

Direct Instruction NEWS

Volume 1, Number 2

P.O. Box 10252, Eugene, Oregon 97440

Winter, 1982

On Observing Learning

An Essay for the DI Teacher

By Ziggy Engelmann

Observing things in nature grow and develop is an extremely interesting pastime. Plants and trees, for instance, are fascinating — the way the buds form and develop into leaves; the way new growth sprouts out to give the plant a form that is unique to the species; the way the plant protects itself from competing plants. For example, if a young tree is growing next to another tree that is almost as tall, the tree will try to extend a branch over the top of the competing tree, thereby shading the top. Once the top is shaded, the tree's growth slows and the tree is no longer a serious competitor. The most amazing facet of growth is the way that things in nature achieve their shape or form. A young fir tree assumes a conical shape. If its top is cut off, it shoots out a new top and within a few years it again has a perfect conical shape.

Humans are even more fascinating than plants because they are more complex and are capable of growth in more ways than a tree. The human mind, the topic of thousands of books, is probably the most fascinating growing part of the young human because of the amazingly complex form the mind assumes as it matures. How the mind works is basically a mystery. But the way in which it works is remarkably clear. The mind grows in response to demands from the environment and encouragement from the environment. The mind begins as something more than a blank slate. In the infant, the mind has a full program of responses, most of which are emotional. Even the simplest activities amuse, frustrate, or dramatically anger the infant. States, such as mild hunger, create incredibly strong emotional responses; and environmental changes, such as a smile from the infant's mother, create a response that seems to be pure joy. From these emotional responses and the magnificent human brain come learning and habits. At first, the learning is meager. Even after infants have been exposed to their new environment for a year, they may give no indication that they understand the basic assumption of language — which is that the same word or utterance means the same thing each

time it occurs. But when these infants have tangled with the language code for a few more months, they begin to understand it, and they begin to learn at a rate that is almost frightening. Now meager gains are replaced by astonishing leaps, generalizations, and "role playing." Still driven by the very strong emotions that characterize early childhood, these youngsters want to do the things their parents and older siblings do. Their incessant tendency to idolize is reflected in their pretend-behavior, their play, and their insistence on tagging along and doing what the others do.



Ziggy Engelmann

Then they go to school. At this time, they have minds that are capable of incredible learning — even the lower performers. But the school scenario is often sad, because, as many critics of education have pointed out, the children are stifled. They are not provided with productive outlets for their emotion; they are not given strong models to emulate; they do not receive instruction that conveys urgency and the sense of mastery that they so desperately want; and they often do not receive instruction that they understand. They are removed from a world in which they clearly see what others do and in which they are pro-

(Continued on page 16)

Direct Instruction: The Child's Creative Future

Robyn Maggs, M. Psych.
Clinical Psychologist.

Alex Maggs, Ph.D.,
Senior Lecturer in Education,
Macquarie University, N.S.W. Australia

Editor's Note: The following article is taken from the Australian version of DI News called Teach Every Child (Summer, 1981). The article has been slightly abridged. The reader may wish to know that the research on teaching effectiveness has been summarized by Barak Rosenshine who first noted that converging research points to a model of effective teaching which he called "direct instruction." The references are:

Rosenshine, B.V. Classroom Instruction. In N.L. Gage (Ed.) The Psychology of Teaching Methods. Seventy-fifth yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1976.

Rosenshine, B.V. Direct Instruction for Skill Mastery. Paper presented to the School of Education, University of Wisconsin at Milwaukee, April, 1979. Professor Rosenshine is at the College of Education, University of Illinois, Urbana, Illinois, 61801.

Never before have teachers been so well qualified to make professional judgements about the academic programs they elect to use. An ever-increasing number of teachers extend their formal training, attend in-service courses, and give up weekends to participate in a wide range of workshops that have little to do with promotion and a lot to do with teaching children more effectively.

Just as research moved medical practices out of the dark ages, so has the teaching profession come of age in its recognition that all professional developments must be based on reputable research data rather than "I think... I assume... I know... I prefer..." In the 1970's educational research finally moved into the classroom. Not only did this give teachers instructional facts to work with and change the emphasis from "failed" child or "failed" teacher or "failed" homelife to "failed" instruction, but encouraged teachers to control and contribute to their own destinies. To their

credit, Australian teachers have been amongst those most open to involving themselves in classroom research and assessing the effects of their program choices and teaching techniques on the children whose skills and development they determine.

The authors of this paper can sympathize with the deep breath required to negate the body of training and experience that has become the basis of one's work when new research findings and the resultant developments require us to change direction. In our own professional lives we've had to do it several times, and expect to again. We both trained in areas heavily dominated by the traditional body of knowledge in psychodynamic psychology, cognition, information processing, perception, memory, linguistics, etc.

When trying to apply these theoretical structures to a wide range of children — the "bright," the "retarded," the "normal," the "disturbed," the results were frustratingly patchy. As happens in any developing body of knowledge, there were fortunately researchers able to draw the best from the past and move into a more effective future. In the 1960's behaviour therapy gave a basis for new educational developments. The present authors acknowledged our ignorance and went back to school! In the 1970's the major body of educational development was direct instruction. Again we charted a new course. In the 1980's we make an educated guess that the major field of educational change and development will again take the best of recent educational knowledge and apply it to the field of microcomputers. Somewhat nervous, but rewardingly challenged, we go back to basics and start learning again.

Over the past decade classroom research looked at "good" teachers and "good" students to try and tease out contributing factors. International work in schools has elicited to date about ten new factors that are known to contribute to effective teaching and effective learning. Independent researchers, drawing together the pattern of classroom evidence at several different research sites, found that the most effective

(Continued on page 15)



Feedback

Are we meeting your educational interests and needs with the issues of the DI News we have published to date? *Don't* wait until it's time to renew your ADI membership or News subscription, then decide *against* renewing as a protest over things you might not like about the News. Instead, send us your feedback and suggestions *now* so that we can make changes which will improve the publication and convince you to renew your partnership with us. This is *your* publication; make sure it meets your criteria for a successful newsletter by voicing your opinions and concerns. By the way, we also accept positive feedback — it nourishes our commitment. Send your comments to the editors either as private correspondence or as a letter-to-the-editor, depending on whether or not you want your letter published. We will publish as many letters-to-the-editor each issue as space permits, and we will personally reply to all private correspondence which calls for one. Thank you for whatever effort you feel you can make in this attempt at participative journalism. Our mailing address is:

Stan Paine/Wes Becker, Editors
Direct Instruction News
Follow Through/Education
University of Oregon
Eugene, OR 97403

Letters-to-the-Editor

Editor's Note: Each issue, the DI News will publish letters received by the editors since publication of the previous issue. We invite your commendations, criticisms, opinions, inquiries, and other forms of comment on any aspect of the News, the Association, or other issues pertaining to direct instruction. Letters requiring replies will be responded to directly; other letters will be printed without comment. Please send all letters-to-the-editor to:

Stan Paine, Co-Editor
Direct Instruction News
Follow Through/Education
University of Oregon
Eugene, Oregon 97403

Call for Articles

This newsletter is intended to be a consumer-oriented publication. You, the readers, are the consumer group. Therefore, we very much want your input in future issues. The editors invite your contributions of manuscripts, comments, ideas, inquiries, or information suitable for publication in the DI News. Any item relevant to direct instruction is appropriate for the News. A working list of the types of items the News will publish, along with submissions guidelines for each, appears in this issue. All submissions will be edited for length, readability, and technical accuracy prior to publication. Issues will be published in fall, winter, spring, and summer. Please submit (postmark) all items no later than the first of September, December, March, and June.

Advertising Policies and Rates

The Direct Instruction News will publish advertisements for materials (programs, books), training (conferences, workshops), and services (consultation, evaluation) 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:

Full page: \$200
Half-page: \$125
Quarter-page: \$75

**20% Off
List Price**
ON

**Direct Instruction Reading
and**

Direct Instruction Mathematics

Send \$14.95
plus \$1 for shipping and handling
for each book to the
Association for Direct Instruction
P.O. Box 10252
Eugene, Oregon 97440

The **Direct Instruction News** is published in September, December, February and April, and is distributed by mail to members of the Association for Direct Instruction. Readers are invited to submit articles for publication relating to DI. Send contributions to: The Association for Direct Instruction, P.O. Box 10252, Eugene, Oregon 97440.

Editors	Wes Becker
.....	Stan Paine
Art Director	Susan Jerde
Layout	Sheila Rose
.....	Springfield News
Typesetting	Pan Typesetting
.....	Springfield News
Printing	Springfield News

ADI Officers Elected

Officers of the Association for Direct Instruction for the 1981-82 membership year were elected at the fall meeting of the ADI Board of Directors. Officers for the current year are: Stan Paine, President; Doug Carnine, Vice-President; Leslie Zoref, Secretary; and Wes Becker, Treasurer.

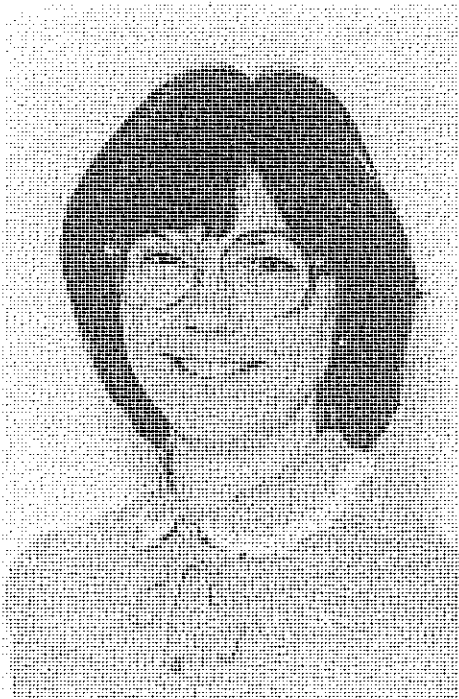
Stan Paine, a former project manager and research associate with Project Follow Through, is currently managing director of ADI and co-editor of the DI News. Doug Carnine is the Director of the Direct Instruction Follow Through Model and is a Direct Instruction author. Leslie Zoref is a project consultant for Follow Through and a current program author. Wes Becker is the former Follow Through director for the DI model, co-director of the Engelmann-Becker Corporation, direct instruction author, co-editor of the DI News, and one of the developers of the DI Model.

In keeping with the by-laws of the Association (see DI News, Vol. 1, No. 1, September 1981), these officers will serve through the 1982 Summer Conference in Eugene. New officers will be elected at the time of the conference, which marks the end of one membership year and the beginning of another.

Teacher-to-Teacher

Editor's Note: We are pleased to announce a new column, "Teacher-to-Teacher," which will appear in each issue of the News beginning with Volume 1, No. 3, scheduled for publication in Spring, 1982. The column will always be written by classroom teachers about issues of interest or concern to other teachers.

The column will be edited by Jane Cote', teacher at Whiteaker Elementary School in Eugene, Oregon. Jane has been involved with Direct Education for 9



Jane Cote'

years; for the past seven years she has taught first and second graders using a comprehensive Direct Instruction curriculum complemented by a variety of behavior management procedures. Jane is also active in the Bethel-Eugene-Springfield Teacher's Center and is a member of the Board of Directors of the Association for Direct Instruction. She is considered by many to be one of the best teachers in the United States. We are extremely pleased about her involvement with the News as editor of "Teacher-to-

ADI Membership Report

As of January 20, 1982, Association membership stood at 370. This figure compares favorably with the projected membership growth rate for the organization. Half of the current members (192) were enrolled at last summer's Direct Instruction Conference in Eugene. While we were excited about the number of people who joined the association at the conference, we would like to see membership continue to grow throughout the year. We are hoping that much of this growth will come through reader response to the Direct Instruction News.

You can facilitate continual growth of the organization in at least two ways. First, if you have not yet joined the association, please do so now. You may use the convenient membership form printed on the last page of this issue of the News. Please enclose a check or money order with the application form. We need your support to continue to grow. Similarly, we need your input if we are to serve *your* direct instruction informational and support needs fully. Please send your ideas for association activities or for Direct Instruction News content along with your membership forms. If you are already a member, please write to us and let us know what we can do to serve your direct instruction needs better. We very much want to be a member-oriented organization.

Another way you can support the growth and vitality of the organization is to help other people to become members. You can do *this* either by encouraging them to join on their own or by signing them up yourself. You are an influential member of your school or community, right? Use your leadership role to advance a course that you believe in. Encourage teachers, supervisors, administrators, parents, students, professors, and other taxpayers to join the Association. It is not just the Association you would be promoting — it is the cause of quality in the public sector — of excellence in education. Tell these people about the Association; share your copy of the Direct Instruction News with them. If they do not take the initiative to sign themselves up, take the initiative for them — give them a gift membership. These memberships can be given for any occasion: birthdays, holiday gifts, unique wedding or anniversary gifts, baby gifts (in the name of a newborn child whose future education you care about), welcoming gifts for new educators, graduation gifts, or give them to reinforce good educators you want to encourage.

Teacher." In this capacity, Jane will write topical features for the column on approximately an every-other-issue basis. For alternate issues, she will edit contributions to the column which she has invited other teachers to write. If you have suggestions for topics which you would like to see addressed in the column, please send your ideas to:

Jane Cote', Column Editor
Direct Instruction News
2470 McMillan St.
Eugene, OR 97405

ADI Board Plans Goals



Jane Cote, Wes Becker, Linda Carnine, Stan Paine, Leslie Zoref, Doug Carnine

At the January meeting of the ADI Board of Directors, the Board adopted a statement of purposes, a set of goals, and a corresponding organizational structure for the Association. They are printed here for the information of the membership.

The purpose of the Association for Direct Instruction is to promote excellence in education by disseminating information about effective educational technology and by supporting students, teachers, parents, and administrators in their pursuits of educational excellence. Toward this purpose and by its activities, the Association will strive to reach the following goals:

1. To provide resource support to persons using direct instruction programs and procedures.
2. To foster communication among persons working in the area of direct instruction on issues pertaining to the practice of direct instruction.
3. To develop skills and disseminate information regarding direct instruction programs and procedures to interested persons.
4. To promote quality educational services through recognition of teachers, administrators, buildings, and/or districts evidencing competent use of direct instruction programs and procedures.
5. To maintain and build ADI's purposes through a wide variety of public relations and fundraising efforts.

The organization structure of the Association corresponds directly to its five goals. The Board established a working committee to pursue each goal. These groups include: a membership/support committee to pursue goal 1; a publications committee to pursue goal 2; a conference committee to pursue goal 3; a recognition committee to pursue goal 4; and a public relations/funding committee to pursue goal 5. These committees are now being formed and will begin work immediately on their respective areas of responsibility. Reports of their progress will be published periodically in the *DI News*.

The Board of Directors welcomes your comments and suggestions on ADI's expressed goals and organizational structure.

"Dear Ziggy"

Do you know students who add when they should subtract, who hold their books upside down when they read, or who hang from the light fixtures when you turn your back? Have you ever wondered how to help the students make more sense out of the basal reading program you're stuck with? Have you ever asked, "Can this classroom be saved?" If you have ever had a question about your curriculum, your instruction, or your classroom management (or about those of someone you supervise), this column is for you. And who would be more likely to have an answer to your questions than "Dear Ziggy?"

