

# EFFECTIVE School Practices

VOLUME 14, NUMBER 4

PRICE \$5.00

FALL 1995

## FOCUS: DIRECT INSTRUCTION READING

### FROM THE PRESIDENT

Bob Dixon ..... 1

### CONFERENCE NEWS

Annual Awards ..... 3

### IMPLEMENTATION NEWS

#### The Changing Teacher

• Shirley Freed, Andrews University, Berrien Springs, Michigan ..... 5

#### The Culinary Art of School Transformation

• Sandra S. Murray, Larkdale Elementary School, Florida ..... 10

### SUCCESS STORY

#### Affecting the Lives of Incarcerated Youth

• Greta Clark and Judith Schacht, Ferris School for Boys, Delaware ..... 13

### BOOK REVIEW

#### *The Bell Curve*

• Tom Fisher and Sara Tarver ..... 16

### INTERNATIONAL

#### Can New Learning Technique Solve the Illiteracy Plague?

• Teresa Adamson, Queensland, Australia ..... 20

#### An Early Literacy Program: Preventing Failure

• Denis Condon and Judith Blaney, Brisbane Catholic Education, Australia ..... 22

### RESEARCH

#### Seven Year Overview of Direct Instruction Programs Used in Basic Skills Classes at

#### Big Piney Middle School

• Jonita Sommers, Big Piney Middle School, Wyoming ..... 29

#### The Multiple Effects of Whole Language, Precision Teaching, and Direct Instruction on First-Grade Story-Reading

• Malcolm Neely, Federal Way, Washington ..... 33

#### Fact Sheet: Preventing Reading Failure

• Bonnie Grossen, University of Oregon ..... 43

#### Research on the Effects of direct Instruction on the Higher Level Thinking

of Students with Disabilities ..... 45

## Philosophy of *Effective School Practices*

1. Teachers are responsible for student learning.
2. The curriculum is a critical variable for instructional effectiveness.
3. Effective teaching practices are identified by instructional research that compares the results of a new practice with the results of a viable alternative.
4. Experiments should not be conducted using an entire generation of Americans. The initial experimentation with a new practice should be small in scale and carefully controlled so that negative outcomes are minimized.
5. A powerful technology for teaching exists that is not being utilized in most American schools.

*Effective School Practices* is published quarterly by the Association for Direct Instruction. The mission of the Association for Direct Instruction, as stated in the by-laws, is to promote the improvement of educational methods.

The name *Direct Instruction* originated with the highly effective instructional model first developed by Zig Engelmann in Project Follow Through during President Johnson's Great Society legislation. Although the evaluation of Project Follow Through showed the Direct Instruction model to be far more effective than the other models on every identified outcome, education in America remained generally unchanged.

A few educators, impressed by the extraordinary results of the original Direct Instruction model and the programs that were developed as DI evolved, formed the Association for Direct Instruction in 1981.

Today, this organization is a vanguard in promoting school practices that have been validated as effective through the use of the scientific method in educational research.

The Association for Direct Instruction was incorporated in 1981 in the state of Oregon for educational purposes. ADI is a nonprofit, tax-exempt

corporation under Section 501(c)3 of the Internal Revenue Code and is a publicly supported organization as defined in Sections 170(b)(1)(A)(ii) and 509(a)(1). Donations are tax-deductible.

A copy or summary of the current financial statement, or annual report, and registration filed by ADI may be obtained by contacting: ADI, PO 10252, Eugene, OR 97440 (503-485-1293). ADI is registered with the state of Oregon, Department of Justice, #79-16751. Copyright © 1995 Association for Direct Instruction.

ANNUAL SUBSCRIPTION RATES: \$20 U. S.; \$25 (U. S. currency or equivalent) Canada; \$30 Europe; \$40 airmail to Europe.  
(ISSN 1068-7378).

Editor ..... Bonnie Grossen  
Assistant Editor ..... Jocelyn Warren  
Associate Editors for Research ..... Jerry Silbert  
..... Russell Gersten  
..... Geoff Colvin  
..... Ed Kameenui

Proofreading and Typing ..... Jocelyn Warren  
Layout ..... Jerry Marr  
Printing ..... Springfield News

e-mail: BGrossen@oregon.uoregon.edu



# From the President

## ADI Awards: Old & New

Bob Dixon

### Traditional ADI Awards

Many ADI members, I'm sure, are aware of the annual ADI awards that have been given out over the last several years at the annual Eugene ADI summer conference. Those awards fall into four categories of outstanding achievement: administrator, supervisor, researcher, and teacher. Although these awards are given annually, they are not (contrary to popular belief) "xxxx of the year" awards. The distinction may seem trivial, so allow me to explain. The ADI board does not have a policy restricting it by (a) requiring that an award be given in each category, or (b) limiting each category to one award per year. Those would be rather arbitrary restrictions. Rather, the policy is to review nominations, then decide how many categories will be awarded and how many awards in each category will be given. In 1995, for example, we gave two awards for Outstanding Teacher and none in the research category. (See p. xx in this issue for details on the 1995 awards.)

The board of directors faces many challenges throughout a year, but none is quite as difficult as determining who should receive these awards. We simply don't receive nominations that are "weak" in any way. Although there is no way we can think of to make it easy (on ourselves) to select among several excellent nominees, we do think it would help the entire process if we could receive nominations for the 1996 awards before June 1, 1996. That will allow us to give each nomination the type of studied consideration it deserves, with the additional bonus of allowing us to contact the award recipients by the end of June with our decisions. Many have asked us whether there is a particular format for making nominations. There isn't. Our "rules" are simple: (a) nominations must be made in writing (by June 1), and (b) the particular award someone is being nominated for should be clearly identified (e.g., teacher, researcher, supervisor, administrator).

### The Wayne Carnine Student Achievement Award

The Wayne Carnine Student Improvement Award was established by the ADI board this past year and will be awarded for the first time at the 1996 conference. As the name implies, this award goes to a student. Unlike our traditional awards, this is a cash award of \$200, given directly to the student winner. Nominations for this award must also be in writing, and are due no later than June 1. "Outstanding Improvement" can be academic or behavioral or both. Other than that, there are no conditions for nominations.

The ADI Board is very excited about the establishment of this award, which is a memorial to Wayne Carnine, Doug Carnine's father. Wayne Carnine was a wonderful man who, along with his wife, gave Direct Instruction one of its most highly valued assets—Doug. I and select board members will make what we anticipate to be the difficult decisions on the recipient of this award.

### The Susie Wayne Scholarship

On August 15, 1995, the ADI Board of Directors voted unanimously to establish the Susie Wayne Scholarship Fund. The board has initially allocated \$500 from the general fund for this scholarship. As this issue of *Effective School Practices* goes to press, the board is discussing the exact nature of the Susie Wayne Scholarship: who will qualify, for what purposes, and so on.

Susie Wayne is a friend to many in the Direct Instruction community, and to students all over the Greater Seattle Area. In an upcoming issue of *ESP*, we will profile Susie in some detail. For the moment, I would just like to say that Susie has been an outstanding researcher, supervisor, and teacher. She is a young woman with an infectious smile and tireless sense of humor, made all the more remarkable because of critically serious medical problems



over the past few years. Those who know Susie wonder each day why someone so intrinsically good should suffer, but moreover, there are many of us who find in Susie the inspiration to set aside our trivial problems. We are confident the scholarship fund will help continue the good works that Susie has so inexplicably been torn away from. We will be actively soliciting contributions to the Susie Wayne Scholarship Fund in the coming months. Upcoming issues of *ESP* will contain more details on the fund as they are worked out.

### **My Award**

One of the privileges of my office (or of getting Bonnie to publish this column) is that I can make up my own awards. I want to give the Bob Dixon President's Award collectively to Wes Becker, who originally founded the Association for Direct In-

struction, and to every person who has ever served on the ADI Board of Directors. In my first year as a board member, I have come to appreciate the tireless dedication of the very busy volunteers who are now serving on the board and who have served in the past. The achievements of those rarely recognized individuals are nothing short of astonishing. In upcoming issues of *ESP*, I hope to profile the current board members for you, as well as some of our poorly paid employees. For the moment, however, I would just like to say that I don't appreciate at all the pressures that past presidents of ADI have put on me: Stan Paine, Randy Sprick, John Woodward, and Geoff Colvin. All of those people are a very, very hard act to follow.

*Send your letter of nomination for the Excellence in Education Awards*

- ☆ **Outstanding Administrator**
- ☆ **Outstanding Teacher**
- ☆ **Outstanding Researcher**
- ☆ **Distinguished Service**

In your letter describe achievements and provide testimonials, anecdotes and any other relevant information. Gather signatures of other staff members to support your letter. Any information documenting effectiveness is relevant.

Send nominations to: ADI  
Awards  
PO 10252  
Eugene, OR 97440

***Deadline June 1, 1996!***



---

## ANNUAL EXCELLENCE IN EDUCATION AWARDS

---

### Outstanding Teachers

**Patricia Bennett Perry**, of Ithaca, New York has been teaching kindergartners for fifteen years using Direct Instruction programs. She began as a special education teacher with mildly handicapped seven- to ten-year-olds. Patricia's all-will-learn-if-the-teacher-can-teach attitude led to remarkable student performances in decoding, math, and language. After a few years, Patricia decided that teaching in the regular classroom in the lower grades would enable her to catch children before they experienced failure. Later, she took that philosophy one step further and became a kindergarten teacher. To this day she continues to be the only kindergarten teacher, in a district of eight thousand students, who teaches reading, math, and language. Many of her kindergarten students achieve at comparable or higher levels than children in first and second grades in the district. In fact, even staunch whole language-manipulative math teachers in the district have quietly chosen Patricia's classroom for their own children.



