using pencils and in writing letters, numbers, and drawing (Sims & Weisberg, 1982a), the question can be raised if other written productive skills, such as individual stories, can be facilitated.

The component skills for the construction of simple freehand pictures have not been seriously examined. Yet, one important determinant is knowing the major attributes or details of the object to be drawn. In this respect, the DISTAR Language program places more emphasis on those attributes, such as sad eyes or a moving object, as possibilities to consider for more advanced drawings.

The Early Childhood Day Care Center (Weisberg, 1981) is a Direct Instruction preschool for disadvantaged children located on the University of Alabama campus. Here, we investigated children's drawings and compared them to the drawings of children from other preschools. Drawings were obtained to determine whether the academic priority of the ECDCC would place the preschoolers at a disadvantage in a self-expressive activity, such as producing art forms.

Drawing pictures of people was chosen as the evaluative task for four reasons. First, these forms are easily scoreable in terms of the number and quality of body parts included; in fact, there are objective and standardized scoring systems available (Harris, 1963). Second, an examination of preschool books and manuals reveals that learning about body parts is an ubiquitous preschool activity, no matter what the preschool philosophy may be (Brophy, Good, & Nadel, 1973; Weikart, Rogers, Adcock, & McChliss, 1971). Third, many preschools provide a cluster of activities that include practice in putting together body parts to form people (e.g., flannel boards, puzzles, cut-and-paste activities). Fourth, there is usually opportunity in preschools to engage in self-expressive art forms involving people, such as making freehand drawings of them on the chalkboard or on paper during easel paint time, finger painting, and so forth.

Subjects
A total of 66 economically disadvantaged children, from three local preschool programs and a no-preschool comparison group, were sampled. The SES characteristics of each group are reported elsewhere (Sims & Weisberg, 1982b); in summary, the children were educationally at-risk and had the same poverty level attributes of preschools reported in other studies (Gray & Klaus, 1970; Schwenkrath & Weikart, 1980). Each group was subdivided into children having one year versus two years of preschool experience. The one-year group were of kindergarten age (K-age) and the two-year-olds of first grade-age (1st grade-age). Figure 1 shows the sample N and mean age in months for each of the eight subgroups. No child with obvious sensory or motor handicaps was tested; two with measured IQs below 75 were tested, but excluded from this study.

Preschool Experiences
Two of the programs, Direct Instruction and Child Development, contracted with the State Day Care agency for public welfare to provide services to poverty level parents whose children were in need of Full-time, year-round day care services. Assignment of children to these programs was done by caseworkers at the local welfare agency on a random, first-come, first-served, basis. The third preschool experience was a local Head Start program. All three preschool programs had been in existence from eight to ten years and all enrolled children with the same kinds of backgrounds and geographical locations.

The fourth group consisted of children who had never attended a preschool. These No Preschool children were located and evaluated during the beginning months of public school kindergarten and/or first grade in September or October 1980. Consequently, 1st grade-age No Preschool children were several months older at the time of testing than the three groups of children attending preschool who were tested during April or May 1980.

Program Descriptions
Direct Instruction. Classes in Direct Instruction language, reading, and math were held daily for 45 minutes each. Of relevance here are the language program formats which presented body parts in two parts, whole object identification tasks, as well as in tasks involving actions, "a/an," discriminations, prepositions, plurals, tense, "some/all/no one," and "same/different." Other tasks, that could be related to preschool-related drawing -- people, involved the classification, use, and part-whole relationships of articles.

Child Development. Also structured cognitive program, the Head Start Center used the Peabody Kit (Dunn and Smith, 1970) for concept and language development. October was set aside as "body part month," providing a four-week thematic unit during which related language was taught for 15-30 minutes per day. Children also received daily arts and crafts classes. More time was spent on a free-play than in the other two programs.

Procedure and Assessment of Drawing Quality
Drawings were assessed by the Goodenough-Harris Drawing Test (Harris, 1963), commonly called the "draw-a-man" test. This test was given to a sample of nearly 3,000 children with about 300 children in each of ten age groupings, from five to five years. The final standardization group, selected from four major geographical areas, represented the national distribution with regard to 1950 paternal occupational occupation measures. The test has been shown to be a reliable instrument with internal consistency reliabilities (split-half correlations) of .70 to .80, and a test-retest reliability of .60 to .70. Reported intercorrelator reliabilities were generally lower.

The children were tested individually and instructed, "Draw a picture of a person that is the picture of a person that you can." After completion, they were asked if it was a boy (man) or a girl (woman). Limited time dictated the necessity of a single drawing, although the test suggests the drawing of both a man and a woman. Separate scoring criteria are given for male and female body parts that "needed fixing." However, this task also provided useful information on facial features and limited only to the beginning exercises.

Figure 1. Mean Standard Scores for the four types of preschool experiences at kindergarten and first grade-age. A Standard Score of 100 represents performance at the 50th percentile.

4 DIRECT INSTRUCTION
CHILD DEVELOPMENT
HEAD START
NO PRESCHOOL

D 110.8

91.5

K-age

86.2

95.6

1st grade-age

98.9

97.0

N = 6

5

6

8

10

X age (mos) = 64

68

67

67

X age (mos) = 75

75

80

81

.5%ile = 75

18

28

17

90

47

16

42

4 DIRECT INSTRUCTION NEWS, SPRING, 1983
Preschoolers

figures: as long as the drawings are scored by the appropriate sex criteria, it does not matter whether the child chooses to draw a man or a woman.

Interscorer Reliability

A second scorer independently evaluated a random selection of twenty drawings. A high (.94) rank-order correlation between the two sets of scores was found.

Results and Discussion

Raw scores were converted to standard scores appropriate to the child's age group. Figure 1 shows the mean standard scores for K-Age and 1st grade-age children from each of the four preschool conditions.

Statistical analysis, based on a 2 x 4 analysis of variance, indicated a significant difference between the four groups. The Direct Instruction children scored significantly higher (p < .05) than the other groups, both at the K-Age and 1st grade-age level. The Direct Instruction children included more detail, that is, mo body parts, in their drawings. Readers most often write-in the children's name, even if there is really a visible difference in drawing quality. The median drawings for each of the four groups of first grade-age children entering children were selected and are shown in Figure 2. Clearly, there is a substantive difference in the amount of detail included. It is left to the reader to conclude whether the additional detail implies greater drawing sophistication.

We cannot say from this analysis whether Direct Instruction and non-Direct Instruction children differ in artisitic skill. The Draw-A-Man Test focuses more on attention to detail than on artistic quality. Nevertheless, it seems apparent that the children in Direct Instruction programs are at least no worse in their representation of nursery, in spite of their comparatively limited practice in a diverse set of related activities.

It is possible that the language concepts taught in Direct Instruction sometimes enhances the acquisition of productive drawing performances. If such is the case, it is understandable why body parts are taught through actions, part-whole relationships, tenses, etc., might appear in children's drawings. This possibility definitely merits further investigation, either with a larger sample in a between-group design or with several children in a within-subjects design. In the latter case, one might directly teach certain parts of various objects to see if the taught parts appear in children's drawings of those objects.

Finally, whereas there is presently no Direct Instruction art program, it is interesting to speculate on what types of products such a program might produce. Craig (1979) reports that children in the People's Republic of China are directly taught to imitate skills in paper cutting and painting with great precision; the results are appropriate works of art. Such instruction may have played a role in the development of the intricate, highly stylized characteristics of oriental art. This is not to suggest that Direct Instruction of art would produce only imitative works. Weinberg (1982) has shown how Direct Instruction in language, reading, spelling, and writing descriptively about scenes high creativity could lead to some highly creative story-writing by preschoolers. Surely the same creativity is attainable with Direct Instruction in art.

References

Davis, L.M., & Smith, J.C. Preschool early experi-

Figure 2. Median drawings by 1st grade-age children in the four preschool condi-
tions: A. Direct Instruction Standard (S = 112); B. Child Development (S = 88); C. Head Start (S = 78); and D. No Preschool (S = 92).

several months off. I suspect that other teachers sometimes feel this same way and I therefore offer some suggestions which I hope will add a new spark to your classroom.

1. Start a plant corner. Bring in some plants from home. Start some plants from seed. Teach your students the parts of a plant. Include the botanical names in spelling lists. Work on a mural il-

What To Do

Until Spring Comes

How

As winter lingers on and spring seems never to come, I find it difficult at times to psych myself up for the daily routine of teaching. The thrill of September, with its new challenges, has passed. The motivation of the year's end is still

Weiskart, D.P., Rogers, L., Alcock, & McChle-

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What To Do

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Weiskart, D.P., Rogers, L., Alcock, & McChle-
Teaching Nutritional Values to Preschoolers with DI

By Michael F. Masters, Daniel V. Mc Callum, and Paul Knight II

Foundation for Behavioral Research Kalamazoo Intermediate School District Kalamazoo, MI

In the last decade, considerable evidence on the effects of certain dietary habits on health and degenerative diseases (heart disease, arterial problems, cancer, etc.) has been acquired. The Senate Select Committee on Nutrition and Human Needs reported on the relationship between certain diets and the occurrence of these degenerative diseases. Perhaps more importantly, it stated that the average American diet has evolved in recent years in the direction of less healthy foods. The committee's report recommended that people consume relatively more complex carbohydrates (fresh fruits and vegetables, whole grain products, and legumes) and relatively less fats, simple carbohydrates (sugar), and salt than they consume now as a means of prevention. This report generated considerable controversy in the food industry and in the medical community. Consequently, it received little publicity. However, the importance of nutritional awareness had not been overlooked by nutrition educators. Instruction at a young age, specifically Direct Instruction, was one of the methods we chose to effect the changes in diet suggested by the Senate Select Committee.

The project described in this article was entitled: "Developing a Health-Oriented Diet Curriculum." The purpose of this three-year project was to develop and validate strategies to teach young children about healthy lifestyles in the areas of nutrition, harmful substances, and health advocacy within a self-management framework. Our goal was to develop a preventative health package based on the premise that many health behaviors are learned at a very early age, and that teaching healthy habits at an early age is a more promising approach to promoting good health than strategies that focus on treating pathologies after they have occurred. There is considerable support for such an approach in the behavioral science literature. Nutrition research (Note 2) indicates that nutrition habits are learned at an early age and that these habits tend to maintain throughout later life.

A second point concerns the success of health change programs aimed at subjects in the latter half of adult years. Generally, the literature indicates that those programs which work are expensive, labor intensive, and not generally available. Even these intensive programs have not shown good long-term outcomes.

The original aims stated for the Project were to:

* Develop a nutrition instruction program and empirically evaluate the impact of the program on children's nutrition and health-oriented behaviors.

* Develop a technology of teaching self-management techniques to preschool and kindergarten age children.

* Evaluate a parent training program to enhance family life and support pre-school behaviors in themselves and their children.

The primary focus of this article is to describe the activities of the Pre-Hap health project that are relevant to the area of Direct Instruction, specifically the development of the Nutrition Education Instructional System (NEIS) and a removed-component toothbrushing program.

In the first two years of the project, the content of the NEIS program was finalized, the initial tracks of the program were written, a lesson production process was developed, and the first version of the nutrition program was completed and tested at the Child Development Center (C.D.C.), a private preschool in Kalamazoo, Michigan. The Pre-Hap project also investigated various measurement methods and dependent variables that could be used to evaluate the effects of the NEIS program. A toothbrushing program, using a "removed-component" teaching strategy, (Engelmann and Carnine, 1982), was also designed and compared with a program using a "forward chaining" teaching strategy.

In the final year of the project, the NEIS was revised and implemented in a regular public school setting. In this setting, the program was taught to regular classroom teacher as part of the kindergarten program. At the same time, another investigation conducted by the C.D.C. studied the effects of the NEIS when combined with various behavioral intervention strategies.

Over the three years that the project was funded, a number of research projects were conducted, including investigations of: (1) behavioral procedures for increasing the amount of food consumed; (2) the relationship between verbal and non-verbal behavior with respect to foods; (3) the reliability and validity of an observational system designed to monitor food and nutrient consumption; (4) a comparison of alternative teaching strategies used in various tracks of the NEIS and the testing of toothbrushing; and (5) multiple evaluations of the NEIS. The remainder of this article is devoted to a description of only the research projects related to Direct Instruction.

NEIS Description

The NEIS is a Direct Instruction program developed to teach young children a hierarchy of nutritional concepts and food selection strategies. The curriculum consists of instruction on three major groups of skills: language and vocabulary pre-skills, nutrition-related identification skills, and rules for selecting healthy foods.

Lessons are presented in a typical DISTAR fashion to small groups of students and require a high rate of unison and individual responses per instructional session. A lesson includes a script of the teacher-child interaction which includes teacher instructions, students' responses, teacher feedback, and relevant visual stimuli.

The curriculum contains 15 tracks which cumulatively teach the content area specified in the program's educational objectives, each track includes from 10 to 70 tasks, or exercises, which successively teach the concepts for that track. Within a daily lesson, 8 to 10 exercises from several tracks are presented (see Figure 1). The language and vocabulary pre-skills instruction is designed to teach the children to follow instructions, to engage in specific actions, to name body parts, to describe groups of objects with the words "all, some and none," and to identify objects as food or not food. The emphasis of this instruction is to teach the children to describe actions and objects with complete sentences. These sentence forms are then used to teach the nutrition-related skills.

The group of skills in nutrition-related identification skills. Children are taught to identify: (1) food names and food groups; (2) various grain products; (3) "harmful parts of food" (sugar, salt, and fat) and foods which contain these elements; (4) types of cooking (steam-, broiling, baking, boiling, and frying); (5) types of packaging (fresh, frozen, boxed, and canned); and (6) typical snack foods.

The third and final group of skills taught are rules for selecting healthy foods. The rules taught in the NEIS allow the children to base food choices on food group membership, on the food's content of "harmful parts," and on the method used to prepare and package food. Children are first taught to state the rules and are then provided with extensive practice in applying the rules. Rule applications consist of making decisions about eating a specific food and then by applying the rules and the method used to prepare and package food. Each of these applications, children are required to state "why" they chose a food and apply the rules of the forms of the rules taught in the NEIS.
The Effect of NEIS on Nutrition Knowledge/Food Selection: Pilot Evaluation

This study evaluated the effects of the first version of the NEIS program upon the acquisition of nutritional concept and subsequent dietary choices in kindergarten-age children. Twenty-five children with a mean age of 5 years, 3 months participated in this study. The study was conducted over an eight month period at the C.D.C.

In order to evaluate the effect of NEIS instruction, tests were administered by project staff who had no prior contact with the children. Two aspects of the children's behavior were assessed: (1) nutrition knowledge and (2) food selection in a choice situation. The nutrition knowledge test consisted of items which sampled information, rules, and verbal rule applications taught in the NEIS. The tests were presented to the children individually in a DISTAR format. An example of a test item would involve showing a child a page with pictures of fruit on it and, as the examiner points to each fruit, asking the child to name the fruit. An example of a more difficult item involved having the child select from pictures of food objects one which was (or was not) good to eat and explain why it was (or was not) good to eat. Food selection in a choice situation was assessed with lunch and/or snack. A choice between a nutritional and a relatively less nutritional example of a particular food was presented for each food served (e.g., hot dog vs. tuna and fruit drink vs. fruit juice).

A pre-posttest follow-up design was used in this study. Measures of nutrition knowledge and food choice behavior were the same as those used in the pilot evaluation. The knowledge test sampled all tracks in the revised curriculum, and the food choice test was administered at lunch over a two day span. A total of 14 choices (seven per day) were presented at each test administration.

The results showed a substantial effect of the NEIS on both response measures. Figure 3 displays the mean proportion of correct responses for both groups on the nutrition knowledge and food choice tests.

Field Evaluation

An extensive investigation was conducted at a local kindergarten to determine the effect of a revised version of the NEIS on nutrition knowledge and food selection in a choice situation. Subjects were 40 boys and girls, approximately five years of age, assigned to one of four classrooms (Note 3). Two classrooms met in the morning and two in the afternoon. In this study, the afternoon classes (N=10) were taught with the NEIS, while those in the morning (N=24) were used as controls. Two teachers taught the four classes, one each in the morning and the afternoon. Before the study began, the teachers were given four hours of preservice training on the use of the NEIS. Subsequently, the NEIS was taught to the afternoon classes during the last seven months of the school year under the supervision of the project staff to insure correct implementation. During the

completed more lessons scored higher on the knowledge measure.

Correspondence Training and Food Choices

This study was conducted over a five-month period at the C.D.C. The subjects were ten preschool children whose ages varied from 3.7 to 5.3 years. All subjects were taught the first 35 lessons of the NEIS program before the experiment began. Instruction for four of the subjects was discontinued at that time, and they served as a control group. Instruction continued for the remaining six subjects. These six subjects were divided into two groups which differed in the sequence of manipulations they experienced. The phases which the subjects experienced are described below.

Subjects

Sequence
S2, S4, S7
S9, S10, S11
S12, S14, S16, S17

During Phase A (rule review baseline), subjects were asked to recite the food rules they had learned in the instructional groups before they were served lunch. No social or token reinforcement was given during this period. During Phase B, correspondence training with token and/or social reinforcement was used. The subjects were told what was to be served for lunch and asked which foods they were going to choose (say-do) and they were given which foods they had chosen (do-say). Saying and choosing nutritional food was reinforced with tokens or praise. Phase C was a baseline period during which NEIS training continued, but correspondence training and reinforcement system was discontinued.

Each day at lunch four or five food choice opportunities were provided to the children and the proportion of "correct" choices (nutritious vs. less nutritious foods) were recorded. Figure 4 shows these proportions for each subject for consecutive two-day periods.

We conclude from the data that children who had acquired basic nutrition knowledge by exposure to the NEIS are sufficiently responsive to correspondence training that they choose the most nutritious food available to them almost 100% of the time. Further, these children's good food choices maintain at this high level even when correspondence training is discontinued. Children who have not been exposed to the rule tracks of the program are responsive to correspondence training in this context, but not to the extent that children who had been exposed are. Correspondence training alone will induce children to choose nutritious foods, but they do not reach the same high level, or maintain that level, when they have not been taught the rule tracks of the NEIS program.

On Page 8
Learning Study Skills in Fifth Grade

Reported by Wes Becker

This report is a summary of a study by Abhy Adams, Paul Whiffen, and Doug Carmine of the University of Oregon. It was published in Reading Research Quarterly, 1992, 27, 427-55. Quotes are made with the permission of the authors.

This study examines the effectiveness of Direct Instruction in study skills on the learning of factual material from social studies. Fifth grade students from five schools in Eugene, Oregon, were first screened to insure adequate decoding skills and a reading comprehension score of at least 5.0 grade equivalents.

The study was designed to test the following hypotheses:
1. It was necessary to test the following hypotheses:
2. The study was designed to test the following hypotheses:
3. The study was designed to test the following hypotheses:
4. The study was designed to test the following hypotheses:
5. The study was designed to test the following hypotheses:

Table 1

<table>
<thead>
<tr>
<th>Training*</th>
<th>Immediate Test</th>
<th>Delayed Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systematic Instruction (SI)</td>
<td>4.73</td>
<td>1.92</td>
</tr>
<tr>
<td>Independent Study With Feedback (IS)</td>
<td>3.43</td>
<td>1.98</td>
</tr>
<tr>
<td>No Instruction (NI)</td>
<td>2.77</td>
<td>1.29</td>
</tr>
</tbody>
</table>

* Possible correct responses for each test

Table 2

<table>
<thead>
<tr>
<th>Training Method</th>
<th>Immediate Retell</th>
<th>Delayed Retell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systematic Instruction</td>
<td>6.73</td>
<td>4.64</td>
</tr>
<tr>
<td>Independent Study with Feedback</td>
<td>5.67</td>
<td>3.04</td>
</tr>
<tr>
<td>No Intervention</td>
<td>5.33</td>
<td>3.20</td>
</tr>
</tbody>
</table>

* 17 important information units possible on retell 1.
* 28 important information units possible on retell 2.

Results

Tables 1 and 2 show the outcomes of the Systematic Instruction group significantly more than the other groups on the short answer tests. The Systematic Instruction group received no training in the classroom and then students were tested on their ability to pass the test without any previous instruction. The Systematic Instruction group receiving no instruction at all was significantly higher than the other groups. The results indicated that the Systematic Instruction group was significantly more effective than the other groups in improving their ability to pass the test without any previous instruction.

Position Wanted

Amy Briggs, a former DEI Field Teacher from Dayton, Ohio, is seeking a position teaching Direct Instruction programs at the kindergarten or primary level. Write to Amy Room 313 Old Dairy Rd., Darby, Montic 98289.
Report on the ADI Sponsored Preschool

From The Director by Gary Davis

Ed. Note: The Early Education Preschool for mentally retarded and developmentally disabled children operates under the auspices of the Association for Direct Instruction. The preschool is housed in classrooms at Springfield and Eugene School Districts. The preschool is a region-wide facility. Local school districts provide transportation to the preschool and some testing service.

Mary A. walked around the room crying non-stop and not following any teacher instructions; John bunched his head and hit his wrists so much that there were large scars on both wrists; Mary B. could label objects if they were one syllable, but could not put two words together. Bob was non-verbal and would throw huge tantrums if the teacher gave any directions that he did not want to comply with; Pam sat in the corner, did not understand any directions and could not imitate any actions; Ralph was extremely non-compliant; Sally had an IQ of 55.