In each issue, beginning with the Spring, 1982 issue, we will publish letters from readers — along with answers from "Dear Ziggy" — about common (and unique) educational problems. Whether you are a teacher, administrator, parent, or student, we invite your letters. You have enough other things to think about — give your problems to "Dear Ziggy."

Write to:
Dear Ziggy Column
Association for Direct Instruction
P.O. Box 10252
Eugene, OR 97440

DI Preschools Please Help

Do you use DI in a Preschool? Paul Weisberg wants to find out about the scope and extent of usage of Direct Instruction in preschools across the country. If you know of a Head Start, day care, or special school that uses D.I. please contact Paul either by calling (205) 348-5083 (or 5553) or by writing P.O. Box 2968, Department of Psychology, University of Alabama, University, AL, 35486.

Corrective Spelling Program Evaluated

By Mike Vreeland
Kalamazoo Public Schools

Three teachers and approximately 60 students took part in an evaluation of three spelling programs in the Kalamazoo, Michigan Public Schools during the 1980-81 school year. One of these programs was *Corrective Spelling Through Morphographs*. It will be referred to as Program A. The other two programs will simply be referred to as Programs B and C.

All of the students involved in the study were 4th graders enrolled in regular (non-special education) classes. A district consultant described the three groups as equivalent in reading level at the beginning of the study.

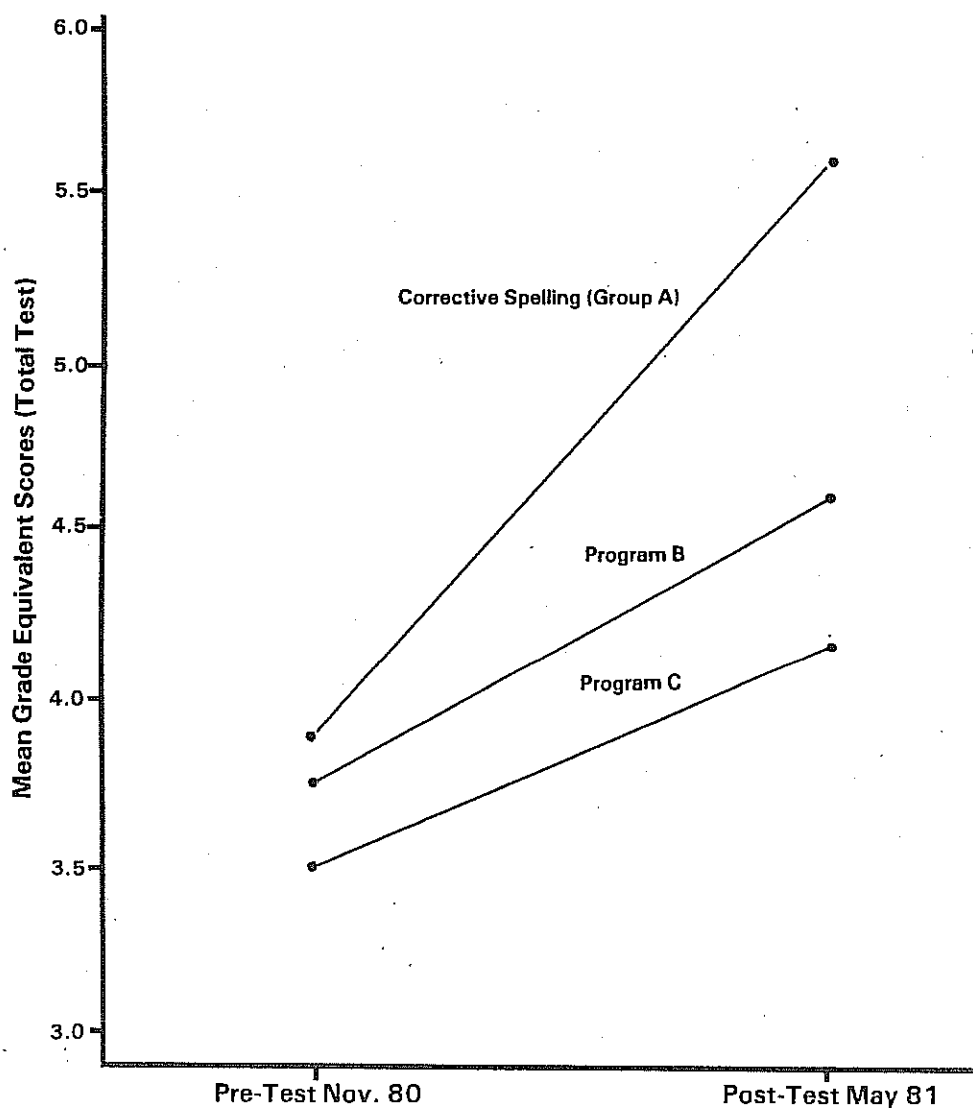
Each of the three teachers taught a group of 20 students for one-half hour each school day for seven months, using one of the three spelling programs studied. Teacher A taught from Program A. Teacher B from Program B, and Teacher C from Program C. Teacher A, who taught from *Corrective Spelling Through Morphographs*, received approximately six hours of training in this program and was observed while teaching and given feedback weekly during the first month of the study and bi-weekly for the remainder of the project. The other two teachers received no special training in their programs and were not observed or given feedback during the study.

Students were tested in November and again in May using the *Test of Written Spelling*, a group administered test requiring written answers. The test is divided into two parts — one dealing with phonetically regular words and the other with irregular words. Results of

this testing are shown in the accompanying chart.

Students in Program A (*Corrective Spelling*) increased from 3.9 to 5.6 in total test grade equivalent scores, an increase of 1.7 grade levels during the seven months of instruction provided in this study. Group B students increased .8 grades from 3.8 to 4.6. In Group C, students climbed from 3.5 to 4.2 — a .7 grade level increase. Increases on component parts of the test parallel total test scores. Group A students showed 2.2 and 1.5 grade equivalent increases on the regular and irregular word sections, respectively; Group B improved .6 and .9 on these sub-tests; and Group C's component gains were .8 and .6.

The gains made by the *Corrective Spelling* group (Group A) appear to be clearly superior to those of either Group B or Group C. In both cases, Group A increases were more than twice those of the comparison groups. However, the effects should be interpreted conservatively for at least two reasons: (1) instructional time was only estimated to be equal for all groups — this was not measured; and (2) Teachers B and C did not receive program-specific training or supervision, as did Teacher A. This second limitation should be considered carefully, since it could have contributed to the differing program effects as much as the program differences. What we do know, however, is that *Corrective Spelling*, supplemented as it was in the study by teacher training and supervision, can produce gains averaging approximately two-and-one-half months of achievement for each month of instruction. The factors contributing to such instructional efficiency clearly seem worthy of further investigation.



DIRECT INSTRUCTION NEWS, WINTER, 1982

Direct Instruction Outcomes with Middle-Class Second Graders

Because the Distar® programs are used extensively with lower performing children, many educators have assumed that the programs are designed only for low performers and that they are either not appropriate or are even stultifying for "average" children. The Distar authors, on the other hand, maintain that the programs are designed for any child who has not mastered the skills necessary to read, to solve arithmetic problems, or to handle basic language operations.

Data on the Engelmann-Becker Follow Through Model (Becker & Engelmann, 1978) tend to substantiate the authors' contention that Distar does not inhibit middle-class children's achievement. Within Follow-Through classroom are some 20 percent middle-class children. At the end of second grade the average performance in reading decoding for 3,363 poor children who started in first grade was grade level 3.7 (based on the Wide Range Achievement Test norms); for 898 middle-class children, the average reading performance was grade 4.5.

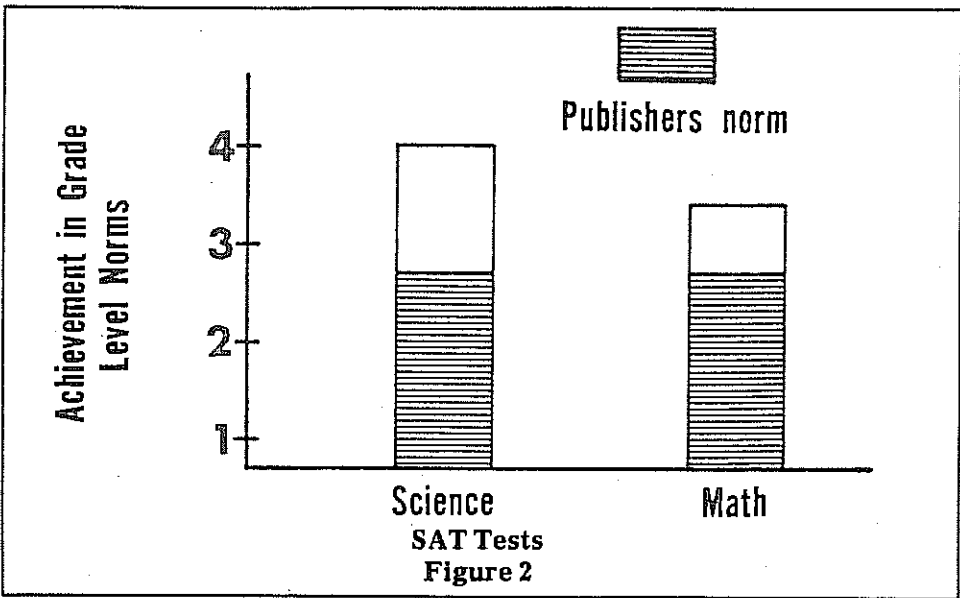
To further document the effects of Direct Instruction on the attitudes and achievement of "average" children, data were collected on a classroom of 30 middle-class second graders in Springfield, Oregon. The top half of the total second-grade enrollment — as determined by teacher assessment — was placed in the experimental classroom (28 children). These children had been in Distar as first graders also. Two low-performing children were added to the experimental classroom. One was a repeater (the only student who had been retained). The other was placed in the classroom on the recommendation of the reading specialist.

During both the first-grade year and the second-grade year, the children were taught primarily by trainees (students at the University of Oregon enrolled in a practicum on Direct Instruction techniques). Two academic skills — reading and arithmetic — were taught by trainees each morning during a two-hour period. For reading the second-grade year, each child received one-half hour of small-group instruction in level III Distar (which focuses heavily on science content), one-half hour of independent reading seatwork, and one-quarter hour of entire class instruction. The daily arithmetic instruction involved one-half hour of entire class presentation and one-quarter hour of independent seatwork.

The second-grade classroom teacher was rated as a superior teacher; however, the trainees were responsible for the bulk of academic instruction in reading and arithmetic.

A supervisor was responsible for training the trainees and for monitoring their performance. A total of six trainees taught the children over the two-year period. The trainees usually switched subject areas or small groups at the beginning of each new quarter, which meant that the children were frequently taught by three different "teachers" dur-

By Siegfried Engelmann and Doug Carnine



ing the year, some of whom initially had never taught children before. Based on training data and children's performance in Follow Through, one would expect that the inexperienced trainees would not be able to achieve performance gains as great as those of experienced teachers.

These tests were given from late April to early June of the second-grade year:

Stanford Achievement Test (Primary Battery 2) for Reading, Arithmetic, and Science. Wide-Range Achievement test for oral reading.

The ten children who performed best in reading achievement also received the Gates-MacGinitie test of *Speed and Accuracy* (for fourth through sixth graders).

An attitude questionnaire (developed by the investigators) was designed to tap the children's feelings about their reading program, their teacher, and themselves. (See Table 1.) The attitude questionnaire was presented to the entire class. The tester told the students that he was going to ask questions about their reading program and that the children were not to write their names on the test form. The tester then read each item aloud and the children circled the words that indicated how they felt. (The questions did not appear on the children's answer sheets.)

Results

Figure 1 presents bar graphs of the reading test scores.

The first bar shows the mean reading (comprehension) score for all 30 children on the Stanford Achievement Test and the publishers norm (crosshatched). The mean performance for the 30 subjects was at the 4.6 grade level. The only two children who scored below grade (below 2.7) were the two low performers added to the classroom. Both scored 2.6.

The second bar shows the mean performance for all children on the WRAT Reading (oral decoding). No child scored below grade norm.

Results of the Gates-MacGinitie tests of *Reading Speed and Accuracy* appear on the third and fourth bars. Only the top ten children received this test. Although the children were in the second grade, they received the fourth through sixth grade battery because that is where they were performing. The ten children's mean performance was grade level 7.6 for speed and 7.5 for accuracy. The lowest score for speed was 4.6 (both scores achieved by the same child).

Figure 2 shows the performance of all 30 children in Science and Arithmetic as measured by the Stanford second-grade battery.

The children were not taught science as a subject. What they had learned about science derived from Distar Reading III. The 15-minute daily entire class activity could be labelled "science," since the children learned the various science rules presented in Distar III during this time. In science performance, the mean of 4.0 is significantly above the expected norm of 2.7. Only four children scored below grade level.