*Patricia Bennett Perry, Outstanding Teacher*

---



*Carol Nielsen, Outstanding Teacher*

---

**Carol Nielsen** has been using Direct Instruction programs for over 12 years. As a teacher with the Institute for Effective Education in San Diego, Carol has worked miracles with students who have been labeled difficult or even impossible to teach. Her students range in age from three to twenty-one and are severely emotionally disturbed or mentally handicapped. These are the students who have failed in special education programs. One of Carol's gifts is her ability to demonstrate any part of any lesson to perfection. Under her tutelage, students with IQ's of 40 finish Reading Mastery VI. Carol also has been a mentor to interns and practicing teachers. Her manner is compassionate and firm. By holding students, teachers, and administrators accountable for their actions, she gets remarkable results. Presenter Kathy Madigan said Carol is "easily one of the top ten Direct Instruction teachers in the country."



## Outstanding Administrators



*Joyce Nace, Outstanding Supervisor*

## Outstanding Supervisor

For Joyce Nace, Direct Instruction is a life-long pursuit. Over the course of twenty-five years Joyce has taught in many educational settings. She is currently a Title 1 Reading Specialist at Evergreen Elementary School in the Clover Park School District, Washington. Evergreen has a population of 750 students, about half of whom are special needs. The school is currently under intense pressure to give up its Direct Instruction program, now in its second year. Despite this opposition, Joyce remains committed to Direct Instruction and to the success of all students. She is also committed to the success of the staff, with whom she shares her talent and high energy. As testimony to what an important part of her school Joyce is and to what an excellent instructional leader she is, her principal's letter nominating her for the award was signed by everyone in the school. As presenter Marcy Stein said, "Joyce does teaching and supervising the same way we want kids to do reading—effortlessly."

When Linda Gibson-Tyson, principal of Arlington Park Elementary School in Columbus, Ohio, decided to implement Direct Instruction school-wide, she met fierce resistance from the district and from within the school itself. Arlington Park, which serves low-income families, has a limited budget and the district refused to fund the implementation. However, with relentless energy, she was able to secure funding from a variety of sources in the community. The implementation is successful thanks to her constant monitoring and attention to detail. Now in its third year, the gains in student achievement levels are testimony to Linda's effective leadership. She also insists that the school be a warm and caring place for children and a secure environment in which to learn. Presenter Jerry Silbert said Linda is a nonsense consultant: "This is for her courage and for her ability to get the job done."



*Linda Gibson-Tyson, Outstanding Administrator*



---

# The Changing Teacher

Shirley Ann Freed

Andrews University, Berrien Springs, Michigan

*Would that I were under the cliffs, in the secret  
hiding-places of the rocks,  
that Zeus might change me to a winged bird.  
Euripides*

How I wanted to change! How I wanted to learn a Direct Instruction reading approach! It looked so easy! But I and 20 other teachers involved in a three-week, intensive training course would discover that change comes slowly and painfully. Why should it? We were receptive—looking for something to add zest and vigor to programs that had grown stale and boring. We soon discovered, however, that this was not to be a typical in-service. Imagine our shock the very first day to find children present. This was summer school. We had assumed we would be free from the “little monsters” for a few days.

The first day we watch for four hours in amazement as three trainers demonstrate the components of a Direct Instruction reading approach. We stand open-mouthed. The room is buzzing with activity.

---

**The first day we watch for four hours in amazement as three trainers demonstrate the components of a Direct Instruction reading approach. We stand open-mouthed. The room is buzzing with activity.**

---

Students are giving timed spelling tests to each other, reading out loud, saying the main idea and writing their spelling words. It seems that everyone is doing something different—even reading different stories—orally. In the midst of this chaos the teacher flits from one student to another giving mastery tests. The timer goes off and everyone is back in their desks. Within seconds the teacher is reviewing vocabulary words. The students clap and read in unison. Then comes new vocabulary presented on cards with particular attention given to word formation. The students spell, read, make sentences, write, and correct on command. We have never seen anything like this before. A form of culture shock sets in. The surprises and contrasts are as enormous as waking up one morning and

---

**We have never seen anything like this before. A form of culture shock sets in. The surprises and contrasts are as enormous as waking up one morning and finding yourself on an exotic island in the Pacific.**

---

finding yourself on an exotic island in the Pacific.

Having just lived six years overseas, I look at the teachers through slightly tainted glasses. They remind me of my arrival at an airport approximately half-way around the world. The hot air blasted my face as I walked down the stairs from the airplane. Upon entering the airport building, nothing was familiar. I couldn't read any signs. The people, in strange-looking, baggy attire, stared at me and I stared at them. And then we're shuffled through the masses to a waiting car. The two-hour drive to our new home was punctuated with Oh's and Ah's at the incredible sights at the side of the road. All the exhaustion of a 36-hour trip was dissipated as we enthusiastically asked, “What's that?” “What's happening?” and “Why are they doing that?”

## Enthusiastic First Reactions

Adler (1975), Hoopes (1972), and Witman (1962) give as their first stage that of “enthusiastic acceptance or fascination and curiosity” in a cross-cultural experience. That was my experience six years ago and also what I observed among the teachers. They were excited and intrigued when they saw children responding to the trainers. They were pleased with the participation; the speed with which new words were introduced; the high levels of concentration of even the smallest children; the coordination of reading, writing, spelling, and vocabulary; and the idea of mastery learning. For many teachers it was their first exposure to Direct Instruction. Their comments indicate their enthusiasm:



I'm excited about it—at last a program designed primarily to teach and not to grade or label!

I'm really pleased. It answers questions I had and resolves struggles about the curriculum I was currently using.

One of the trainers said she "could not believe the positive feelings at the beginning. So many were saying they intended to use Direct Instruction in their own classrooms."

Unbeknown to each participant we were embarking on an experience that would in many respects mimic a cross-cultural experience. Mansell (1981) believes that "learning to live in a different culture necessitates the construal of new definitions, meanings, and explanations of everyday affairs and the negotiations of an alternative order of assumptions about reality, routineness, and rationality" (p. 96). This then, is the story of our process of change—how we, as teachers, developed new meanings, new beliefs, new skills and alternate ways of viewing our responsibility.

The initial enthusiasm was sparked by a deluge of new ideas in an almost totally new situation. Throughout the three-week training, we were bombarded with new concepts. Some new ideas the teachers identified were positive reinforcement, varied practice, mastery, repetition, and Direct Instruction of comprehension, penmanship, and vocabulary:

I noticed Sabrina really reinforced good behavior and just ignored the bad behavior. I've never seen anything like this. It is not the way I was taught.

The varied practice, using multiple examples, helps to make sure students who do not learn well with the one example learn it with additional examples in new contexts. I know that for me I could not learn by only watching. I'm one who needs to do it to learn effectively.

All children can score 100% accuracy, in the proper setting. No child appears threatened. They work in a neat orderly environment. The children themselves expect to score high. Children learn a group of sound-symbol relationships through repetition. These children have learned to recognize sounds. They even appear to enjoy the repetition of sounds. They know what to expect.

**This then, is the story of our process of change—how we, as teachers, developed new meanings, new beliefs, new skills and alternate ways of viewing our responsibility.**

While many teachers were enthusiastically accepting new ideas, we were in no way prepared for the very real change in attitude which occurred about the third day. On that day we were informed that we would begin teaching the students using the Direct Instruction method the next day. Most teachers became very concerned about the demands of the innovation and their adequacy in relationship to those demands. They said to the trainers, "We need more time, we've just been introduced to this innovation."

The theory I got right away,  
But on the demonstration — I'd like a replay.  
Thank you, I see it much better now  
If you'll show me again, I'm sure I'll know how.  
That was very good, but there's one little part  
I'd like to see again before I start.  
I hate to be slow, but what the heck  
If I could see it once more just to check,  
I'm sure I'd be ready to go  
Into the class to tell and to show.

Hank Moss

### Disillusionment

We went home and began to learn the directives. Some had nightmares, some had stomach aches—all experienced rather high levels of anxiety. Our attitude had very quickly changed to "resentment and criticism," a cross-cultural stage described by Witman (1962) and "hostility" which Hoopes (1972) depicts. Teachers began to grumble and complain. The writing on the overheads was too small, surely students would have high levels of eye-strain. The teachers were tired of teaching, why should they have to continue teaching when they had come to take a nice easy course to get their certification requirements. It was unfair of the trainers to expect us to teach. And to have to supervise the children and clean the rooms, this was *really* asking a lot! Criticism was bordering on anger over confusing directives. Some that were printed in the syllabus were different from the ones in the textbook. During this time of high "resentment and criticism," three teachers chose to drop the class.



But practice was part of the training. The trainers believed we couldn't learn the technique without practice. We weren't convinced.

And the practice I really don't need to do,  
I've already been teaching for a year or two.  
And the nature of the difference is such  
That actually, well—there just isn't much.  
Well, if you *insist* I'll show it to you.  
But you see I'm one of those *rare* few  
Who can get it just by seeing it done  
So could you show me again, just for fun?

Hank Moss

We were astounded and scared! Sproull, Kiesler, and Zubrow (1984), in commenting on adjusting to an alien culture, suggest that confusion sets in soon after the realization that the new situation is quite different. The "confusion about self leads the novice to feel overwhelmed and to question aspects of his or her self-identity or self-image" (p. 34).

---

**While many teachers were enthusiastically accepting new ideas, we were in no way prepared for the very real change in attitude which occurred about the third day. On that day we were informed that we would begin teaching the students using the Direct Instruction method the next day.**

---

I am so self conscious—what other people think of me matters to me. I think I did the word skills better this time than last time.

I dislike the insecurity I am feeling.

After seeing Sabrina teach two classes of spelling, I do not think I can do this. I do not think my brain works fast enough. Wow! That was something!