The difference in these children after a year in the Early Education Preschool has been dramatic. Mary A. sits happily in a group and can follow one step commands; John's bunting and hitting has been stopped; his wrists have healed and he is0 inching a verbal one-step; commands. Mary B. has become a bright social child and is preparing to enter a regular kindergarten program. Bob no longer throws tantrums and he can make statements of up to six words in length; Pam can follow one-task directions, can imitate actions and sounds and is beginning to stand on her feet; Ralph is on task and socially involved with the other children and adults; Sally's IQ has jumped 30 points.

As the part-time preschool director for the past two years, I have helped and watched the progress in these and in the more than 40 other children who have been enrolled in the preschool. For some children, the progress is very fast and for others it is painfully slow. These children enrolled in the preschool are either mentally retarded or developmentally disabled. Developmentally disabled children are children with epilepsy, cerebral palsy, or another severe disability which requires training similar to that required by mentally retarded children.

There is one teacher and two assistants for each class of 12 children. A physical therapist, funded with the assistance of the March of Dimes, provides individual treatment and sets up group programs for children as needed. Children range in age from three to six.

The school is funded by the Oregon State Division of Mental Health. The preschool has been in existence since September of 1981. In October of 1981 we were reviewed by the State. Verbally, the State review team reported that we were the best preschool that they had ever observed in the State. Their written report noted the following program strengths:

1. Parents expressed a high level of confidence in the Director and staff's ability to provide effective, high quality educational services to their children.

2. The program's design and emphasis on functional skill development has resulted in one of the highest levels of classroom instructional activity ever observed by the members of this team in a preschool for the severely handicapped.

3. The classroom staff exhibited highly developed teaching skills. It was our opinion that this high level of proficiency could, in part, be attributed to the intensive supervision of classroom programs that was provided by the preschool director.

4. Records documenting student eligibility, IEP's, and documentation of program effectiveness were complete and comprehensive.

5. Cooperation between the preschool program and the number of Lane County School districts continues to show solid improvement.

After less than two months in the business! Since then, teaching skills have improved, we have become more skilled at teaching and more efficient in everything that we do (except for the paperwork).

Understanding language and communication is the basis for all instruction; therefore, the preschool's instructional emphasis is language. Some children start the preschool with no idea that the noise around them can be translated into actions. Asking them to take an object or stand up means nothing. Others have a good receptive language, but are unable to produce words or phrases. Some children label objects but are unable to say four-word phrases.

Teaching children with language and other disabilities presents different problems than teaching children without them. Chief among these is the number of repetitions that it may take for a child to master a skill. The more severe the disability, the greater the number of repetitions that are needed. Often, more than a thousand repetitions are needed to teach a skill like "take it" or "give it to me." A second problem is that often, when learning new concepts, children in the preschool will confuse many of the concepts they have previously mastered. Dealing with these problems requires a different program and teaching schedule. Language skill practice is maintained in small group sessions or 5 minutes, and then repeated during the day. These high intensity language sessions are normally followed by free or gross motor sessions that require less intensity.

By coming back and doing a second and sometimes a third language session, children not only get additional practice, but are forced to extend their skills over time. The rule for mastered skills is that they are never dropped from the child's program. Often mastered skills become part of a routine to teach new skills.

We try to squeeze every instructional minute possible out of our short day. Teaching starts as soon as the children step inside the door. The first activity is whatever we call language activities. If the child is verbal, we work on information tasks like, "What is your last name?" or "How old are you?" If the child is nonverbal, we work on tasks like, "Touch your head" or "stand up." The children now have to direct the teacher to do a high number of tasks at a rapid pace. By performing the task and being reinforced appropriately, the child is "set up" in a work mode. Naturally, not all the three hours are spent in small group instructions, activities. After an hour, the children break for a snack and recess. This is time for everyone to rest a little and recharge the "batteries." After 45 minutes, we go back to the small group instruction and repeat the first hour's schedule. The last 10 to 15 minutes is spent in a social activity like singing or playing games.

Since 1970, I have been working in the Follow Through Project with a wide range of different schools and staffs. Never have I been so completely satisfied as I have been with the incidentals. I have seen such rapid progress. I have worked with a staff that has provided the instruction to make this progress happen. My regret is that I am only involved quarter time.

From the Staff

never thought myself capable of teaching handicapped children, but when I became the parent of one, my attitude changed and my desire to help those children grew. I have been involved in several special education preschool programs. This one ranks the highest. Even my lowest functional student is progressing and learning. Structured teaching, in 15 minute sessions that are repeated again during school hours, is paying off. The Early Education Preschool is basically service oriented. The staff works as a unit. If a child becomes stuck on a skill or concept, then consultants are called in to work with us in dealing with the problem.

H. Krusverena
Teacher Assistant

Preschool—play, nap, stories, songs, games. This was my idea of preschool; therefore, I didn't think I would ever end up teaching in a preschool. But Early Education Preschool is different. The emphasis is on learning, using the techniques of Direct Instruction—task analysis, individualized goals, teacher feedback, high criterion student performance. Yes, in other words, we have high expectations for our students and they learn to expect more from themselves.

L. Eng Hyett
Teacher

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Physical therapy treatment is done directly in the classroom. This is fairly unique. Classroom treatment allows for a totally coordinated program for each child. The therapist is afforded the opportunity to observe the children as they function in their daily routine and any deficient areas can be responded to immediately. The teaching staff is also more aware of the students' level of physical ability and can incorporate some of the treatment techniques into the program. Cooperation and cooperation enhancement treatment and assists each child to achieve their optimum level of performance.

H. Kramer
Physical Therapist

I came to work as a teaching assistant at the Early Education Preschool after five years of experience in two other preschools for developmentally disabled children. One big difference here is that I get help whenever any questions or problems come up with my work. In that all I have to do is ask someone with the knowledge and experience is called in to analyze the problem and then help plan a program to suit the needs of the child. It is great to have such positive help for the teaching staff and the Director of the program.

L. Mooney
Teacher Assistant

If any program can satisfy an individual's desire to teach, it is this one. Teaching—the amount (continuous or part-time) is not important. The priority reason is that I am enjoying my work at the preschool so much. The incredibly skilled staff, children that work so hard, and supportive parents create an environment that facilitates dedicated teaching on our part, and continuous progress on the part of the children that we are serving.

K. Wehrman
Title VI Grant Coordinator

As a parent to a handicapped child, as well as being a teaching assistant in preschool special education classrooms for three years, I feel everyone should know how good the Early Education Preschool is. Early Education combines teaching and learning with the ability to make the environment exciting for children! I've never seen children advanced as much as in this program, I've been involved with special education. The program is adaptable to the individual needs of each child. Specialists are brought in to deal with any problems that help the child. Open communication between parents and staff create a relaxed atmosphere for all who involved and insures that all needs will be dealt with. For those years between the first year, there is no better educational boost for that "special child."

M. Kubi
Teacher Assistant

From the Parents
Note: Names have been deleted by the Editor.

Dear Gary:
As a parent, I have been very pleased with the cooperation and commitment of the educators of the Early Education Preschool. The school has demonstrated concern, care, and an interest in meeting the educational needs of its developmentally delayed students. I appreciate the patience of the staff, their understanding, and the varied learning skills that my daughter has achieved through her involvement with this program.

Dear Gary:
I am writing this letter so that you can tell others what the Early Education Preschool has done for my child. At just 4 years of age, my child had only learned to control her environment and anyone around her. If she were left alone, she would continually do a little dance and twist her hands and head—self-stimulating. Along with this she would yell very loudly. She had no purposeful vocalization. When anyone interfered with this action, she would bite herself or bang her head with her hands. She would occasionally bite someone into if they were in her way, but she usually was abusive to herself. She had been in a handicapped preschool situation for one month old, during which time she had learned exactly what to do to get out of any type of command put upon her.

In the Spring of 1981 when you (Gary Davis) assumed directorship of the preschool, even though it was moving down the street, you brought in Geoff Colvin to work with her. In Geoff, she encountered for the first time someone who was looking toward the real challenges! This little 26 pound wildcat offered Geoff Colvin began by purposefully putting her into situations that would precisely cause her to become self abusive and to command. With Geoff, avoiding the problem, he willingly met it head on. As expected, her behavior problems escalated. Geoff's goal was to reach a peak in her bad behavior and then hopefully see a rapid decline after that. It didn't take this child long to figure out that if she acted very free, she would give up on her for the evening. Then, when he left she would begin her self-stimulating and yelling on until the early hours of the morning. Geoff became aware of her tricks and was able to get through the first phase of having her follow the simple commands of "stand up" and "sit down". He was already known to her. Once she learned this, it was her self-stimulating device when she bit or hit herself. Gradually, her hitting and self-abuse began to diminish. She began to learn about rocking or fidgeting for a few minutes a time now. The home program that Geoffrey initiated was followed up in her school program.

Before Geoff began working with this child, she bit and hit the people she was in contact with and would not respond to any communication—almost appearing deaf. Now she is more alert and willing to respond to some spoken commands. She would only eat eggs, macaroni, and cheese! Geoff has shown her that she would get another piece of turnover. She is now beginning to expand her diet. She still has a long way to go. She is still the same little child, but we feel confident now in the direction we are going with her.

We are extremely grateful to the people from the Early Education Preschool for the guidance, time, and support they gave us. Within this team of experts, we found people who not only were interested in our child's problems but were so supportive of us. We highly recommend this educational program to anyone with a child, yours, who needs special help from competent, caring people.

Dear Gary:
Our son will have attended the Early Preschool for two years when school is out in June. He is 5 years old now, so this is his last year before entering kindergarten in the Fall. When he entered the preschool, he had good language comprehension, but had extreme trouble expressing himself. He has learned so much from the preschool that, at times, it is hard to remember when he was having such difficulty in language. He is learning reading and math, which I sure didn't learn until first grade! We are amazed at how far this preschool has helped him to progress so rapidly. We are thankful for the opportunity for him to be able to attend such a school and receive the help he needed.

Francine Holland
University of Alabama at Birmingham

(Editor's Note: We welcome Dr. Holland's article, which she has agreed to let us publish as a Dissent. We also request dissenting views on various aspects of Direct Instruction from other readers.)

For years, educators have been searching for effective instructional strategies for teaching language. Of all curriculum areas, language has consistently been one of the most difficult for students who are hard of hearing. We all seem to know the least. Packaged, sequenced programs have continued to flood the market, promising to meet the language needs of all children needing remediation. As a result, teachers have elected to use one or more of these programs, often without regard to the appropriateness of their programming for the child. The DISTAR Language Program has often been selected as the program of choice. All too often, this program has been chosen in error.

Good Program, Good Intentions, Poor Match: Poor Results

As a whole, the Direct Instruction Model has been demonstrated to be an effective teaching model. The model cannot be faulted for using proven techniques of scripted presentations, small-group instruction, signals, positive reinforcement, precise teacher training and supervision, and criterion reference testing. We have not been with the DISTAR Language Program but with the match between the Program and the one with whom which sometimes used. The original intent of DISSTAR was to provide educational programs for disadvantaged children. "Children who are handicapped present a particular problem in terms of motivation, limited use of purpose signals, and restricted referential object- events, a number of factors are essential in planning for intervention. In the early 1970s, there was demonstrated that the DISTAR Language Programs begin at levels which exceed the preverbal stages for emerging or basic language needs. As children's language emerges, they become able to talk because they have a reason for doing so (Miller and Yoder, 1972). In the early 1970s, there was a shift against emphasis on grammatical components to semantic or meaningful categories (Bloom, 1990). Later, the emphasis shifted again to that of pragmatic or functional ways in which language is used (Hilliard, 1972; Dore, 1972). Emerging language skills now appear to be guided first by children's realization of the purposes language can serve in different situations (e.g., 'Mommy' can mean a variety of things to the young child like 'Tell me to get my bottle, to pick up, to move out of my way, etc.) (Bates, 1976). In addition, children realize there is meaning within a given context, and words can be used to mean differing bits of information when paired with other behaviors (Allen, 1972, 1976). For example, 'Mommy' can mean 'This is my Mommy' if accompanied by putting a teddy bear in her lap, or 'Mommy, don't want to eat that' if accompanied by head turning when the spoon is offered to her, or 'Mommy' when there are two long words together (together) that are well on the way to putting two and three word combinations together (e.g., "Mommy, time to eat meat") (Palmer and Mcleese, 1972; Prutting, 1979).

These components of language are the most appropriate targets in intervention for emerging language. Following development patterns, focus is placed initially on pragmatic and semantic relations rather than on the structural side of the language system. Only when children have built a strong foundation for expressing themselves for the environment do they turn attention to structural detail in their verbal output. In addition, these pragmatic and agent-action-object children use only to express a perceived event closely ap
Distant Language Dissent

Continued from Page 10

proximates the eventual formalized structural treatments in grammar (i.e., subject-verb-object). Once the shift is made to structure, the child can readily put together complete sentences from the smaller units to make the language more structurally appropriate (i.e., "say the whole thing").

DISTAR is a very positive program, both in its Direct Instruction approach and in its systematic sequencing of higher level concepts of language. It is a most appropriate program for children who have basic structural, social, and conversational experiences of language in place, but who misuse or fail to use concepts appropriate to the kindergarten and initial elementary levels. For these children, DISTAR should be the language program of choice, although it is still in the formative stages, it cannot be recommended.

Acquisition Principles Applied to Intervention

We have learned a number of principles from the normal acquisition process, which may then be used in designing language interventions. Specifically, the following components necessary for the formulation of a language focus on cognitive and social aspects of the communication process. These areas provide us both with our goals as well as with implications for language training (McLean and Snyder-McLean, 1978).

Children learn about objects/concepts through experience in the environment.

Children learn language concepts through the experience and manipulation of objects and events in the environment (Piaget, 1971; Macnamara, 1972). As a result, they discover and come to understand the relationships among features of those objects as part of an identifying "reference bank" (Nelson, 1972; Evatt, 1972). For example, a child's first notion of "bigness" comes as a result of pulling the tail, being licked in the face, pulling to standing by holding handfuls of hair, and being surprised by the bark or growl elicited from climbing on top of the dog. Through discovery, they affirm that this "thing" has a tail, a wet tongue, a hairy body, and so forth.

In intervention, the child needs exposure to concrete objects for exploration, to the environment of the features of that object that make that object unique from all others (McLean and Snyder-McLean, 1978). It is through the concrete experiences of the environment that children learn about relationships among objects and events through manipulation of objects and events in the environment.

Children learn that words represent objects/events once a reference bank is in place. It is only as a word or "referent" is perceived as another feature of an object that a child begins to form representation abilities (Crozier, 1971; Schlesinger, 1974). That is, only after the reference bank is in place can a child develop the understanding that abstract words represent or stand for "something else." It is not until these words are in the child's reference bank that they are stored in the reference bank. For programming, then, contextual, simplistic labels need to be used as descriptive features of ongoing events, objects, and activities. DISTAR, however, assumes that the child is learning that the function or behavior is a prerequisite for entry into the program. This is not a language program for children who have limited language skills or whose language concerns are at the infant level. DISTAR is primarily limited to labeling or answering questions (Dore, 1974).

Children learn how one thing relates to others. DISTAR is sequential in nature. Subsequent to learning that labels represent objects, events, or people, children (McLean and Snyder-McLean, 1978) come to understand the relationships that may exist between and among these concepts. These include such relationships as actions of oneself upon objects (e.g., me roll ball, boy push car), locations in which those objects may be found (e.g., car floor, baby crib), expressed properties or characteristics of those objects ("big ball, "big toy"), and so forth (Piaget, 1979; Miller and Yoder, 1974). Specific training situations need to be offered which provide demonstration of the relationships between objects/events, with specific descriptive labels being provided. For example, once a child has learned through manipulation that the features of "ballness" (round thing, rub- ber, rolls) are integral parts of the "ball," then other environmental con- structs impact upon the ball should be taught. This is an integral part of DISTAR. Specific training would be directed toward such semantic constructs. For example, if the child learns that the ball (recurring), my ball (possession), big ball (attribute), roll (function) will establish additional meaningful ways in which relationships can be described (McLean and Snyder-McLean, 1978). The use of language as an organizing tool, then, allows the child to understand the relationships between the objects/events in a coherent context.

Children learn about reciprocal roles of communication from early turn-taking to mature language. DISTAR, through its training, develops skills at an early level through social exchanges and rituals developed with the caretaker (e.g., maternal smiling, vocalization, eye contact). Eventually, these routines lead to the child's desire to initiate communication. Reciprocal roles that characterize communication between individuals have the potential to establish the role with interactions between the child and others being continued only as long as the child desires to continue. For example, in intervention, then, should focus on the role of exchanges, and specific require- ments for verbal turn-taking should be at a maximum (Macneeney and Seyle, 1976). In the DISTAR Program, however, allowance for social exchange is at a minimum. That is, the exercises are teacher-directed and children are expected to give only the direct responses which are the target of the particular lesson. Continued exchange is not typically encouraged during the lessons.

Children learn to use words as a result of discovering their power in affecting change in the environment. Initially, children develop gestural systems as a means of communication. As the child learns to handle the power of the language, words (e.g., please, thank you) become the basis of the social exchange. As the child develops the ability to manipulate the power of the language, words (e.g., please, thank you) become the basis of the social exchange. As the child develops the ability to manipulate the power of the language, words (e.g., please, thank you) become the basis of the social exchange. As the child develops the ability to manipulate the power of the language, words (e.g., please, thank you) become the basis of the social exchange. As the child develops the ability to manipulate the power of the language, words (e.g., please, thank you) become the basis of the social exchange. As the child develops the ability to manipulate the power of the language, words (e.g., please, thank you) become the basis of the social exchange. As the child develops the ability to manipulate the power of the language, words (e.g., please, thank you) become the basis of the social exchange. As the child develops the ability to manipulate the power of the language, words (e.g., please, thank you) become the basis of the social exchange. As the child develops the ability to manipulate the power of the language, words (e.g., please, thank you) become the basis of the social exchange. As the child develops the ability to manipulate the power of the language, words (e.g., please, thank you) become the basis of the social exchange. As the child develops the ability to manipulate the power of the language, words (e.g., please, thank you) become the basis of the social exchange. As the child develops the ability to manipulate the power of the language, words (e.g., please, thank you) become the basis of the social exchange.

References


Peterson, C. Proton of the moving forward promptly from one point to another on the way to completion. J. of Speech and Hearing Disorders, 1970, 45, 51-58.


DI Conference in Kalamazo0

The Sixth Annual Direct Instruction Conference at Kalamazoo will be conducted February 10-13, 1979 at Western Michigan University, Kalamazoo, MI. The conference is co-sponsored by the Michigan State Department of Education and the Division of Continuing Education. Graduate credit is available. For further information, write to: Conference Director, Kalamazoo Conference, Western Michigan University, Kalamazo0, MI 49008.
Engelman

Testing Basic Language Concepts

Virginia Bingham
Dorothy Ross

Teachers of DISTAR Language have often expressed the need for a test that is useful when placing children in the program. With these teachers, you might be interested in the recent publication of the Basic Language Concepts Test. This test is a shortened and standardized version of the original Basic Concepts Inventory.

The Test

The Basic Language Concepts Test (BLCT) is recommended as an efficient language test for children entering kindergarten or first grade, and as a measure of language readiness for children already in preschool. It can also be used to evaluate older children being considered for specific educational programs. The test has normative data on a sample of 2500 children. These norms can be used to evaluate a child's performance relative to other children of the same age. The test also has a strong criterion-related and construct validity component to aid in selecting specific remedial goals for individual children.

Teachers of DISTAR Language can use the BLCT score to place children in Language Group 1, which is for children already in preschool (which are not included in the manual) are presented below.

The Manual

The manual that accompanies the test contains eleven sections. These are: Overview, Introduction, Preparing to Give the Test, Administering the Test, Scoring the Test, Interpreting Test Performance, Instructional Remedies, Large-Scale Screening, Test Content, Research and Development of the BLCT, and the Test Script (including the picture plates used with Part I).

The Test Script is intended as a guide to facilitate standardization of presentations for people unfamiliar with the test. Those administering the test are urged to learn the order and wording of the presentation so that they can maintain eye contact with the child while presenting the test.

The Test Research and Development reviews the ten years of testing and data analysis which went into development of the instrument, as well as describes the test population. White, Black, Native American and Hispanic children of both economic backgrounds and those from geographically distant locations in the United States were included.

The section on Interpretation of Test Results contains information on the use of the diagnostic and criterion-referenced information the test produces. This includes: (1) how to compare the child's score to the standard for children of the same age; (2) how to identify children with special expressive problems; (3) how to distinguish between "disturbed" and delayed problems; (4) how to chart errors to reveal ineffective language strategies and/or specific language deficiencies; and (5) how to analyze individual errors for further identification of specific language-concept deficiencies.

DISTAR Language Placement

The BLCT score can also be used to place children in DISTAR Language I. The score on the BLCT represents the total number of errors on all parts. A score of 30 or more errors indicates a possible language problem. Scores of 23-29 may indicate a need for additional testing or observation to determine if appropriate progress is being made. See Manual for additional information on interpretation.

The DISTAR I program is designed to allow entry at different places and to work on different levels. Possible entry points are lessons 1, 13, 21, 31, and 41. Although a placement test accompanies the program, the BLCT score alone may also be used as a placement instrument.