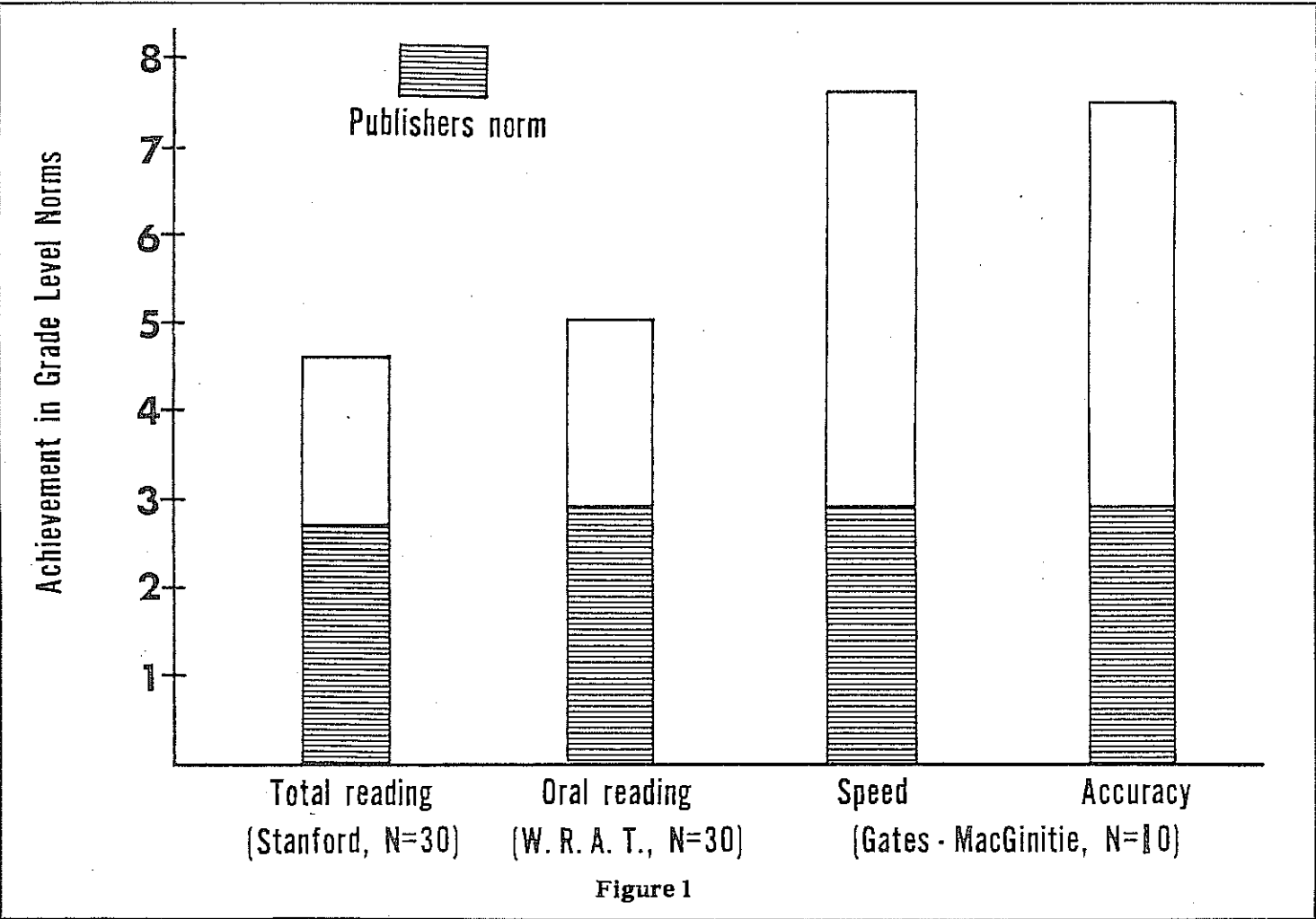


Table 1				
Distar Reading Attitude Questionnaire and Children's Responses				
	1	2	3	Mean
A. Enjoyment				
1. How much did you enjoy the stories?	a little (4)*	some (6)	a lot (20)	2.5
2. How much did you enjoy the workbook?	a little (6)	some (11)	a lot (13)	2.2
3. Were the materials:	too easy (5)	just right (22)	too hard (3)	1.9
4. Which part of the program did you enjoy the most?	beginning (4)	middle (15)	end (12)	2.3
5. Which part of the program did you enjoy the least?	beginning (16)	middle (7)	end (7)	1.7
3. Interest and Curiosity				
6. How much did you talk about what you've learned with other people?	a little (8)	some (10)	a lot (12)	2.1
7. Have you read other books to find out more about something you read in a story?	Yes (20)	No (10)		1.3
C. Self-Image				
8. How smart are you compared to other kids you know?	smarter (9)	just as smart (16)	not as smart (5)	1.9
9. How well are you going to do next year in school?	very well (19)	O.K. (10)	not too good (1)	1.4
10. How smart are you going to be when you grow up?	very smart (24)	average (6)	below average (0)	1.2
11. How much did the teacher expect you to work?	a little (1)	some (2)	a lot (27)	2.9

* Numbers in parentheses indicate the number of children who circled that response.

The mean Arithmetic performance grade level 3.4) is not as high as that of reading and science. The standard deviation for arithmetic performance was 0.83, indicating a narrow score distribution. Five children were below grade level.

The results of the attitude questionnaire are summarized in Table 1.

Items 1 through 5 deal with the student's enjoyment of the level III material. In response to item 1, 67 percent of the children indicated that they enjoyed the text material (the stories) a lot. The group enjoyed the workbook less, however, the highest category (a lot) was marked by 43 percent of the children. Most children (73 percent) indicated that the material was "just right" in terms of difficulty (item 3). In items 4 and 5, the students indicated that they enjoyed either the middle (47 percent) or the end of the program (40 percent) far more than the beginning.

Items 6 and 7 may be considered as a crude indicator of the extent to which the children's interest was either stimulated or stifled by Distar Reading II. The summary of item 6 indicates that almost three-fourths of the students (73 percent) talked about the content some or a lot with other people. Also, 67 percent of the children read other books to find out more about specific content presented in the reading program (item 7).

Items 8 through 10 deal with "self image" as it relates to being smart and performing well academically. Responses to

item 8 indicate that the children do not consider themselves smarter than other kids they know; however, according to item 9, 80 percent of the students believe they will be very smart when they grow up. Almost two-thirds of the children (63 percent) indicate that they will do very well in school during the following year (item 10).

While there is no comparison group reported in this study, the performance of the children seems to be far above what would be expected in middle-class second-grade classrooms. There were no non-readers at the end of the second-grade year. In fact, the two lowest performers on the Stanford were only one-tenth grade level below norm. Both of these students scored above grade level on the WRAT. If we consider the publisher's norms as a basis for comparison, the children reported in the study were significantly accelerated, although the children had received no kindergarten instruction and although the classroom situation was less than optimal for achieving maximal performance or attitude gains. The constant switching of trainees meant temporary breaks in continuity. The inexperience of the trainees frequently meant that the children did not progress as rapidly as a more experienced Distar teacher would have moved them.

Some Conclusions

This study is not presented as a definitive statement about the effectiveness of highly structured, direct-

Administrator's Briefing

Editor's Note: We believe that the News should address the educational issues and concerns of administrators, as well as those of teachers. While both groups presumably have as their primary concern the educational progress of students, they often deal with different issues on a daily basis. In this regard, we are pleased to announce a new column designed for principals, supervisors, coordinators, directors, superintendents, school board members, and any other persons working in an administrative capacity at the building or district levels.

The column, tentatively titled "Administrator's Briefing," will appear in each issue of the News beginning with Volume 1, No. 3 — the Spring, 1982 issue. The column will be written by administrators about administrative issues related to direct instruction, and will be edited by Linda Carnine, Director of Special Education and Curriculum Coordinator for the Creswell, Oregon, School District. Linda served as a trainer, consultant, and project manager for the Direct Instruction Follow Through Project for 12 years, co-authored the Corrective Reading Program, and serves on the ADI Board of Directors. Her past experience in Direct Instruction and her present position in an administrative capacity give her an excellent perspective from which to edit this column. We are very pleased that she has agreed to share this perspective with our readers.

Linda will write the column herself for



Linda Carnine

about half of the issues; on the remaining occasions, she will invite other school administrators familiar with direct instruction to write the content, which she will then edit. If you have suggestions for topics which you would like to see addressed in this column, please send your ideas to:

Linda Carnine
Director of Special Education and Curriculum Coordinator
Creswell School District
182 S. 2nd St.
Creswell, OR 97426

instruction techniques with average and above-average performers; however, the data suggest that many statements like the following are false.

1. *Highly structured programs either retard or hold back average or above-average performers.* The teaching procedure is basically the same for both above- and below-average children; however, where they start and where they end is different. As soon as the children show that they can perform on a particular skill, the teacher moves to the next skill. The children in the study completed an average of 460 lessons during the two-year period (an average of 2.6 lessons per school day, based on 180 days per year).

2. *While highly structures programs may be successful in teaching very basic skills, such as decoding, they are not well designed to teach comprehension and reasoning skills.* The comprehension mastery as measured by the Stanford (4.4) was 1.7 years above grade level.

3. *Children who learn from highly structured programs find the instruction boring.* Neither the behavior of the children in this study nor their responses to the questionnaire provide any evidence that they found the highly structured presentations boring. While recognizing that their teacher required them to work hard, the children generally enjoyed what they did. An interesting point is that they enjoyed the program more as they progressed through it.

4. *Structured programs stifle curiosity and instill passive, stimulus-response behavior.* The children reported that they discussed the content of the program outside of class and two-thirds of them read books about specific concepts taught in the program. Discussions and

independent projects are generally taken as signs of both independence and curiosity.

5. *Structured programs do not promote positive self-images.* Self-image is difficult to measure because there are many facets to a positive self-image. (Confidence on the basketball court does not imply a positive self-image in a reading group.) Although the measures used to judge "self-image" in the present study are, at best, crude, the children seem to be saying that they feel confident about themselves, that they are smart, that they will do well in school next year, and that they will be smart when they grow up. The only item that provides an apparent inconsistency with this interpretation is 8, to which the children responded that they generally consider themselves as smart as other children. A possible interpretation is that the children were using their classmates as a basis for this evaluation. The fact that they feel they will do very well next year and will be very smart when they grow up implies that they currently consider themselves quite smart. If these statements actually reflect their feelings, the children exhibit a quite positive self-image with reference to academic performance.

In summary, this study provides good support for the use of Direct Instruction programs with all children, not just the difficult-to-teach children.

Reference

Becker, W.C. & Engelmann, S. Analysis of achievement data on six cohorts of low-income children from 20 school districts in the University of Oregon Direct Instruction Follow-Through Model. Technical Report 78-1: Eugene, Oregon. University of Oregon Follow Through Project, 1978.

By Anthony B. Branwhite

(Editor's Note: Tony Branwhite is a British educational psychologist currently on exchange at the MacWilliam Centre for Special Services in Kelowna, B.C., Canada. He has been using and promoting direct instruction in the United Kingdom for several years. Please note that the school in which the research took place is described as a middle school. The students involved in the study were eight and nine years old, not twelve to fourteen, as middle school students tend to be in the United States. We encourage other people outside of the United States to write to us or submit something reflecting their work so that we can let others know about direct instruction efforts and successes taking place around the world.)

Two questionable notions persist within the mythology of remedial education: (1) that teacher-expertise is the paramount factor in promoting reading competence, and (2) that responsibility for resolving reading problems rests with the student. Both seem worthy of critical scrutiny and both are addressed here to investigate the suitability of direct instruction technology in one particular school.

While an impressive amount of research involving direct instruction programmes has been carried out overseas (see Becker & Carnine, 1980), there is a current paucity of data on direct instruction in the U.K. Of the studies which are available, few offer comparative data. Apparently, none presents an empirical evaluation of the particular programme used here. A rationale for use of the Distar programmes in U.K. schools has been given by Branwhite & Levey (in press).

The work was carried out in an urban middle-school (for children aged 8-12 years) designated as being in a social priority area (low income).

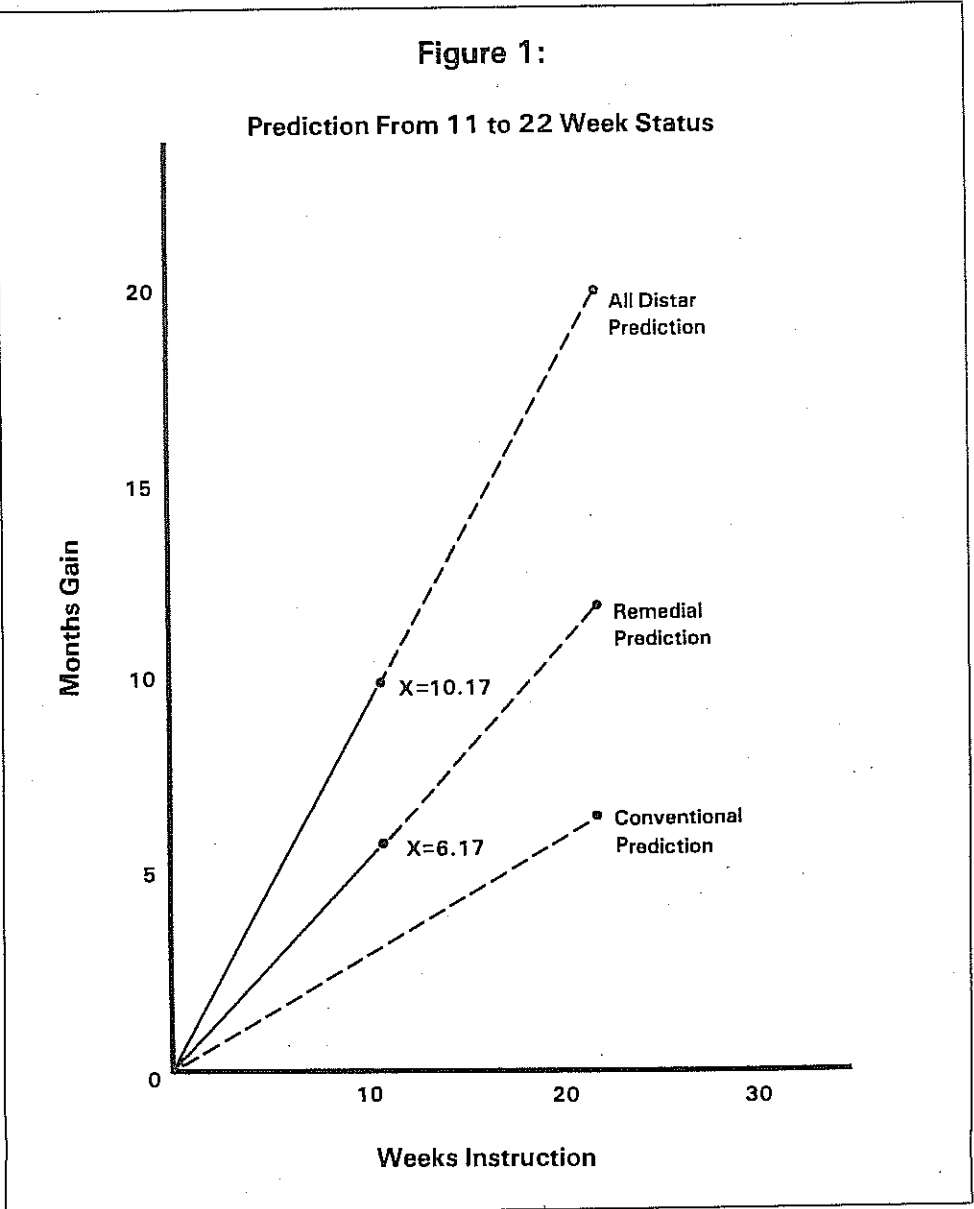
The students were 12 boys and 2 girls in a remedial teaching group; ages ranged from 8 years-1 month through 9-11, with an average of 8-7. The group intelligence test used by the school yielded Q's from 74 to 108 with a mean of 116. After their minimum of 3 years in full-time mainstream education, these children were assigned to the remedial class because they were significantly retarded in reading attainment, exhibiting a range of 20 to 40 months retardation, with a mean level of 31.9 months.

Their initial reading performance evinced numerous omissions, sound substitutions, reversals, frequent hesitations, complete blocks, and a general absence of blending skills. To listen as the children attempted to read at this stage was usually to listen to a stumbling word-by-word approach, which was not typically accompanied by finger-pointing. To ask questions regarding the text was to discover an inadequate degree of comprehension. By any standards the need for remediation was urgent.

The 14 children were divided into 2 groups of equal size after administration of a placement test, and each was given tuition in reading by the same teacher 35 minutes per day over a period of 22 weeks. Instruction was delivered in two phases. In the first, one group of children was exposed to the Direct Instruction programme, while the other group received routine remediation. During the second phase both groups received Direct Instruction.

the Singer or the Song?

Does the Programme Make a Difference with a Good Teacher?



Reading assessment and teaching were executed by a remedial specialist of some years experience. She had no ancillary help in the classroom, and while one group received tuition, the other completed an alternative assignment. To keep seatwork going, housepoints (popular amongst the children) were awarded for on-task behaviour.

The appropriate Direct Instruction programme for the age-range involved was *Distar Reading II*. The placement test from this programme was administered to all the children, with the outcome that 7 of them scored between 4 and 10 errors, the recommended error-range for entry at lesson 1 of the programme. The remaining 7 children were assigned to a routine remediation group. There was no significant difference in I.Q. between the groups.

"Routine" remediation included criterion-referenced assessment of phonic skills, regular small-group teaching of sound and word discrimination, and individualised activities based on Tansley's (1974) "Sound Sense," Ridout's (1957) "Word-Perfect" series of readers, East Riding Remedial Service phonic work-cards, and individually designed back-up materials. Reading assessment was carried out before instruction commenced and again at the end of each phase of instruction, using the school's standard reading instrument, Schonell's graded word reading test (1972 revision).