The disintegration which Adler (1975) identifies is elucidated best by the wide range of physical manifestations which we experienced. One teacher expressed slight discomfort:

I'm like a circle. It's like a square trying to be fit in a circle. It does not flow for me—it's not smooth, there's conflict.

The descriptions of dreams best captures the disequilibrium felt by teachers:

Last night I woke up and someone was screaming, "Spell and read!" The dog was barking. I jumped out of bed and it was all quiet. You have no idea how vivid this was to me.

The nightmares I am having are of words I should teach but do not know. I would say the anxiety is equal to my first day teaching.

I had nightmares again trying to think how I would fade the directives and how the kids would respond. I also had nightmares thinking about my supervisor and board and how I would help them to know what I was doing.

In an effort to bring some level of continuity out of this state of confusion and frustration, we find the teachers trying to interpret what this new situation means to them. As in a cross-cultural experience, they need to have control of their lives and must endeavor to gain control by trying to make sense of the new situation. Until the time when new meanings are established, the individual feels "disconnected." As Sproull, Kiesler and Zubrow (1984) point out,

Everyone feels confused at times. In ordinary circumstances this confusion is alleviated by observing what other people do, or by comparing one's behavior to standards embodied in the environment. In an alien culture, however, clear comparative information is lacking. When in addition to this conceptual ambiguity there is an absence of emotional buffering mechanisms (such as enclaves set aside for novices), then people experience a loss of control. Reality shock and confusion lead novices to try to reestablish control. These attempts can entail mental activity alone, e.g., constructing satisfying interpretations of the confusing events. And they can also entail actions such as increased effort or talking with other people about the situation. In either case, aspects of the culture play a part in the control attempts. They provide sources of information for constructing interpretations and people who function as comparators or standards against which the novices can judge their behavior. (pp. 34 & 35)

### Reintegration

Teachers trying to develop an explanation of how Direct Instruction related to them often expressed their concerns in the form of questions:



If I get too many reading or grade levels in my school, will I still be able to use it?

Using this method, can we reach the criteria of the state? How do we implement this in a multigrade school? I'll have 8 levels of reading.

Could it be taught to 4th grade? Will the kids get tired of basically the exact same routine every day?

With each question, the teachers were saying, "I'm trying to figure out how I'll be able to use Direct Instruction." They were constantly searching for ways to connect the new technique with their previous practice.

I like the idea of combining all the reading/language arts instruction so the students are being taught in a unified and consistent manner. I have never liked the idea of using so many workbooks.

Direct instruction will work for me because I believe in it. I'm disgusted with the old way. I want a method that will bring up the children's achievement levels and less grading for me and something that challenges the kids and has them mastering the words at 100%.

In the need to reintegrate the self with new values and beliefs there is a tendency for what Mansell (1981) calls "adaptive resilience." A number of teachers were clearly in the business of making adaptations to the program from the very beginning. They "wouldn't introduce so many words at a time," or they "would change the directives." Some would require the spelling words be written rather than spelled orally. Others had ideas of how to give the points that would be more effective than "running to the students' desks." Others planned some form of assessment because it seemed "some words are so easy that the children might be able to read them and spell them without the need of going through all the routine."

In contrast to those making adaptations were many typified by this comment:

As to how I would use what I've learned in class. . . well, I'd do exactly what the book suggests and have a successful year!

As the training continued, a sense of ownership of the new ideas became a dominant motif. Teachers were now saying, "These new concepts are a part of

With each question, the teachers were saying, "I'm trying to figure out how I'll be able to use Direct Instruction." They were constantly searching for ways to connect the new technique with their previous practice.

me." In answer to the question, "Are you aware of any changes you are experiencing in your beliefs or attitudes?", they responded:

Yes! Copying or modeling does work!

Yes, many! I am learning how new words may be taught where the coefficient of efficiency is high, for the effort made by the teacher.

Yes, my attitude towards teaching with directives has changed. I see the benefit and efficiency of the method better.

Yes, I believe we as teachers expect the student to do the learning, but we do not do an effective job of instructing. Using this method of instruction guarantees learning.

### New Skills

The attempts to bring control to the new situation requires the participant to learn new skills. This is necessary if the individual is to function in his new role. As a Direct Instruction teacher, one has to be able to learn many directives and be able to use them in discussions, spelling, skills time and when teaching comprehension. Some of the tensions involved in learning a new skill are suggested by the comments below:

It is hard to really learn positive reinforcement.

I feel I have learned the skills needed to implement the program.

I did all my words in skills in under 5 minutes each. I feel really good about that.

As the training continued, a sense of ownership of the new ideas became a dominant motif. Teachers were now saying, "These new concepts are a part of me."



Adler (1975), Mansell (1981), Hoopes (1972), and Witman (1962) identify stages where recovery and adjustment or some type of acculturation and autonomy are evidenced. During the three week intensive staff development program, this process began when adaptations and adjustments were being made. Also, as new beliefs and skills were developed the individual was gaining control of certain aspects of Direct Instruction in preparation for functioning independently.

---

**As a Direct Instruction teacher, one has to be able to learn many directives and be able to use them in discussions, spelling, skills time and when teaching comprehension.**

---

### Plans

The plans which teachers began to make show that some level of acculturation had arrived. The teachers were beginning to see themselves operating in the new role.

I plan to use the next four days to start to get my materials ready. I'll make two folders, get comprehension paragraphs made up and copied. Also, all the word cards, mastery tests, word formation and word discrimination exercises and then get everything properly filed.

I'll have 5 grade levels but I'll have 2 reading groups. I won't have to order the *skilpak* and study books.

I'm planning to implement. I will only have one group. I'll teach reading in the afternoon when the kindergartners are gone—couldn't do it in the morning when they are there.

I will force students to think faster and to aim for 100% accuracy and not just be content with making a C.

Mansell (1981) suggests that the final stage of cross-cultural adjustment occurs when the individual can function equally well in both cultures. She labels this stage "duality." More time was needed than just the three-week intensive program to demonstrate the extent to which the teachers adjusted to this new way of teaching.

In summary, learning a Direct Instruction approach can be compared with a cross-cultural experience. Teachers experience a high level of disintegration while they are adjusting to new beliefs, skills and materials. During this time of change, other teachers could be a support and trainers themselves may want to help teachers understand the process so they may more readily accept it.

### References

- Adler, P. S. (1975). The transitional experience: An alternative view of culture shock. *Journal of Humanistic Psychology*, 15, 13-23.
- Hoopes, D. S. (1972). *Readings in intercultural communication*. Adapted in Baudoin, E. M., Bober, E. S., Clarke, M. A., Dobson, B. K., Silbersteing, S. (1988). *Reader's choice*. Ann Arbor, MI: University of Michigan Press.
- Mansell, M. (1981). Transcultural experience and expressive response. *Communication Education*, 30, 93-108.
- Sproull, L. S., Kiesler, S., & Zubrow, D. (1984). Encountering an alien culture. *Journal of Social Issues*, 40, 31-48.
- Witman, S. L. (1962). *Some factors influencing communication between cultures*. Pittsburgh, PA: Pittsburgh Council for International Visitors.

---

**A Direct Instruction approach can be compared with a cross-cultural experience. Teachers experience a high level of disintegration while they are adjusting to new beliefs, skills and materials. During this time of change, other teachers could be a support and trainers themselves may want to help teachers understand the process so they may more readily accept it.**

---



# The Culinary Art of School Transformation

Sandra S. Murray  
Principal, Larkdale Elementary School, Florida

Writing about the transformation of a school brings to mind flow charts and timelines. To most people, that is. For me, a recipe for a luscious cake pops into my head! Ridiculous? Think about it.

As with school reform, each ingredient in the cake recipe is vital to the end product. Leave out the pinch of salt and the cake just won't be quite right.

The recipe for a successful school might look like this:

## Content (Cake)

1 cup of social skills training  
1/2 cup conflict resolution instruction  
pinch of self esteem building  
2 cups curriculum change  
2 cups behavior expectation training  
1 tablespoon study skills training.

Mix all ingredients gently. Pour into 7 grades (Pre-kindergarten through fifth grade) generously coated with caring and concern. Bake at 180 days for one year, checking regularly for progress.

## Staff (Frosting)

1 great staff willing to take risks  
1 supportive administration willing to take shots training to taste.

Blend the staff and administration until they work together and are comfortable with each other. Add training a little at a time until correct fluency in programs is achieved.

---

Writing about the transformation of a school brings to mind flow charts and timelines. To most people, that is. For me, a recipe for a luscious cake pops into my head! As with school reform, each ingredient in the cake recipe is vital to the end product.

---

How successful can this recipe be? In the past five years at Larkdale Elementary School it has proven to get better each time we bake the cake. We are forever sampling our product, and searching for new ingredients to improve the flavor.

The first year we tried our culinary skills, we found we had left out some vital ingredients.

We instituted conflict resolution and social skills into the school day, but disciplinary concerns still existed. During the 1990/91 school year, we had over 1300 referrals with a population of 684 stu-

---

**The first two weeks of the school year were concentrated on teaching the students what we expected of them. We taught the students what we wanted using the same techniques as when we teach content areas: teach, practice, test, reteach until achieving mastery. The disciplinary referrals that year dropped.**

---

dents. We were at a quandary as to what to do. When referrals were reviewed, it was evident that a problem existed in that there were inconsistent expectations for either staff or students. Teachers still believed that students could be controlled by punitive measures and raising of voices. The number of disciplinary referrals proved that this was not true.

A team of five persons was formed by administration. This team attended Randy Sprick's Solutions Workshop. From this came our second attempt at baking our cake. The new ingredient for this year was a school-wide discipline plan that was written by the team. The plan was presented to the staff on the pre-planning days for the 1991/1992 school year. The entire staff worked on refining the plan before school began that year.