If the child makes more than 60 errors on the BLCT, do not administer the Language I Placement Test. Place the child at lesson 1 in the program and present at least one complete lesson a day, reviewing those parts of each lesson that present problems.

If the child makes more than 60 errors on the BLCT, do not place the child in DISTAR Language I, unless the placement is accompanied by other language activities. The non-DISTAR activities that should be presented include: (1) activities that teach number names ("I want . . ."); (2) activities that teach order of counting ("one, two, three, four"); (3) object identification tasks that involve real objects; and (4) picture-realization and single-choice repetition (within meaningful contexts). For students who score in this range, do not present all learning activities specified in the DISTAR Language I lessons initially. The recommended DISTAR activities for the child should initially be limited to the action track for the daily lessons. (Action track activities occur on every lesson.) The activities related to pictures are probably not appropriate in early instruction with this child.

After the child has successfully performed on the action-track activities from the first 20 lessons of DISTAR Language I and has worked on the additional skills specified above, the child may be placed in lesson 1 of DISTAR Language I and receive entire lessons (including the action-track activities) at the rate of one lesson a day. New conditions, such as the use of new illustrations and time constraints may make it impossible to teach a complete lesson each day; however, the rate of presentation should not be less than three lessons every five days.

If the child scores fewer that 30 errors on the BLCT, the child should enter DISTAR Language I according to the following guide:

Scores

<table>
<thead>
<tr>
<th>Place on Lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>24-29</td>
</tr>
<tr>
<td>17-23</td>
</tr>
<tr>
<td>13-16*</td>
</tr>
<tr>
<td>6-10*</td>
</tr>
<tr>
<td>0-6*</td>
</tr>
</tbody>
</table>

*Note: Children making 16 or fewer errors probably do not have a serious language problem. Placement in DISTAR Language I is optional. Children making six or fewer errors may be able to meet the entry criterion for DISTAR Language II. Teachers should administer the placement test in the Language II Teacher's Guide.

Direct Instruction Programs

Many of the commercially available Direct Instruction programs have the following characteristics:

• Teacher presentations are scripted.
• Presentations are fast-paced.
• Small groups are utilized to maximize student response opportunities and teacher monitoring.
• Tasks are taught to criterion with all students participating.
• Individual student tests are given to evaluate student performance.
• Correction procedures are built into the instructional programs.
• Teachers use verbal reinforcements and response contingencies to maintain student motivation.

All Direct Instruction materials have the following characteristics:

• Carefully controlled teacher wording.
• Scripted lessons help insure that teachers present material in a way which will help students understand it.
• Similar instructional formats and teacher directions are used throughout a particular program, although the amount of teacher-imposed structure is faded as students begin learning the tasks.

Engelman (1969) maintains that many handicapped children who understand task demands because they have been taught the vocabulary words like below, circle, underline, and cross-out may be unfamiliar to the naive learner. By programming the basic vocabulary of instruction, the teacher can help avoid student failure.

Rapid pacing of instruction enhances student attention and performance (Carnine, 1976). Engelman (1969) suggests that teachers should present about ten times as many examples of a concept as they would usually present in the given period of time. This pacing should be the teacher to arrange students according to their skill levels. According to Direct Instruction research, lower-performing children should be in a group of 4 to 7 children to insure maximum teacher feedback. The higher probe percentage of hand signals enables several students to respond at once without listening to each other's feedback, but it does not send a signal to the naive learner. By programming the basic vocabulary of instruction, the teacher can help avoid student failure.

Continued on Page 13
Immediate teacher feedback within every correction procedure reduces the chances of students feeling overwhelmed. Finally, Engelmann (1969) views the use of verbal reinforcement as pivotal to the success of his method, believing that the "teacher must react to the child, S/he must exaggerate, showing excitement when the child succeeds, and at the same time when he behaves in a way that will not lead to success, and patience when the student is trying to learn."

 instructional Design

"Teachers must avoid doing what comes naturally" (Engelmann, 1989a). Frequently, teachers want to help, believing that they may be presenting the learner with too much, or too many, concepts at once, or that the student may be overwhelmed. However, this is not necessarily the case. Engelmann (1989a) states that for the teacher, the goal of being an impeccable instructional presenter is analogous to becoming a proficient dancer, gymnast, or pianist. Great amounts of practice and work are needed. Engelmann views the teacher as both an instructional designer and a conveyer of information. If the teacher is using only pre-packaged Direct Instruction. The instruction method has already been determined, and if the teacher is not using a pre-packaged Direct Instruction program, he/she may still employ many of the same principles of Direct Instruction with the curriculum materials on hand.

Regardless of the program selected by the teacher, the learner's behavior is predicted by stimuli and not solely by responses. Teachers need to remember that they are responsible for ensuring that the learner receives appropriate feedback.

Engelmann's Philosophy Reconsidered

Engelmann (1989a) notes that in education, there has been a great deal of controversy—and consensus—among educators. The fruits of Engelmann's labor are extensive. His ten page curriculum vita exemplifies the scope and efficiency of his work. During the last ten years, sixty authors have cited him or his work in many of the leading journals. Not all of them are educators or researchers. Teachers, psychologists, and other researchers have contributed to the field of instruction. There is no doubt that Engelmann's work has been influential in the development of educational technology.

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The High School Study

In June of 1981 and 1982, the first two follow through students were interviewed (those who began kindergarten in 1968 and 1969) were due to graduate from high school. We *did* decide, with a bit of trepidation, to design a study to see whether the Direct Instruction program did have an impact on the high school careers of those who participated. Only a few key questions were examined — whether the dropout rate of Follow Through (FT) students was lower than that of comparable students in the neighborhood or district, whether the percentage of students who completed high school was higher, whether there were differences in the percent of students who go to college, and whether the program had any impact on junior high school students.

As can be imagined, the potential problems were numerous. It was unclear if there would be an impact on junior high school students, whether the program would have any impact on junior high school students, whether the program would be more effective than any programs that had been offered, whether the program would be more effective than any other programs.

In fact, the scores on the New York State test showed second grade readers were not readers. This was a great disappointment to the principal of the school and the head of the school district. The principal and the head of the school district were both disappointed with the results of the study. They concluded that the study was a failure.

Critics of the model assert that the effects of structured programs are better when students are left on their own. (In fact, Plagued educators such as Connecticut's Governor have said that these programs will actually harm students in the future.) Thus, followup research is being conducted, but it is possible that the results of all followup studies will be more accurate than any previous studies had. We were able to find comparison schools in four of the eight communities, and we worked with nine, New York, Pitt, East St. Louis, and Williamsburg County, S. Carolina. In three of these four sites we were able to find a comparison group. For example, in Uvalde, Texas, a small town next to the Mexican border, all the children in the county are in Follow Through, and the Anglo children are in the regular program. Besides the obvious language and cultural differences, the median family income of the Anglo students is almost triple that of the Follow Through students. One school in the study reported 100% of its students were receiving free and reduced price lunches, so, the chances of being able to find a school at a similar poverty level. In these cases, more reliable graduation rates, as time series designs were used. (See related article on Uvalde.)

Computerized student files were virtually unknown in most school districts in 1968. All data were retrieved by manually going through memos and notebooks in the principal's office. Student mobility was a huge problem, though surmountable with perseverance. The most extreme case of this was New York City—from the two Brooklyn elementary schools involved in the study, students had dispersed to 67 different high schools in four boroughs (each of which had to be visited to retrieve the files).

What kinds of long-term expectations are reasonable, if, in fact, we presented a better than average program to young children?

The following were ours:

1. The longer children stayed in the program, the better the performance measured at a later time.
2. The better the program is implemented, the greater the residual difference we would expect to see later.
3. The poorer the traditional program that follows the intervention, the lower the overall performance of the students at a later time.
4. The more positive the initial learning experiences, the stronger the expected impact of children to stay in school (rather than drop out).
5. Although the program would interact with the intervention received by the students following the program, there should be some lasting positive effect that is reflected in improved performance. However, such lasting effects could well be masked by lower retention and dropout rates in the better programs.

Table 1

<table>
<thead>
<tr>
<th>Starting Year</th>
<th>N</th>
<th>% E</th>
<th>G.E.</th>
<th>N</th>
<th>% E</th>
<th>G.E.</th>
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<tr>
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<td>163</td>
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<tr>
<td>1969-1</td>
<td>60</td>
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<td>173</td>
<td>15</td>
<td>6.4</td>
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<tr>
<td>1970-1</td>
<td>60</td>
<td>7.4</td>
<td>141</td>
<td>18</td>
<td>6.8</td>
<td></td>
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<tr>
<td>1970-K</td>
<td>54</td>
<td>8.8</td>
<td>121</td>
<td>26</td>
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E. St. Louis 9th Gr. CAT Language

<table>
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<th>Starting Year</th>
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<th>G.E.</th>
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<th>% E</th>
<th>G.E.</th>
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<tr>
<td>1968-1</td>
<td>114</td>
<td>7.3</td>
<td>158</td>
<td>23</td>
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<td></td>
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<tr>
<td>1969-1</td>
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<td>7.2</td>
<td>166</td>
<td>19</td>
<td>6.7</td>
<td></td>
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<tr>
<td>1970-1</td>
<td>56</td>
<td>8.9</td>
<td>137</td>
<td>33</td>
<td>8.1</td>
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</tr>
<tr>
<td>1970-K</td>
<td>51</td>
<td>10.2</td>
<td>111</td>
<td>35</td>
<td>8.3</td>
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</tr>
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E. St. Louis 9th Gr. CAT Math

<table>
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<th>Starting Year</th>
<th>N</th>
<th>% E</th>
<th>G.E.</th>
<th>N</th>
<th>% E</th>
<th>G.E.</th>
</tr>
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<tr>
<td>1968-1</td>
<td>114</td>
<td>18</td>
<td>156</td>
<td>14</td>
<td>6.8</td>
<td></td>
</tr>
<tr>
<td>1969-1</td>
<td>59</td>
<td>18</td>
<td>161</td>
<td>13</td>
<td>6.7</td>
<td></td>
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<tr>
<td>1970-1</td>
<td>59</td>
<td>19</td>
<td>141</td>
<td>18</td>
<td>7.3</td>
<td></td>
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<td>1970-K</td>
<td>53</td>
<td>20</td>
<td>137</td>
<td>18</td>
<td>7.3</td>
<td></td>
</tr>
</tbody>
</table>

*p = .06 (Significant effect)
Students Follow-up in H.S.

The Uvalde Study

By W.A.T. White and Russell Gersten

Uvalde, Texas, students who were in the Direct Instruction Follow Through project in their first three grades of school were compared in high school with similar students who completed high school in Uvalde during the prior two years. Uvalde (45 miles from the Mexican border) is one of the largest Follow Through Programs in the Direct Instruction Model. Over 99 percent of the Follow Through students are Chicano. Many enter first grade with little or no knowledge of the English language.

A preliminary analysis of the high school data shows that the Direct Instruction students:

- Are more likely to receive a high school diploma.
- Are less likely to be retained in any grade.
- Show better attendance in 9th grade.

The results do not show appreciable differences between ninth grade Follow Through and Non-Follow Through students in achievement scores or high school grade averages, but such differences are likely concealed by the differences in retention and dropout rates. If lower performing students are given an extra year to learn, they can make gains that would help to mask a Follow Through advantage. Similarly, most dropouts are from those failing in school. This selective factor could also mask true Follow Through Non-Follow Through differences.

The Sample: The DI Model was implemented in the first grades in Uvalde in the Fall of 1968. This report covers a follow-up on the Chicano students who entered first grade in the Fall of 1966, 1967, 1968, and 1969. The students from the two years prior to Follow Through are compared with those from the first two years of Follow Through. A large number of students in all four of the annual classes failed to remain in the community. The percentages remaining in the community for the years 1966 to 1969 respectively were, 43.1%, 41.6%, 60.7%, and 44.1%. The figures given in the results reflect data only the students who did reach high school for some period of time.

Results: Table 1 shows that a higher percentage of Follow Through students graduated than for the two preceding classes of students. It also shows that there were fewer retentions among Follow Through students, and especially after the first year.

High School attendance was also examined (Table 2). DI students showed better attendance during 9th, but not 10th, 11th, and 12th grades. The dropout rate differences could be affecting the attendance differences. A student was considered to have good attendance if the student was absent for 10 or less days during the year.

9.3 grade equivalent. The Language test (grammatical usage) fails to show a consistent trend, but all groups perform well on this test.

Final graduation data for the Cherokee four-year FT groups will not be available until spring 1983, but the trend is toward a decreased dropout rate and increased graduation. Non-FT students (1969-K) had a dropout rate of 38 percent, the group with one year of DI was 32 percent, the two-year group 25 percent, and the three-year group 22 percent. These findings parallel their achievement scores at the end of third grade.

Williamsburg County, South Carolina is a rural, agricultural community. When Follow Through began, it had one of the highest illiteracy rates in the country. For those beginning first grade in 1969, the Follow Through group shows a significantly higher percentage of high school graduates, lower percentage of dropouts, and higher rate of acceptance to college (see Table 3). (Note the percent graduates and percent dropouts do not add to one because of retentions. Some retentions are yet to graduate.) Results are not significant for achievement differences.

Again, these may be hidden by dropout and retention differences.

Summary: These results are preliminary. Additional data are still coming in for students retained at some point in their careers, and further analyses and verification of the data are being conducted. This Spring, the Follow Through students in New York (results reported in the Fall issue of DI News) will be interviewed to get their side of the story.

There is more to the study than the numbers. The senior author spent much of the first six months of 1982 at the sites, working out the details of the study. It was impossible not to notice, with some marked exceptions, how teacher expectations were for these low-income adolescents. This was reflected sometimes by apathy and sometimes with direct accusations.

On the one hand, it is gratifying to see the impact Follow Through has had for the students in New York, to see adolescents from one of the poorest sections in New York City (long known for its poor achievement) perform at a grade level in reading in junior high, and to see significantly fewer former Follow Through students dropping out of school than is typical for the district. Likewise, in what is one of the poorest counties in the country, with one of the highest illiteracy rates, it is gratifying to see that Follow Through has improved the graduation rate. On the other hand, even with Follow Through and the high reading scores, the dropout rate is still 40 percent for the New York students. In South Carolina, almost all the students who took the College Board Exams (usually the upper ten percent) received scores between 200 (no items correct) and 280 (2nd percentile and below).

Although the results are not final, the studies show that the three or four years of an effective, academically-oriented program in the primary grades generally had a permanent and positive impact on the students’ lives—in at least the academic aspects of their lives. But, as much as anything else, the study alerts us to the seriousness of the problems that exist in high schools and the need finally to begin doing something about them.

Table 2

<table>
<thead>
<tr>
<th>Starting Year</th>
<th>Cherokee 9th Gr. Achievement Test, Reading</th>
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<tbody>
<tr>
<td>1969-K (No FT)</td>
<td>45 29 7.9</td>
</tr>
<tr>
<td>1970-2 (2 yrs. FT)</td>
<td>67 31 8.1</td>
</tr>
<tr>
<td>1970-3 (3 yrs. FT)</td>
<td>60 40 8.8</td>
</tr>
<tr>
<td>1970-4 (4 yrs. FT)</td>
<td>57 45 9.3</td>
</tr>
</tbody>
</table>

Table 3

<table>
<thead>
<tr>
<th>Williamsburg County, SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classes Starting in 1969</td>
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<tr>
<td>Follow Through</td>
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<tr>
<td>School 1</td>
</tr>
<tr>
<td>No. of Students</td>
</tr>
<tr>
<td>Percent Graduates*</td>
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* Significant effect (p = .05)

Table 4

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<tr>
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* These N’s exclude students who moved away during high school.

Table 3

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Preservice

Teaching Formats

Usually, the teachers which the supervisors and supervisor-trainers work with have not previously taught DI programs. These teachers attend preservice sessions to receive initial training from the senior supervisors (trainers). The trainers present the rationale for Direct Instruction and for specific techniques such as unison responses, signaling, pacing, etc. Before showing naive teachers how to present formats, the trainers teach the preskills required by the formats, such as stop sounds and continuous sounds; or various signals used in DISTAR Reading 1. At the same time, the new supervisor-trainers observe and take notes, preparing to become trainers. After the teachers demonstrate adequate mastery of preskills, the trainers model key formats from the programs that the teachers will be teaching. They show the teachers how to present formats by using the same steps that they use to teach children: model and test. The trainers model a format while the teachers play the role of children, then the teachers present the format while the trainers play the student role.

In teaching teachers, the trainers use the same principles that they use in teaching children. They talk rapidly and with enthusiasm, keeping the group moving through the tasks so that the teachers will learn much content in one session. The trainers give reinforcement for effort and good work, provide corrections when teachers make errors, and require that teachers meet a high criterion. The goal from Day 1 is that the teachers will know how to present formats; the teachers must know their formats well so that, when they begin teaching children, they can concentrate on monitoring the children's performance.

When teachers can present formats reasonably well, the trainers begin teaching them how to provide simple corrections. The trainers model how to provide a specified correction for a preplanned error, then observe while the teachers try using the same specified correction for the preplanned error. Now, the trainers must begin teaching teachers to transfer skills from one situation to another. The trainers make unplanned errors so that teachers learn to apply their newly-learned correction procedures spontaneously; model, test, retest. In small groups, the teachers practice presenting formats and providing corrections for errors while the trainers and supervisor-trainers provide feedback and model appropriate correction procedures.

Classroom Management

Following formats, good pacing, enthusiasm, and frequent responses all help keep students attentive; however, teachers will frequently find themselves dealing with inappropriate behaviors and lack of student motivation. During the preservice, the trainers prepare teachers for these problems by talking about behavior management skills and modeling the skills while teachers play the role of children. Then, teachers practice the skills in small groups, with some adults playing the role of children and with trainers and supervisor-trainers giving feedback. When video tapes are available, trainers use them to illustrate examples and nonexamples of effective behavior management skills. The nonexamples show how teachers who are not trained in behavior management naturally act, and thus show teachers to misbehave rather than to behave.

Follow-up following small-group practice, the trainers and supervisor-trainers conduct individual checkouts with each teacher. The adult learners play the role of children like at “behavior cards” which tell them to talk out, not respond, etc. The supervisor-trainer checks the teachers state expectations, praise appropriate behaviors, ignore inappropriate behaviors, and provide consequences for those whose inappropriate behaviors persist.

Getting Ready for the Classroom

Once teachers have been taught to follow formats and use effective behavior management skills, the training becomes more individualized. The teachers' assigned supervisors work with them until they are firm on the first lesson they will be teaching in the classroom. When ready, each teacher “checks out”, first in a one-to-one situation with a supervisor, then in a group situation with other adults playing children (see Figure 2). The trainers also assist the teachers in writing a management plan, which consists of small group rules, possible reinforcers, and possible negative consequences. The trainers and supervisors check each person's teaching schedule for adequate teaching time. They also talk with the teachers about the role the supervisors will play in the classroom.

Monitoring Teachers through Children's Performance

In the core of the new supervisors' training program begins when the trainers begin going into classrooms to observe. During the first term, the senior supervisors and supervisors may actually teach in teams. The senior supervisors demonstrate how to identify specific problems in the classroom and how to provide effective solutions to problems that the teachers do not yet know how to solve. Specific problems include poor teacher presentation skills (such as inappropriate pacing), not providing enough voice emphasis for critical format words.
Research Institute Using DI to Study Generalization Processes at the U of Oregon

In October of 1983, the U.S. Department of Education initiated four research institutes across the country to pursue topics of importance for the education of students with severe handicaps. One of these institutes was established at the University of Oregon with a mandate to conduct applied research and build instructional packages that improve the generalization and maintenance of behaviors acquired by severely handicapped students. Under the direction of Tom Bellamy at the University of Oregon, the Extending Competent Performance Research Institute has begun a five-year plan of research and intervention. As part of this plan, the University of Oregon staff will work closely with Drs. Robert Kriegel and Glen Dunlap at the University of California at Santa Barbara.

The educational problem faced by the Institute staff is much the same as that encountered by direct instruction program developers several years ago: How to design programs that not only teach specific instructional examples, but also teach the “general case.” The content area, however, is substantially different. Severely handicapped students need instruction on skills that are immediately functional. The trend at this time is away from an emphasis on academic, and more toward adaptive skills such as shopping, street crossing, vocational assembly or tool use, dressing, etc.

The approach of the Institute is to apply the rules of direct instruction to the curricular needs of severely handicapped students. Procedures for selecting and sequencing examples that DI authors have long advocated for teaching math, reading and language (Becker & Engelmann, 1978; Engelmann & Carnine, 1981) are also proving functional for teaching general case tool use (Colvin & Horner, 1983; Horner & McDonald, 1982), vending machine use (Sprague & Horner, in preparation), and street crossing (Horner & Jones, in preparation). The myth that severely handicapped students do not generalize appears unfounded. As is so often the case, the errors of handicapped students are tied more closely to teaching procedures than to characteristics of the students.

Over the course of the Institute, it is expected that the technology of direct instruction will be expanded to include teaching a wider array of adaptive behaviors. It is encouraging, however, to note that basic DI teaching rules are proving functional for severely handicapped learners and their teachers. Individuals interested in more information about the Extending Competent Performance Research Institute at the University of Oregon are encouraged to contact either Dr. Robert Horner, University of Oregon, 1590 Willamette, Eugene, Oregon 97401 or Dr. Glen Dunlap, University of California at Santa Barbara, Social Process Research Institute, Santa Barbara, California 93105.