Results

Analysis of the data shown in Table 1 using *t* for independent samples yielded *t*

= 9.30. This gave a highly significant difference (*p* less than .001) for Distar gains over Remedial gains given equal teaching time during phase one. The group mean gain scores are shown in Figure 1, and were used to predict performance at 22 weeks by extrapolation. Both types of intervention exceeded the conventional prediction of 12 months gain for 12 months instruction.

It should also be noted that the conventional prediction gradient has in fact been plotted at its most optimistic level, namely that of 12 months gain for a teaching year of around 40 weeks.

Table 2 indicates that within the Distar group the average gain was 2.63 months lower in the second 11-week phase. Although the acceleration rate is still far superior to both conventional and remedial gradients, this difference is statistically significant and needs to be accounted for. A possible explanation may lie in the greater task-complexity encountered further along in the programme; if this is correct, the fall-off in rate of gain may be an artifact of hierarchical programme construction. It may also be simply an artifact of the skills tested in relation to what the programme teaches.

From Table 3 the reverse effect can be seen. Although remedial teaching accelerated these children at a rate well in excess of conventional expectation, transfer to the Distar reading programme boosted them still faster. The difference between the mean gains for each phase, 6.17 and 12.20 months respectively, yielded a *t*-value of 15.87 which was significant at the .001 level. A

Table 1									
Gains at 11 Weeks Over Status at Start									
Child	1	2	3	4	5	6	7	X	S.D.
Distar Group	6.0	9.6	10.8	16.0	10.8	9.6	8.4	10.17	3.05
Remedial Group	6.0	4.8	4.8	9.6	6.0	4.8	7.2	6.17	1.76

Table 2									
All Distar Group Gains in Months									
Child	1	2	3	4	5	6	7	X	
Gain at 11 Weeks	6.0	9.6	10.8	16.0	10.8	9.6	8.4	10.17	
Gain from 11-22 Weeks	14.4	6.0	7.2	4.8	6.0	4.8	9.6	7.54	

Table 3									
Remedial to Distar Group Gains in Months									
Child	1	2	3	4	5	6	7	X	
Remedial Gain at 11 Weeks	6.0	4.8	4.8	9.6	6.0	4.0	7.2	6.17	
Distar Gain from 11-22 Weeks	13.2	6.0	0.0	12.0	13.2	12.0	16.8	12.20	

zero-gain for child 3 is explicable in terms of his almost continuous absence during this phase of the project.

Gain score mean values for the All-Distar and Remedial-Distar groups were plotted for comparison purposes in Figure 2 below, against the predicted levels of performance from Figure 1.

The discrepancies between actual gains and predicted levels are perhaps unsurprising, since learning progress typically produces a curvilinear trace, hence it is unlikely that plain linear extrapolation would have been replicated entirely. Nonetheless, the prediction lines have the merit of highlighting changes in learning gradients, and the comparative shifts can be readily detected here.

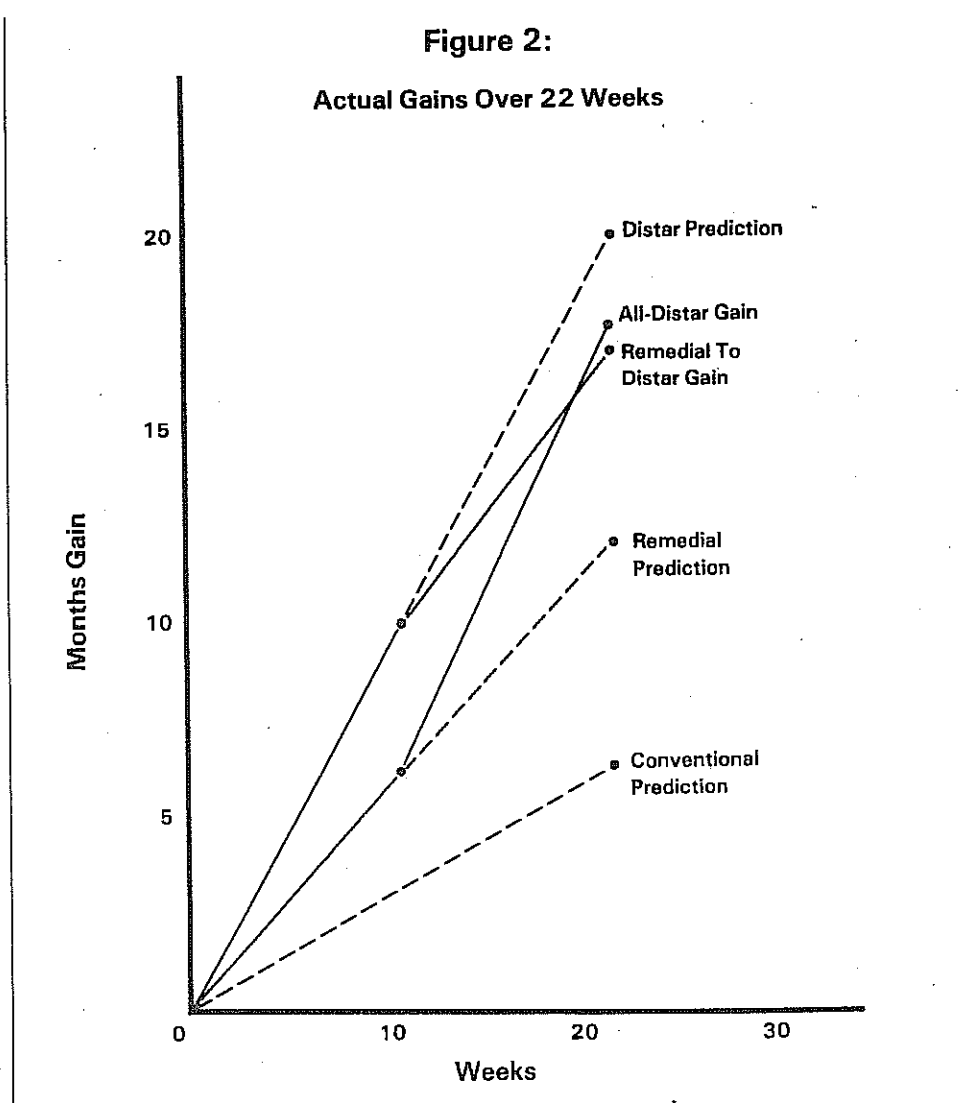
Discussion

During the first phase of the investigation, skillful remedial teaching evidently delivered what it is generally held to provide, i.e., a measurable level of change. Yet, it did not approach the magnitude of effect achieved by employing *Distar Reading II*, even though the teacher involved was a constant factor in the learning experience of both groups.

After 11 weeks, the decision was made to switch the remedial programme children into the direct instruction programme. Justification for this decision can be seen to lay in the superior acceleration achieved by the remedial group using *Distar Reading II* against their own previous performance.

Data shows that *Distar Reading II* produced a rapid and substantial acceleration, and that this effect was consistent across two groups of subjects, even though in their 3 past years of full-time education as individuals they may have met widely differing emphases in reading instruction.

Other observations suggest that there were important qualitative as well as quantitative gains. For example, measurements of the childrens' oral reading performance yielded final median values of 30.5 words correct per minute and 3.0 errors per minute in the Remedial-Distar group, against 67.5 words correct per minute and 4.0 errors per minute for the All-Distar group. It seems noteworthy that while there is little difference in the median error-rates, the median correct-rate was more than twice as high for the All-Distar children, even though they were reading more difficult material. In addition, finger-pointing was no longer



a dominant feature of this groups' reading performance, although it was still readily observable amongst the Remedial-Distar children. The basis for these differences apparently lays in an extra eleven weeks Distar experience for the All-Distar group.

Overall, these findings do not support the contention that teacher-expertise was the overriding factor in remediating reading difficulties; it was important in running the programme, but the striking contrasts in performance reported here seem to be indisputably linked to the Distar design package. A realistic viewpoint would be that a competent teacher can multiply any positive effects they can produce by adopting high-quality instructional materials.

The response of the children was such that those with 22 weeks exposure to Distar Reading II were pinpointed for full-time survival in regular classes during the next school year, and this sug-

gests that one-to-one instruction need not be perceived as the only viable solution for major reading retardation, since the child-to-teacher ratio these children experienced was 7-1.

Twenty-two weeks' work represents approximately 55 programme hours, and the ability of the programme to promote strong gains from this limited amount of input reflects the quality of its organisation. Distar Reading II offers a blend of task analysis, programme logic, teaching tactics and careful research which few of us indeed could aspire to put in practice unaided. It is, perhaps, not without significance that Beck & McCaslin (1978) gave Distar Reading a more favourable rating than seven other phonetic reading instruction programmes they subjected to rigorous evaluation.

While remedial teaching was obviously helpful, in its best sense a remedy should be curative. In this setting that

implied a capacity to generate learning at a pace where children neither continued at their previous rate nor learned at the pace of regular-class peers, but actually learned *faster than normal* to facilitate their catching up. It is concluded that Distar Reading II had the capability to meet this need in a way that routine phonic remediation did not.

Finally, a word of caution about generalising these results: this study was carried out in the context of a busy school and a hard-pressed psychological service, without the benefit of grants or full-time research personnel. Therefore, it might reflect some of the limitations of work done in the field. The duration of the project was not long, the subject groups were small, and for all the above reasons a conservative interpretation is appropriate. Plans are afoot to develop more extended projects in the near future.

Acknowledgements

Full credit should go to teacher Denise Rothenberg for completing a course of training in her free time, and developing a new style of instruction; also to Neil Robinson, headteacher at South Parade Middle School, for his funding of the materials and open-minded support of the work done. The author would also like to thank Kim Hart for her stimulating course-input during September 1980. Grateful thanks are due to June Jackson for her painstaking preparation of the typescript after code-breaking my handwriting! Appreciation of the willing participation of the children involved is the last but not the least acknowledgement.

References

- Beck, I.L. & McCaslin, E.S. (1978) An analysis of dimensions that affect the development of code-breaking ability in eight beginning reading programs. Pittsburg: University of Pittsburg, Learning Research and Development Center, 1978.
- Becker, W.C. & Carmine, D. (1980) Direct Instruction — an effective approach to educational intervention with the disadvantaged and low performers. B.B. Lahey & A.E. Kazdin (Eds.) *Advances in Clinical Child Psychology*, Vol. 3. New York: Plenum Publishing Corp., 1980.
- Branwhite, A.B. & Levey, B. Teacher-controlled learning: an orientation for the 1980's. (In press.)
- McCullagh, *Pirate Readers*. Leeds: E.J. Arnold, 1975.
- Ridout, R. (1957) *Word Perfect: A series of introductory texts*. Aylesbury, Bucks: Ginn & Co., 1957.
- Tansley, A.E. *Sound sense* (Revised Edition) Leeds: E.J. Arnold, 1974.

Dissent

The editors believe that publishing polite dissent is critical to any forum which strives to be fair and open, which encourages readers to think through issues for themselves, and which wants to avoid unrestrained dogmatism. Therefore, we welcome expressions of dissent on various direct instruction issues — either from those who consider themselves direct instruction professionals or from those who view the field from another perspective. You may submit your views as either two to four page formal dissents or, in briefer form, as letters-to-the-editors. All dissents should be based on issues, not on personalities, and should be signed by the author. Submit dissenting opinions to the editors.

Employment Exchange

As a service to our readers, we would like to publish notices of positions available, positions wanted, and job exchange opportunities in each issue of the News. To do so, however, we need information which only you, the readers, or your colleagues, can provide for us. This is one feature of the News for which we cannot generate information ourselves. If you want to hire someone, but you want to make sure they have a direct instructional background; or if you are frustrated about your efforts to use direct instruction in your present position and are looking for a supportive movement; the Employment Exchange might be a source of assistance for you. We are interested in helping people find direct instruction staff and direct instruction positions at all levels of employment in both service delivery

(aides, teachers, supervisors, administrators) and higher education (teaching, research) settings. Send your notices, marked "Employment Exchange" to the editors. Restrict your length to 50-60 words. For the immediate future, no charge will be made to members for this service.

Acknowledgements

The Board of Directors of the Association for Direct Instruction and the Editors of the Direct Instruction News wish to express their sincere thanks to the following people for their recent efforts on behalf of the Association and the News:

Barker Houghton	Sally Chastain
Marilyn Stepnoski	Pam Cooper
Bob Taylor	Bryan Wickman

You Can Help Us Reach New Members

If you are attending any conventions that would likely attract persons interested in DI we will provide you with copies of this newsletter for distribution. Write Wes Becker at ADI indicating how many copies you will need.

The CORBEH Behavior

by Hill M. Walker

CORBEH (Center at Oregon for Research in the Behavioral Education of the Handicapped) was a research and development center at the University of Oregon from 1971-79. CORBEH was directed by Hill Walker and funded by the Office of Special Education Programs within the Department of Education.

The Center contracted in 1970 to develop, test, and validate four behavior management packages for use by school personnel in remediating commonly encountered child behavior disorders. A separate package was developed for each of the following behavior disorders: (1) acting out behavior, (2) low academic survival skills, (3) social withdrawal, and (4) social aggression.

Research and development activities on the packages are now complete. Each package contains the following components: (1) a consultant manual, (2) a teacher and/or excess supervisor's manual, (3) a program materials packet, and (4) a cassette tape/filmstrip T.I.P. (Total Information Program) that provides an overview of the package. The approximate cost of each package is \$25-30, excluding the T.I.P. (which can be borrowed for up to a month). Each package can be used repeatedly without additional costs. Information about the packages, supporting research and ordering information can be obtained by writing to: CORBEH, Clinical Services Building, 3rd floor, University of Oregon, Eugene, Oregon 97403.

The remainder of this article describes: (1) the behavior management packages, (2) the R & D process used to develop them, and (3) references on their effectiveness.

THE BEHAVIOR MANAGEMENT PACKAGES

The four packages developed by CORBEH are: (1) CLASS (Contingencies for Learning Academic and Social Skills) for acting out children, (2) PASS (Program for Academic Survival Skills) for children with low academic survival skills, (3) PEERS (Program for Establishing Effective Relationship Skills) for socially withdrawn children, and (4) RECESS (Reprogramming Contingencies for Effective Social Skills) for socially negative/aggressive children.

CLASS and PASS are focused on academically related behavior within classroom settings. PEERS and RECESS focus on child social behavior in playground settings. All four packages have been field tested and are used extensively in this country, Canada, and Australia. The CLASS program has also been successfully replicated within Costa Rica. Negotiations are currently ongoing with commercial publishers for publication of the packages.

The packages are implemented over a two to three month period, and then, either terminated or followed up with a low cost maintenance program. Although designed for use primarily in mainstream educational settings, the packages can and have been used in special classes and resource rooms. However, efficacy studies of the packages have only been carried out to date in mainstream settings.

CLASS

The CLASS program is a set of procedures designed to modify the disruptive behavior of the acting out child. Its goal is to increase the occurrence of those behaviors which are prerequisites for successful social and academic achievement, and to decrease the frequency of behaviors that interfere with such achievement. To reach this goal, the CLASS program involves as many social agents as possible (parents, teachers, classmates) to build in positive behavior across multiple settings.

The program is implemented via a teacher-consultant, e.g., school psychologist, counselor, or resource teacher, who works closely with the regular classroom teacher. The

consultant provides direct intervention in the regular classroom setting, and when necessary, involves additional school personnel to extend the program to other school settings such as the playground, hallways, lunchrooms, and other classrooms.