We were forced to reexamine the idea of student discipline. The idea of giving students the position specific "power" that teachers felt they had was alien to some. The realization of having no power in



---

**Though the students made progress, there was something missing. After analyzing the referrals we found that the majority of the referrals were made by less than 12% of the students. The missing ingredient this time was how to deal with chronically disruptive students.**

---

controlling students was very painful for many. Not all of the staff believed that Sprick's method of disciplining students would work. Some were still in the let's-control-the-students mode rather than that of teaching students to control themselves. These skeptics, however, agreed half-heartedly to implement the program.

The first two weeks of the school year were concentrated on teaching the students what we expected of them. We taught the students what we wanted using the same techniques as when we teach content areas: teach, practice, test, reteach until achieving mastery. The disciplinary referrals that year dropped. Teachers taught the students how they wanted them to do everything. They practiced how to walk in line, how to get in ready position, how to line up, etc. Each teacher strived to make every student successful.

We also instituted our Disruption Alternative Education class that year. This class housed the students who exhibited chronically disruptive behavior. The teacher concentrated on basic education and coping skills. When an outburst occurred, the teacher used that as a teaching moment. Students spent a percentage of every day learning new techniques for coping with life. Instead of fighting, they talked through alternative solutions to problems.

Though the students made progress, there was something missing. After analyzing the referrals we found that the majority of the referrals were made by less than 12% of the students. The missing ingredient this time was how to deal with chronically disruptive students. The institution of the Disciplinary Alternative Education class did alleviate some of the problems, but there was still need for improvement.

Since the school houses an Educable Mentally Handicapped Cluster, we enlisted the assistance of the Exceptional Student Education Department's Cluster Improvement Program (CLIP) Team. The 1992/1993 school year began with the support of two CLIP Team members. Stuart Greenberg and

Debbie Berlin assisted the ESE teachers in looking at the educational program and disciplinary techniques. Administration and any other interested staff member (ESE or regular education) attended training in working with chronically disruptive students.

When we analyzed student referrals midway through that year we found that most of the chronically disruptive students were also unsuccessful in academics. To address this concern, we searched for methods that would assist the students in achieving academic success. We started using SRA's Direct Classes. The results were amazing. Though our student population had increased to 800, our referrals had dropped to 831. We found that 57% of the referrals were made by 6% of the students.

Our cake took on a different flavor during the 1993-1994 school year. The new ingredient was curriculum change. We revamped the curriculum delivery to better address student needs. We still utilized team teaching at each grade level, but as an added ingredient, each grade level was asked to have one teacher volunteer to use SRA's Direct Instruction Reading Curriculum, supplemented by Scott Foresman. The students were given individual

---

**When we analyzed student referrals midway through that year we found that most of the chronically disruptive students were also unsuccessful in academics. To address this concern, we searched for methods that would assist the students in achieving academic success. We started using SRA's Direct Classes. The results were amazing.**

---

reading inventories to determine reading level. Each grade utilized Scott Foresman Basal Reading, Focus Reading, and Direct Instruction. The number of groups each teacher delivered reading services to was reduced, and the students received more reading instruction.

Our referrals were affected also. Our population rose to 860 students, our referrals were 863. Of these 863 referrals, 47 students were responsible for 494 referrals, 5% of the students were responsible for 57% of the referrals. Our cake again improved.

This year we are proud participants in the Alliance of Quality Schools. This program allows us to make curriculum changes to address needs. We have added several new ingredients to this year's



cake. The entire staff has been trained to deliver the Direct Instruction Reading Program and in disciplinary techniques. Teachers and paraprofessionals are working as teams to teach students. Each grade group has an uninterrupted ninety minutes each day to teach reading. The art teacher, music teacher, physical education teacher, enrichment teacher, media specialist, and guidance counselor all teach reading for thirty minutes per day.

We have incorporated changes in the spelling, language, and math curriculums to address unique student needs. In some grade levels, team teaching has been extended to math and spelling to better serve students. This is determined by the grade level with the assistance of the Curriculum Facilitator and the Alliance coach.

Each day is started with curriculum openers that the students begin immediately upon entering the door. Teachers have worked as teams to develop

---

**Students are on task, and busy all day. There is little down time. The students and the staff are exhausted and exhilarated at the end of the day.**

---

these openers to insure consistency in content. The fourth grade has worked with the Alliance Director, Stuart Greenberg, to develop story starters for weekly writing homework. The first grade is working on daily openers, for mathematics, phonics, writing, and current events.

Our referrals for the first quarter dropped from 166 last year to 89 this year. A reduction of 54%. We seldom have any referrals between the hours of 8:30 a.m. and 11:00 a.m., protected reading time. Stu-

dents are on task, and busy all day. There is little down time. The students and the staff are exhausted and exhilarated at the end of the day.

The most heartwarming new ingredient this year is the enthusiasm exhibited by the staff and the

---

**The most heartwarming new ingredient this year is the enthusiasm exhibited by the staff and the students. We are all excited about the progress we see.**

---

students. We are all excited about the progress we see. As I visit classrooms, students ask me to listen to them read. A fifth grade class begged their teacher to reteach a lesson so they could show me how well they read.

Last Monday, I visited a classroom that was reading the novel *The Wizard of Oz* from their reading book. I had a long discussion with two students about the difference between the book and the movie. Both girls admitted that they liked the book better than the movie. How exciting!

It is hard to believe how much has changed with the new curriculum and discipline techniques. We have gone from 1300 referrals (approximately 325 per quarter) for the 1990/1991 school year to 89 referrals for the first quarter of the 1994/1995 school year. We still need to find that magic ingredient for the chronically disruptive student, but curriculum change seems to be addressing part of that need.

Though this year's cake is the most successful, we strive to find even better ingredients. We shall continue to take risks and explore other methods of instruction and restructuring to improve the education for the students.



---

# A Success Story: Affecting the Lives of Incarcerated Youth

---

Greta W. Clark and Judith A. Schacht  
Ferris School for Boys, Delaware

Can Johnnie or Jermaine learn to read, even if he is an incarcerated teenager with a history of school failure? Yes. Not only can he learn to read, but he can also gain two to four years of growth in reading in one school year if the factors of grouping, curriculum, and instructional methods are carefully controlled. Concurrently, his mathematics scores can reflect one to two years of growth. In our Basic English and Basic Mathematics classes at Ferris School for Boys, Delaware's male juvenile correction facility, students are using their "jail time" to become school successes instead of failures. In Basic English classes, they are mastering a hierarchy of

---

**In our Basic English and Basic Mathematics classes at Ferris School for Boys, Delaware's male juvenile correction facility, students are using their "jail time" to become school successes instead of failures.**

---

word decoding skills and are applying these skills to become effective, functioning readers. In Basic Mathematics classes, they are learning computational skills that will enable them to be independent. Using SRA's Corrective Reading Program and Corrective Mathematics Program in small, homogeneously grouped classes promotes student-teacher interaction which results in accelerated achievement, as measured through precision teaching methods and performance on mastery tests.

The student body at Ferris School is composed of males between the ages of thirteen and eighteen. All are adjudicated youth, placed in this maximum security facility by order of Family or Superior Court. The students assigned to Basic English and Basic Mathematics classes have reading and mathematics scores between a second and fifth grade level as measured by the Wide Range Achievement Test, administered during the intake process. They are

usually, but not always, identified as special education students, with either learning disabilities or serious emotional disturbance being the primary handicapping condition. Most have experienced school failure and, if they have been attending school, have been placed in alternative programs such as intensive learning centers. They hate school; they have hated school since third or fourth grade, when classmates mastered a written symbol system that, for a variety of reasons, made no sense to them. Some have used disruptive behavior as a means of camouflaging their inability to read and do math. They rely on this disruptive behavior to get them excluded from the educational setting. Others have hidden in the anonymity of the back row of overpopulated classes. They keep their heads and hands down and their voices low and hope not to be seen.

Herein lies one reason for assigning these boys to classes of one to six students, all functioning at the same academic level. Before any effective learning can take place, these students need assurance: assurance that they can succeed, assurance that they are safe from ridicule, and assurance that they will no longer be permitted to hide from their academic difficulties. They also need assurance that there is a curriculum which can present tools to remediate

---

**Seventy-five percent of the students who entered the program reading at a speed of 40-50 words per minute doubled their speeds in eight to twelve weeks of instruction.**

---

their learning problems and teachers who will guide them through this curriculum. At the moment that the students believe that, effective learning can begin.

For this effective learning to occur, a proven core curriculum is necessary. In the fall of 1991, SRA's Corrective Reading Program and Corrective Mathematics Program were chosen to be our "road maps" to give these at-risk students the tools needed to



---

**By the end of his six-month stay, Mike was reading at a fourth grade level, writing in cursive, and struggling daily with the morning newspaper. While he didn't show as much growth in math skills, he did master some basic computation skills.**

---

allow them to master the written communication and numerative systems. Initially, the program was presented exactly as written, and within weeks, student success was apparent. Second-grade, seventeen-year-old readers quickly began to master specific letter combinations while simultaneously becoming aware of letter combinations which they frequently reversed. Fractions began to make sense. Timed-reading and computing graphs and discussions of improved speeds became daily topics, providing visual and numerical proofs of individual success. Seventy-five percent of the students who entered the program reading at a speed of 40-50 words per minute doubled their speeds in eight to twelve weeks of instruction. As they were able to see and hear their increased reading fluency, they became eager to work on specific areas of difficulty, such as reversals or re-reading phrases (both of which impede comprehension). As simple problems in double-digit division were mastered, they became willing to attempt more challenging tasks.