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Figure 3

DIRECT INSTRUCTION NEWS, SPRING, 1983 17
A Comparison of Palo Alto and DISTAR Reading Programs

Ed. Note: A more detailed version of this study appeared in Contemporary Educational Psychology, Volume 1 (3), Fall 1982, pages 194-202.

This summary stems from an analysis of eight beginning reading programs conducted by Beck and McCasin (1978), which concluded that compensatory education Direct Instruction Neus, Winter 1982-83; Beck and McCasin reviewed-six: Craft, Morse, Houghton Mifflin, Scott Foresman's Open Highways: Macmillan's Bank Street Readers; Merrill's Linguistic Reading Programs; Havercourt Brate Jovanovich's Palo Alto Reading Program; McGraw Hill's Sullivan Readers; and Science Research Associates' DISTAR Reading I and II.

Their analysis focused on: (a) the general characteristics of each program, (b) letter/sound correspondences, such as how many letters and sounds are taught, and their sequence of introduction, and (c) instructional pedagogy.

Beck and McCasin concluded that for compensatory education students, those students most likely to have difficulty learning to read, the meaning-English basal approaches are much less likely to be effective because of their complicated teaching sequences and their lack of direct instruction. The Beck McCasin summary went on to emphasize the trouble compensatory education students often have learning letter/sound correspondences. They found that the six individual skills mesh together so that by the time the children are reading words, they are using all six of these skills. The six prereading skills taught are: sounds, say it fast, symbol action, say the sounds, sound it out, and rhyme. Sounds are taught for 40 symbols. The children learn one sound for each symbol and one configuration for each symbol. Say it fast, an oral blending skill, involves saying words at a normal speaking rate. The teachers hear the words sounded out. Practice on say it fast is done first on long words and then on short words to practice syllables on words the children will read first.

Symbol action games teach left-right orientation as the child acts out a series of actions depicted on an arrow. The arrow under the pictures indicates movement from left to right. Later the first words and stories the children read also go from left to right on an arrow. This mirrors the change that the children will start to sound out words in an inappropriate sequence.

Sound it out, the children practice oral sounding out, blending, by saying words slowly that the teacher says at a normal speaking rate. The teachers and students reverse their roles for say it fast and say the sounds so that the children receive oral practice in both sounding out words and putting them back together orally before they actually start to read words.

In sound it out, the students are almost reading. They say the sounds in a word, blending the sounds together. Blending exercises appear just a few lessons earlier to prepare students for reading words in a series and for reading words that are somewhat difficult to sound out because they begin with a "stop sound" (one you can hold, like "t").

Prereading Skills

Palo Alto and DISTAR present very similar prereading skills with only two skills that can truly be considered prereading. Prereading involves identifying and copying the symbols. The practice is extensive and goes from lower one symbol to capitol letters. In letter name spelling, the teacher is directed to work with packets of letters on a divided chart. The children are to arrange the symbols they know.

DISTAR Reading I has six prereading skills, and these skills represent a "cumulative program." This means that the six individual skills mesh together so that by the time the children are reading words, they are using all six of these skills. The six prereading skills taught are: sounds, say it fast, symbol action game, say the sounds, sound it out, and rhyme. Sounds are taught for 40 symbols. The children learn one sound for each symbol and one configuration for each symbol. Say it fast, an oral blending skill, involves saying words at a normal speaking rate. The teachers hear the words sounded out. Practice on say it fast is done first on long words and then on short words to practice syllables on words the children will read first.

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Practicing Skills

The amount of practice students receive on each prereading skill is probably as important as including all of the compensatory skills in the prereading program. The study well recognized that lower-performing students, those most likely to be in compensatory education programs, work fewer than the substantially corrected practice in order to master new skills. This section examines the amount of practice in the PALO ALTO and DISTAR programs. Actual tallies of each skill demonstrate both the type of practice and the programs and the amount of practice.

It is difficult to give a precise count of the Palo Alto tasks because many choices are left up to the teacher. Teachers and students make up stories with "taught" vocabulary, so the amount of practice depends upon the stories that the teachers and students develop.

In addition to the stories, the students complete exercises on a workpad. Most of the exercises require the students to trace or match letters, though it is not unusual for several different representations of a symbol to be used in a single exercise (a lower case and a capital case, circle and a dot). They also print a dozen or more times. By the fourth worksheet, there are capital A's as well as lower case a's, and the fifth worksheet repeats the sequence with the second symbol m. By the twelfth worksheet, words appear that the children should read. In short, students receive limited practice on each sound in a variety of exercises; the total repetitions add up to less than three dozen practice.

DISTAR repetitions are fairly easy to count in the materials, although all exercises end with instructions to the teacher to "read until firm." Therefore, practice varies, but the students obviously practice almost every exercise and there is substantially more practice on the prereading skills. In addition, the instructions to the teachers are consistent and detailed in the scripts in the DISTAR program.

There are several implications for teachers to draw from the comparisons of these two programs and these three areas. First, when thinking about compensatory education students, the adequacy of the prereading skills is perhaps the most important aspect. Are all of the skills students need taught? Are all of the skills taught efficiently and with enough practice? If a program calls for students to sound words out and then identify the words, it is important to teach all of the component tasks in these skills. Compensatory education students must be taught all of the steps in the sequence; they should not be expected to figure out on their own how to put the skills together. Second, the importance of practice that compensatory education students need to master a new skill cannot be overemphasized. Precisely how, however, is substantial evidence that practice that is important for lower-performing students. The amount of practice the students need will effectively differentiate higher and lower performing students. Therefore, it is particularly important for teachers looking at materials for lower-performing students to see how much practice the programs include for each of the skills.

There is little documentation of how specific a program's instructions to the teachers should be. Some educators argue vehemently against scripting, while others view scripts as recipes or parts in a play—one aspect of "lesson planning." Others believe that scripts can reduce teachers' preparation time greatly and allow them to concentrate on other aspects of teaching. The issue is complex as conning, while others see them as liberating—liberation from preparation.

Discussion

In each of these three major areas, prereading skills, practicing skills, and teaching strategies, there are marked differences between the Palo Alto and DISTAR Programs. There are more Reading I worksheets and there is substantially more practice on the prereading skills. In addition, the instructions to the teachers are consistent and detailed in the scripts in the DISTAR program.

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Reading Mastery: Formula for Success

Reading Mastery teaches the skills that students need for success. Students learn new skills at every level, in every book, in every lesson. Skills are introduced gradually, in carefully measured steps, so that every student can master every skill. Reading Mastery has six separate programs and three major stages — Learning Initial Skills, Building New Skills, and Mastering Advanced Skills. Each stage teaches new skills and reviews old ones.

Learning Initial Skills
Reading Mastery I
Reading Mastery II
- Fast and efficient teaching of all beginning reading skills.
- Systematic introduction of letters and sounds.
- Word-attack strategies that allow students to decode hundreds of new words.
- Basic comprehension activities that teach students how to understand what they read.

Building New Skills
Reading Mastery III
Reading Mastery IV
- Careful teaching of inference and reasoning.
- Continuous building of vocabulary and reading fluency.
- Gradual introduction of complex sentence forms.
- Application of comprehension skills in a variety of contexts.

Mastering Advanced Skills
Reading Mastery V
Reading Mastery VI
- Extensive independent reading.
- Development of critical reading through analysis and interpretation.
- Appreciation of classic and modern literature.
- Proficiency in reference and writing skills.

I’d like to preview Reading Mastery.
Please have my SRA Representative call me.

name: ____________________________
position: _________________________
school: __________________________
school address: ____________________
day: ______ state: ______ zip: ______
phone ( ): ________________________

SRA
SCIENCE RESEARCH ASSOCIATES, INC.
150 North Wacker Drive
Chicago, Illinois 60606
A Subsidiary of IBM
Copyright © Science Research Associates, Inc., 1983

DIRECT INSTRUCTION NEWS, SPRING, 1983 19
NINTH ANNUAL EUGENE DIRE

August 8-12, 1983
Training and Information on Direct Instruction Techniques
Choose one A, one B, one C, and one D:

A  Introduction to Direct Instruction
A  Fire Tasting Direct Instruction Skills
A  Barriers in Implementation

B  Teaching Beginning Reader
B  Reading Mastery 3-6
B  Teaching Beginning Language Skills
B  Teaching Reading Accuracy and Fluency
B  Teaching Oral and Written Language and Comprehension Skills
B  Effective Spelling Instruction
B  Advanced Algebra
B  Overview and Implementation of Direct Instruction
B  District Compliance Training
B  Classroom Management—Elementary Level
B  Transition from DISTAR

C  Teaching the Beginning Reader
C  Teaching Reading Accuracy and Fluency
C  Teaching Oral and Written Language and Comprehension Skills
C  Effective Spelling Instruction
C  Classroom Management—Secondary Level
C  Evaluation of Instruction
C  DISTAR Reading II
C  Stan Palmer & Millie Becker & Siegfried Engelmann will speak.
C  Sessions Meet 7:10-11:30 am
C  Lunch Break 11:30-1:30 pm
C  Sessions Meet 1:00-4:00 pm
C  All participants are encouraged to attend.
C  4:30 - 6:00 pm

Tuesday through Thursday, August 9-11

B  Sessions Meet 7:30-11:30 am
B  Lunch Break 11:30-1:30 pm
B  Sessions Meet 1:00-6:00 pm
B  All participants are encouraged to attend.
B  3:30 - 5:30 pm

D  Sessions Meet 7:30-10:00 pm
D  Closing Session 1:00 - 1:45 pm

SESSIONS OFFERED

There are 33 different sessions offered during the 5-day conference. Participants may choose to attend 4. Sessions are either training or informational sessions. The focus of training sessions is on specific teaching behaviors. Task practice is involved in each of these sessions. Participants who choose to attend the informational sessions is to provide the kind of detailed information needed to implement successful techniques or to understand the topic. Sessions are scheduled in four time periods. Each participant may choose one session during each time period. So that no session becomes too large to be effective, some multiple sessions are offered. More may be added as necessary. A 4th session will offer 5 hours of training. Please note that you need to attend the "A" Session that reflects your current skill level. This is important to your training the rest of the week. "B" & "C" Sessions offer 9 hours contact time and "D" Session will provide 4 1/2 hours of class time. All sessions focus on current techniques and materials.

1. Introduction to Direct Instruction. For those new to DI. For all teachers interested in Direct Instruction (teachers who have never used a DI program or who have never received training). General information about the different DI programs and teaching on the basic techniques used in all programs—pacing, signalling, correcting, and following the formats presented in the programs. (A) Phyllis Haddox, Karen Davis, Jane Cole.
2. Fine Tuning of Teaching Skills. For those involved with DI. For experienced Direct Instruction teachers only (those who have taught the programs or who have received training). Fine tuning of teaching skills. Procedures for teaching skills so that students learn them thoroughly and are therefore able to move faster and faster through the programs (rather than bogging down). (A) Siegfried Engelmann, Maria Collins, Linda Youngmayer, Marcia Stein.
3. Barriers to Implementation. For administrators concerned with Direct Instruction implementation, Overview of problems in educational systems that create resistance to implementation of DI programs and recognition of program success. Also, possible strategies for dealing with specific problems. (A) Doug Conine.
4. Teaching the Beginning reader. Regular K-1, non-readers in remedial 2-12. How to teach beginning students to read and how to teach remedial students—those who read very poorly or not at all. This session will provide training in Word Attack Basics® (Decoding A of the Corrective Reading Series) and Teach Your Child to Read in 120 Easy Lessons (a new Direct Instruction program, currently being written and referenced reading at home). Participants learn the basic information and skills needed to implement the programs, etc. associated with acceleration, scheduling, grouping, presenting: preceding exercises. (B & C) Phyllis Haddox.
5. Reading Mastery III, IV, V & VI. Regular grades 2-6 or for students performing on grade level 3-6. These programs present a careful sequence for teaching comprehension and decoding skills to students who have mastered the basic skills. Programs provide for meeting the full range of comprehension and decoding skills, include management systems for organizing student progress, and teach all core components: skills, symbols, rules, information, maps, skills, context analysis. Needed for students to completely understand the expository and fictional selections presented in the program. (B) Susan Hanner, Leslie Zore.
6. Teaching Beginning Language Skills. Regular class K-1, District 6, ESL 1-12. For teachers of basic language in preschool through grade 2, and for teachers of English as a second language. Focus is on the language of instruction—politics, 5-6-7, following directions, etc. The emphasis is on teaching the students and emphasizing on communication production. Includes a trait on how to apply concepts to new situations. Training on English to English will be covered, as well as training on DISTAR language 1 & 2 with students for whom English is a second language. Participants receive a Language 1 & 2 Teacher's Guide. (B) Kim Weilberman.
7. Teaching Reading Accuracy & Fluency. Regular class, low performers 4-8, remedial 4-12. How to teach students to read better. How to increase rate, build vocabulary, and read for information, books, newspapers, and other materials. Training developed from Decoding Strategies® (Decoding B) and Skill Application® (Decoding C) of the Corrective Reading Series. Programs may be used developmentally or remedially. (B & C) Gary Johnson.
8. Teaching Oral & Written Language & Comprehension Skills. Regular class 4-6, remedial grades 4-12. Developmental and remedial techniques to effective presentations with primary age students through adults. Based on Thinking Basics® (Comprehension A), Comprehension Basics® (Comprehension B), Concept Applications® (Comprehension C) and DISTAR Language III—Direct Instruction programs that include presentations of skills such as deductions, inductions, analogies, following instructions, vocabulary building, editing, writing and logical analysis. (B & C) Sam Miller.
Conference Registration Form

Where-When: To be held August 8-12, 1983, at the Eugene Hilton and Conference Center, in downtown Eugene, Oregon.

How to Pre-Register: Please fill out application form. Enroll with check or school district purchase order for the proper fee. Send application to the Association for Direct Instruction. Pre-registration before July 1 guarantees space in preferred sessions. Any session with less than 20 participants will be canceled. This form covers conference pre-registration only. This does not constitute pre-registration for college credit or room reservations.

Fees and Discounts: The conference registration fee is $100.00. Association members receive a 10% discount, and members of groups of 10-19 receive a 20% discount. For groups of 20 or more, call for a quotation. Ask for Bryan at (503) 485-1200.

Hilton Room Rates: The rate for a single is $32.00 a day. Doubles will be $44.00 (52.00 per person), plus tax. If you are interested in staying at the Hilton please call "yes" on the pre-registration form. We will then put the hotel in touch with you. DO NOT SEND ANY ROOM MONEY TO THE ASSOCIATION.

College Credit: An optional 1, 2, or 3 units of college credit through the University of Oregon are available at an additional cost of $26.00 for each unit. Persons interested in college credit should indicate on the enclosed pre-registration form. We will forward information on credit along with conference pre-registration confirmation.

Please print your name, address, and phone clearly. Use an address at which we can reach you before the conference.

Name __________________________ Phone (________) __________________________

Street __________________________ City __________________________ State ______

Zip ____________________________ Have you had previous experience with Direct Instruction?

What taught? __________________________ How many years? __________

I would like to register for the following: (list one "A", one "B", one "C", and one "D" session): 

"A" __________________________ "B" __________________________

"C" __________________________ "D" __________________________

I am an Association for Direct Instruction member: Yes ☐ No ☐

I will attend the picnic: Yes ☐ No ☐

Please send college credit information: Yes ☐ No ☐

I will be staying at the Hilton. Please have them contact me: Yes ☐ No ☐

I would like to be doubles with another participant: Yes ☐ No ☐

PLEASE RETURN THIS FORM WITH YOUR CHECK OR DISTRICT PURCHASE ORDER TO: ASSOCIATION FOR DIRECT INSTRUCTION P.O. BOX 10235, EUGENE, OREGON 97440

For Office Use Only: Fee: __________ Checks: __________

DIREC INSTRUCTION NEWS, SPRING, 1983 21
APPLES FOR TEACHER

Cursive Writing Program

AUTHORS: Samuel Miller, Siegfried Engelmann
RANGE: Third and fourth grade students or older

DESCRIPTION: The Cursive Writing Program is a 160-lesson direct instruction program that teaches how to form the various letters, create words, write sentences, and write faster and more accurately. Special features include a simplified orthography, emphasis on higher level combinations, and design features such as the slant arrow to indicate correct paper placement. Exercises require only 15-20 minutes of daily work.

ADMINISTRATION: The program is suitable for individuals, small groups, or an entire class. COMPONENTS: Teacher Presentation Book includes: Detailed specifications for each lesson. Student Workbook includes: Practice papers for each lesson.

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<tr>
<td>440) Cursive Writing Program</td>
<td>25.00</td>
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<td>Teacher Presentation Book</td>
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<td>441) Cursive Writing Program</td>
<td>4.00</td>
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<tr>
<td>Student Workbook (1 ea.)</td>
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<tr>
<td>442) Cursive Writing Program</td>
<td>19.85</td>
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<td>Student Workbook (pkg. of 5)</td>
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I Love Library Books

AUTHORS: Janice Johnson, Siegfried Engelmann
RANGE: Students with first grade reading skills.

DESCRIPTION: I Love Library Books provides details for introducing 37 popular children's books as an integral component of a first grade reading program. A computer analysis has keyed each book's vocabulary with the words processed in 9 major basal reading programs so that the selected books will match the child's skills and ensure a successful reading experience. Children using this program usually start reading library books by February.

ADMINISTRATION: Either the librarian or teacher may administer this program.

COMPONENTS: Teacher Presentation Book includes: Complete lesson plans for introducing 37 books, computer analysis chart matching each book with a specific page and test of basal reading programs, procedures for record-keeping and assessment. Creative, time-efficient reinforcement activities. Student Workbook includes: Introductory sheets for each book, student record sheet, supply memory worksheets.

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<tr>
<td>444) I Love Library Books Teacher Presentation Book</td>
<td>25.00</td>
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<tr>
<td>445) I Love Library Books Student Workbook (1 ea.)</td>
<td>4.00</td>
</tr>
<tr>
<td>446) I Love Library Books Student Workbook (pkg. of 5)</td>
<td>19.85</td>
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Your World of Facts

AUTHORS: Siegfried Engelmann, Karen Davis, Gary Davis
RANGE: Third through fifth grade students, and remedial learners who read on at least the beginning third grade level.

DESCRIPTION: Your World of Facts is designed to supplement science and social studies programs, teaching key facts and relationships. The series was written in response to the problem that students are often so concerned with the vocabulary of science and social studies texts that they fail to understand the concepts. Simple charts and pictures present each set of facts, and a game format provides impetus and practice. The 40 lessons require 45-50 minutes each, but only 15 minutes of teacher-directed time.

COMPONENTS: Teacher Presentation Book contains guide information and instructions for each lesson. Student Workbooks are nonconsumable and contain 25 topics, including the solar system, the respiratory system, continents, oceans, and the internal combustion engine. Reproducible scoreheets. Reproducible certificate.

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<tr>
<td>448) Your World of Facts Teacher Presentation Book</td>
<td>25.00</td>
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<tr>
<td>449) Your World of Facts Student Workbook (1 ea.)</td>
<td>4.00</td>
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<tr>
<td>450) Your World of Facts Student Workbook (pkg. of 5)</td>
<td>19.85</td>
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Speed Spelling

AUTHOR: Judy Profit/Witt
RANGE: Learning disabled and retarded children who have not mastered grade school spelling skills.

DESCRIPTION: Speed Spelling is an individualized, phonics program designed to increase spelling speed and accuracy following a systematic development of sound-to-letter correspondence. A placement test determines each student's level. Each of the 92 lessons teaches word reading, word writing, and sentence writing, and contains instructional objectives and detailed directions.

COMPONENTS: Manual includes: Placement test. Cycling tests. 92 lessons with complete instructions. Adaptation procedures for classroom settings. Student Book includes a record of performance and is the only consumable part of the program. Word List Packet contains large-letter words and is reproducible.

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<tr>
<th>Component</th>
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<tr>
<td>252) Speed Spelling Kit, manual, 20 Student booklets, plus Word List Packet</td>
<td>74.85</td>
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<tr>
<td>253) Speed Spelling Student Books (pkg. of 25)</td>
<td>9.40</td>
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The primary objective of the program is to teach the administrative and practical research skills that are implied by the supervisor’s role, teach training behaviors, and consult on field implementations. The program will allow qualified candidates to earn money while attending school.

The program uses existing sequences with some modification. It includes:

1. A sequence on research methods.
2. A sequence on the Design of Instruction. The content will include the type of information that is needed for supervision, design, and field implementation.
3. A sequence on logical critiques and writing skills. The first will focus on critiques of research articles, policies, and arguments, etc. The second course will concentrate on reviews, summarizer, and editing.
4. A third is a grant writing course.

4. College-course teaching will be part of the first-year and second-year sequence. During the first year, the candidate will be part of a team involved in teaching one of the Direct Instructional courses (the candidate will be responsible for a specific part). Also, this course will be used to assess the candidate’s presentation skills and to provide individual remediation. During the second year, the candidate will engage in two seminars of college-course teaching, again in one of the Direct Instructional programs, including possible involvement in the Design of Instruction or teaching the supervisory practice.

5. The supervisory practice will be scheduled for two terms each year. These practices will focus specifically on in-classroom management of trainers and their students. During the first year, supervisors will be involved with students in the direct instruction practices. During the second year, the supervisor will focus primarily on the training of first-year doctoral candidates.