The basic components of the CLASS program include: (1) the identification of a child likely to benefit from the program; (2) procedures for obtaining the involvement and cooperation of all principal participants; and (3) the implementation of the remedial procedures. Children are selected through teacher ratings and classroom observations by the consultant. After the case is accepted, the program is explained to the child's teacher and principal, his parents, the child himself, and his classmates. Each party signs an agreement which specifies his/her role and responsibility in the program. The program does not proceed unless the agreement has been signed by all.



Hill M. Walker

The remedial procedures are divided into two phases. Phase I (Days 1-5) requires the intensive in-class involvement of the consultant. Using a red/green point card, the consultant provides the child with continuous feedback as to the appropriateness (green side) or inappropriateness (red side) of his behavior. The consultant also praises the child and awards points which are exchanged for a reward shared by the entire class when a prescribed number of points are earned. Two successful periods in a day result in an additional reward and praise at home. During this time the teacher is increasingly involved.

Phase II (Days 6-30) is characterized by a complete shift in program responsibility from the consultant to the classroom teacher. By Day 10, the program has been extended to the entire school day and Day 20 is the last day on which tangible rewards are used. By the end of the 30 Program Days, the teacher is well prepared to help maintain the child's new level of appropriate behavior using praise and rewards occurring naturally within the school environment.

To allow for individual differences, children who do not progress smoothly are recycled to earlier successful levels. Therefore, while the procedures require 30 program days, the successful completion of these 30 steps may take more calendar days.

The great majority of acting out children who are judged to be appropriate candidates for the CLASS program are boys. The behavioral characteristics of such children often include one or more of the following: (1) disrupting the classroom, (2) noncompliance with teacher instructions, directions, and commands, (3) hurting others, (4) destroying property, (5) low levels of academic achievement, and (6) teacher defiance. The behavior pattern of these children can be characterized as acting out against classroom rules, procedures, and established structures.

PASS

The PASS program is a group-behavior-management system designed to increase the competence of primary level children on academic survival skills. Academic survival skills (attending to assigned tasks, listening carefully to instructions and directions, following directions, and talking with peers about academics) are the prerequisites for effective academic performance. The program is designed to improve the skill levels of children in classrooms who have low rates of academic survival skills. However, the program is applied on a *classwide basis*. Thus, low-functioning children are not singled out by the intervention procedure.

The PASS program is designed to be used by the consulting school professional (counselor, resource teacher, school psychologist, team leader, in-service instructor). Included in the materials are solutions to problems situations that frequently arise, suggestions for engineering the program to the idiosyncratic nature of most classroom program, and alternative suggestions regarding situations in which the program would not be beneficial or appropriate for use. Research has shown that if the procedures and techniques are systematically and consistently applied, significant improvement can be expected.

PASS is divided into five implementation phases:

1. *Preliminary assessment.* Observations are carried out by the consultant to determine the need for the program.
2. *Teacher baseline observations.* The teacher learns to record and graph the time *all students* are demonstrating survival skills during one or two daily academic periods.
3. *The full program.* The teacher and consultant introduce classroom survival skill rules, group rewards using available school activities, and give praise for improvement in survival skill score.
4. *Removal of the program.* Following improvement in the class survival skill level, the teacher begins a gradual removal of program components.
5. *Maintenance.* The teacher carries out two random weekly checks on the survival skills score and the teacher's praise rate. Three options are available for reinstituting the program to regain improved levels, if maintenance checks indicate a drop in performance.

The complete program takes 25-45 consecutive school days depending upon the rate of progress and the number of daily academic periods involved.

Children with low academic survival skills are not behavior problems in the same sense as are acting out children. They are not, as a rule, disruptive of classroom atmosphere, nor are they usually defiant of teacher commands and directives. However, the types of inappropriate classroom behavior(s) they frequently engage in are incompatible with academic performance and achievement. As a result, such children are often below grade level in achievement. The ratio of boys to girls low on academic survival skills is approximately 6.5 to 3.5.

PEERS

The PEERS program for socially withdrawn children utilizes an individual contingency with group activity

Management Packages

rewards shared equally with classmates. The target children in the PEERS program earn a daily group reward in which all peers share. This contingency procedure has these advantages: (1) it motivates a target child's peers to be supportive of and cooperative with the intervention program, and (2) it avoids teaching the child's peers to be deviant in order to be treated in a special way. The playground is the primary intervention setting because it provides excellent opportunities for social interaction. Because the PEERS program is concerned with building competencies, the techniques for producing behavior change in the PEERS program consist of direct prompting and reinforcement procedures designed to increase appropriate behavior.

The PEERS program consists of four major components. These are: (1) Social Tutoring or Coaching, (2) Joint Task, (3) Recess Point System with Backup Rewards, and (4) A Verbal Self-Report Procedure. The coaching and the Recess Point System are carried out primarily by the consultant. The other procedures are implemented by the classroom teacher; however, the consultant is also responsible for insuring that the teacher carries out these procedures correctly. The PEERS program requires from 20-40 school days for implementation. The consultant is involved for a minimum of 20 days, but the specific number of days is determined by the target child's performance.

On program Day 1 the intervention procedures begin with the first of three Social Tutoring or Coaching lessons. Also on Day 1, the teacher, under the supervision of the consultant, organizes the first Joint Task activity in the classroom. Day 2 is much like Day 1 except that the child is interviewed by the teacher and consultant who attempt to enlist his/her active participation in the program.

On Day 3, several major components are added. The Point System is introduced to the class and implemented in one specified recess period. The Verbal Correspondence procedure (which requires the child to report to the teacher about his/her play activities after each recess period) is introduced in the remaining recess periods. Simultaneously, Joint Task activities are introduced to the target child and his/her peers within the regular classroom setting.

Except for the Coaching component, which terminates after three days, the entire program (including Joint Task, Recess Point System, and Verbal Correspondence) continues for the duration of the intervention period. When the target child's level of social behavior is found to maintain at or above the criterion level for his/her grade level, then a gradual withdrawal of the components is initiated. The fading procedures continue until all of the components have been removed.

Children for whom the PEERS program was designed have extremely low rates of social contact with their classmates. They may also be isolated in a sociometric sense, but their rate of social interaction with other children is the primary selection criterion used to determine the need for the PEERS program.

The ratio of boys to girls who are judged in need of the PEERS program is approximately even.

RECESS

The RECESS program for socially negative/aggressive children also uses an individual contingency with group activity rewards shared by his/her classmates. A daily group reward is available whenever the criterion is achieved. The target child can also earn home privileges and rewards for performing well at school. This dual contingency increases the likelihood that a meaningful reinforcement will be identified for each child.

Like PEERS, the primary focus of the RECESS program is on social interaction. However, for withdrawn children, their problem is primarily one of *level* of social interaction; in contrast, the concern with socially negative/aggressive children is with the *quality* of their interactive behavior. The primary treatment setting for the RECESS program is the playground. Because socially negative/aggressive children often break classroom rules, etc., it is necessary to extend RECESS to the classroom setting in many cases.

RECESS consists of the following components: (1) discrimination training for the target subject and peers in appropriate versus inappropriate social behavior and/or classroom behavior, (2) a response-cost-point system which operates during recess, (3) adult praise (consultant, teacher, playground supervisor) for positive, appropriate interactive behavior, and (4) group reward available at school and the individual reward available at home. The point system, praise, and school and home contingencies are in effect throughout the entire program. The discrimination training procedures are implemented just prior to the start of the program with review sessions programmed intermittently during its early stages.

The RECESS program consists of four sequential phases occurring over a 6 to 7 week period: (1) Recess Only, (2) Full Program, (3) Fading, and (4) Maintenance. The Recess Only part of the program lasts two weeks and the consultant assumes primary responsibility for operating it. The intervention procedures are implemented in all three recess periods simultaneously, and, if the target child has zero negative/aggressive behavior in 2 out of the 3 recesses, the daily group reward is earned and made available at the end of the school day. Whatever recess points remain at the end of the day can be exchanged for tickets which are taken home to count toward special home privileges. During this two-week period, the consultant gradually trains the recess supervisor to operate the program.

Once the playground supervisor is running the program smoothly and effectively, the consultant begins making arrangements to extend the program to classroom areas. The extension occurs by requiring the target child to earn access to each of the three recess periods during the day. In order to earn access to recess, the child must follow classroom rules and be polite and cooperative with other children and the teacher. Unless access is earned to at least two daily recesses, the class group reward cannot be earned.

To build in long-term maintenance of treatment efforts, a low cost variation of the intervention program is installed on a "permanent" basis, i.e., until the end of the current school year at a minimum. In this procedure, the playground supervisor rates the child's overall behavior in each recess as either + or - on a daily basis. The child's teacher also rates his/her classroom behavior as either + or - twice each day - once in the morning and once in the afternoon. Each + counts toward a happy face on a wall poster. When completed, the poster is exchanged for a bonus reward - approximately once every 2-3 weeks.

Socially negative/aggressive children are extremely difficult for school personnel to manage effectively. A characteristic behavioral profile of such children includes: (1) argues and must have the last word in verbal exchanges, (2) intimidates other children, (3) uses coercive tactics to get his/her own way, (4) uses verbal derogation and ridicule in social exchanges with other children, and (5) is physically and/or verbally aggressive with other children. These children are frequently reinforced for behaving in this way via the natural consequences that are produced, e.g., submission of others, getting one's own way, and so forth. An extremely powerful intervention program is required to change this pattern of behavior and to teach a more positive cooperative style of interacting with others.

The great majority of socially negative/aggressive children are boys. Of 31 children worked with to date, two have been girls and the rest boys.

THE RESEARCH AND DEVELOPMENT PROCESS

Four to five years were invested in developing, testing, and validating the four behavior management packages. A three-stage research model was used. In research stage I, the focus was upon development of an economical, yet effective, set of procedures for changing the behavior of targeted children. Emphasis was placed upon a precise, careful analysis of the functional relationships between different treatment variables and behavioral outcomes. The

research in stage I took place within an experimental classroom for a 3 to 4 month period and then returned to the students regular classrooms. Once a set of treatment variables were identified that proved effective for remediating a given behavior disorder within the experimental classroom, the development process shifted to research stage II.

The focus of this stage was on adapting the identified procedures for use within the regular classroom. Target children representative of the behavior disorder in question were selected and program consultants (employed by CORBEH) worked with school personnel in delivering the treatment procedures. The goal of activities at this stage was to produce an intervention package that would be practical, cost effective and viable for use by regular school personnel. The emphasis was upon producing replicable effects on the behavior of target children across different classroom/playground settings and teachers and supervisors. Once this goal had been achieved, the procedures were packaged for field testing in stage III.

The primary research questions in stage III were whether teacher consultants employed by school districts could be trained to a sufficient skill level within a short-term workshop (2 to 3 days) to apply the package(s) effectively and correctly. Field testing afforded an opportunity to test the external generalizability of the package procedures through the use of experimental/control group designs. In field testing, the packages' effectiveness was compared against whatever ongoing treatment procedures the control children were exposed to. By the time a package reached the field-testing stage, there was no longer a question of whether the procedures were effective in changing child behavior. Instead, the issues of concern related to the packages' overall cost effectiveness, their practicality, and the extent to which school personnel could be trained to implement them correctly.

Each of the four packages went through this development cycle or process. After completion, the only additional work carried out on the packages related to dissemination and in-service training activities associated with the implementation process.

EFFECTIVENESS

Each of the packages was shown to be effective during the R & D cycle. Results on program effectiveness are described in the consultant manuals of each package. A bibliography on the respective packages is provided below.

CLASS

Walker, H.M. & Hops, H. The CLASS program for acting out children: R & D procedures, program outcomes and implementation issues. *School Psychology Digest*, 1979, 8, 370-381.

PASS

Greenwood, C.R., Hops, H., & Walker, H.M. The program for academic survival skills (PASS): Effects on student behavior and achievement. *Journal of School Psychology*, 1977, 15(1), 25-35.

PEERS

Hops, H., Walker, H.M., & Greenwood, C.R. PEERS: A program for remediating social withdrawal in school. In L.A. Hamerlynck (Ed.) *Behavioral systems for the developmentally disabled: I. school and family environments*. New York: Bruner/Mazel, 1979.

RECESS

Walker, H.M., Hops, H., & Greenwood, C.R. RECESS: Research and development of a behavior management package for remediating social aggression in the school setting. In P.S. Strain (Ed.) *The utilization of classroom peers as behavior change agents*. New York: Plenum Press, 1981.

Consumer satisfaction measures by program users consistently yield positive results. However, a major concern is the amount of time that program implementation requires, e.g., approximately 35 hours of consultant time distributed over a 2-4 month period. It is sometimes difficult for busy school consultants to make this amount of time available on a schedule that suits the implementation process. In such cases, it would be feasible for consultants to consider program variations that involve partial rather than full implementation. A significant impact can still be produced, in many cases, with less costly applications of the packages.

Direct Instruction Programs from SRA

The programs you've been hearing about...programs designed to get results...

programs for a wide range of student abilities...

programs in Reading, Language,
Spelling, and Math...



What is Direct Instruction?

Close interaction between teacher and students to provide the immediate feedback that's so important to mastery.

Presentation Books with detailed lesson scripts that take the guesswork out of teaching.

Lessons that stress clear presentation of concepts, plenty of reinforcement, and cumulative sequencing.

Daily teacher-directed activities followed by independent work that reinforces learning.

What are the key benefits?

Minimal lesson planning time, freeing you to focus on teaching rather than preparation.

The confidence that comes from using a proven method.

The satisfaction of knowing you have done the best possible job to help all your students.

What's available in Direct Instruction?

- Developmental programs
 - in Reading: DISTAR® Reading for preschool—grade 2
Reading Mastery for grade 3
 - in Language: DISTAR® Language for preschool through
grades 3
 - in Spelling: Spelling Mastery for grades 2-6
 - in Mathematics: DISTAR® Arithmetic for preschool through
grade 3
Mathematics Modules for grades 4-12
- Remedial programs
 - in Reading: Corrective Reading for grade 4 to adult
 - in Spelling: Corrective Spelling through Morpho-
graphs for grade 4 to adult
 - in Mathematics: Corrective Mathematics for grade 3 to
adult

What's new for 1982 in Direct Instruction?

Reading Mastery III — leads from DISTAR® Reading II into basal reading for the upper elementary grades.

Español to English — works alongside DISTAR® Language I to help move Spanish-speaking youngsters quickly into English.

The Solution Book — provides specific solutions to specific classroom discipline problems.

BLCI — new test screens students for language deficiencies in a way that points to specific remedies.

Corrective Mathematics — provides flexible remediation in whole-number mathematics.

Mathematics Modules — offers modular convenience in teaching upper-grade mathematics concepts.

Seeing is believing

If you'd like to visit a schoolroom to see the DISTAR® System and other Direct Instruction programs in action, the Direct Instruction Programs Administrator can usually arrange such a visit. We can also notify you of the next Direct Instruction Workshop in your area.

We think that seeing is believing, and when you see the enthusiasm and excitement that success breeds, you'll be convinced that Direct Instruction programs are indeed "programs that work." You can find the name and number of your SRA Representative by calling (800)-621-0664. In Illinois call 312/984-2550.