While the students were learning, so were the teachers. Most of the methods and activities in the curriculum were highly effective; however, for this population of hyperactive, physically combative, learning disabled youth, some modifications proved

---

**At the close of the school year in June, Richard had attained an oral reading rate of 150 words per minute at a seventh grade reading level, a growth of five grade levels in one academic year, as measured on the Fry Readability Scale.**

---

useful. Keeping their attention focused on word lists in the text required a very controlled classroom atmosphere, which challenged disruptive students to push limits in an effort to avoid working, while withdrawn students stared at lists but failed to par-

ticipate. A more effective practice was to write the lists on the chalkboard. Heads came up, eyes focused, and lists were read cooperatively. As an extension of precision teaching, timed readings of the lists became a favorite and highly competitive part of the routine. As an opening activity, these chalkboard lists centered our attention on a positive, cooperative task that set the mood for the whole class period.

Text-reading and comprehension questions worked smoothly, but juggling a stopwatch (for timed readings), teacher's guide, and a pen and paper to record scores took much attention from the students. The solution was simple: a small sheet of labels was used. As each student read, name, date, lesson number, reading speed, and number of errors were recorded on a label. At the conclusion of the story, students did workbook activities while the

---

**The academic growth of Richard, Mike, and their classmates is only part of the success story. The emotional changes in these students surprised many staff members in the facility, including their classroom teachers.**

---

teacher placed each label in the students' folders and recorded speed and errors on each individual's chart. As we worked, we could discuss progress or problems. The mathematics teacher soon adapted the use of labels to timed tests in math skills. (Also, the charts provided precise information for indicating a student's "present level of performance" on IEP's.)

In the Basic English classes, as the first group of students progressed from Decoding B2 to Skills Applications, Decoding C, it became obvious that the reading level of the material increased quickly. Using the Fry Readability Scale, groups of lessons were evaluated and appropriate grade levels noted. In this way, students and teacher could monitor reading speed and grade level equivalency simultaneously. Those numbers gave us confirmation of the rapid progress being made by most students. Discussions with the math teacher yielded reports of similar progress in math. At this point, we realized that we had a true success story. Two specific cases illustrate it well.

Mike, a seventeen-year-old, entered Ferris School for Boys in March of 1993, reading on a second grade level with few decoding skills and unable to read or write cursive writing. His math scores were also in the low elementary range. He was evaluated by the



occupational therapist, and she and the classroom teachers planned a coordinated approach to remediate Mike's weaknesses while building on his strengths, greatest of which was his motivational drive. Mike desperately wanted to read and write. The occupational therapist focused on cursive writing, using the vocabulary from Decoding B2, which Mike was using daily in his Basic English class. The reading teacher drilled letter combinations, helping Mike to attain auditory closure and symbol-sound association. The math teacher worked on basic multiplication and division skills. By the end of his six-month stay, Mike was reading at a fourth grade level, writing in cursive, and struggling daily with the morning newspaper. While he didn't show as much growth in math skills, he did master some basic computation skills. At last report, this young man is employed as an auto mechanic, something he dreamed of doing but feared that he lacked the basic literacy skills to attain. His six months in Ferris School were certainly profitable!

Richard, one of Mike's classmates, has had even greater academic success. Richard first came to Ferris School in January of 1992. At that time, he had almost no reading or math skills and very weak verbal skills. When given three nouns, Richard was

---

**We, their classroom teachers, will never know the exact degree of our impact on these young lives. Yet the acquisition of these basic skills, gained from consistent instruction through an effective curriculum, is an achievement that will remain with these students throughout life. Their sense of accomplishment, combined with their knowledge that they can now function in society, may be enough to convince them to choose to be law-abiding citizens. What greater success could we, as their teachers, ask for?**

---

unable to compose a sentence. Many months were spent in developing Richard's verbal encoding, divergent thinking, and social skills. Richard was absent from the facility for eight months and, when tested upon his return, was only reading 75 words per minute on a second grade level. He was placed in a reading group using Decoding B2 and a math group beginning the Basic Fractions book, and again the occupational therapist and the teachers coordi-

nated their efforts. Within one month, Richard reached an oral reading rate of 160 words per minute with 0-1 error. In September, Richard was reading in Decoding C, beginning at 88 words per minute on a high second grade level. At the close of the school year in June, Richard had attained an oral reading rate of 150 words per minute at a seventh grade reading level, a growth of five grade levels in one academic year, as measured on the Fry Readability Scale. His math progress was also impressive, showing achievement of two grade levels in one academic year. Presently, Richard is carrying a full academic load and is accumulating science credits through independent study. It is anticipated that he will receive his high school diploma in August of 1995.

The academic growth of Richard, Mike, and their classmates is only part of the success story. The emotional changes in these students surprised many staff members in the facility, including their classroom teachers. Initially, these boys had been negative in attitude and behavior, frequently using evasive tactics to avoid attending classes. But as they experienced small success upon small success in their reading and math classes, their attitude toward learning began to change. Other teachers reported that they were volunteering to read aloud in front of their peers. In the Life Skills lab, they were offering to demonstrate math skills needed to double a cooking recipe. Within a month, some were being elected "Student of the Week," a coveted honor which rewards a student with a lunch of his choice, usually pizza! At the end of the first quarter, both Richard and Michael were awarded the ABE (Attitude, Behavior, Effort) Certificate, the highest honor given.

As their self-confidence grew, the young men in this group accepted new challenges both academically and socially. Some were placed in regular English and Mathematics classes. Some took on leadership roles on their housing tiers and within the school setting, becoming peer mediators and earning the highest level of privileges given in the facility. Some returned to the community and are maintaining a crime-free life. Did all this growth happen because they mastered basic reading and math skills in our classes? We, their classroom teachers, will never know the exact degree of our impact on these young lives. Yet the acquisition of these basic skills, gained from consistent instruction through an effective curriculum, is an achievement that will remain with these students throughout life. Their sense of accomplishment, combined with their knowledge that they can now function in society, may be enough to convince them to choose to be law-abiding citizens. What greater success could we, as their teachers, ask for?



# An Analysis of *The Bell Curve* and Its Implications for Special Education

Tom Fischer

Doctoral student, University of Wisconsin, Madison

Sara Tarver

University of Wisconsin, Madison

Special educators need to be aware of, and wary of, the arguments put forth in the controversial book, *The Bell Curve* (Herrnstein & Murray, 1994). The book has had an impact that goes beyond its merits on a scholarly level, partly because of author Charles Murray's aggressive promotional efforts. While *The Bell Curve* has been roundly criticized for its questionable use of statistics (Gould, 1994), its questionable reasoning in general (Ryan, 1994), and its use of research from groups with neo-Nazi and white supremacist ties (Lane, 1994), it nonetheless occupied a place on the *New York Times* top-ten nonfiction list for three months. The book was featured on the cover of *Newsweek*, on the TV show *60 Minutes* and in numerous other newspapers, magazines, and TV shows.

*The Bell Curve* argues that the U.S. is becoming increasingly stratified according to intelligence, with highly intelligent people occupying most of the high status and high paying positions, while the least intelligent people are increasingly stuck at the bottom rungs of society. The book has caused the most stir with its assertion that blacks are genetically inferior to whites. But for special educators, the most important argument in the book may be that the U.S. should devote less of its resources to those of lower cognitive abilities.

Special education programs and related services now claim more than \$1.5 billion of the federal budget (U.S. Department of Education, 1992). That is in addition to more than \$10 billion in state spending and nearly \$7 billion in local expenditures for special education and related services (U.S. Department of Education, 1992). With a new Congress aiming to cut federal spending, especially on social programs, many educators are worried about the direction of federal support for education in general ("Republicans gain," 1994). Special education in particular may find itself pressed to justify the large amount of federal support it receives.

In the midst of this mounting budgetary debate comes *The Bell Curve* with its proposals aimed at increasing the United State's overall level of intelligence. Perhaps most important is the book's influence on the new group of Congressional leaders. Written with more than \$1 million in support from

---

**The book has caused the most stir with its assertion that blacks are genetically inferior to whites. But for special educators, the most important argument in the book may be that the U.S. should devote less of its resources to those of lower cognitive abilities.**

---

the conservative Bradley Foundation in connection with the American Enterprise Institute ("Controversial book," 1994), *The Bell Curve* clearly is of the same philosophical bent as some of those leaders, especially Speaker of the House Newt Gingrich. Like Gingrich, *The Bell Curve* argues for eliminating existing welfare programs, creating voucher programs that would allow parents to choose private or religious schools, and reducing or eliminating affirmative action programs. Both also want to make it harder for single women to have children, Gingrich by sending those children to orphanages, *The Bell Curve* by eliminating the ability of single mothers to receive child support and by eliminating even visitation rights for unmarried fathers.

*The Bell Curve* does not specifically address special education. The closest it comes is a suggestion to reallocate some portion of existing school funding away from programs for the disadvantaged to programs for the gifted. "At present, there is an overwhelming tilt toward enriching the education of children from the low end of the cognitive ability



distribution. We propose more of a balance across the cognitive ability distribution" (p. 442).

What may be more troubling to special education, however, is Herrnstein and Murray's broader argument about intelligence. People at the low end of the intelligence spectrum are destined to stay there, they say, and they probably will marry others of low intelligence, have too many children, do a poor job

---

**We in the special education field need to be able to critique the arguments in *The Bell Curve* and to be able to show examples of the positive role of special education.**

---

of parenting, cause more crimes, and in general be a drain on the American economy. It is this viewpoint—about limited abilities, limited hopes, and limited potential to improve on the part of less intelligent people—that may be most important to special educators. For it is the idea that we can improve our students' abilities, widen their future choices, and open doors to the mainstream of American society that is at the heart of special education. Thus, we in the special education field need to be able to critique the arguments in *The Bell Curve* and to be able to show examples of the positive role of special education.