6. The supervisory session practice will be presented during two terms of the second year. The focus of these will be an extension of prescriptive techniques for dealing with observed problems, procedures for conducting in-service sessions, use of data for making decisions, policies and priorities, and topics, etc. The focus will be on very specific problems that the candidate required, in the spring term of the second year, to use field data derived from supervision to diagnose, execute, and take data on the effectiveness of the in-service remediation provided.

7. The third year will be reserved primarily for the dissertation and course pursuits related to the dissertation.

Di Conference Sessions Offered
Continued from Page 21
Theory of Instruction

Principles and Applications

By Siegfried Engelmann and Douglas Carnine
Published by Information Press, 1982
(385 pp/$29.95)

Note: This book may be ordered from the Association for Direct Instruction by members for $20, non-members $25. Add $1 for shipping costs.

Most educators have probably wondered at one time or another why there are so few apparent interactions among the massive body of instructional materials available to teachers, the large collection of educational research, and the few existing theories of instructional design. Instructional materials, more often than not, seem to be based upon nothing more sophisticated than their resemblance to other instructional materials. Much educational research is conducted in a vacuum, unguided by any uniform theory of instructional design, void of practical implications for the design of instruction, and often lacking any reference to materials of instruction. Serious practitioners of other disciplines, viewing this state of affairs from a distance, often conclude that education is in a state of chaos. The charge is not easy to defend.

Theory of Instruction: Principles and Applications, has the potential for bringing order out of the chaos. There are several features of this book that lead us to such an optimistic conclusion. First and foremost, Theory of Instruction explains in great detail specific instructional components for effectively teaching the widest range of both cognitive and motor tasks. It is, to be sure, a complicated instructional design theory, and in detail only those components of instruction that come before or after the actual design of the instruction—components such as the formulation of goals and objectives or the evaluation of instruction. The authors of such theories seldom offer more than a few pages of general observations on the actual design of the instruction, which should be the core of any instructional design model. Thus, it is not surprising that no instructional design theorist has applied his or her theory to the actual development of instruction in a way that even approximately what Siegfried Engelmann has done. Engelmann has applied his exhaustive and highly detailed instructional design theory to more than 30 widely used, published instructional programs that have been proven effective in time and time again. Not only has impressive research been conducted on the programs based upon Theory of Instruction, but many studies have been done on individual components of the theory as well. These studies are summarized in a later section of the book. Because of this unique marriage of instructional design theory, materials of instruction, and educational research, every educator should find Theory of Instruction at the very least immensely interesting, and potentially quite practical.

The book is divided into nine major sections, with 2 to 5 chapters in each section. The section titles are: Overview of Strategies, Basic Forms, Joining Forms, Programs, Complete Teaching, Constructing Cognitive Routines, Response-Locus Analysis, Diagnosis and Corrections, Research and Philosophical Issues. Different readers are likely to appreciate Theory of Instruction for different reasons. We can identify at least three different groups for whom this is probably true: advocates and teachers of Direct Instruction, people who aspire to design instruction, and other educators, including detractors of Direct Instruction. We will discuss possible values of the book for each of these groups.

Advocates of DI

Direct Instruction teachers and other advocates of DI frequently pose the question, "What is it, exactly, that makes DI work so well? What is the key element?" Some think it is a good practice. Others attribute the success of DI programs to teacher-directiveness and scripts. And still others believe it is group responding, or correcting all errors. The appeal of each of these over-characteristics of DI programs is strong, as is the appeal of all of them taken together. Yet, it is not difficult to envision a largely ineffective instructional program that is teacher-directed, scripted, and highly structured, so that requires students to respond together, prescribes that every error be corrected, and provides a great deal of practice. Why, then, do these programs work?

In an interview with the Eugene Register Guard (Dec. 4, 1977), Engelmann himself answered this question by saying, "There is no big thing. It's all pick, pick, pick, pick details. Direct Instruction is just attention to a lot of tiny details." Readers of Theory of Instruction will begin to appreciate the massive number of details that are controlled in DI programs, just how tiny some of those details are, and why each is important. Readers will come to appreciate that simply changing the order of two examples in a DI program can cause unnecessary confusion for some students and why. Details on some of the same DI teachers may be tempted to view as unnecessarily laborious will suddenly reveal themselves to be among the hundreds of small, but critical, parts that account for the success of the whole. Nothing short of reading Theory of Instruction from cover to cover will account adequately for the effectiveness of DI programs. Readers should be forewarned that the strong commitments they may have to more global characteristics of DI programs, such as reinforcement techniques or model-lead-test patterns, will seem simple-minded in retrospect.

Instructional Designers

Instructional designers are an obvious audience for Theory of Instruction. As the title implies, the book is rich in both instructional design principles and examples of how those principles should be applied to designing lessons covering a broad range of subject areas, student performance levels, and to a lesser extent, instructional delivery modes. (Although many of the examples illustrate teacher-delivered instruction, we ourselves have had few problems applying the principles to computer-based education.) The larger percentage of the book consists of highly detailed, how-to-do-it sections.

It should not be assumed, however, that after having read Theory of Instruction, one will necessarily be able to think in design lessons that approximate the effectiveness and efficiency of Engelmann-generated instruction. There are several reasons for this. First among them is the fact that simply mastering the large number of principles and the various conditions under which each applies is a massive undertaking. That, for one thing, probably requires at least several readings of the book and several corrected attempts at applying the techniques.

At any given point in the instructional design process, several design principles apply. To be effective, for the very least, the designer must recognize which principles apply at the moment, and the conditions that control the specific application.

Continued on Page 25

Adding Quality to the Formula for Educational Equity


This book presents the findings, conclusions and recommendations from a two-year study by a blue-ribbon panel of the National Academy of Sciences (Commission on Behavioral and Social Sciences and Education) of practices that have led to the classification of a disproportionately large number of black and other minority pupils as educable mentally retarded (EMR). The findings and recommendations have far-reaching implications for all educators committed to excellence in instruction. The study was commissioned by the Office of Civil Rights (OCR) to obtain guidance for monitoring activities.

OCR suspected that the tests used for identification were biased in some way against minority pupils. What the Academy panel found has far greater significance for education.

The Academy panel followed the trail of disproportionate placement from the tests given, back to the reasons for the initial referrals for testing, and finally back into the regular education classrooms to the nature of the instruction provided that causes so many minority pupils to be referred for special education services.

The panel concluded that regular education practices could be enhanced in quality so that a great number (if not the majority) of the future special education placements for EMR are prevented. The recommendations include an emphasis on direct instruction and behaviorally oriented teaching methods that recent research has demonstrated can be effective in preventing failure in regular education classrooms.

Some highlights from the panel's report include:

"... We have found little evidence for test bias, in the technical sense of the term, but we recognize the distinction does not address many concerns about bias as the term is used in public discussions. What is needed is evidence that children with scores in the EMR range will learn more effectively in a special program or placement. As argued in more detail in Chapter 4, we doubt that such evidence exists," (p. 61).

In summarizing the research on effective teaching the panel cites several school projects, and states:

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The Theory of Instruction

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tion of each principle. The burden of single-handedly developing the rigorous theory of Engelmann and Carnine are telling us likely to discourage some potential instructional designers from even attempting to apply Theory of Instruction principles.

Once an instructional designer has mastered the basic to-do list of what is known about Theory of Instruction, he or she is still faced with the greatest difficulties associated with applying those principles. The designer may fail to identify correctly the features shared by the instances of a given concept or fail to recognize those features of a task that imply the most efficient initial teaching presentation, or fail to overfit sufficiently the steps in a cognitive routine. Some people will have trouble identifying the most significant minimal discriminations or even the smallest invariances, and discriminations for many concepts.

These comments are not intended to cast instructional materials produced by trying to apply Theory of Instruction principles. Rather, we are attempting to make the burden of doing-to-do principles seem as primarily intuitional or as "glimorous" in any sense will not find much rein-

The Theory of Instruction is an innovation in reasoning about learning and teaching. We use Theory of Instruction in an attempt to understand instructional processes of the student little about instructional processes. For example, the question of what instructional processes are there in a given instructional design that cannot be justified on the basis of a theory which accounts for facts about learning, teaching, and knowledge systems.

In short, the benefit of Theory of In-
struction is likely to be much greater for those educators who are teaching generalization, and instructional designers.

Theory of Instruction is based upon a theoretical framework that appears to have been most useful to educators. It is not. The reason is quite sim-

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**Theory of Instruction**

*Continued from Page 25*

For every educator, the most important and most interesting aspect of Theory of Instruction is the high level of detail from which the specific applications of instruction design, and the scope of that detail. Through this comprehensive and original treatment, the nature of the details may not be as important as simply the presence of details, details upon which honest, scientifically valid educational research can be based. If the efficacy of a particular detail is in doubt, the stage has been set for conducting meaningful, replicable research on that detail.

**Conclusions**

We have made some rather ambitious claims about the field of instruction. After several readings of the book, and after frequently finding resolutions to what at first seemed like major difficulties, and particularly after many applications of Engelmann and Carnine's principles to both instructional design and research problems, we are convinced that our claims are not, in fact, inflated. Theory of Instruction, in our most thoughtful opinion, should become a classic in the field of education. This point of view can only be appreciated by a focused effort to read, understand, and apply our principles. The only way to do this, without being sophisticated—have difficulty understanding this book. Of those who have read it, few have attempted to develop original curricula or conduct research based upon its principles. Mastering Theory of Instruction requires substantial effort and commitment, with no guarantees that its principles will be interpreted according to the authors' intentions. We recommend, however, that anyone interested in elevating their classroom from the depths of mysticism make that effort.

Reviewed by:
Robert C. Dixon
Martin A. Siegel
Computer-based Education Research Laboratory, University of Illinois at Urbana-Champaign

—

**Adding Quality in Education**

*Continued from Page 24*

A number of large scale studies...identify a number of components of instruction and process that contribute to good academic performance in schools with high proportions of children receiving free or reduced-price lunches (both white and minority). These studies, all conducted in large numbers of classroom conditions on a set of descriptions of "direct instruction" (see Rosen- shine and Berliner, 1979) that include high content overlap between learning activities and criterion (test) tasks, built-in assessment tasks, assessment of instruction, increased complexity in instruction, increased pacing, and the use of motivating management systems (i.e., some form of continuous evaluation).

...behaviorally oriented, direct instruction approaches have clearly emerged as the direction of effective practice in research to date, although there are reasons to remain open to change. (p. 89).

Current special education laws and regulations (P.L. 94-142 and Sec. 504) stipulate that pupils not be placed in special education programs unless they have been assessed by professionals. It is demonstrated that "the education of the person in the regular environment with the use of supplementary aids and services cannot be achieved satisfactorily." [34 CFR 104.4(a)] see also 20 USC 1412(5)(B), 34 CFR 300.550] The panel listed four crucial points for demonstrating that such separate education is justified.

1. "there should be some evidence that schools are using curricula known to be effective for the student in question" is no longer a problem.
2. "there should be evidence that the teacher has implemented the curricu- lum effectively for the student in question" is no longer a problem.
3. "there should be objective evidence that the child has not learned what was taught." is no longer a problem.
4. "there should be evidence that even elementary problems were detected, systematic efforts were made to locate the source of the difficulty and to take corrective measures," (pp. 69-70).

The panel's view is that a referral for special education placement should not even be filled until the above requirements have been met. To do so might jeopardize the child's civil rights and the existence of a child rather than a school problem. Only when the school has provided instruction proven to be effective can it look to the child as a possible source of the problem. Instead of labelling children to be "at risk" until the above requirements are met, pupils in ineffective educational practices, ineffective practices should be improved in order to avoid labelling children.

Furthermore, the panel appears to be concluding that blaming the tests for the disproportionate numbers of minority pupils placed in special education programs is following a red herring. But the panel was not thrown off the trail. The trail leads back to the quality of education initially provided in regular education classrooms, and its failing of minority pupils.

The panel concluded that educators have not failed minority pupils intentionally. To avoid this misinterpretation of the panel's readings of the literature, the panel is well aware that its recommendations place a heavy burden of responsibility on the schools. This is inten- tionally. The burden is essentially one of educating all children, and it is one that educators and schools as institutions have already accepted. Our intention has not been to add to that burden or to denigrate teachers, schools, or special education. We have argued instead that educators and educational institutions, who have had the opportunity to gain many educational sources, have become distracted from this central responsibility. Concerns over assessment procedures, ethnic disproportion in special education, and related issues are important and necessary.

In the review, the sense of the goal of our recommendations is to refocus the attention of educators, policymakers, and the public on the traditional goal of the schools: providing the best possible education for all children," (pp. 113-14).

By Robert C. Dixon and Martin A. Siegel

**A System for Reading Theory of Instruction**

*Continued from Page 10*

time before teaching and liberation dur- ing a very small group time to give greater opportunity to focus on the students' performance. There is general agreement coming from at least two studies (Cronin, 1980; Datta, 1981) that the most important long-range considera- tions for teachers in new implementa- tions are: (a) higher student achieve- ment, (b) teachers' own improved performance.

Using rather simple guidelines, then, teachers may begin to see how such a program would be different from those done here on a variety of instructional materials. They can start to see how many of the activities in sections of the program, how much practice the students got on the skills, and the level of detail provided to the teacher for each of the exercises. This information could help determine how compensatory education students will fare with the program and how successful the teacher will be in using it.

**References**

**Comparison of Palo Alto & DISTAR**

*Continued from Page 10*

JOIN THE ASSOCIATION WE NEED EACH OTHER
Curriculum Complaints from Parents

A growing number of parents today are expressing concern about curricular materials. Often, these complaints are smokecreens for other issues they wish to raise. Nevertheless, a group of vocal, literate parents can cause much strain and tension for the administration and teachers in an otherwise positively-fueled school year.

Years ago, such a group in South Dakota used as their curriculum target the DISTAR Reading I Program. They complained about the objectionable practices DIスター was teaching their children. In fact, the curriculum was based on a Communist plot, because it contained stories about a "Fat cat," supposedly representing the capitalist system.

Many of us working in that school system felt that the primary concern of the parents involved nothing of the size. Follow Through Program that was bringing Native American girls into the classroom. The parents who were American girls were being taught much as their White peers. These objections were never clearly stated. Instead, the reading curriculum became the target. It caused a great deal of havoc in the district, especially for the administration and the teachers.

I have just experienced another controversy-filled year, in a different school district, and I would like to make some suggestions regarding how to handle these curricular issues to minimize stress and strain.

To begin with, establish a parent advisory group—a Lay Curriculum Committee. This group should not be completely composed of like-minded members. Rather, it should represent a cross section of the community. A majority of the members should be a reasonable and supportive of your school program, but you should also include people who are critically antagonistic groups (i.e., parents who have concerns about secular humanism or industrial education, structured learning environments, ability grouping, phonics-based reading approaches, community service activities, and/or special education). We found that without this cross section in the Lay Curriculum membership, the decisions regarding curricular matters were not accepted by the community at large. The committee should be appointed, or at least sanctioned, by the local Board of Education. Ideally, the Lay Curriculum group will provide a forum for good discussion.

My second recommendation is to develop specific procedures for handling complaints about the textbooks, films or any other educational materials. These procedures should include a written complaint form, a committee for investigating what they find objectionable, this report can then be submitted to the Lay Curriculum Committee for study. All of the members of the committee should first study the target materials. This should be followed by a presentation from the teacher(s) using the material, or a librarian or counselor (depending on the issue), which describes how the materials are presented and what their goals are for their use. At a later time, an observation may be scheduled of the materials in use. Before this observation, the teacher should brief the Lay Curriculum members on the objectives of the lesson to be taught and explain the purpose behind some of the instructional techniques to be used.

We had a librarian present at our Lay Curriculum group. Several library books were under fire. Parents were objecting to stories about families going through divorce and other common problems. The librarian pointed out that few students read these stories, but that they were helpful in role playing. She was experiencing the problems. The librarian's presentation was most effective, and the Lay Curriculum Committee recommended that none of the books be removed from the shelf.

My final recommendation is to set up procedures and guidelines for the Lay Curriculum Committee to review textbook material it is being asked. This calls for more proactive planning, but it has a number of benefits. If your parent curriculum group has an opportunity to learn about the curriculum you are selecting and to voice concerns and preferences, they can serve as an informed resource if objections are raised later on.

The Lay Curriculum Committee may be particularly helpful when introducing a Direct Instruction program for the first time, since these programs are characterised by some unconventional instructional techniques (e.g., choral group responses, hand signals, specific correction procedures). Parents should be informed not only about the rationale for these instructional techniques, but also about important developmental characteristics (i.e., clear explanations that give children a strategy to use when they work independently on new skills, and information with sufficient review for retention). Encouraging and paying for a representative from this group to attend a teacher training session or two (such as the Annual Direct Instruction Conference) might be one means for helping the Lay Curriculum members become better informed. The representative could then share with the full curriculum group what he/she learned from the training. Lay Curriculum members, best with other parents about the things that are most important to them regarding programs. Possessing this knowledge now may yield dividends for you the next time disgruntled parents bring a complaint about the curriculum to you or your staff.

Edward Huth Kalamazoo, MI

Dear Ed,

The problem in working with students in remedial situations is a lot like a situation in which someone presents you with an entire beach. The sand on this beach represents the spectrum of abilities of the learner. You are given enough time to pick up possibly three bucket-fulls of sand. And, of course, you are expected to select the right bucketfulls. In other words, the schedule for working with remedial students is usually impossible, in the sense that it doesn't provide enough time to address all the skills and provide an appropriate remedy. After all, students in the sixth grade are typically deficient in nearly six years of skills in three or four subject areas. So, even the best strategy must be some sort of compromise.

Here's a reasonably effective way of handling the situation:

1. Don't make a judgment about the teacher's ability to teach and manage. Usually a simple observation will disclose whether the teacher manages or demurs, whether the teacher presents "direct orders" to the students or quite assigns low-profile work to occupy them.

2. Don't put weaker teachers (those that demarcate and are into the low-profile game) into the remediation programs. The reason is that these programs require a lot of teaching behavior and the teacher, without receiving a lot of monitoring and training, will strike out and look overwhelmed. (In other words, O.K. because it requires less teaching behavior.)

3. With weaker teachers, work on any serious deficit in mechanical skills (handwriting or spelling, for instance) and Your World of Facts. These programs require far less teaching behavior and far less training and demand far less of these programs will shape the teacher's teaching behavior.

4. If the teacher is not terribly strong and the students are relatively weak in both decoding and comprehension skills, the best placement is probably reading and spelling mastery 3 or 4. This placement works well with good teachers, also, and is an efficient with a decrement because it permits students to develop both comprehension skills and decoding skills. The students should perform on at least lesson 40 of Decoding B (decoding within the specified error limit) for this placement. But Reading Mastery works well for these students because it does not require as much good teaching behavior as the comprehension programs do. One reason is that the skill development in Reading Mastery is somewhat slower and tends to center more around things the students understand.

If teachers are strong, use the comprehension programs. But even with strong teachers, monitor the teacher's progress and pay particularly close attention to whether the teacher is bringing the students to a good criterion of performance—whatever that may be. Students are doing things correctly on the first trial about 70% of the time. It's not good enough. It's not good enough. The first-time correct percentage must be relatively high or the teacher is unintentionally providing the students with information that they are failing, not succeeding.

5. If students are seriously deficient in mechanical skills, such as handwriting, always address these skills first (or possibly in connection with the implementation of the program, such as Reading Mastery 4). The reason is that these skills in these pre-empt students from the development of the complex skills. One reason some students can't write answers to questions is that they write at such a low rate that they probably forget what they are trying to write a problem that will be encountered in both Comprehension B and Comprehension C. The solution is to start with a simple dictation or copying program, the objective of which would be to bring students to a criterion of writing at least 30 words a minute. Now we can proceed with tasks that require writing skills, and we have ruled out one possible cause of "failure" that existed previously before.

This summary certainly hasn't exhausted all the possibilities; however, I think it presented the "rules" that pertain to the most common problems associated with placing these students efficiently. Let me know how it goes.

DIRECT INSTRUCTION NEWS, SPRING, 1985
Engelmman Compares Traditional Basals With

By Siegfried Engelmann

Reading Mastery 3 and 4 are designed to solve the typical problems students experience when they first attempt to decode, or for guaranteeing that students receive regular practice in applying decoding skills to a variety of materials (Beck & McCaslin, 1978, Chall, 1877). Typically, students do not understand silently. Whether they read accurately is not determined, either by their silent reading performance, or by the written comprehension responses to the written comprehension questions.

2. Students do not provide adequate teaching for comprehension skills. Part of the problem relates to the categories that have been classified as “non-teaching” skills. The comprehension skills. There are hundreds of important comprehension skills in addition to those listed in the traditional-balas format. These skills are not taught, except incidentally. Also, the targeted comprehension skills are taught in a very poor manner. Typically, the teaching for a particular skill is not coordinated, which means that once a skill is taught, students do not continuously use the skill. Also, the introduction is typically ambiguous (with the presentation being consistent with more than one possible interpretation). For instance, in most programs, fact and opinion questions are treated as oppositions, which they are not. The teaching does not typically suggest that students learn with an opinion that was a fact, or that it is fact that the person had a particular opinion. Reading Mastery is probably the only program around a “spiral curriculum” format, in which different lessons deal with different topics. Typically, students are not taught to see the school day's perspective between the two or more examples on a particular topic (such as fact versus opinion).