SCIENCE RESEARCH ASSOCIATES, INC.
155 North Wacker Drive
Chicago, Illinois 60606
A Subsidiary of IBM

Generalized Compliance Training

By Kim Wiehermann

(Editor's Note. This is the first in a 6-part series on the newly-developed direct instruction-based compliance training program. Here, a teacher (Kim Wiehermann) discusses the characteristics and logic of the procedure. In the next issue, Geoff Colvin will address questions and issues which the procedure frequently raises.)

It was late spring when it started. Along with the warmer temperatures and soft rains that occupy Western Oregon at this time came an additional, unwelcomed situation. Like cancer, it appeared suddenly and gradually came destructive to its victim. Left untreated, it certainly would have destroyed the lives of several people. I was 2100 miles away finishing my senior year of college at the University of Illinois. As a special education major, my time was spent in applying for jobs, student teaching, and preparing for the continuation of my undergraduate career. The cancerous growth that was herded in with the Oregon rains in Eugene was still unknown to me. However, by the time I arrived in Eugene in August, 1980, excited and enthusiastic with the prospects of my first job, the unwelcome condition of last spring had festered. Its victim was a ten-year-old, severely handicapped boy. The behavioral "cancer," which started with simply tearing corners off papers, had developed into tearing pajamas into rags, ripping electrical wiring out, and ripping wallpaper off bedroom walls. It was to be in my classroom.

Along with this student came an additional three students, whose ages ranged from 10 to 13. All exhibited severe language deficits, extreme behavior problems and autistic-like behaviors of aggression and severe withdrawal. It was an incredible class for any teacher; a nearly impossible one for a first-year teacher.

I compared the ten-year-old student's behavior to a cancer because of its destructive growth. Fortunately, however, the cancer was eliminated through a "cure" known as *generalized compliance training*.

Generalized compliance training (Engelmann and Colvin, in press) involves the teaching of compliance so that the learner complies across different situations, across different individuals, and across different tasks. The procedures are lengthy and require precise implementation to assure success. I can only give a brief summary here. First, however, I wish to stress the following 10 points:

1. Compliance training is used only with learners who exhibit extreme noncompliance and who have learned strong, habitual responses for coping with situations that demand compliance. Thus, a very small percentage of students with behavior problems will ever require compliance training.



Kim Wiehermann

2. Teachers and other professionals who read this article should not attempt any of the procedures without special supervised training, as compliance training requires precise implementation of the procedures and monitoring of teacher and student behaviors.

Essentially, generalized compliance teaching involves showing the learner a wide range of situations in which compliance leads to reinforcement, and showing the learner a wide range of situations in which noncompliance does not lead to reinforcement. According to Engelmann and Colvin (in press), noncompliance is not a single response, but a "chain of possible responses that are ordered from 'mild' noncompliance to 'frantic' noncompliance." These responses occur when the learner is required to comply and reinforcement is achieved when the person making the demands leaves, or the learner leaves the situation. Compliance, on the other hand, occurs when the learner does something the teacher tells him to do, not what the learner wants.

Therefore, we must teach the learner about compliance and noncompliance. This is accomplished by establishing two sets of examples — the compliance set, where the learner complies and receives reinforcement, and the noncompliance set in which the learner does not comply and receives punishment.

Generalized compliance training involves five training phases:

Phase I	Assessment		
Phase II	Establishing the noncompliance set		Establishing the compliance set.
Phase III	Expanding the Noncompliance set context.	Establishing voice control.	Expanding the compliance set. Establishing the precorrection set.
Phase IV	Modifying the Noncompliance set.	Targeting specific problems: a. Extinguishing inappropriate routines. b. Extinguishing superstitious behaviors.	Dejuxtaposing tasks from the precorrection set.
Phase V	Maintaining modified noncompliance set.	Establishing instructional sets: a. Individual. b. Group.	Maintaining dejuxtaposed precorrection set.

Phase I — Assessment

The purpose of the assessment is to test the learner's tendencies to noncomply. This is accomplished by establishing a context in which the noncompliant learner will demonstrate a full range of noncompliance. The assessment involves five steps in which the teacher seats the learner on a chair and begins conversing with him in a reinforcing, conversational tone. Secondly, the teacher uses slow pacing and affectionate physical responses when providing commands to the learner. In the third step, the teacher reverts to slow pacing and coaxing, while giving the student commands. In the final step (which is not presented if the learner complies with all the tasks in Step 4), the teacher uses fast pacing and a harsh voice. The teacher enforces all commands the learner does not comply with. The teacher uses the commands "stand up" and "sit down," and does not reinforce the learner.

Phase II

The training begins with the noncompliance set in this phase. In the noncompliance set, the teacher presents "stand up," "sit down," using fast pacing and no reinforcement. All noncompliant responses result in the teacher using vigorous physical prompts. The tone varies from harsh to flat according to the learner's performance. The learner remains in the noncompliant set until s/he complies to eight consecutive commands.

Once the learner meets criterion on the noncompliance set, the compliance set is established. Here the teacher presents simple tasks the learner can respond to. If at all possible, "stand up" and "sit down" should be avoided. Fast pacing and lots of social reinforcement are used. The tone is reinforcing. For the compliance set, the exit criterion is 30 consecutive tasks. If, however, the learner *noncomplies* in this set, s/he returns to the noncompliance set.

Phase III

In Phase III, the compliance set is expanded while the noncompliance set is used contingently as a punishment for noncompliance. The compliance set is expanded so that it promotes generalized compliance. Specifically, generalization across places, persons, time, form and content, immediacy of reinforcement, and proximity to trainers are taught. According to Engelmann and Colvin, to

teach these generalizations, examples that are as greatly different as possible along a specific dimension are juxtaposed, and the same kinds of responses to them are required. For example, if the learner is expected to respond to different people, use the sameness principle to show that a wide range of people are the same with respect to compliance. The teacher presents three or four tasks, and then the mother presents the same tasks. This shows the learner that compliance is not the unique feature of only the one teacher, but that it applies to a wide range of people.

Also included in this phase is the establishment of voice control and expansion of the context in which the noncompliance set may be used. When establishing voice control, the warning tone serves the same function as the noncompliance set. If the learner fails to comply to the repetition of the task when presented in the warning mode, the noncompliance set is presented. Thus, the harsh voice *signals* the part of the chain that will follow if the learner noncomplies.

When expanding the context in which the noncompliance set may be used, the teacher introduces the noncompliance set if the learner fails to respond to any command provided by the teacher, regardless of the setting in which the command is issued. (This requires careful preparation.)

Also included in this phase is the establishment of the precorrection set. The precorrection set is a set of activities that is presented immediately before the learner is to enter an activity in which: (1) we have less control than we have over classroom situations (i.e., gym or recess); and (2) the learner tends to misbehave.

The precorrection set is introduced after the compliance set has been expanded to at least 12 different tasks that the learner performs reliably. This set is presented in a basic reinforcing mode; however, noncompliances are dealt with by first giving a warning and then through procedures involving "stand up" and "sit down."

Items in the precorrection set include a sample of tasks that demonstrate a wide range of variation in the number of steps, time required to complete the task, proximity of the teacher, and content. Also included are a sample of tasks that are related to the activity that the learner will engage in. Do not permit the learner to enter the activity that's scheduled unless the learner responds appropriately to the precorrection set. The precorrection set should be presented each day at these times:

- As soon as the learner comes to school.
- Immediately before any new or difficult activity is presented.
- Immediately before the learner goes home.
- Immediately after the learner has engaged in an activity that is particularly reinforcing.

The precorrection set should consist of 50 tasks, with some repetition of the same task. The exit criterion is perfect performance on 25 consecutive trials.

Phase IV

There are three main developments in Phase IV:

1. Targeting specific inappropriate behaviors.

(Continued on page 12)



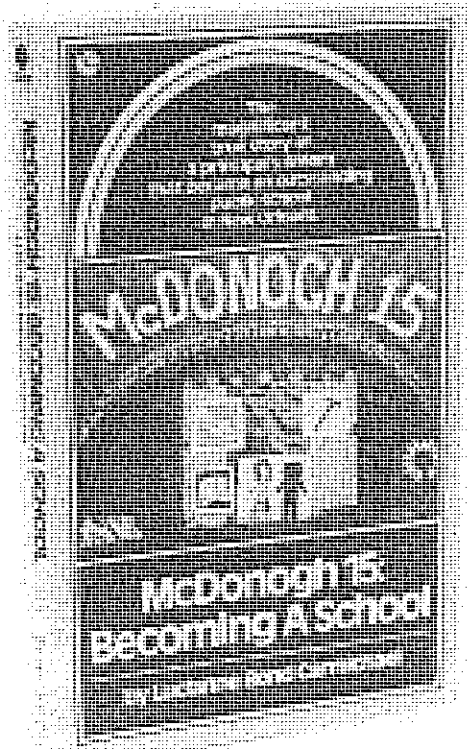
McDonogh 15: Becoming a School

Carmichael, Lucianne Bond. *McDonogh 15: Becoming a School*. New York: von/Discus, 1981. (204 pp./\$2.95)

On the brightly colored cover of *McDonogh 15*, we read that this is "the magnificent true story of a principal's team that became an outstanding public school in New Orleans." While I believe that the account is true, I am unconvinced that the story is magnificent or that the school is outstanding. Yet, I feel that the book is well worth reading for what it is. It is interesting, easy reading about public education (a favorite topic of mine); it is truly story-like — with characters, a plot, and a bit-sweet ending; and (at times) it is even inspiring. For example, the school practices self-government (with both students and teachers), and does not merely preach it; it proclaims a firm belief in public schools ("Public schools have to be good enough for everyone or they won't be good enough for anyone."); and it demonstrates the often-present (but usually unstated) opportunity to carve out one's own program within a system and to distinguish from common practice.

But while the book is at times inspiring, it is at other times sobering. For while the school has much to offer that other schools do not, there is also so much more that it could be — or at least, that the author could tell us about it. There is no talk in the book of outcomes, of effects, of student achievement — and this is still the primary measure used in this country to judge school effectiveness. Many critics of

progressive education, including Carmichael in this book, seem to downplay the importance of academic achievement as a measure of a school's success. In-



stead, they focus on more affective outcomes — happiness, satisfaction, self-concept. In contrast, many advocates of structured education (including some proponents of direct instruction) pay exclusive attention to achievement, ignoring affect. A reasonable compromise might be to assess one's success by both measures. The question then turns to process: What should one do to produce

good scores on both measures? For *McDonogh 15*, the answer was to focus on "the quality of life — the caring, consideration, honesty, laughter, satisfaction, lack of fear, feeling of competence, feeling of being cared for..." In a more highly structured educational program, the answer likely could be to focus on basic skills. Why? Because doing so is a more efficient approach. For example, the Follow Through Experiment revealed, through the distinctly different processes and outcomes of the Direct Instruction and the Tucson Early Childhood Model (based on language experience), that you can focus on cognitive skills — *teach* reading — and get good scores on affective measures as a *by-product* of achievement, but that if you focus on the affective domain, teaching reading less directly, you do not get correlated achievement in cognitive areas. The approach of *McDonogh 15*, which Carmichael describes as "child-centered," does not seem sufficient to produce high academic achievement throughout the student body. Direct instruction, which I submit is *also* child-centered, has a record of producing consistent cognitive effects.

Carmichael characterizes the *McDonogh 15* curriculum as being "as diverse as the children." This approach is in contrast to a unified curriculum, such as Distar, through which teachers and administrators can manage the academic progress of *all* students. The school's reading program is based on the language experience approach: A stu-

dent makes up a story, the teacher writes it down, and the student learns to read from his/her own words. This book, itself, is an analogy to the process: Carmichael tells a story (of the *McDonogh 15 School*); she herself writes it down; and (presumably) she — and we — learn more about school administration from the process. The problem with the approach in both contexts is that it produces learning with very limited carry-over either to other words or to other administrative situations.

McDonogh 15 describes quite realistically one possible role for principals to play — that of school catalyst. Whether this is the most productive role for principals is left to the reader. It is probably one of the many roles which must be played from time to time.

One of the book's strongest points is that, while it is a *story* and not the kind of "how-to-do-it guide" to which direct instruction users grow accustomed, it provides a strong testament that one's dream of what is best for students *can* be accomplished — even in a bureaucracy the size of the New Orleans Public School System — given sufficient concern, commitment, and caring.

This book is not about direct instruction, but neither is it incompatible with direct instruction. Perhaps *McDonogh 15's* approach is a useful complement to direct instruction — a curriculum of application exercises into which students can begin to move when they have mastered basic skills or other new contents through structured presentations.

Stan Paine

Compliance

Continued from page 11)

2. Modification of the noncompliance set to support the work on specific inappropriate behaviors.
3. De juxtapositions of tasks in the precorrection set, so that tasks are presented individually and not merely within the context of a large block of tasks.

There are two basic procedures for eliminating undesired behavior. The first is to ignore the behavior. After time, the behavior may extinguish, particularly if the learner receives adequate reinforcement for appropriate compliance. The second approach is to present tasks that are incompatible with those that the learner produces. The cycle begins when the learner produces a high frequency undesired behavior. The trainer then issues a direct command, in the warning mode, that is incompatible with the behavior. If the learner com-

plies, the trainer can present a precorrection set. If the learner does not comply, the trainer can present the non-compliance set.

The noncompliance set can also be modified to support the work on specific inappropriate behaviors. Procedures for eliminating inappropriate low frequency behaviors begin with the teacher presenting different commands that call for the *inappropriate response* and its opposite. These 20-30 commands are presented in the noncompliance mode. Thus, the performance of the undesired behavior is strongly associated with the non-compliance set. This association indicates that both the inappropriate behavior and its opposite are demanded and are *not* reinforced (for example, if the learner tears things, the learner is instructed to "tear it" with some objects and is told "don't tear it" with others).

The basic procedure for de juxtaposing tasks is to select a group of tasks that are difficult for the learner to perform. Following this identification, the teacher must identify a variety of activities in which the tasks can be presented. When

presenting the de juxtaposed tasks, the trainer first orients the learner by calling the learner by name, securing an attention response, and then presenting one of the targeted tasks. If the learner complies, the teacher provides immense praise; if the learner does not comply, the teacher treats the infraction as non-compliance. The purpose of the de juxtaposed tasks is to demonstrate to the learner that compliance is not limited to these sets, but should occur throughout the day in all situations.

Phase V

This phase maintains the precorrection set and the intermittent de juxtaposed precorrection set tasks, and focuses on the establishment of an instructional set. The major problems that are typically faced when instruction is begun are not related to compliance, but rather to knowledge. In other words, the learner may not understand the commands because of skill deficiencies. In this case, the learner's skill level must be assessed to determine the starting point for instruction and the skills that must

be taught initially.

As I stated in the beginning, generalized compliance training served as a "cure" for the behavioral cancer that grew within a ten-year-old boy. Its procedures, which I have briefly outlined within this article, are highly effective in controlling behavior. Generalized compliance training allows the teacher to effectively control students while instructing them in an *overwhelmingly positive manner*. However, I must stress again that the procedures must be executed precisely, and simply by reading this article one cannot conduct compliance training properly. Its use is limited to only a very small population who exhibit severe behaviors.

Simply, compliance training teaches a learner that *compliance is reinforcing*. Upon securing this compliance, the teacher has a basis to begin teaching. Perhaps, this is where I, as a teacher, feel that compliance training has assisted me the most. It has shown me where to begin my teaching, how to control students, and how to interact with my

(Continued on page 13)

DI at ABA: Convention Schedule

Since 1980, the Annual Convention of the Association for Behavior Analysis (ABA) has provided a national forum (in a central location) in which interested people could discuss issues pertaining to direct instruction from a variety of perspectives and in several formats.