The first of Herrnstein and Murray's arguments to address is their view that intelligence is, by and large, genetically fixed at birth. Although they at times pay lip service to the role environment plays in influencing intelligence, their major lines of reasoning clearly emphasize the genetic factor in determining intelligence. This is most apparent in their view that the 15-point overall gap between blacks and whites in the U. S. is due largely to a genetic difference in the races, and not due to environmental differences or a cultural bias on the part of I.Q. tests. Herrnstein and Murray take the view that little can be done, short of hugely expensive programs, to raise the intelligence levels of any group of people.

Within special education, perhaps the most vivid example against that line of reasoning is the huge changes that have occurred in children with Down syndrome. Whereas in the past these children were considered worthy of little more than institutional warehousing until their early death, in recent years children with Down syndrome have made huge advances in ability levels, intelligence levels, life

spans, and functional ability in society. The large difference environment can make was seen in an early study showing that IQ levels of Down syndrome children were 30 points higher when raised in their parents' home compared with those placed in institutions (Wunsch, 1957). IQs were in the 20 to 30 range when living in an institution and 50 to 70 when living at home.

A clear example of how education can have a positive effect on students' IQ scores comes from Project Follow Through, a large federal study in the late 1960s. Here, a 75% minority population taught with Direct Instruction procedures made IQ gains averaging 8 points from kindergarten or first grade through third grade (Rhine, 1981). Low-IQ students made gains of 8 to 14 points, discounting statistical regression effects. This is significant because Herrnstein and Murray state that gains underprivileged children make in preschool years with programs such as Head Start usually are lost within a few years of regular schooling. More noteworthy for special education is the fact that low-IQ students made achievement test gains as great as other groups under Direct Instruction (Gersten, Becker, Heiry, & White, 1984). Here, students with IQs of 70 and below made gains from 75 to 108 on a mean standard score for the WRAT reading test, while those with IQs of 71 to 90 made gains from 78 to 106. The roughly 30-point gain was similar for all IQ groups. Direct Instruction has shown similar results in other settings. After using Direct Instruction programs for two years, the IQ scores of a group of 4- and 5-year-old disadvantaged black children increased an average of 24 points (Engelmann, 1970). Similarly,

---

**Herrnstein and Murray take the view that little can be done, short of hugely expensive programs, to raise the intelligence levels of any group of people.**

---

an Australian study with moderately retarded children taught for two years with Direct Instruction materials showed average IQ gains from 41.6 to 50.6 (Gersten & Maggs, 1982).

A related issue is Herrnstein and Murray's insistence on viewing IQ as the single most important predictor of everything from school achievement to occupational status to crime rates. They consistently cite their own analysis of data from the National Longitudinal Survey of Youth showing that



the correlation of IQ to various future achievement indicators is higher than other correlations involving factors such as socioeconomic status. What they leave out, except buried within 102 pages of appendix material, is that this correlation is very weak, usually between .2 and .4. This means that, even at the high end, IQ as a predictor is accounting for only 16% of the outcome being predicted.

---

**Even their assumption that IQ is the first among many items that can be used to predict achievement is questionable. Marilyn Jager Adams, in a review of studies concerning beginning readers, found that phonological awareness, and not IQ, is the most powerful predictor of subsequent reading success (Adams, 1990).**

---

Even their assumption that IQ is the first among many items that can be used to predict achievement is questionable. Marilyn Jager Adams, in a review of studies concerning beginning readers, found that phonological awareness, and not IQ, is the most powerful predictor of subsequent reading success (Adams, 1990). This is important for educators, especially special educators, because while we may not be able to teach IQ, we can teach phonological awareness. Since that can improve future reading achievement, which in turn has a strong bearing on future school success, we do not need to take up Herrnstein and Murray's fatalistic viewpoint that those with low IQs are destined to be low achievers in school, work, and family life.

Snider and Tarver (1989) found results consistent with those of Adams when studying the relationship of achievement and IQ in students with learning disabilities. As they get older, learning disabled students typically show drops in verbal IQ but relatively steady performance IQ scores. Snider and Tarver analyzed IQ changes from first to fifth grade in a group of learning disabled students and found that achievement's influence on IQ was stronger than IQ's influence on achievement. They saw the data as backing the thesis that students with severe learning or reading disabilities have a deficiency in phonological processing that interferes with acquisition of decoding skills needed for beginning reading. Without effective remediation, this in turn

hurts their ability to acquire the prior knowledge background needed for reading comprehension. This leads to the decline in verbal IQ scores. Put another way, their poor future achievement is not caused by low IQ but by problems in phonological processing.

Another question that needs to be addressed in regard to *The Bell Curve* is the issue of whether intelligence can be quantified by a single number (usually called Spearman's *g*). Herrnstein and Murray acknowledge that even within the sphere of those who study intelligence there is wide disagreement on this subject. Gould, in his 1981 book, *The Mismeasure of Man*, did a masterful job of debunking the long history of attempts to use a single measure of intelligence to compare groups of people. Gould sees those who try to quantify intelligence as a single number as guilty of "reification," or treating an abstract concept as a concrete object. Herrnstein and Murray do little in their book to counter Gould's analysis.

We in the field of special education are well aware of the dangers of trying to sum up a person's abilities or potential in a single number. Those in the mental retardation field, especially, know that an IQ score is often a poor indicator of the true capabilities of a person. The American Association of Mental Retardation in its 1992 definition of mental retardation stressed that an IQ score alone is not enough to identify mental retardation (Luckasson et al., 1992).

Herrnstein and Murray's description of blacks as genetically inferior to whites also relates to special education, since overidentification of minorities has been an issue in the field. Although they do indicate an awareness that environmental factors may play a

---

**Herrnstein and Murray finally acknowledge that the long legacy of slavery, segregation, and discrimination may have had some effect on the I.Q. of U.S. blacks. Thus they turn to Africa for a fairer view of the abilities of blacks and pick the country of — South Africa!**

---

role in the gap between black and white IQ scores, Herrnstein and Murray consistently return to the theme that the gap is real, and based to a significant degree on genetic factors. Perhaps the most far-fetched section of the book is the initial chapter on ethnic differences in cognitive ability. Herrnstein and Murray finally acknowledge that the long legacy



of slavery, segregation, and discrimination may have had some effect on the I.Q. of U.S. blacks. Thus they turn to Africa for a fairer view of the abilities of blacks and pick the country of — South Africa! If Herrnstein and Murray expect readers to swallow this supposedly fair example, their expectations of cognitive abilities are indeed off base.

---

**We must carefully document and make public the effectiveness of the programs we use, so that we can show clearly that low IQs are not an inevitable harbinger of future failure.**

---

Despite the glaring weaknesses of this book, there are lessons for special educators to learn from it. One is that we must carefully document and make public the effectiveness of the programs we use, so that we can show clearly that low IQs are not an inevitable harbinger of future failure. Another lesson is to make sure that effective programs are widely implemented. Otherwise, we will be open to attacks from people who say that additional spending on special education students is not justified. Perhaps the most important lesson is not to succumb to the fatalistic viewpoint that a person's future can be summed up in a single statistic.

### References

- Adams, M.J. (1990). *Beginning to Read: Thinking and Learning about Print*. Cambridge: The MIT Press.
- Controversial book on I.Q., race defended. (1994, Oct. 15). *The Capital Times*, p. A1.
- Engelmann, S. (1970). The effectiveness of direct instruction on IQ performance and achievement in reading and arithmetic. In J. Hellmuth (Ed.), *Disadvantaged child* (Vol. 3). New York: Brunner/Mazel.
- Gersten, R.M., Becker, W.C., Heiry, T.J., & White, W.A.T. (1984). Entry IQ and yearly academic growth of children in Direct Instruction programs: A longitudinal study of low SES children. *Educational Evaluation and Policy Analysis*, (6), 2, 109-121.
- Gersten, R.M. & Maggs, A. (1982). Five year longitudinal study of cognitive development of moderately retarded children in a Direct Instruction program. *Analysis and Intervention in Developmental Disabilities*, (2), 329-43.
- Gould, S.J. (1981). *The Mismeasure of Man*. New York: W.W. Norton
- Gould, S.J. (1994, Nov. 28). Curveball. *The New Yorker*, pp. 139-149.
- Herrnstein, R.J., & Murray, C. (1994). *The Bell Curve: Intelligence and class structure in American Life*. New York: The Free Press.
- Lane, C. (1994, Dec. 1). The tainted sources of *The Bell Curve*. *New York Review of Books*, 14-19.
- Luckasson, R., Coulter, D.L., Polloway, E.A., Reiss, S., Schalock, R.L., Snell, M.E., Spitalnik, D.M., & Stark, J.A. (1992). *Mental retardation: Definitions, Classifications, and Systems of Supports*. Washington, D.C.: American Association on Mental Retardation.
- Republicans gain in Congress, state races. (1994, Nov. 28). *American Association of Colleges for Teachers of Education*, (15), 1-4.
- Rhine, W.R. (1981). *Making Schools More Effective: New Directions from Follow Through*. New York: Academic Press.
- Ryan, A. (1994, Nov. 17). Apocalypse now? *The New York Review of Books*, 7-11.
- Snider, V.E., & Tarver, S. G. (1989). The relationship between achievement and IQ in students with learning disabilities. *Psychology in the Schools*, (26), 346-352.
- U.S. Department of Education (1992). *Fourteenth annual report to Congress on the implementation of the Individuals with Disabilities Education Act*. Washington, D.C.: Author.
- Wunsch, W.L. (1957). Some characteristics of mongoloids evaluated at a clinic for children with retarded development. *American Journal of Mental Deficiency*, 62, 122-130.



# Can New Learning Technique Solve the Illiteracy Plague?

Teresa Adamson

*Reprinted from The Catholic Leader, Queensland, Australia, March 6, 1994, with permission.*

Up to 95 percent of children can be taught 95 percent of the school curriculum...and not just smart or average children, but any child.