3. The skills are not integrated. The lack of integration occurs on the level of daily lessons and is observed in the frequent discrepancies between the workbook items for the lesson and what the students are taught. As a rule, students are not tested on what they are taught in particular lesson. On the level of lessons-to-lesson integration, the programs seem to operate from the assumption that the student's vocabulary is not necessary. Typically, the student readers are analogies, with relatively uncontrolled sentence forms, and no careful gradation from one author or section to the next. (Vocabulary and sentence forms are not systematically introduced, practiced, and then integrated.) The programs have no review tracks or activities that systematically review what was taught (word meanings, information, decoding, words, skills—such as drawing inferences or using “context clues”). And the programs have no performance criteria or solid expectations for either the students or the teacher (Lessons or expected units of progress are not specified.)

4. Perhaps the most distressing aspect of these programs is that most stories—the heart of the program—are not very interesting or highly motivating. (Generally, the good basal stories introduce far more vocabulary and are therefore much more difficult to decode than the poor stories, which often require many inferences, because important

The Solutions

The problems imply the solutions. If the program is to overcome the problem of inadequate decoding, it should provide adequate and systematic teaching. The program should also provide adequate teaching for comprehension skills, which teach all new words, syntactical constructions, and facts that are needed if students are to understand the stories. The program should provide for the systematic integration of skill into the stories. Finally, the program should revolve around stories that are interesting. The stories, obviously, should not be part of an anthology, because too many details must be given. Different types of inferences or comprehension questions supported by the text, the specific comprehension questions, the syntax, the integration of facts and information, and interest level of the stories.

Next, students read selections on all regular lessons, students read a main selection, which is usually a chapter of a longer serial. The chapters are designed to end on a cliff-hanging note (to promote interest). Students read part of the selection orally. They have an “error limit” for the oral story reading. If they read with the error limit, 15 students receive oral points. Also, during the reading of the selection, the teacher asks specified comprehension questions. These questions are keyed by circled letters in the student reader. When a student reads to the end of the sentence that is followed by a circled letter, the teacher asks the question for that letter. During the oral reading of this main selection, the teacher asks between 15 and 30 questions. On the lesson, students read information passages before reading the main story. These passages present facts and rules that relate to what they are reading. For instance, if students are going to read a selection about a flea circus, the information passage presents information about the fleas and how they are trained.

Following the structured work, students do their independent work. They are presented with around 40 items each day. The items deal with the information that has been taught—vocabulary words, facts and rules from the information passages. There is a direct relation to the main story. The students' independent work also includes a review section. These tests important information skills (such as map skills) taught earlier in the program.

Also, an examination of the daily lessons discloses the major objectives. It does not suggest the degree of control and integration that occurs within the program. Because such control is not exercised in other reading programs, I would like to consider some of the things that may escape the casual observer.

Easy Reading Material

As I indicated above, our greatest concern is setting up the main reading selections of the program so they teach new things, (new words and new information) and so they are interesting. I mentioned that traditional stories of high interest usually have elaborate vocabularies (because the author is explaining things that are happening in a way that permits the student to identify with the events), while the stories with simple prose usually require incredible inferences on the part of the reader. The reason is that the author has left out important details in an attempt to make the prose "simple." Below is a passage from a biography of Jane Addams written by Helen Peterson. It illustrates the amount of inference that is implied if the text appears to be "simple."

One day in Spain, Jane knew what she would do. She told Ellen, "I will render a house in the poorest part of Chicago. I will live with the poor people and be their neighbor." What will you do there?" Ellen asked.

"Whatever I can to help them. Oh, Ellen, let us together. Will you join me?"

"I, I . . ." Ellen stammered. Then suddenly, she was smiling. "Yes, I believe all men are brothers. I'd like to live with them.

She hurried home to start her set-dealer house.

That prose is not the type that grabs kids. A story of a love affair is unintentionally very difficult for a number of reasons. It introduces names the students have never heard of (University of Oxford, but mentions them only once, which means they are irrelevant). The strategy that some students will develop is to simply read over all strange names with the understanding that they are probably incidental and probably play no role in the story. The problem with this strategy is that it will not help the student understand the story. The "strange name" that is introduced may both recur and may have an important bearing on the story. So the students are punished either way—punished if they work on the strange name, and punished if they ignore the references, or punished if they do not and later fall to comprehend what is happening in the story.

But the basal excerpt has many other problems. It flits from set-
along with only their first above the water. Ooloo saw the killer whales, but she didn't say anything to Oolok. (Reading Mastery IV, page 67.)

This passage is less difficult for students than the Lane Addams except because it gives information about why the characters do what they do, and how they feel. Fourth graders have no trouble identifying with characters if they have enough information about how the characters feel and why. Because the passage provides that information, it does not require incredible inferences to transform the characters into people they could identify with.

Below is an excerpt from one of the early Reading 4 stories. The characters are Oolok and Ooloo, Eskimo siblings, and a full grown polar bear named Usk, which the children had raised from a cub and which they were now supposed to play with. Despite their father's other warning about not playing on the ice shelf, Oolok and Ooloo decided to play on the ice shelf, and began to play on an ice chunk, which drifted north, toward the open water, where the killer whales waited for any unhappy prey that tried to venture toward the open sea. The ex- cited and careless hunters are drifting toward the killer whales.

Oolok looked very frightened and cold. His eyes were wide. Ooloo tried to hold on to him and keep him from slipping off. "Are we going to die?" he asked.

"No, we're okay," Ooloo said. She was lying. She didn't see any way that she and Oolok could survive.

Then suddenly the wind died. The waves rolled and continued to push the ice chunk beyond the ice shelf. But the big wind had stopped. Rain and hail started to fall. The rain and hail made the ice shelf wet. "Help!" Ooloo shouted. But she was starting to lose her voice. "Help!" Ooloo said. She said to Oolok, "One, two, three, help!" They repeated the shout again and again. The wind was gone, and the rain and hail stopped. Still the rain and the hail pounded down. Even though the rain was cold, it was much warmer than the ocean water.

After half an hour, the rain began to slow down. When it had been coming down very hard, Ooloo had not been able to see more than a few meters. Now she could see where they were. They were ice chunk was near the top of the C-shaped ice floe and it was still moving north. Ooloo looked to the ocean, past the ice floe, and she could see them—five or six of them. Sometimes they would4

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Reading Mastery 3 & 4
Continued from Page 29

The early river boats depended upon steam for power. Their engines were heated by hot water in the boilers. The water changed to steam. Steam, under pressure, caused the boiler to move. The movement of these parts, in turn, caused other parts to move. One very big wheel was turned. This large wheel moved the large paddle wheel.

The syntactical problems interact with the vocabulary problems and render the passage very difficult for the average or below-average student. (Questionable words include: heat, steam, upon, roof, houses, and caused.) Aside from the vocabulary problems, the passage introduces gerunds (listening and watch- ing—acting as an actor to perform these actions), passive voice, and/or construction, needless asides, and question-able use of which.

To solve the syntaxis problem, Reading Mastery 3 and 4 present a unique approach. In syntaxis (to go along with the controlled vocabulary and controlled information), At the beginning of level 3, sentences are designed so that the first part designates something that is happening and each successive part designates something that adds more information. No "loops" or ambiguities are possible with these sentences, which means that the subject is not going to become barriers for student understanding. Sentences like these would never appear early in a program because they break the rules:

"When he went home, Jokey ate four cans of dog food."

"Jokey, when he finally got home, ate a huge meal.

A sentence is a "no-no" because it does not name the actor in the first part of the sentence. (It should say: "When Jokey got home, he..." because this order presents the information unambiguously.) The second part of the sentence does not add more information and creates an unusual word order, which makes the sentence potentially confusing. The only violation to the progressive-meaning structure of sentences occurs with speeches that the character says. In these sentences, the name of the speaker comes after the quote. However, these are set up so that (a) the speaker's identification quote makes it clear who is talking; or (b) the content of what is said makes it apparent who is talking. Being Jokey, he's an excerpt from a series about Jokey, a bogle who is very fat because he eats everything.

"When we cat peaking thro' the fence on the other side of the yard. That's right," the cat yelled. "Everybody thinks I'm so ugly, but I'm beautiful next to you."

"Jokey tried to pull in his big belly so that he wouldn't look so fat. It didn't work. His belly was still touching the ground. I can't help it if I'm fat," Jokey said. "It's not my fault."

"Wrong," the cat said. "It's your fault. If you don't eat less, you will be fat."

It is possible to identify who is talking by referring to content of what the character says or by clues that are pro-"vided through the preceding paragraph. As students progress through the program, new syntactical forms are systematically introduced. For instance, passive voice constructions are introduced in level 3. The introduction of these forms is easiest because the verbs functions in the same way an adjectival function

"She was finished" is structurally and semantically similar to "She was carried.

When each type of syntactical form is introduced, students receive "massed practice" in dealing with the new form. Below is an excerpt from a story about a bank, an imaginary place in the land of Hobocho in which words are sewer manholes, and the people the Hobos who use the words. The most frequently said words are in the first two and the least frequent are said in the last two. When the people in Hobocho started to do things which was new behavior for them, a great turmoil occurred in the word bank. The excerpt below takes place on the day that new words are announced for the words.

At 9:00 announcements began and they were not finished until late at night. Nearly every word in the word bank was moved. Sometimes whole rows of words were moved. And some moved more than 100 rows. The most amazing announce- ments were made all day about 10:30 in the morning, after two or three hundred words had been moved. Here was that announcement: "The words run and walk will move from row 110 to row 10."

Reading Mastery IIIA, page 285,

It is important to note that the passage provides repeated practice with the new form. The sentences tell about two Moses, a book, and a bug. The passage begins with a sentence that uses were not finished, which is a particular difficulty for most students. Note that the introduction of the passage forms some earlier-taught vocabulary words (such as announced). The passage deals with time notations. The passage supports inferential comprehension questions. The passage was written on the word-frequency rules that govern the seating in the word bank. And the passage presents a sentence that describes what happened, a sentence form that had been introduced earlier. Although the inter- twining of the sentence context may be less visible to the casual observer, they are discussed by careful analysis of the test. Everything that had been taught is re- forced in the test material, and the text material provides sufficient practice with the various teaching objectives to

assure that students become firm in applying all the targeted skills.

Comprehension Skills Revisited

When we look at the problem of comprehension as it relates to the word-by-word, sentence-by-sentence progression through a passage, we realize how fragile the traditional comprehension—skill categories are and even worse, how inadequate they are.

There are only three major "categories" of comprehension skills: (1) the structural details that are unique to the written page (and that have no counterpart in spoken language); (2) information that is treated literally, and (3) in- formation that promotes some sort of in- ference.

Structural Details

Included in this category are: dots or spaces between paragraphs that indicate some "time lapse" or lack of transition, italicized or bold-faced words that are to be stressed or not, ellipses follow- ing partial utterances (___) to indicate that the person stopped talking or was interrupted.

Each of these details is taught in Reading Mastery 2 and 4. For instance, students learn the rule that dots at the end of a paragraph indicate that part of the story is missing. Students then read to the dots, interpret them, read the following part of the story and then draw a conclusion about which part of the story was missing. If one scene is in a school, and the next is in the character's home, students conclude that the missing part would tell about the character going home.

Similarly, students learn to interpret bold-faced words by stressing them. If a character says, "I don't want to do that," students say the speech the way the character said it, stressing the word that.

Again, students receive repeated prac- tice in "interpreting" bold-faced words.

Literal Comprehension and Inferential Comprehension

The test for literal comprehension is simply: Do words in the story have to be the way they are in the order they are in? If so, then literal comprehension. The test for inferential comprehension is to see if they are the way they are in the order they are in. Students therefore receive repeated prac- tice in distinguishing between the two.

In levels 3 and 4, however, students also learn and apply various inferential comprehension skills. There are two basic types of inference—that are based on a deduction and those that are based on induction. For deduction, the rule is specified and is then applied to in- stances. (The cat who talked to Jokey presented such a rule. The more you eat, the fatter you get. This rule supports the rest of the deduction. You ate more, so you'll get fatter. Inductive inference does not present a rule. It simply presents ex- amples that permit future predictions. For instance, let's say that a cat in a story lies again and again. These in- stances suggest the rule: He is a liar. In a new situation, we can predict how the character will behave. He will probably lie."

The traditional comprehension categories of cause and effect, relevant detail, context clues, etc., make very little sense within this framework. In the example about the liar, for instance, how could we draw a conclusion about future behavior without attending to context clues? How could we attend to context clues without perceiving relevant detail? When the character appears in a new situation, we can predict how he will behave. The behavior is determined by the context clues which were perceived and remembered. The whole point of this is to show the limitations of the "skill" approach to comprehension. The problem is not the lack of skills, but that they teach skills within a more comprehensive frame- work. It is the author who figures out the various inferences or either deductions or inductions (not always by labeling them, but by re- ferencing the rules that govern the various inferences in the story). At the beginning of level 3, students receive repeated practice in per- forming these inferences. Figure 1 shows an example from worksheet 13.

Deductions are applied to a variety of content, throughout levels 3 and 4, in- cluding content in which the "rule" that deduces the answer is embedded in a story. For instance, the passage below is the opening paragraph from level 4 serial.

"Going places with Grandmother Esther was fun, but it was also embar- rassing. It was embarrassing because Grandmother Esther had a bad eye, and she talked in a very loud voice. She talked so loud and the longest about invention. So when Leonard went to the museum with Grandmother Esther, Leonard was ready to hear a lot of talk about inventing. (Reading Mastery IV, page 121.)"

Questions such as "How loudly will she talk at the museum?" and "Why?" are derived through a deduction (and are asked by the teacher). The questions sometimes apply to a variety of complex behavior. In the serial about Leonard, for instance, Leonard does not know what the electricity switch that automatically turns off lights in a room that is empty and turns on the lights when somebody enters the room. During the first afternoon of the invention fair, Leonard is disappointed by the lack of response to his invention. The Grandmother Esther explained:

"Things aren't always what they seem to be. Smart manufacturers will never let you know that they're in- terested in your invention. They're smart. They know that you'll want more treatment for your invention if they're very interested. So they'll act as if they're not interested. Don't let Continued on Page 31
then food you. The ones that seem the most interesting are the ones who will really want to buy your invention.” (Reading Mastery 4, page 158.)

The next chapter of the serial tells about the land of the fair. The excerpt begins with one of the many complex interactions that are based on the "rule" that Grandmother Esther had presented. The excerpt begins when manufacturer's representatives casually approach Leonard's booth.

Grandmother Esther whispered, "Leonard, they're going to try to make a deal with us. Let me do all the talking.

The man and woman approached Leonard's display. They stopped. They didn't smile. They just stood there.

"Hello," Leonard said at last. The woman said, "Do you have a patent on this device?"

"Yes," Leonard replied. The woman said nothing for a few moments. Then she said, "I'm with ABC Home Products. The woman continued, "I don't think many people would be interested in an invention like yours. But I may be able to talk you into working out a deal. But that deal must not involve a lot of money."

Grandmother Esther pointed to the large clock in the center of the hall. "It's already after eleven o'clock," she added haltingly. "We're going to be very busy. This evening we're going to win first prize and one of those video boas."

The man and woman, who are interested in this invention, if you want to make a deal, you'd better talk about a lot of money, and you'd better start talking about a lot of money.

The discrepancy between the woman's speech and her motives are explicable in terms of the rule that Grandmother Esther had presented earlier. Although these "inferences" of this type are common and important, how do we categorize them in terms of traditional basal classifications? I don't know of any category that deals with event behavior versus real motives.

Inductions

Just as there are thousands of possible deductions that deal with anything that can be expressed as a "rule" (from the rules about how words are seated in the word bank to rules about the discrepancy between what manufacturers say to inventors and what they really think), there are thousands of possible inductions. Various types are presented in levels 3 and 4. The range from simple examples to those that are very complex. One of the more complex inductions occurs in the Leonard stories. The readers are asked to find out how Leonard solves different problems in designing a workable electric eye device, the serial ends with Leonard being a successful inventor (after winning second prize and making a million dollars in products). In the last chapter of the serial, Leonard and his mother go to the store. As they approach the dried fruits section of the store, his mother complains because she must put down the bags and search for her key to the trunk. Leonard examines the trunk. The trunk of the car is due.

He drew two little circles in the dust. One circle was on each side. The two books looked at each other, smiled, and said, "I have figured out the problem which will solve your problem.

Now it is your turn to think like an inventor. See if you can figure out the device that Leonard was thinking about when he told his mother that he could solve her problem with an invention. The end. (Reading Mastery 4, page 167.)

To solve the problem, the students must apply what they have learned in previous lessons. A spotted lid figured out how to make the trunk open in a way that would occur only when someone opens the trunk. This task is inductive. (By the way, during field trips of the program, most students came up with very clever inventions.)

Perspectives

Cutting across both inductions and deductions are perspectives. These are perspectives based on importance (with a person responding one way to things that are important to the person; another way to things that are not important), perspectives of size or distance (with some things looking big when viewed from one perspective and small when viewed from another), perspectives of time (with a given time period apparently short to one person and long to another), and perspective of view-point (with the reader receiving information about what one character is thinking, but not what others are thinking). Each perspective is taught in levels 3 and 4. In level 3, students learn about size and distance perspectives through a serial about Naram, a little girl who shrinks to the size of a drop of water. She learns many things about being small, such as the rule that very small animals are not hurt if they fall from high places, and that their voices become higher as they become smaller. She has adventures trying to drink from a drop of water (which has a skin around it that prevents problems when she tries to penetrate the drop). The story was transferred to the reader by indicating how large things look to us and how large they look to Nancy. (For example, students indicate how small a crumb of toast looks to us and how large it could be for Nancy if she held it.)

Other viewpoints are presented in the level 3 serial of Herman the Fly. Herman wanders into a jet plane that travels all around the world, stopping at different places. Herman has different adventures. Things that are seen through his eyes are juxtaposed with events seen through the eyes of the passengers on the plane. The excerpt illustrates one of the old perspective switches. Herman is caught in a spider web as the plane approaches Jackson.

Herman gave a great buzz with his wings. He gave the hardest buzz he could make. Suddenly, he was in the air. With some sticky stuff still on his legs.

Get out of the dark, Herman thought. He flew from the closet to the bright parts of the jet. A moment later, Herman landed on a warm red and rubbered his front legs together. As Herman sat on the seat back, he did not remember what had just happened. For Herman, things were warm and red. And he was tired. Time to nap.

For the passengers it was a time for excitement. Look off in the distance. The green strips of land and a great mountain. "Look," they said as they crowded near the windows. "Japan." (End of chapter, Reading Mastery III, page 243.)

The culmination of all the perspectives and all the information presented in levels 3 and 4 is the last serial in level 4, a 38-chapter story about Al, who was a very poor student, and his sister Angela. They encounter a strange old man who operates a shop on a strange street in the city. The old man has magical powers and takes the youngsters on trips to exotic places, but the trips are contingent upon Al and Angela being able to pass a test on the information learned from each trip. Through different adventures, all perspectives are taught, and trips are made into a new perspective story context. On Al's first adventure, he finds himself in a small car, driving along at a speed of more than 180 miles an hour with the engine screaming and wind roaring. Suddenly a jet speeds past the racing car.

The old man said, "This car is really very fast. Let's get into something that is more secure."

"I think it's better to go home," Al yelled. "It's getting late and ..."

Suddenly, Al was no longer in the racing car. He was in the front seat of a jet plane. Everything was quiet inside the plane. Al looked out the window. He could see the racing car below.

When Al looked at the speedometer, he couldn't believe it. One thousand kilometers per hour. (Reading Mastery IV, page 321.)

At the end of the chapter, Al and the old man were hurting through space at the speed of light. The old man pointed to a far off galaxy and said that at the speed of light it would take 200 million years to reach that galaxy. The old man Al never following this trip consisted of one question. What does it mean to go fast? Al explained that in the racing car, he felt that he was moving at a frightening speed, but the speed of light is actually very slow when you consider how long it would take to get to places that are far off in the universe.

In later adventures, Al becomes so small that he can observe molecules; he goes to Neptune and Saturn (where air is a solid); he and Angela go to the bottom of the ocean where they observe how pressure affects a small balloon as it ascends and observe strange flora and fauna creatures that are adapted to the ocean floor; they go to the Sun, and the Milky Way. Then they see our sun from a new perspective—as a medium-sized star near the edge of the disk. They go inside the human body and observe the workings of bones, muscles, the brain, the eye, the ear: they go to the moons of the earth. After Al and Angela pass the test on this trip, the old man says there will be only one more trip.

"You don't need the trips anymore. When you first came to me, you needed to see things. They helped you to learn about the world. And you need to learn that it is fun to learn. Now you have learned everything. If you want no more lessons, the old man selected the last trip, the library. Al and Angela were to go on a trip into a world of modern animals and dinosaurs, the old man asked. "Did you like this trip as much as the trip to the poles or the human body?"

"No, I didn't," Angela said.

The old man smiled. Then he said, "Taking a trip from a book is not as easy as taking a real trip. You have to use your imagination to take a trip from a book. The old man then reminded the youngsters that they could no longer go on real trips. "But you can still go back to the bottom of the sea with a book. And if you want to visit other planets, take a trip from a book."