This year's ABA Convention is scheduled for May 27-31, 1982, and will again be held at Milwaukee's Hyatt Regency Hotel. The direct instruction events scheduled for the Convention are summarized below. The theme of this year's symposium is "Bridging the Gap with Compatible Technologies."

Events Sponsored by the Direct Instruction Special Interest Group to be Held at the 1982 ABA Convention

(some titles are tentative)

Thursday, May 27

Even. Participation in the "Get-to-Know-ABA" Special Event (This event has not yet been announced, but if it is held, we will participate.)

Friday, May 28

9:00-11:00 Symposium: Direct Instruction and Precision Teaching. Doug Carnine, Ogden Lindsley, and others (Michael Maloney, chair)

11:00-12:00 Invited Address: Theory of Instruction. Wes Becker & Doug Carnine (Galen Alessi, chair)

12:00 -1:00 Lunch Break

1:00- 3:30 Symposium: Direct Instruction — Joining Forces with Compatible Technologies. (Stan Paine, chair)
Direct Instruction with the Severely Handicapped. Rob Horner, University of Oregon; Jeff Sherman & Peter Lorimer, Thisteltowne Regional Centre, Ontario

Identifying & Defining Direct Instruction Teaching Skills. Marilyn Monteiro, Dallas Independent School District

Generic Direct Instruction: A Decade of Research on Teacher Effectiveness. Barak Rosenshine, University of Illinois

Break

Direct Instruction & Behavior Analysis: Partners in Achieving Educational Excellence. Wes Becker & Doug Carnine, University of Oregon; Sidney Bijou, University of Arizona; Don Thomas, Minnesota Learning Center; Galen Alessi, Western Michigan University (moderator)
Discussant: Robert Benjamin, *Baltimore Sun* (author, *Making Schools Work*)

3:30- 4:30 Conversation Hour: Wes Becker, Doug Carnine, Galen Alessi, others

4:30- 5:30 Direct Instruction Special Interest Group Meeting. (Stan Paine, Marilyn Monteiro, & Galen Alessi, chairs)

Saturday, May 29

Group Poster Session on Direct Instruction. (Marilyn Monteiro, Doug Carnine & Stan Paine, co-hosts)

Workshop: Structuring Classrooms for Success — A Direct Instruction Approach. Stan Paine, University of Oregon (tentative)

Presentations in the Group Poster Session on Direct Instruction

Jane Howard, Cal. State, Stanislaus — Training of generic direct instruction skills in special education personnel.

Marilyn Monteiro, Tom Heiry, & Michael Vitale, Dallas Independent School District — Direct Instruction: A supervisory model.

Marilyn Monteiro, Tom Heiry, & Michael Vitale, Dallas Independent School District — Dallas Direct Instruction Schoolwide Project: Second-year results and an evaluation model.

Ed Kameenui, University of Montana — Direct Instruction: Analysis of reading comprehension.

Peter Lenz & Paul Knight, Kalamazoo Valley Intermediate School District — Direct Instruction principles applied to the "non-performer."

Paul Knight, Western Michigan University Child Development Center — An application of stimulus-locus and response principles to the teaching of self verbal instruction. An initial analysis and results.

Steve Enge, Peter Lenz, Paul Knight, George Thompson, & Dave Ray, Kalamazoo Valley Intermediate School District — An integrated

language curriculum for multiply-impaired children based on Skinner's *Verbal Behavior* and Engelmann's DISTAR Language and low-performer material.

Michael F. Masters, David M. Keenan, David S. Snyder, Joetta J. Long, & Elizabeth W. Slocum, Foundation for Behavioral Research — The effects of a nutritional training program on young children.

Timothy I. McKinley, Western Michigan University; Michael F. Masters, David M. Keenan, Joetta Long, Foundation for Behavioral Research; Cheryl E. Poche, Western Michigan University — A comparison of two procedures for teaching toothbrushing concepts.

Michael F. Masters, Foundation for Behavioral Research; Jon Boes, Western Michigan University — A comparison of two procedures for teaching toothbrushing "concepts."

Richard Packer, University of Alabama — Beginning reading acquisition and generalization: Effects of letter-sounds, rhyming, and word training.

Kathy Wright, Western Michigan University — Untitled.

Annual Conference on Direct Instruction at the Eugene Hilton and Conference Center August 16-20, 1982

The new Eugene Hilton has been reserved for the 1982 Conference. This means first class recreational facilities along with the conference. The more conference participants who stay at the Hilton, the lower the cost to the Association for conference rooms. The single rate will be \$30 per day and the double rate \$40 (\$20 per person), plus tax. We will double you with someone on your request. Reservations and first night's cost must be in at least 30 days before the conference. Be early.

The five-day conference fee will be \$100. Direct Instruction Association members receive a 20% discount on this. Also, group reservations of 5 to 9 persons receive a 10% discount, and groups of 10 or more receive a 20% discount. The member discount and group discount cannot be used on the same application however. College credit (3 graduate hours) will be available from the University of Oregon at \$24 per credit hour.

As usual, there will be many options for training to choose from. These will be detailed in the next Newsletter, with application forms. Since we are interested in your input to the conference, we are listening to all suggestions for new types of sessions. The suggestions below were made at a recent ADI Board Meeting. Check the possibilities you like and make your own suggestions.

Please clip and return to:
Wes Becker, ADI, P.O. Box 10252, Eugene, OR 97440
Attn: Summer Conference

Which of the following topics do you think would make good additions to the Direct Instruction Conference program this year and in the future? (Check and list as many possibilities as you like.)

- ☐ Law and special education
- ☐ Direct Instruction in secondary level programs
- ☐ Using Direct Instruction procedures with basal programs
- ☐ Evaluating and selecting basal programs
- ☐ Increasing educational effectiveness — a session for principals
- ☐ Theory of Direct Instruction
- ☐ Structuring classrooms for success (preventive classroom management)
- ☐ Use of computers in Direct Instruction
- ☐ Others: _____

Compliance Training

(Continued from page 12)

difficult students in a positive manner. However, the most important consideration in my continued use of compliance training with severely handicapped students is that it results in student behavioral and academic progress such as I have never witnessed before.

Even more, it is the students themselves who have convinced me of the effectiveness of compliance training. I mentioned the 10-year-old student whose "cancer" had developed to the point where he was destroying clothing and furniture, not to mention himself and his parents. Since he has been through compliance training, he is now

sleeping in pajamas in a bedroom that has wallpaper and furniture in it — something that was impossible 18 months ago.

The three other students who made up that "impossible" class have all made such remarkable gains that the class has been dissolved. The four students are now in trainable and educable mentally handicapped classes in the Eugene School District. The children themselves are proof of the effectiveness of compliance training. If you were to ask their parents, they would tell you so much more than I have, and you wouldn't have to ask the children; they would merely show you.

Reference:

Engelmann, S. and Colvin, G. *Generalized Compliance Training*. In press.

(Next issue: Answers to commonly asked questions about compliance training.)

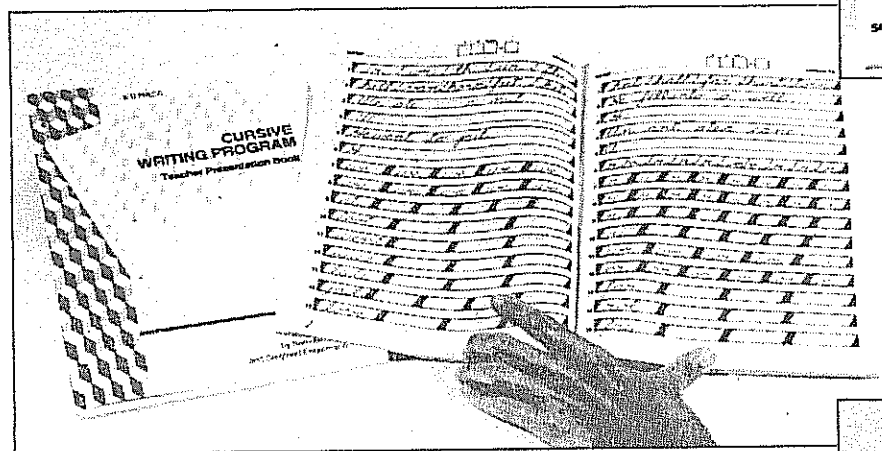
Direct Instruction Programs

from E-B Press

Cursive Writing Program

- 140 complete lessons.
- Specific teacher direction.
- Lots of practice for students.

Teacher Presentation Book \$25.00
Student Workbook \$2.95



The program teaches cursive skills as simple transformations of manuscript writing.

A becomes *a*, + becomes *t*, by changing the slant and adding tails. Prompts teach appropriate slant and form.

Practice with joined letters actually teaches the more complicated letters.

Practice with *ci* teaches *a*.

Practice with *ct* teaches *d*.

Simple stroke descriptions direct students and teachers.

No great memorization load on students.

Fully field-tested and effective.

DISTAR® Continuous Progress Tests

A breakthrough in simplifying behavioral objective diagnosis and remediation. Available for: DISTAR® Reading 1 and 2, Language 1 and 2, Arithmetic 1 and 2.

- Individually administered.
- Criterion referenced measures of skills and sequences taught in the DISTAR programs.
- Specific remedies specified.
- Results show the lesson number each student has achieved for each skill, simplifying IEP's.
- Document that specific instructional objectives are achieved.

The essential core of a quality-control management system identifies problems with individual students and with the teaching of specific skills.

Tutorial Series

Programmed Time Telling Number Skills
Sounds, Symbols, and Blending Carrying and Borrowing
Word Endings Functional Decoding and Vocabulary Building
Math Combinations

I Love Library Books

Level I

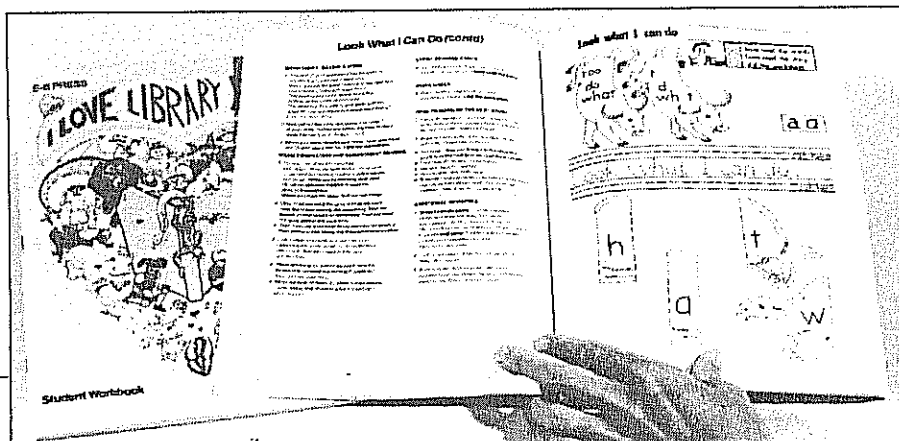
- An exciting program for introducing popular library books to first graders.
- Thoroughly field-tested and effective.
- Lessons keyed to all major basal reading programs.
- Complete worksheet and teacher-presentation material for 37 popular books.

The program is based on a computer analysis of the words that appear in the different library books and the words that are introduced in every major basal. You simply select the books that you wish to introduce and then refer to the program, which tells exactly when it is safe to introduce the book. The worksheet for the introduction presents all the new words the children need to read the book (never more than 10 words) and comprehension activities for the major concepts and vocabulary of the book.

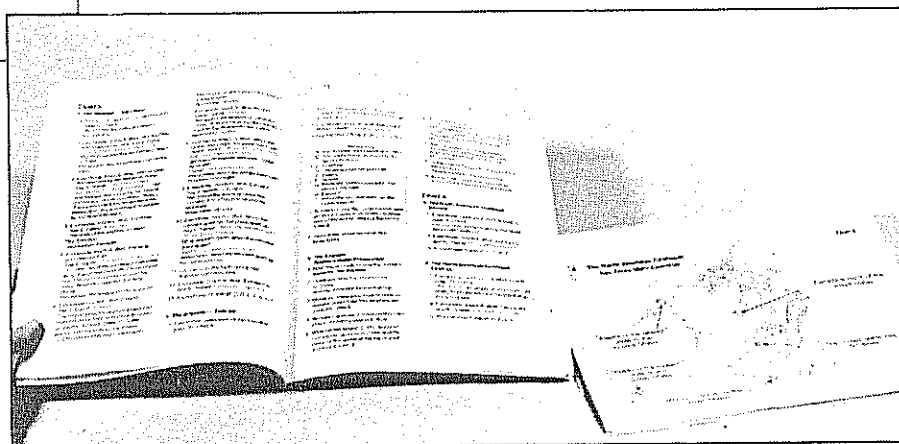
The teacher-presentation material tells exactly how to present the worksheet exercises to the children.

With this program, you can introduce library books so that the teaching is easy and virtually all your first graders learn to love library books.

Teacher Presentation Book \$25.00
Student Workbook \$1.95



The World of Facts



- A new concept in teaching vocabulary, relationships, and facts for social studies and science.
- Program requires very little teacher-directed time.
- Uses a game-type format that assures important facts and relationships are taught.

Ideal as both a stand-alone program or as an introduction to the key facts and relationships presented in social studies and science texts.

Module 1 teaches 10-20 key facts and relationships for each of 25 topics, including Western Hemisphere, solar system, the human breathing mechanism, continents and oceans of the world, game birds of North America, parts of a tree and a flower, and the internal combustion engine.

Module 2 introduces a broad range of topics, such as characteristics of mammals, climate and climate regions of North America, geological areas, and industries that are associated with climate regions.

Module 3 focuses on plant physiology, plant classification, diet, different systems of the human body (circulatory, skeletal, nervous) and food chains.

Subsequent modules of the program will introduce the full range of traditional science concepts as well as study skills and procedures for students to make up their own "visual-spatial" charts on various topics.

*available Dec. 1981.

Teacher Presentation Book \$20.00
Student Workbook \$2.00

Send for free E-B Press Catalog:

Engelmann-Becker Corporation
P.O. Box 10459
Eugene, Oregon 97440
or call (503) 485-1163

The Child's Creative Future

(Continued from page 1)

By Robyn and Alex Maggs

Eaching model might best be summed as "direct instruction." Direct instruction is still in the process of being tested, as new research evidence suggests it further. Direct instruction (in this sense) is not any particular program, but an evolving model of effective teaching.

Some of the basic features of this research evidence and the resultant direct instruction model follow:

Higher academic gains result from more content being covered and mastered. Teachers who moved at a faster pace and covered more content obtained higher achievements.

"Academically engaged minutes" or "academic engaged time" is a critical factor in academic achievement. Few programs or teaching strategies let the teacher know if the child's attention is really engaged. A teacher does not need every student perfectly engaged all of the time. The critical aspect is the total academic engaged minutes that occur during the day.

Successful teachers, across a number of studies, were those who maintained a strong academic focus and spent less time in non-academic activities. Students in formal rather than informal classes had the highest achievement gain in reading and mathematics. The teacher reading stories, arts and crafts, physical activities, toys and puzzles and even academic games, consistently had negative correlations with achievement gain.