Ninety-five out of every 100 children, under a learning technique which is slowly filtering through Brisbane archdiocesan primary schools—and including students with moderate to severe learning difficulties—can learn almost all that is taught in classrooms.

That is the contention of Dr. Denis Condon, a Brisbane Catholic Education guidance counselor, who started the ball rolling with a pilot program at St. Joseph's Primary School, North Ipswich, in 1991.

For the many parents, teachers and children confronted by a broadening quag of literary and numeracy problems, Dr. Condon's statement is the stuff of fairy tales.

---

**Up to 95 percent of children can be taught 95 percent of the school curriculum...and not just smart or average children, but any child.**

---

Cynics have called it an ambit claim, a shoot-from-the-hip promise to capitalize on an education system desperate to solve an illiteracy plague and necessary to stem the subsequent savaging education bodies have received from political, industrial, and academic sectors.

Parents and teachers of children struggling to keep pace with their peers, however, are embracing the scheme enthusiastically.

Dr. Condon, 20 years an educationalist, stresses there is not one touch of overstatement in his claiming that, properly and fully applied, this method of teaching can produce such an astonishing success rate.

Local results from the programme's test run at North Ipswich—and in other Catholic schools which

have since begun using the Direct Instruction techniques—include "remarkable, significant and substantial" success stories.

Within months at St. Joseph's, most of the children withdrawn to be immersed in the Direct Instruction programme—75 percent on average—have returned to regular classes with abilities equal to their classmates' and, in many cases, better.

The Direct Instruction programme is painstakingly designed and precise.

It works on the concept of "phonemic awareness"—jargon for teaching children to learn that words consist of a series of sounds. The programme combines early detection of a learning problem with the Direct Instruction teaching method. Under the programme, Year 1 students are assessed in the first few weeks of school.

If perceived to be "at-risk," they are withdrawn—four days a week, half-an-hour at a time—to receive Direct Instruction. Their progress is regularly tested. Within months, 75 percent of the children no longer need learning support and return to regular class.

"And they return," Dr. Condon said, "with more than just reading skills. They have general learning skills, are generally willing to participate more in class and have higher self-esteem because they can achieve their goals.

It remains a sense of professional and intellectual puzzlement to Dr. Condon that a proven way of academically rescuing children at risk of failure has been ignored for so long by the vast majority of his teaching peers.

There are many reasons for that. One handicap is that, to achieve optimum success, intensive teacher input and participation are required. In some schools that precious time resource is not always available.

"I'm not worried about the good teachers," Dr. Condon said. "But I'm worried about the ones who aren't getting results.

"Sometimes people choose education the way they choose shoes. One programme becomes fashionable," and that programme, Dr. Condon said,



became teaching flavour of the month or year or era. "My goal is that teachers will be able to justify the decisions they make on the basis of applied research."

With the passion of a true believer, he lays down a challenge for those still using other methods to teach educationally at-risk children: "If someone comes up with something better, and there is applied research to back it up, I will convert; but, in 20 years of working in this field, I have yet to find a more comprehensively successful programme."

Direct Instruction is being used in all 19 Catholic primary schools in BCE's south-western region. Other systemic schools are, or have expressed an interest in, adopting the technique.

"The use of Direct Instruction is not based on the

---

**It remains a sense of professional and intellectual puzzlement to Dr. Condon that a proven way of academically rescuing children at risk of failure has been ignored for so long by the vast majority of his teaching peers.**

---

whim of a person or group of people," Dr. Condon said. "It is not based on an education fashion. The choice of this programme and similar programmes was not based on some unsubstantiated theory. The choice was made, rather, on the basis of applied educational research.

"This technology has proven to be effective in hundreds of studies employing tens of thousands of children over a period of 30 years."

---

**"The use of Direct Instruction is not based on the whim of a person or group of people," Dr. Condon said. "It is not based on an education fashion. The choice of this programme and similar programmes was not based on some unsubstantiated theory. The choice was made, rather, on the basis of applied educational research.**

---

A paper co-written by Dr. Condon and Mrs. Judy Blaney, the BCE support teacher who oversaw the two-year pilot project at St. Joseph's, was presented at the prestigious International Congress for School Effectiveness and Improvement in Melbourne earlier this year.

"These children constantly face the tyranny of time in trying to catch up with their peers, who continue to advance in their literacy development," Mrs. Blaney told congress delegates.

The literacy-rich get richer and the literacy-poor get poorer in reading opportunities, vocabulary development, written language, general knowledge and so on."

Dr. Condon estimates that, if the present rate of growth continues, "in two years time, Direct Instruction will have spread throughout the system."

He is patently relieved; relieved because "I worry about the children who could be lost without it."



# An Early Literacy Program: Preventing Failure

Dr. Denis Condon and Mrs. Judith Blaney  
Catholic Education, Brisbane, Australia

## Introduction

Most Australian investigations into Direct Instruction (Lockrey & Maggs, 1982) have involved norm-referenced comparisons, some of which have been of a pretest, posttest control group design. They have evaluated Direct Instruction programs in Language (12 studies), Reading (15 studies), Arithmetic (9 studies), Spelling (4 studies) and Microcomputing (2 studies). They demonstrated Direct Instruction to be effective in the following variable circumstances.

1. With "normal" children in regular classrooms;
2. With children in regular classes with mild skill deficits;
3. With children in regular classes with moderate to severe skill deficits;
4. With children in regular schools being withdrawn to resource rooms or withdrawal classes;
5. With special classes in regular schools;
6. With children in disadvantaged schools including Aboriginal and migrant children;
7. With children in schools for pupils with a mild intellectual disability;
8. With children in schools for pupils with a moderate to severe intellectual disability;
9. With children in schools for pupils with a physical disability.

These results were regarded as supportive of the view that instruction based on Direct Instruction technology is effective for learners exhibiting difficulty over a wide range of content areas.

## Phonemic Awareness

An integral part of Direct Instruction reading programs has always been instruction in what can now be recognised as Phonemic Awareness. Its inclusion was not based on any theoretical argument or supportive theoretical research. It was included because applied research suggested it improved reading per-

formance. We now have, however, a more theoretical justification for including phonemic awareness instruction in reading programs (Stanovich, 1986).

Phonemic awareness (sometimes called phonological awareness, phonemic analysis, or phonemic segmentation), defined simply, is the ability to perceive a spoken word as a sequence of sounds. The insight that words are composed of smaller units (i.e. phonemes) may be difficult for some children to grasp because phonemes are very abstract units of language. They carry no meaning, and children are accustomed to thinking of words in terms of their meanings, not in terms of their phonemic characteristics.

It appears that an awareness of the phonological segments in words and the ability to manipulate these segments are of crucial importance in reading acquisition. As Williams (1987) pointed out, one of the most important insights in beginning reading has been the realisation that, "sometimes children have trouble learning to decode because they are completely unaware of the fact that spoken language is segmented..." It is these phonemic segments that are more or less represented by the letters in an alphabetic writing system.

Not only has phonemic awareness been determined to be a powerful predictor of reading ability but we now have results from studies (e.g. Ball and Blackman, 1991; Bradley, 1988; Juel, 1988; Lundberg, Frost and Peterson, 1988; Stanovich 1986) that indicate that phonemic awareness can be trained and that such training makes a difference in beginning reading and spelling achievement. After a review of the research into beginning reading, Adams (1990) concluded that "The evidence is compelling: toward the goal of efficient and effective reading instruction, explicit training of phonemic awareness is invaluable".

It is apparent that many researchers now appreciate the significance of phonemic awareness in reading instruction and recommend that it be taught. Direct Instruction reading programs can, however,



rightly claim to have been teaching phonemic awareness twenty-five years before the practice gained currency in mainstream education.

---

**Direct Instruction reading programs can, however, rightly claim to have been teaching phonemic awareness twenty-five years before the practice gained currency in mainstream education.**

---

#### Early Instruction

Researchers such as Gersten, Darch and Gleason (1988), Stanovich (1986) and Juel (1988), recommended that any intervention should begin as early as possible. Regardless of the underlying reasons that may necessitate intervention, what is profoundly and unequivocally the same, is that the children requiring intervention are behind the level of their peers. This is a matter that must be addressed. In fact "this issue is crucial because of the large number of students entering kindergarten each year who are likely to be at risk for future educational failure. Current estimates place this figure as high as 20% (Children's Defense Fund, 1987)" (Gersten, Darch, & Gleason, 1988).

These children constantly face the tyranny of time in trying to catch up with their peers, who continue to advance in their literacy development. This predicament has been referred to as the "Matthew effect," a concept resurrected and insightfully applied to reading by Stanovich (1986). According to the Matthew effect, the literacy-rich get richer, and the literacy-poor get poorer in reading opportunities, vocabulary development, written language, general knowledge, and so on.

Evidence of the critical importance of early reading instruction now appears overwhelming. According to Juel (1988), the probability that a child who is a poor reader at the end of Grade 1 will remain a poor reader at the end of Grade 4 is .88. There is a near 90% chance of remaining a poor reader after 3 years of schooling. Juel noted, "Children who did not develop good word recognition skills in first grade began to dislike reading and read considerably less than good readers both in and out of school" (p. 27, 1988).

#### Purpose of Study

The present investigation was a pilot study that attempted to gain some insight into the instructional efficacy of a more recent Direct Instruction program. The program is called "Teach Your Child to Read in

100 Easy Lessons" (Engelmann, Haddox and Bruner, 1983).

The program is an initial instruction reading program. It is a modification of DISTAR Reading I-FAST CYCLE (Engelmann & Bruner, 1974). "Teach Your Child to Read in 100 Easy Lessons" was developed specifically for use at home by parents or tutors. Although it was designed to be used on an individual basis, here it was used to teach groups of students and was presented by a Special Education teacher.