The old man stopped talking. The library was quiet. Al was thinking, "Maybe the trip from a book would not be as good as a real trip, but it would still be better than the old trip; it would be fun to take a trip to Africa and learn about the lions."

"It would be fun to go back to the Moon and read about Plateaus. (Reading Mastery IV, page 325.)"

As Al learned, books represent the ultimate culmination of different perspectives. Reading Mastery 3 and 4 are designed to present this ultimate perspective to students in a way that is both plausible and emotionally compelling. By the time students complete Reading Mastery 4, they, like Al and Angela, will have experienced many things through books—vivid experiences that make them laugh (such as the folly of Jokey), and make them cry (such as the death of Herman), that transform ordinary things into centers of excitement (such as a drop of water), and that transform vocabulary and information into tools that permit the student to gain a great sense of achievement and to open new doors to exciting places and events.

The programs have the potential to achieve these goals—which should be the goals of all reading programs. The interwoven objectives assure that the programs are correctly focused. If the program is办好, if the program is properly, and the format guarantees that student reading the words, and learning the vocabulary they learn, and that they use it in a broad range of contexts so there is an opportunity for learning the words, meanings, and knowledge of structure that serve as the basis for not merely "learning to read," but "reading to learn."
DI Follow Through In Providence - The History

by Gary Davis

Editor's Introduction. Follow Through was a federal project designed to test different approaches to teaching disadvantaged children in kindergartens through third grade. The Direct Instruction Model started working with 12 school districts in 1968, added 6 more in 1969, and 2 more in 1970. People like Gary and Karen Davis were trained by Engelmann and Becker to be project managers and field supervisors. In the final analysis of the Follow Through data by Alb Associates, the Direct Instruction Model produced the most positive results in terms of learning gains. It showed that compensatory education could work with proper programs, training, and use of time. Providence was not a total failure. The children did make considerable progress. But we did fail to have a long-term impact on Providence's aids. The educating disadvantaged children. This story views the failure from the heart of one whose gave eight years of his life to Providence. Names have been changed to protect the "innocent."

Roger Williams founded Rhode Island and the Providence Plantations in 1633. If only it had remained lost.

1969-1970

I made only one consulting trip to Providence during this school year, therefore, most of my information is second-hand and not as complete as it could be. Follow Through was operating at all three schools: Jenkins, Berkely, and Pogarty. Pogarty had the only assigned full-time principal. Berkley and Jenkins Schools had part-time principals. Their chief responsibility was a larger school to which they were assigned. Berkley and Jenkins Street Schools suffered from neglect and both had serious organizational problems.

The classroom setup was also strange. One additional teacher for every two rooms was hired. The swing teachers, so termed because they "swung" between two rooms, had the responsibility to teach six to eight groups daily in several rooms. Groups were 20 minutes long (lessons normally required 30 minutes). I made a consulting visit in March, 1970. Implementation of the swing-teacher concept resembled a circus down at Berkshire Street School. At an exact time teachers would stop teaching, grab their books and rush off to another room to be in time to do another 20-minute group. As supervisor, I ended up running alongside try-

GARY AND KARIN DAVIS

According to the Director and Personnel Commit-tee. Action would then be taken by them to either terminate or make the program permanent on permanent status.

The original principal filed a grievance against the aides teaching. I considered this undue harassment. I came on very strong with him. I let him know that we did not appreciate his ac-

be a couple of young kids being thrown in to the lions den. Luckily, the lions was already bored and couldn't get up for the kill. He just kind of gnawed on us a piece at a time. We settled into a typical New England apartment with ten-foot ceilings, two fireplaces that smoked if we burned a fire, and neighbors that screamed and hit their kids.

Budget considerations and pressure from Washington brought the "swing" to a deserving end. Paraprofessionals were hired, 48 in all. This was up 23 from the previous year. However, the person doing the hiring had not the remotest concept of what we expected aids in the program to do. Therefore, several people at the pre-

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thought we were running an annex to the Providence zoo.) Child behavior was handled by a teacher who had started in the first grade instead of kindergarten. The teaching staff included a team of substitutes who worked in the system if the regular teachers were absent due to illness or personal emergencies. There were several first-year teachers who eventually became good, but being new had no influence on the school. Another first-year teacher was so bad that downtown actually in- dicated to her that they would not rehire her—a first for the city of Providence... also an option. They took this action after being verbally coerced by me with backup letters from consultants who had been in the room.

Jenkins School was fair and made great improvement. Everyone was con- cerned about the children and worked hard to help them improve. Jenkins had a high percentage of aides that were parents of the children.

Jenkins had problems: NO organi- zation. The principal did not participate in the school. Each teacher did what she felt she should. Schedule changes were not followed and there was a tendency by a few to "teach to the test," except that the test was in the building.

Fogarty—our star. Fogarty had three excellent teachers. Everyone expected excellence from the principal for behavior by the others. Everyone worked hard to achieve all that they could. One teacher, who was the one school where consulting time was not pulled to handle admin- istrative problems, organized the school and made a difference.

1971-1972

The sun was warm but not too much rain. Just enough to bring the fruit to full ripeness. A good year. Not great, but close. The kind of year that makes you feel the stride and effort may be begin- ning to pay some dividends. We moved into a quiet place in the country. An up year for Providence, too; one that suggested better things were ahead if we just kept plugging. It was definitely our best year in Providence. I have this problem with everything—not knowing when to quit. Fortunately for me, I don't go to Las Vegas and gamble.

Administration

There were still some of the same old problems at the school, if you consider the materials at the start of the school, etc. Vision was split into two: we focused on teaching problems, and principals. Mike worked very hard to involve the prin- cipals in what was happening at the school. Mike had been steadily as a director. He enthusiastically supported the program. A disastrous school year, continuous testing was scheduled and happened. For the first time, supervisors (teachers) were able to give teachers reliable and accurate feedback on the test scores. The personnel procedures established last year were working extremely well. Aides that were hired had the abilities to do the job and knew what was expected of them. The personnel committee took their roles seriously and reviewed all new aides. Mike supported the aides in their training and was able to get three very weak teachers to transfer out of the program. The parent relationship was not quite as good as they previously were.

function smoothly. By the time school closed, I felt Mike was on his way to becoming a good director. He was not as efficient at times, and we had our moments, but he could be reminded with and made the right decisions most of the time.

Supervision

Supervision of the four schools was split between myself, Karen, the assistant principal, and the teachers. Karen, being the smarter half of the team, chose the classroom teaching position. I opted to continue the routine. Although I knew the act wouldn't be funny, missing the straight man. We each took a school where there was no assign- ed principal. The Providence advisors split the coverage of Fogarty between them. An advisor at Fogarty 5 out of every 10 school days. Lourdes and Berkshire received 8 days out of 10. Both local advisors were given the school, but only Karen was left. I visited each other school every two weeks to work with the aids and problems that people were having.

Teaching

Out of the 24 teachers, 12 qualified for the master's degree. Only 3 out of 12 transferred out, "with a little help from friends." three worked hard and became good teachers, one left the pro- fession to go on to advanced degree work in education at a prestigious school, one improved a notches, "to get them," and the re- mainder stayed with us for yet another year. Principals were completely un- iformed of what was going on, so it was good for the teachers to observe bad teachers and make sure that they did not get tenure. Fratini was the principal of the upper grade following through with children. Many of the previous years' sec- ond graders had been dispersed to other schools.

Jenkins. Improved, but still problems. The principal was an itinerant presence. One teacher, from fourth to eighth. Half the teachers were inadequate. The school was better because one teacher spent a great deal of her time out of the classroom making sure that things got done. Groups suffered greatly. Behavior prob- lems of the children were not as great. Lourdes was another center for all the upper grade public. Follow through with children. Many of the previous years' sec- ond graders had been dispersed to other schools.

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1972-1973

The plan for the year was to make the Director knowledgeable about the actual teaching program and more visible in the classroom. The plan was to pull off. He became completely inefficient and unorganized. Not much, if any, was done in the Oregon project and I devised the following system. We made a list of important jobs and kept checking with Mike until the jobs were completed. Mike remained enthusiastic about the program. He was the only one that we had. Right—we were in trouble.

Administration

The Providence School Department was reorganized by Dr. Smith, the new superintendent. Everywhere there were new, younger faces. Providence was on the move. Unfortunately, the old moves were made previously by the tired, old faces. The new administrators priorities and stay on task. To get him to do the necessary jobs on time, Jean O'Connor, our Oregon project manager, and I devised the following system. We made a list of important jobs and kept checking with Mike until the jobs were completed. Mike remained enthusiastic about the program. He was the only one that we had. Right—we were in trouble.

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Failure

Continued from Page 33

classroom. Barbara, the third adviser, stopped for a few months to have a baby. Then she left the program and moved to Australia. The remaining teachers and I set out to play the round.

School Run Down

Branch Avenue. Our Lady of Lourdes was one of the first schools to write the children moved to Branch. I opted for leaving some of the teachers at Lourdes, but they had to come along. We thought what problems followed us. We were given another principal and the band played. We had our best group of teachers, but several were still inadequate. Organization of the school was very weak. The staff wasn’t always in the classroom.

Jenkins, Okay. Initial behavior problems crowded out a system that worked extremely well in solving most of the child behavior problems in the hall and cafeteria. I re-instated the system on the buses. As previously indicated, the new principal had the positive impact on the school. The weak teachers had improved. "Fair." We had one new teacher that was "impossible." I had to have an aide re-teach her group. Every day. I tried to get the principal to take appropriation. It was the only effective thing she ever did. He told me that everyone got their tenure and one shouldn’t even think otherwise. He played the pass-the-buck game and made sure she transferred. She has since been promoted to an administrative position.

Berkshire. Same old story.

1973-1974

This was the year to institute a management system—to make teachers accountable for achieving a measure of child progress through the program. Each week six teachers were to project which group would be at the end of a six-week period. The six-week period to coincide with the end of a continuous test round. Progress would then be tied to performance. We never got out of the dog-eat-dog into the-basement’s box. We weren’t allowed to implement the system. Anything smacking of teacher accountability was automatically thrown out. The union took a dim view of such things. (Maybe we made the wrong move by dealing with the union then.) For four years. We may have accomplished more by working with the union. We could keep credo graphs on teacher pro-
gress. Teachers could not be identified by name. We could also support them more and make them faster, but could not require them to do so. The lion was slowly growing out of the facts.

Providence is like a never-ending nightmare. You can’t escape it. Now, off, but the thing never slowed down. When you thought the worst hill or the greatest blowout was over, you knew you had only loomed up ahead. This year it was the time allotment. Mike’s goal for the year was to get more study sciences and science going in the classroom to meet state curriculum guidelines. The method chosen was the time allotment. Specific times were established for each subject area. I agreed with the understanding that the times were to be flexible and we were not locking ourselves into a closed system. Mike had no such understanding, even though he presided at the meeting. We were now ready for a fun ride. Mike pressured us to achieve results to the time allotment and make no deviations. I applied pressure the other way. Low per-
formance was to be given additional teaching time. Mike and I fought. At one point he was going to investigate my ac-
tions. The teachers ended up ignoring the time allotment for most of the part. The goal was achieved though. More science and social science were taught in the classroom. Teachers used their time more efficiently than in the past. The time allotment was finally abolished in the middle of the year. The segment chief in charge of Follow Through informed Mike that the time allotment was never intended to be followed exactly. The purpose was to serve as a guide to teachers. When-
something stopped the bleeding after a year, for a minute you think you have won a victory and then you realize that this is Providence and you are still on the same old roller coaster.

Administration

The administrators worked very hard and did what they could to "get us" before school started. There were approximately seven teacher openings in Follow Through in the sixth grades that had just completed their degree work through the Career Development Education Program. These were eligible for the posi-
tions. The aides had at least three years teaching experience in the classroom. They were interviewed by the principals along with other applicants. None of the forward aides were hired. Ranked above them were five teachers with no ex-
perience, except student teaching. The rationale was that the former aides had no experience in a regular classroom and, when Follow Through folded, they wouldn’t be able to back it. The message was clear to the aides—you program and experiences count for nothing. (By contrast, in Racine most of the aides became Follow Through teachers through a similar training program.)

Pre-service started without the new teachers and six unfilled aide positions. Four aide positions were still unfilled six months later. 

Our view was that Mike was an admin-
istration that is consistent.

The Director became involved in the construction of the new building, go

over the Continental test results with an administrator. Providence observation forms on Reading, I Teachers. Neither one did any of the teachers and got an A for the course.

Supervision

We were back to a strong lineup. Beside myself, we had two good full-time part-time aides. Mike and two staff advisors. The schools were split among the local super-
visors. We were to oversee each school and work on specific problems that teachers had. We instituted a flow chart with key formats. We tracked each teacher’s groups and either trained them on the key formats immediately before or after the format. The key formats were then made available to all teachers. We set up monthly meetings to establish goals for each school and major problems. We managed to get through. It was very difficult. The supervisors took their time. I led the team, not the supervisor. I knew the program worked and that we could not have more supervision. They may ask teachers or aides to do something, but by this time the circumstances could dictate a teacher or aide to do something. Mike was to make all the decisions. He was to make all the recommendations. We were now making decisions that were previously time all problems were referred to him. On most programs, no action was taken. The supervisors quickly developed the strategy of working around Mike. The damage was done though. The teachers felt powerless. Teachers were now able to play them off against the Director. Advi-
sors felt that support for them was not there.

Major problems were referred to him. The teachers felt that they were getting a propitiate action, he did not get the backup he needed. For example, an aide was to re-teach a group of only teaching two lessons a week. After observing the aide, he set up a conference with her. He warned her he had observed her and walked him out. He suspended her. She was immediately reinstated by the board. The aide was returned to the classroom four hours. Mike was a bit hesitant to at-
tempt any more actions. Downtown’s major problem was the same. The schools remain the same. Fogarty was good, Jenkins fair to good, and the others were just bad.

The year closed about as it began. Classrooms were about the same. Teachers were working about the same level. The coaster keeps rolling.

1974-1975

Like spring, the start of a new school year brings forth the hope of a new rebirth, thoughts of fresh air and sunny afternoons. Karen and I moved to Oregon. (As promised before, we were brought in from the cold.)

Providence began the year in its nor-
mal state—complete chaos. The kid shortage was hitting the system hard. All non-tenured elementary teachers were suspended in June 1974. The effect on us was that 16 Follow Through teachers had been cut. This was a shocker. It meant that teachers did not know their schools, grades, or even in some cases, if they were ever going to be eventually placed in the program.

Administration

In the fall, Jenkins Street schools were closed and the children were divided among five schools. This brought the children into closer proximity. Besides the "shille adjutant" and "pass-the-
teacher," Providence added the "diamonds," "diamonds," and "diamonds" to the problems that we had created logistical problems. We had less freedom in grouping children. Also, we had to figure out the best way to supervise them. With the ex-
ception of Branch, the disposal meant half-time presence in all buildings. Two principals had not been involved with Follow Through before. Karen, now Project Manager, and me, with both impressed on us how they wanted to get involved in the program, and, in the classroom, Wow! A breath of fresh air in Providence. It turned out not to be fresh. Neither had feet in the classroom and observed a group. At the end of their time with Follow Through virtually knew much more than when s/he started. I stopped reporting to the one because she would fall to make needed follow-up contact. She did call me individually and tell her/him that Gary had reported this and we would see what of the program.

School opened with a shortage of 7% kids in Follow Through (below funded levels) and 10% in Providence. Two

ational kindergarten children. There was considerable delay in enlisting the six-year-olds for the program. Karen and I forced the issue. We met with the teachers and placed the children.

Prior to the start of school, Mike and Karen, and I had a very interesting con-
versation concerning Mike’s job the past few years. Two years ago, Providence let him know that he was supporting the program too strongly, and "outsiders" were dictating too much of what was happening in the classroom and the year. "You are no longer the Director’s job and the year of hassle." Then, we applied for the principal’s job, Mike accepted the offer, and then he was here on this issue. He just had no idea what was happening.

This did not surprise Mike, made positive strides to become a more effec-
tive Director. He made classroom visits and followed up on some major prob-
lems. There were two positive ac-
complishments with the personnel department. He was able to cut off chronically absent and aides to hire former Follow Through aides as teacher substitutes. Mike was very frustrated. He would take action on grouping the new kindergarten children, subverted a transition agreement (discussed later), and failed to follow-up on the parent visita-
tion program, and allowed teachers to pull classrooms out of the DISTAR
material.

Supervision

We again started with strong people. We had a new advisor (Providence’s word for supervisor, if you haven’t figured that out) and the usual advisory positions. We set up a data-base system for observing teachers and checking the computer system. We established clear priorities and worked hard to meet
The director picture changed. The Providence proposal called for a half-time director position. The female director position was to be combined with a half-time director position of Providence's early childhood program. The early childhood program was not large enough to employ a full-time director. The principal of Providence said that the man who was currently heading the early childhood program met the needs of the program. They then had open interviews and then hired him.

The new director, Mr. Johnson, turned out to be an excellent administrator. He was efficient. He got the PAC reorganized and it functioned again as a group. He put the parent workers through training and started the home visit program initiated by Karen last year. He published a newsletter and used state funds to put out a pamphlet describing the program. Supervisor morale went up way up. Everything was going along smoothly. Right—this is Providence and you know it is too good to last.

Mike faced a problem. The grievance was based on the Providence School Department revolving the job qualifications. They had taken out the need for a principal's certification. The State Board of Education ruled that changing the qualifications was a "no, no!" A director was an administrator level position and the principal's certification was required. Last fall Mike was reapointed. The time between Lon losing his job and Mike getting his was only two months. In June, Mike resigned and Lon was reapointed.

What a ride! What a ride!

Supervision

The number of schools was reduced from seven to five. This made life much easier for the supervisors. Lon was a positive influence on the supervisors. He attended to problems and got some principals involved in the process. The classroom situation was not good. Two of the three new teachers were very resistant to DISTAR. Two rooms had revolving doors for teachers. One had four teachers and the other had three during the year. As soon as we got one trained, she would depart for a permanent position elsewhere. The positions we had were for long-term substitutes. They served as a rest stop. The union seniority-list rides again. The move back to Mike and the appointment between the supervisors' morale. They had a hard time demanding a performance criterion when the program was dying.

The End — 1976-1977

The parents voted to end the program for the following reasons:

1. Providence School Department would not support an attempt to return Providence to a fully implemented K-3 site. The National Follow Through office had indicated that they would support such a move, but the School Department was interested only in the K-4 program they were developing.

2. Classroom implementation fell off.

3. Classrooms at some schools needed to be closed and those children bused to other schools. (In previous years, these children would have been in four different schools in as many years.)

4. Some schools found out that they were no longer in neighborhood schools would have to bus across town.

Several studies have been conducted to date by researchers in the Direct Instruction Project at the University of Oregon on process and outcomes. Several studies have been conducted to date by researchers in the Direct Instruction Project at the University of Oregon on process and outcomes. Several studies have been conducted to date by researchers in the Direct Instruction Project at the University of Oregon on process and outcomes. Several studies have been conducted to date by researchers in the Direct Instruction Project at the University of Oregon on process and outcomes.

Conclusion

"Why?" and "What if?"... always those questions when you fail. Often we simply project that experience and evidence is different, as you probably have realized by now. When we started, the only group that wanted us in Providence was the parents. The teachers' union and State Board of Education voted against accepting the Direct Instruction Program. Within the Providence school administration only the Director of Federal

after our second year there. At that time, we had still only the parents.

Our entire approach was to do the program and what we were trying to do. There was a commitment to the backers. We were isolated from the regular schools by being housed in separate buildings. We were given less than formal support from the school board. In effect, we met as best we could. Our Director sometimes worked at an alternative school on which side the bread was buttered. Moves to involve principals met with no success. The moves were from the level and not from the top down. Evaluations commissioned by Providence were so bad that Providence rejected them. Our data was suspect to them and couldn't be used. Our attitude and pushiness offended the first two years.

The "why," then is simple—we were in a situation where we were not wanted. Our Attempts to change this were complete flops.

Unless all parties are willing to make the necessary commitment from the start, there should be no program. The lesson has been a painful one for me to learn. But after you've been in the Lion's den, the rest is downhill—or so said Daniel.

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Carnine, D., The effects of two correction procedures on word acquisition by preschool children. (76-2)

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Pacing of Instruction


Training Teachers

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Signalling Students' Responses

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Direct Instruction for Social Skills

A Systematic Approach to the Integration of Handicapped Children into Less Restrictive Settings

By Hill M. Walker
University of Oregon

This article describes the development and validation of a model program for the social integration of primarily grade level handicapped children into less restrictive settings. The model contains both the diagnostic procedures for fitting children and teachers together and a package of Direct Instruction procedures for the development of required social skills for mainstream settings. The SBS model was developed with a three-year grant from the U.S. Office of Special Education Programs. Information is presented herein on four topics related to the development of the model. These are: (1) major findings from mainstreaming research on the social/behavior adjustment of handicapped children in less restrictive settings, (2) the purpose, rationale for, and elements of the SBS model program, (3) the validity, efficacy, and replication studies on the model, and (4) school applications and usage guidelines for the program.