Contrary to many expectations, teachers who were high in affect but low in cognitive emphasis had the most student failure. Programs which were more unstructured had students with lower self-esteem.

Teacher-centred classrooms provided the most effective teaching. Permissiveness, spontaneity, and lack of control were negatively related to achievement gain and to growth in creativity, inquiry, writing ability and self-esteem. Giving students choice of activities yielded negative results.

Small group or large group instruction of students has been found effective in producing better academic achievement. A range of studies has found a pattern of teacher time with groups being positively related to achievement gain, and teacher time spent with individual students being negatively related to achievement gain.

All classroom instructional programs have had to be reassessed on the basis of these findings. Most have few of the above components. The only programs as yet available in Australia that do have them are the Direct Instruction programs originating from the University of Oregon. (This use of the term "Direct Instruction" is always capitalised to

distinguish between the Oregon programs and the direct instruction teaching model discussed above.)

Beyond all their instructional brilliance, these programs are based on the emotional reaction of a man who could not accept the distress of failing children, and who believed teachers could teach brilliantly if given adequate tools. A Professor at Oregon University, Zig Engelmann's genius in instructional design partly reflects his early Philosophy background and his understanding of the structures of knowledge.

Constructive criticism plays an important part in educational progress. The direct instruction teaching model is a flexible attempt to test and improve on the current research evidence. We find it professionally disappointing that critiques of direct instruction have remained so inaccurate and so emotive. When a critique has errors at a very simple level it becomes apparent that no real knowledge of the research, the teaching model, or these complex programs exists.

To have professional papers reduced to the level of "a red under every bed" now being joined by "a multinational under every bed," hardly requires a response! Teachers have more sense and are better trained in rational decision-making. We would like to briefly look at some of the less sensational but equally inaccurate criticisms of the Direct Instruction programs.

1. Research

The growing body of Australian criticism that is supposed to exist about Direct Instruction is purely vocal and very minimal. Not one study exists that shows a Direct Instruction program has been ineffective. The myth that the House and Glass critique (and that is all it was) somehow demolished the greatest educational evaluation the world has yet seen would be laughable if not so constantly repeated by people determined to ignore the even more glaring shortcomings in the House and Glass paper. The less serious methodological flaws of Follow-Through were virtually unavoidable in the real-life complexities of their study. They were acknowledged, taken into account, and avoided in the years of research that followed. No mention of the House and Glass critique (Harvard Education Review, May 1978) should be so biased as to ignore the two effective refutations of the critique contained in the same journal, or the others that followed.*

Suffice it to say that even when House and Glass used their own analytical tools to rank the different educational approaches of Follow Through from best to worst, they virtually replicated the rankings of the Abt analysis, with Direct Instruction at the top of the list! The argument seems rather out-dated with a decade of scientifically reliable Australian research already behind us.

* Wes Becker will detail the problems of this critique in a future issue.

2. Testing

It is commonplace for Australian children in properly implemented Direct Instruction programs to obtain higher scores than other children on tests of the academic skills the program has taught (reading, spelling, maths, etc.) It is also commonplace for them to obtain higher scores on tests of self-image or self-concept, psycholinguistic tests, Piaget-Bruner tests, intelligence tests, etc. Claims that the good DI results in Follow-Through were due to "teaching testing components" are, remarkably, ignored when DI results on tests of self-esteem and other affective measures also out-ranked every other educational approach. Not only did the "child-centered," "open classroom," "discovery learning," and "language experience" type approaches specifically set out to teach self-esteem and affective skills, but chose the Follow-Through tests in these areas. In spite of this, the DI model ranked first in this area while the results for most others were negative, as they also were on the academic tests.

In Australia, we have yet to hear the claim that a "retarded" child should stay in a regular class because he has not been taught how to take tests, thus invalidating his results. Yet attempts are made to explain away the dramatic academic gains and constant 10 to 20 I.Q. points improvement in DI-taught children on the grounds that they have been taught how to take tests. The high test results are due to the fact that excellent programs cover a vast range of in-depth content, develop language concepts, attention, memory, motivation, fluency in written and verbal communication, critical analysis and reasoning skills, and above all, pride, and increased confidence in the pleasure of stimulating work and obvious progress. Tests should not be used if they are inadequate. A valid test assesses what the child has been taught in the year's curriculum to see if any deficit areas need re-teaching. If the child has the skills then the teaching has been effective.

3. Teacher-Child Relationship

One of the greatest incentives for a child's learning in the early school years is a friendly, caring relationship with his teacher. This supplements the child's delight in honest progress, and is a "bonus" in the class where it exists. However, in the world of reality, not every child relates well to his teacher and not every student is lovable. We explain to concerned parents whose child "dislikes" his teacher that it is far more likely that he dislikes the fact that his unacceptable behaviors call down the teacher's wrath, or that inadequate skills don't get him enough praise, attention or stamps. Consequently it is hardly surprising that the direct instruction classrooms where both teacher and children are delighted with their obvious progress, where there is consequently more positive attention, and where a child's desire to learn is strengthened by hundreds of small successes instead of uncorrected failures, produces consistently positive teacher-child relationships.

The well-meant lies of a caring teacher do not convince the failing child that he is not "dumb," simply that adults are dishonest. Effective teaching creates a sound basis for mutually fulfilling teacher-child relationships. This relationship combines with the sheer enjoyment of being challenged and extended to provide the only reward most direct instruction students ever need. Concrete

rewards are only used in cases of extreme skill deficit and when past learning experiences have resulted in hostility to any new program, until indeed learning can become its own reward.

4. The Direct Instruction Programs

For the first time in educational history we have programs that, supported where necessary by behavioral management, do literally and most effectively teach every child. The basis for this is simple. When a child learns to walk, the variations of how and when are countless. But for every child, walking involves the basic skills of being able to take his weight on his feet, maintain his balance, then put one foot in front of the other in a succession of balanced steps. The Direct Instruction programs teach the same essential or required skills across a range of over thirty programs including reading, spelling, maths, language, creative writing, cursive writing, etc. They are based on the fact that while children differ, the skills they need to learn do not. We recognize individual differences by ensuring the child is taught at an appropriate level in each of his skill areas, and that different motivation strategies are used when necessary.

The programs, when best used, are incredibly flexible. The most "retarded" to the most "gifted" child can be extended by them. A critical factor is ensuring that the appropriate program is chosen; for instance *Distar Reading I* is normally only used with moderately to severely retarded children, with "regular" kindergarten children moving into the *Fast Cycle* or *Reading II*, and other remedial children or adults beginning *Word-Attack-Basics* and *Thinking Basics*. The complexity of the programs and the emphasis on "reading for meaning," or effective comprehension, is in evidence in the early *Distar* series as well as in the upper primary reading programs, where the three reading levels involve one and a half thousand pages of decoding and two and a half thousand pages of comprehension work.

A regular first class may have one group on *Fast Cycle*, one group on *Distar Reading II*, and another on *Reading Three*. Their first-class reading includes stories such as "Little Bear Finds Out Which Hen Ate Icecream," "The Wall of Troy," "Sid Learns More About Temperature" and fascinating children's "journeys" into the eye, the brain, the ocean depths and outer space.

The primary reading comprehension programs teach children to rationally question all information presented to them, including graphs, advertising, and politicians' speeches, an essential skill in our media-prone age. Stories cover changing deserts into farmland, the effects of aspirin, progress in modern science, the Mona Lisa, oil spills, the Arctic, sunrise and sunset, the planets and more. The instructional strategies, where reasoning replaces rote learning, ensures that a small amount of learning is specifically made to generate disproportionately large areas of self-generated new learning.

Past programs have not been able to ensure that even highly intelligent children will finish twelve years of schooling with the sufficiently advanced basic skills required by our rapidly changing social and technological era. Direct Instruction is a teaching model that ensures every child effectively learns his critical skills, freeing him for their creative application and opening wider options for his future.

On Observing Learning

Continued from page 1)

vided with many opportunities to join n. And they are placed in a setting that s characterized by new rules, new kinds of interactions with authority figures, and material that plays no important role in their life.

This is where you may come in as a DI teacher. Let's say that you create a different scenario. You begin by recognizing that the springs of important learnings are the emotional ones. You recognize that the children need strong models and that they will work with great intensity to impress their teacher and to succeed. You also recognize that the school should not be a period-after-period grind, but should have breaks, changes of pace, and a few activities that permit a full expression of children's emotions.

With this background understanding, you are in a position to observe things that very few observers in the history of the world have looked at with great care — the way children learn. If you exercise appropriate care to guarantee that you have a very good understanding of what the children know, which specific outputs you provide, and how the children respond to these as inputs, you will see the children's minds change, grow, and develop new shoots, new forms, and begin to take on a shape that is as clearly distinctive as the form of the young fir tree.

But for you to receive good information about how the mind grows, you must exercise the same kind of careful controls that you would use if you were conducting an experiment. You must control all the variables that would make a difference in how the messages you present are received by the child,

An Essay for the DI Teacher

and you must make sure that the messages are valuable ones — those that will lead to generalization and growth.

So you make sure that you are modelling the kinds of emotional responses you want the children to emulate. You show great interest in the material you are presenting. You reinforce effectively, and you make sure that the children are placed in material that they can handle, so they will have many opportunities to be reinforced and learn that indeed the teaching activities you direct are reinforcing. You challenge; you exhort; you set the stage so that the children understand that their work in school is as important as playing in the NBA championship. When they are having trouble with a particular skill or activity, you are emphathetic, but urgent. "This is hard. Everybody, take a deep breath. We can do it. Back to the beginning and thinking big. Here we go..." When they succeed, you let them know that their success is a major one, not something that was less than expected. "I told you we could do it. That was great. Not one person in this group gave up. Give yourself a double pat on the back and say, 'I'm the greatest'..."

But you do not stop here. You work on the technical details of your presentation. You practice your skills of presenting, correcting, reinforcing, and going back to tasks that the children had trouble with earlier. You work on your pacing, your signals, the pauses that you present before signalling responses that require some thinking time, and the other details that make a difference in your presentation (such as the way the children are seated in front of you, and the schedule of daily events). And you practice designing activities that permit the children to use the skills that they

have learned after they have mastered them — perhaps the most important single detail in guaranteeing that the skills will be strong and that the children will recognize their importance.

Now you observe. Single out a child in the group. While you present to the entire group, observe that child. Attend to the specific responses the child makes. Say to yourself that the child will be able to do some things at the end of the school day that she could not do when she entered the classroom in the morning. See if it happens — make it happen.

On the next day, single out another child and do the same thing. See what it takes to teach each specific skill that you present. See how long it takes for the child to become perfectly facile, to generalize, to use the skill.

When you observe the learning process on this moment-to-moment basis, some very nice things will happen to you.

The first is that you will have a much better understanding of children and therefore be in a better position to view the problems they experience from their standpoint.

The second is that you will learn to become a better actor. You will see the influence that your response to the children has, and your responses will be shaped so that you do not praise non-contingently and you show approval or disapproval more fluently, despite your mood.

The third thing that happens is possibly the most interesting: time seems to fly during these interactions. Your mind is completely occupied, as if you are playing some kind of super-chess game that has all the intellectual challenges of chess and nearly the emotional involvement of an overtime basketball game. You present a task. The children respond. You respond. You note their reaction. You present... and

before you know it, the period is over.

Certainly, there will still be times of the day that are boring and times of the school year when the game gets old and you have trouble getting into the role of the teacher-observer. But in most cases, you will be surprised when the period is over. Your mind will not have been on the time, but on your behavior and the children's responses. And sometimes, you will actually think that only about 10 minutes have passed when the clock indicates that a 30-minute period has already elapsed.

The direct instruction programs play a part in this game because they make it possible for you to provide relatively clear messages to the children. In one sense the part they play is important because if the programs are followed both carefully and sensibly, the children will learn the intended skills and you will have the opportunity to observe their learning from the first time a particular task is introduced until the skill is integrated with others the children have been taught. In another sense, however, the programs are minor ingredients because they are passive. For them to become an active part of the interaction, somebody — you the teacher — must take them and transform them into effective communications. Also, you must add a lot of ingredients that are suggested by but not provided by the programs. The model that you present, the urgency that you convey, the patience, the reinforcement, and all the other responses to the children's efforts are not part of the program. But when you make them a part and when you transform those printed sentences and specifications into a convincing, technically well-designed presentation, you will be able to observe some things that only a few people have ever seen in detail — the magnificent growth of human minds.

How to Help the Association for Direct Instruction Get Going

- 1. Subscribe to the DIRECT INSTRUCTION NEWS. Five dollars will bring four issues in the coming year (Sept., Dec., Feb., April).
- 2. Become a charter member of the Association. For the school year 1981-82, the fees are:
 - a. Student Member \$7
 - b. Member \$15
 - c. Sustaining Member \$30 or more

Student members receive the NEWS and a 40% discount on items listed below. Members receive the NEWS and a 20% discount on all Association sponsored products and events, such as:

- A future Journal of Direct Instruction.
- Books to be published by the association such as Theory of Instruction by Zig Engelmann and Doug Carnine, and Research on Direct Instruction edited by Wes Becker.
- Direct Instruction Conferences (after 1981 this will include the Eugene Direct Instruction Conference which the Association will sponsor). For 1981, all students will receive a 40% discount and paid participants who join the Association at the conference will receive a \$10 rebate.

To join the association, clip out this form and mail it in.

ASSOCIATION FOR DIRECT INSTRUCTION
P.O. Box 10252, Eugene, Oregon 97440

CHECK ONE

☐ 1. I WISH TO RECEIVE THE NEWS. A CHECK FOR \$5 IS ENCLOSED.

☐ 2. I WISH TO BECOME AN ASSOCIATION MEMBER. ENROLL ME AS A:

☐ A. Student Member (\$7 ANNUALLY),

☐ B. MEMBER (\$15 ANNUALLY),

☐ C. SUSTAINING MEMBER (\$30 OR MORE INITIALLY)

NAME: _____

MAILING ADDRESS: _____

Got "Smart" Kids? Help Me

Direct Instruction proponents often say that DI is not just for low-performing students — that it is effective with average- and high-performers, too. Critics continue to doubt this. As a result, Louis Mensing, a teacher at Coburg Elementary School in Eugene, Oregon, is collecting information to support the effectiveness of DI with higher-performing students. He will use this information as the basis for an article which will appear in a future issue of the News. If you have any information on this topic (research reports, program descriptions, anecdotes, etc.) that you are willing to share, please send it by February 15, 1982 to:

Louis Mensing
Coburg Elementary School
91274 N. Coburg Rd.
Eugene, OR 97401

You will receive credit in the article

for any information you send which is used. Thanks for any help you can lend.

New Programs

The News will regularly publish descriptions of newly developed instructional programs based on the best of modern learning technology. If you know of new data-based programs, we invite you to describe them for us. Program descriptions should describe the population for whom the program is intended, the skills it is designed to teach, and a brief summary of the content or component skills covered. We also invite you to submit pictures of program materials and brief summaries of program validation data. If you would like to publish a longer description of your validation data (on your program or someone else's), we would be pleased to consider your work in the form of a research article, as well. Both program descriptions and research articles should be sent to the editors.

The DI Philosophy

- THERE IS A VIABLE TECHNOLOGY OF TEACHING THAT IS NOT BEING USED.
- TEACHERS ARE RESPONSIBLE FOR CHILDREN'S LEARNING.
- EVERY CHILD CAN BE TAUGHT.