Findings from Research on Mainstreaming

With the passage of P.L. 94-142, increased numbers of mildly and moderately handicapped children are receiving at least part of their daily instruction in mainstream settings. It was assumed by the framers of P.L. 94-142 that the normalizing processes and developmental opportunities resulting from exposure to less restrictive settings would more than offset any deleterious effects associated with such placement. At present, sufficient data and followup studies do not exist to provide an unequivocal basis for accepting or rejecting this assumption. However, the social/behavioral adjustment of mainstream handicapped children is a topic of increasing professional concern to educators (Strain & Kerr, 1981; Ashar & Taylor, 1981; Jones, 1979; Larrivee & Cook, 1979; & Schneirlin, 1981).

Handicapped children have to make two sets of adjustments within mainstream settings. That is, they must meet the teacher's minimum behavioral standards and expectations with respect to following classroom rules and responding accurately to instruction. Handicapped children must learn to deal with a new peer group of nonhandicapped individuals, and to cope effectively with it. How well handicapped children have been able to make these adjustments? The available evidence suggests that numerous handicapped children have experienced considerable difficulty in these areas.

Regular teachers have proved to be quite reactive to the demands and sided burden imposed on their children who are difficult to teach and mainstream (Jones, 1981). This should not be surprising, since regular teachers have been traditionally encouraged to refer handicapped children for service in more restrictive settings. This practice has had two major effects that impinge directly upon the mainstream experience. First, teachers have been deprived of the opportunity to develop skills in accommodating such children. Second, the tradition of availability of referral as a means of coping with children who are difficult to teach and mainstream was probably contributed to the reluctance of many teachers to accept them into their classes. In spite of the mandate of P.L. 94-142, recent research by the author (Hersh & Walker, 1981), shows that regular teachers have high expectations and a very narrow set of behavioral standards for the social behavior of children in their classes. It is quite possible that the option to refer "difficult" children to special education has contributed to the studies of mainstream handicapped children.

Korg & Levit (1976) report that regular teachers are also quite concerned with the behavior development of handicapped children, their ability to cope with the pressures and demands of the mainstream setting, and that mainstream handicapped children have been poorly prepared for these settings. One of the major assumptions underlying P.L. 94-142 was that through the mainstreaming of handicapped children, their ability to cope with the pressures and demands of the mainstream setting, and that mainstream handicapped children have been poorly prepared for these settings. The assumption that mainstream handicapped children show that they do not immediately imitate the behavior of nonhandicapped peers, nor do they interact with them on any kind of consistent basis (Gresham, 1981). A number of studies have shown that mainstreamed handicapped children have very infrequent social contact with their nonhandicapped peers. How are mainstream handicapped children to interact with their nonhandicapped peers? It is quite possible that the research evidence on this question?

The SBS Program

The SBS Program focuses on the placement and integration components of P.L. 94-142. It provides a methodology for the social integration of handicapped children into less restrictive settings, and seeks to improve the child's adjustment capability in classroom and freeplay settings. Specifically, the program's major goals are:

- To select appropriate placement settings for the integration of mildly and moderately handicapped children into the educational mainstream.
- To identify the minimal behavioral skills and competencies required for a successful classroom adjustment in the target setting, and to identify the nosology of social behaviors that are unacceptable to teachers.
- To prepare such children: (a) to meet the receiving teacher's behavioral expectations, and (b) to achieve adjustment to nonhandicapped peers.

The major thrust of mainstreaming efforts has been to encourage the receiving teacher to adjust to the handicapped child's skill deficits and needs. This process places a great deal of pressure on the management and instructional skills of teachers in mainstream settings, and has achieved only limited success in exposing handicapped children to the full benefits of social integration. The SBS program distributes the demands and logistical responsibilities for mainstreaming process more evenly between the special (special education) setting and the regular (regular setting); by: (a) assessing the teacher's behavioral demands and expectations in the less restrictive setting, (b) using this information to select potential mainstream placement settings (and to prepare the target child to meet the expectations prior to actual integration), (c) identifying the receiving teacher's technical assistance needs in managing the handicapped child following integration, and (d) providing resource support and technical assistance services to ensure a continuing successful mainstreaming experience for the handicapped child, receiving teacher(s), and peers.

SBS Program Components

The SBS Program has two major components: assessment and intervention. Together they make it possible to assess the child's behavioral demands and expectations of less restrictive setting, and to systematically prepare and mainstream handicapped child to cope with them prior to actual integration.

- Assessment Component, AIMS: For Assessments for Integration into Mainstream Settings is designed to:
  - The selection of mainstream settings.
  - Identifying the adaptive skills and competencies required for the receiving setting, as well as maladaptive social behaviors that are unacceptable by receiving teacher.
  - Providing information on the receiving teacher's technical assistance needs in managing the handicapped child following integration and managing the mainstreaming child.

The AIMS system contains the following instruments:
- The SBS Inventory of Teacher Social Behavior Standards and Expectations.
- The SBS Checklist of Correlates of Child Handicapping Conditions.
- The Classroom Adjustment Code.

AIMS provides an ecological assessment of potential mainstream settings, and relies upon teacher ratings of adaptive and maladaptive dimensions of child behavior for this purpose. Teachers rate item descriptions of child adaptive behavior (e.g., makes his/her assistance needs known in an appropriate manner) in terms of whether they are critical, desirable, or unimportant to a successful classroom adjustment. Similarly, item descriptions of maladaptive behavior are rated as unacceptable, tolerated, or acceptable. The resulting data is used in the selection of placement settings, and as a tool in teaching required mainstream behavioral competencies.

The Correlates Checklist identifies conditions and characteristics often present in mainstreaming settings and can cause teachers to resist placement of handicapped children who manifest them. The Classroom and Social Interaction Observation Codes are de-
Skills Program (SBS)

signed for use in assessing the handicapped child’s classroom and peer-to-peer adjustment status following integration. Recommendations for the education of Walker and Rankin (in press) and Hersh and Walker (in press). A manual for the AIDS assessment system is currently being prepared.*

Intervention. The social skills training program called ACCEPTS (A Curriculum for Children’s Effective Peer and Teacher Skills) is used to teach critically important peer and peer-to-peer behavioral competencies essential for a successful adjustment to the behavioral demands of mainstream settings, and can be used either independently, or in collaboration with the AIDS assessment system. The ACCEPTS program contains the following elements:

- A nine-step instructional procedure based on principles of direct instruction.
- Scripts for teaching critically important teacher-child behavioral competencies and 24 peer-to-peer social skills.
- Videotaped examples and non-examples of the skills being taught.
- Behavioral management procedures for using during the training and for strengthening correct applications of the skills in playground and classroom settings.
- Guidelines for using the curriculum, and for training others to implement it.

Table 1

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<th>ACCEPTS Skills</th>
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<td>Classroom Skills</td>
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<td>1. Listening to the Teacher</td>
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<td>2. When the Teacher Asks You to Do Something</td>
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<td>3. Doing the Right Thing</td>
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<td>4. Using the Right Voice</td>
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<td>5. Asking Questions</td>
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<td>6. Talking to Others</td>
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<td>7. Talking in a General Way</td>
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<td>8. Asking Questions</td>
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<td>9. Continuing</td>
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<td>Getting Along Skills</td>
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<td>1. Using Frustration</td>
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<td>2. Shouting</td>
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<td>3. Swearing</td>
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<td>4. Asking Others</td>
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<td>5. Helping Others</td>
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<td>6. Friend Making</td>
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These intervention results were evaluated in a multiple baseline design, but also suggested areas in which the intervention procedures could be strengthened. The intervention increased its teachability, power, and instructional precision. The revision included a more integrated approach and more emphasis on the social-behavioral competence of target handicapped children.

Study two evaluated effects of the revised and expanded version of the ACCEPTS curriculum. An experimental-control group design was used. Handicapped children in grades 2 to 5 were randomly assigned to 10 children in Group 1, 8 in Group 2, and 10 in the control group. Results favored the two experimental groups over the control group on all three dependent measures. Statistically significant differences were obtained on the Criterion Roleplay Test and classroom observation data. One of three interactive measures (interactive inappropriate) derived from playground observations approached significance at p = .06. No significant differences were obtained between the two experimental groups on any of the measures. However, Group 1 children were favored on teacher ratings of classroom skills and peer-to-peer skills, as well as on playground observations.

(°) individual contingency management procedures to increase the use of critical classroom skills, and peer-to-peer skills in playground settings. Teacher ratings and behavioral observations of classroom and peer-to-peer peer performance were conducted for all children at four time points: (a) before training, (b) during training, (c) immediately following the end of training, and (d) at two-month follow-up. In addition, a criterion roleplay test was conducted for each child. The results showed significantly higher performance levels for experimental children on the criterion roleplay test. Although the experimental children’s regular teachers did not perceive that there had been significant changes produced in their classroom and playground behavior even though observation data indicated that this was the case. Statistically significant changes were produced for experimental children on three manipulated dimensions: direct social interaction, and social interaction of their behavior in classroom and playground settings. These were: (a) percent of total social task (on average 20 percent of total social task), (b) percent of time spent engaged in social participation with peers (on average 20 percent of total interactive behavior having verbal content (playground). Signal social changes on direct and indirect measures did occur for control children.

Consumer satisfaction measures of the ACCEPTS product were conducted with parents of students who had participated in the study. The data were collected using a Likert scale survey. The majority of the sample was positive about the ACCEPTS program. The majority of students reported that they had enjoyed using the ACCEPTS program and felt that it had helped them. The teachers also reported that the ACCEPTS program had helped their students.

SBS Program Studies

The SBS model program was developed from 1979-1982. Studies of the completed model’s efficacy and utility in facilitating the mainstreaming process have not been conducted by school districts to date. However, a number of studies are completed and ongoing on both the AIDS system and ACCEPTS program.

AIDS: The Walker and Rankin (in press) article cited above describes the initial validation and development of the AIDS instruments. A large number of researchers/practitioners are currently using the instruments in their research and/or conducting studies. These studies will be incorporated into the AIDS manual and submitted for commercial publication by the summer of 1983.

ACCEPTS: Two major studies of the ACCEPTS program were conducted by the author and his colleagues during its development. In study one, a postaltest only, experimental-control group design was used to assess effects of social skills training (see Walker, McConnell, Walker, Clarke, Does, Cohen, & Rankin, in press) via the ACCEPTS program. Twenty-eight handicapped children were assigned at random to one of three groups—Group 1: social skills training plus contingency management procedures; Group 2: social skills training only; and Group 3: control. There were 10 children in each of Groups 1, 2, and 10 in the control group. Results favored the two experimental groups over the control group on all three dependent measures. Statistically significant differences were obtained on the Criterion Roleplay Test and classroom observation data. One of three interactive measures (interactive inappropriate) derived from playground observations approached significance at p = .06. No significant differences were obtained between the two experimental groups on any of the measures. However, Group 1 children were favored on teacher ratings of classroom skills and peer-to-peer skills, as well as on playground observations.

- Improving the appropriate behavior levels of both non-handicapped and handicapped children.

Guidelines for the use of both AIDS and ACCEPTS are contained in their respective manuals. The instruments are being followed carefully in applying both programs.

*Prepublication copies of the SBS Inventory and Checklist can be obtained from the author by writing to SBS, 300 Clinical Science Building, Oregon State University, Oregon, Oregon 97040.

** The ACCEPTS curriculum and accompanying videotape is published by the PNG 4-D Publishing Co. of Austin, Texas. Pricing and ordering information can be obtained by calling in 503-623-3514, 514 Industrial Oasis Blvd, Austin, TX 78726.

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Call for Articles

This newsletter is intended to be a consumer-oriented publication. You, the readers, are the consumer group. Therefore, we are interested in articles put in future issues. The editors invite your contributions of manuscripts, research reports, ideas, inquirers, or material suitable for publication in the DF News. Any item relevant to direct instruction is appropriate for the News. A working list of the items of the News will be published, along with submissions guidelines for each, appears in this issue. All submissions will be edited for length, readability, and for material suitable for publication. Issues will be published in fall, winter, spring, and summer. Please submit materials at least two months later than the first of September, December, March, and June.

DIRECT INSTRUCTION NEWS, SPRING, 1983 37
Strategies for Special Ed Resource Rooms

Carol Chase Thomas
University of Kentucky

Educational researchers have exam-
ined the performance of special edu-
cation variables in their attempts to identify specific teacher behaviors that result in effective instruction. (Doyle, 1981; Medley, 1977; Rosenshine, 1976; Dunkin & Biddle, 1974). A pattern of teacher behavior and instructional management techniques has emerged from this research. The techniques have been validated in experimental regular classrooms, as summarized by Gage and Gliacoria (1981). The effective instructional strategies and student academic growth have been defined as the standard for regular classrooms, but are not in regular classrooms for some academic and non-academic activities. Students in either type of program also may have had behavior problems, but such problems were not the primary focus of their placement.

Observations lasted at least one hour each and occurred when the teachers were actively involved in instruction. Three procedures were used to collect the data: (1) a teacher observation system, (2) a Teacher Interview Schedule, and a sampling of on/off task behavior. The observation coding system was a modified version of the Direct Instruction Observation System developed by Engler and Sugai (1982). This system permits coding of a number of student and teacher behaviors including number of times used, task completion. The percentage of student response, percentage of verbal praise, and the percentage of time of student are recorded.

The Teacher Interview Schedule consisted of questions related to the following areas: (1) Amount of teaching experience; (2) Number of students served; (3) Amount of individualized and group teaching, and (4) number of teaching and management reinforcement systems. (5) Procedures for seatwork, when assigned. (6) Availability of individual teacher assistance. (7) Teacher activities during time periods between individual and group instruction; (8) Number of students found in this period. (9) Cooperation of the regular classroom; and (10) socials in integrating handicapped students into their classes.

These self-taught sampling was conducted to determine how well students worked independently while the teachers were grouped. The classes were found around the room approximately every five to seven minutes and counted, the results were recorded on the task sheet as on/off task.

Other naturalistic information was also gathered. A diagram of the classroom was drawn, interviews of the students or the classes, and a checklist of things that were happened during the classroom activities were written, and an anecdotal record of the events occurring during the observation period was completed. A summary report containing individual data for all of the teachers may be obtained from the authors.

General Results and Discussion

The observations and interviews revealed that direct instruction concepts were being used by teachers in their classrooms for teaching disabled students. Of the four presentation techniques cited by Rose (1981), the concept of rapid pacing was not observed. Most teachers used verbal praise, some used socials, and some provided immediate corrections. However, no teacher showed systematic usage of all these techniques.

Several teacher behaviors complemented the direct instruction model were observed in both types of classrooms: scanning the room to check on individuals while conducting a group, using specific praise for those students who were on task, modeling of desired behaviors, using attention signals, and providing rules for transition times. (For additional discussion of these behaviors, see Engler & Thomas, 1982.)

Some differences in instructional management procedures between the resource room types were observed. The EMH teachers had more group activities than did LD teachers. EMH teachers reported more requests for help from individual students. These teachers either left the group or assigned students to individual work. LD teachers, on the other hand, commented, however, that they were trying to wean their students away from that type of work. All regular classroom teachers had complained that special education students did not get up when they did not get help in their classrooms.

Only minimal differences were found between teachers for critical organizational and management factors. Both types of teachers had about the same number of resources available in comparable lengths of time. Off-task behavior was not differentiated by type of program. In one study, all teachers used a similar behavior management system that permitted students to earn free time or a special activity for on-task behavior and work completion. Teacher praise was slightly higher in EMH than in LD classrooms. All teachers used a similar seatwork assignment distribution procedure (e.g., folders). The teachers typically used a help tag system or had the students raise their hands when they needed assistance instead of leaving their seats and approaching the teacher.

None of the teachers had totally mainstreamed any of their students during the academic year. All but one teacher reported cooperation from regular class teachers was generally good. The resource teachers often avoided placing students with regular teachers who were not willing to be negative about having handicapped students in their classrooms.

Conclusions

The direct instruction model appears to hold much promise for non-categorical resource room instruction. Although most of the research to date has been in regular classrooms, this study shows that special education teachers use components of the model albeit not systematically. Since it is essential that special education teachers have the skills, training in them corrected use of direct instruction methodology would allow them to be better attaining their instructional goals.

The differences between the classroom types and the patterns of similarities of the instructional and classroom management strategies seem to be a reflection of the special education teachers. Such combining of students would permit implementation of direct instruction techniques for small groups based on academic needs, reduce emphasis on labeling of students, and prevent duplication of effort by the special education teachers.

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Excellence in Education Awards
Call for Nominations

Each year the Association for Direct Instruction honors those who have made distinguished contributions to excellence in Education. The award winners last year were Lorain Kilian of Houston (classroom teaching), Thaddeus Loit of Houston (school administration), Pepe Quintero of Salt Lake City (secondary teaching), and Galen Allesio of Kalamazoo (teacher training and research).

The awards seek to recognize those who have distinguished themselves by their continuing commitment to excellence in education for all students. Through this recognition, the ADI Board seeks to illustrate to others what can be accomplished when commitment and Direct Instruction technology are put together.

Honorees are selected by the ADI Board of Directors from nominating letters submitted to them. You may nominate candidates for one of four categories: (1) elementary teacher, (2) secondary teacher, (3) school administrator, or (4) university trainer of school personnel and/or researcher. NOMINATIONS MUST BE RECEIVED BY JULY 1, 1983. Send your letter of nomination to ADI BOARD (HONORS), P.O. Box 10252, Eugene, OR., 97440. In your letter, document what your nominee has done to earn your nomination. Be sure to give an address and phone where we can get more information from you if needed.

Realize that many more capable and deserving persons will be nominated than can be recognized this year. But remember, there is another year.

The DI Philosophy
- THERE IS A VAILABLE TECHNOLOGY OF TEACHING
- TEACHERS ARE RESPONSIBLE FOR CHILDREN'S LEARNING.
- EVERY CHILD CAN BE TAUGHT.

Join the ASSOCIATION
Membership covers the period from September 1 through August 31.

OPTIONS:
a. Student membership... $7/year (includes DI News and a 40% discount on ADI sponsored conferences and 30% discount on publications).
b. Regular membership... $15/year (includes DI News and a 30% discount on all ADI sponsored items and events).
c. Sustaining membership... $30 or more/year (helps to insure our survival).
d. DI News subscription only... $5/year.

ADI sponsored products and events include books and other materials published or marketed by the Association (DI Reading, DI Mathematics, Theory of Instruction, the Annual Direct Instruction Training Conference, and onsite training/consultation available from ADI staff or consultants).
The Direct Instruction News is published four times a year (Fall, Winter, Spring, Summer).
To join the association, clip out this form and mail it in.

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DI at ABA - 1983

The Ninth Annual Convention of the Association for Behavior Analysts will be held May 26-29, 1983, at the Hyatt Regency Hotel in Milwaukee, Wisconsin. This year's convention will feature nearly two full days of presentations on Direct Instruction, as well as many other events of interest to teachers, administrators, professors, researchers, and other educators. For information on the convention, contact ABA in care of the Department of Psychology, Western Michigan University, Kalamazoo, MI, 49008 or call (616) 388-2830. For information about the Hotel, contact the Hyatt Regency-Milwaukee. Their toll-free reservations number is (800) 228-9000. A partial listing of DI-related events scheduled for the Convention (those we know of as of this date) is provided below.

Thursday, May 26
7-9 pm ABA Special Interest Group on Direct Instruction/Association for Direct Instruction Display booth at ABA Social Hour.
Friday, May 27
9-
10 am Siegfried Engelmann "Science, Logic, & Learning" (invited address).

10-
12 am Stan Payne (chair), Dan Hush (discussant); Craig Darch, Russell Gersten, Siegfried Engelmann, Marilyn Monteiro (presenters) "Direct Instruction: The Research-Service Continuum" (symposium).

2-
3:30 pm Stan Payne (chair), Siegfried Engelmann (discussant); Russell Gersten, Linda Meyer (presenters) "The High School Performance of Follow Through 'Graduates: Enduring Effects of the Direct Instruction Model" (symposium).
4-5 pm Direct Instruction Conversation Hour (opportunity for informal discussion with many of the direct instruction presenters).
5-6 pm Stan Payne (chair), Marilyn Monteiro (vice-chair) "Meeting of the ABA Special Interest Group on Direct Instruction" (meeting).

Saturday, May 28
11:30 am- 1 pm Marilyn Monteiro (chair), Stan Payne (discussant) "Interrelations of Behavior Analysis and Direct Instruction" (symposium).
1:30 pm Lynne Anderson-Inman "A Mainstreaming Dilemma: Teaching for Acquisition vs. Teaching for Generalization" (invited address).
2-1 pm Jack Michael (chair) Jane Howard, Kurt Johnson (presenters) "An analysis of Personalized Systems of Instruction, Direct Instruction, Computer-Assisted Instruction, and Precision Teaching" (paper session).
2-4 pm Freeman Coetzee (chair), Stan Payne (discussant) "Engineering Early Reading" (symposium).

Still to be scheduled is a Direct Instruction Poster Board session, featuring informal presentations of direct instruction research by a dozen different investigators. Also, there are undoubtedly a number of other sessions at the convention which we have not yet heard about which will be of interest to direct instruction followers. In short, the Convention has much to offer to those with direct instruction interests. We are confident that if you attend, you will not be disappointed. We hope to see you there.

Advertising Policies and Rates
The Direct Instruction News will publish advertisements for books, programs, training, conferences, workshops, and services related to direct instruction. All proceeds from the sale of advertising space will be used to help pay publication costs incurred by the News. Ad sizes and corresponding costs are as follows:

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