#### Method

##### Subjects

The 20 subjects were girls and boys in their first year of school (Year One). They were divided into two Cohorts, called Cohort 1 and Cohort 2, depending upon their year of beginning school. Cohort 1 began in 1991 and Cohort 2 began in 1992.

The ten subjects in Cohort 1 were chosen on an informal, subjective basis. After one term of school (approximately nine weeks) the teachers of the two year-one classes were asked to select the five students in each class they considered to be most at risk of reading failure. These subjects were then administered the Macquarie University Word Attack Skills Screening Tests (1982).

The following year, Cohort 2, which also contained ten subjects, was selected by means of administering the Macquarie University Word Attack Skills

---

**Evidence of the critical importance of early reading instruction now appears overwhelming. According to Juel (1988), the probability that a child who is a poor reader at the end of Grade 1 will remain a poor reader at the end of Grade 4 is .88.**

---

Screening Tests to all of the year-one children at the end of their first term (approximately eight weeks) of school. The ten children who exhibited the lowest performance levels comprised Cohort 2.

From Table 1 (next page) it is apparent sexes were evenly distributed among both cohorts, and the average ages were 5.11 and 5.10 for Cohorts 1 and 2 respectively.

#### Design

The study essentially employed a quasi-experimental pretest/posttest design. No control group was employed as the study was a pilot study. At this



stage the emphasis was one of determining whether or not the program in question was worth considering for a more extensive, comprehensive experiment.

A question of ethics was also a consideration when the issue of a control group was raised. One would have to question the legitimacy of preventing a group of students from gaining access to an instructional program that in all probability is particularly effective.

Whilst the study was mainly of a pretest/posttest design, Cohort 1 of students who had been at school a year longer than Cohort 2 were administered a further posttest at the end of their third year.

	SEX		AGE
	Male	Female	
Cohort 1	5	5	5.11
Cohort 2	6	4	5.10

Table 1: Sex and Mean Ages of subjects at beginning of Direct Instruction reading program.

## Materials

The program used was a Direct Instruction reading program. It is possible to identify a number of important features it shares with other Direct Instruction programs.

1. *Specified Teaching Procedures:* This affords the program's maximum chance of success since effective implementation is not dependent on the teacher (who may or may not be familiar with current research into teaching strategies) having to decide which strategies or procedures are the most suitable. The program designers have built into the programs those strategies and procedures that have the most research support.

2. *A Common Logic in Selecting Teaching Examples and Program Sequences:* The fact that a number of examples must be presented to convey a concept means that a number of appropriate examples has to be chosen and an appropriate order of presentation of examples has to be determined. In Direct Instruction, this has led to the development of five principles of selecting and sequencing examples.

3. *Sequencing Examples:* Since it is necessary to present more than one example to teach a concept, and since it is essential to ensure that the presentation results in only one interpretation, much emphasis in Direct Instruction has been directed towards determining the most efficient sequence for presenting examples. By utilising the five principles of

selecting and sequencing examples, a number of sequences of examples have been developed to suit the various categories of knowledge. Once having identified which category of knowledge a particular concept belongs to, a specific sequence for the teaching examples appropriate to the knowledge category is available.

4. *Scripted Lessons:* This is probably the most obvious feature of Direct Instruction programs to the casual observer. Daily lessons are designed in script form telling the teacher exactly what to say and what to do. If followed, this ensures that the examples and their specific sequences are presented exactly as the programmer intended. It also ensures the latest educational technology is included in the lesson, irrespective of the teacher's personal knowledge of current educational research.

The particular Direct Instruction program which is the focus of this study is made up of 100 lessons which attempt to teach basic reading skills. It covers a range of skill areas. These are phonemic awareness, phonics, sight words, reading rate, comprehension, spelling and writing.

Two forms of assessment were employed. The first was the Macquarie University Word Attack Skills Screen Tests (1982). For convenience in this article they are referred to as Macquarie Probes. They are made up of a series of recall and recognition tasks which assess phonics skills. They begin with single letters and gradually increase in difficulty, finishing with complex words. A list of test

**The particular Direct Instruction program which is the focus of this study is made up of 100 lessons which attempt to teach basic reading skills. It covers a range of skill areas. These are phonemic awareness, phonics, sight words, reading rate, comprehension, spelling and writing.**

items and the numbers of each type of item are included in Figure 1.

The second form of assessment was the Neale Analysis of Reading Ability-Revised (1989). For this study only the accuracy and comprehension components were employed.

## Procedure

The Direct Instruction program was operated as a "pull-out" program. The students were instructed in groups of ten for three sessions per week, each



		Score
9.v/s	Single Vowels - Sounds	/5
9.c/s	Single Consonants - Sounds	/21
9.v/1	Single Vowels - Letters	/5
9.c/1	Single Consonants - Letter	/21
10	CVC Words	/35
11	Consonant Digraphs	/15
12	Consonant Blends (CCVC Words)	/15
13	Consonant Blends (CVCC Words)	/15
14	Long Vowels	/15
15	Consonant Blends (3-Consonants)	/16
16	Vowel Digraphs (Part 1)	/10
17	Vowel Digraphs (Part 2)	/10
18	Vowel Diphthongs/Digraphs	/20
19	Syllabification	/20
20	Miscellaneous	/20

Figure 1: Items on Macquarie University phonics probes.

with a maximum duration of 30 minutes.

A Special Education teacher attached to the school presented the program. There was constant liaison with regular class teachers.

Each group was regularly presented with mastery tests. Unlike other Direct Instruction programs, mastery tests were not built into this particular program and had to be devised by the teacher. They were basic recognition and recall tasks which tested understanding of those skills and concepts introduced since the previous mastery test. Performance on the mastery tests enabled the teacher to determine whether or not particular skills and concepts required further expansion and review.

Also, as this program is a modification of a much larger, more extensive one, DISTAR Reading I/FAST CYCLE (Engelmann & Bruner, 1974), sometimes the amount of review and expansion was insufficient for some students. Additional expansion and review activities were prepared by the teacher depending on the results of mastery tests.

Continuance in the program after one year was based on a second administration of the Macquarie Probes. If subjects obtained a maximum score on the first five sections of the Macquarie Probes they were excluded from the program.

After two years or more in the program continuance was based on performance on the Neale Analysis of Reading Ability. Subjects who obtained at least average stanine levels (i.e., 4 or above) on both the accuracy and comprehension sections of this test were excluded.

### Data Analysis

Three dependent variables were measured. The first was the Macquarie Probes. They were administered as a pretest towards the beginning and as a posttest at the end of the first year of school. Raw scores were calculated with percentage gains determined after no more than one year's instruction.

The second dependent variable was made up of the accuracy and comprehension components of the Neale Analysis of Reading Ability. This was administered after no more than two years of instruction. For each cohort, mean performance was calculated using stanine levels.

Since cohort 1 began school a year earlier than cohort 2, there was an opportunity to retest cohort 1 with the Neale Analysis after no more than three years instruction. For cohort 1, therefore, the Neale Analysis was administered twice.

Table 2 (next page) provides a summary of the assessment procedures. Both cohorts 1 and 2 were each administered the Macquarie Probes on two occasions, separated by one year. Cohort 1 was

**The Direct Instruction program was operated as a "pull-out" program. The students were instructed in groups of ten for three sessions per week, each with a maximum duration of 30 minutes.**



	Pre-Test	Post-Test	Post-Post Test
Cohort 1	<ul style="list-style-type: none"> <li>• Macquarie Probes</li> <li>• No Neale Analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Macquarie Probes (after one year)</li> <li>• Neale Analysis (after two years)</li> </ul>	<ul style="list-style-type: none"> <li>• Neale Analysis (after three years)</li> </ul>
Cohort 2	<ul style="list-style-type: none"> <li>• Macquarie Probes</li> <li>• No Neale Analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Macquarie Probes (after one year)</li> <li>• Neale Analysis (after two years)</li> </ul>	

Table 2: Summary of Assessment Procedures

administered the Neale Analysis twice, after two years and three years. Cohort 2 received the Neale Analysis after two years.

The third dependent variable was the number of subjects who remained in the program. Students were excluded from the program based on performance on the Macquarie Probes or the Neale Analysis.

The number of students continuing in the program varied from year to year. Percentage changes were calculated.

### Results

From Table 3 the first cohort of 10 subjects obtained an average score of 17.5 on the Macquarie Probes, when administered as a pretest, and 83.2 when administered as a posttest. This represented a gain of 65.7 or 375% after no more than one academic year's instruction. This was regarded as educationally highly significant.

	Pre-test	Post-test	Gain %
Cohort 1	17.5	83.2	65.7 375%
Cohort 2	12.2	73.8	61.6 504%

Table 3: Mean Macquarie Probe performance after one year of instruction.

The second cohort of 10 subjects exhibited pretest and posttest mean scores of 12.2 and 73.8 respectively. The gain of 61.6 or 504% was also regarded as educationally highly significant.

Table 4 presents the performance of cohorts 1 and 2 on the accuracy and comprehension sections of the Neale Analysis. No pretest data was included. Consequently no relevant stanine data was available. Macquarie Probe data (Table 3) would strongly suggest, however, that if available, stanine scores would be well below average.

From Table 4 it can be observed that both cohorts obtained mean scores in the average stanine ranges after no more than two years instruction. Cohort 1 averaged stanine levels of 5.1 and 4.5 for accuracy and comprehension respectively with a mean of 4.8. Cohort 2 averaged 5 and 4.2 with a mean of 4.6. From Table 4 it can be noted that, after no more than three years instruction, cohort 1 obtained mean stanine levels of 5.2 and 4.9 with a mean of 5.0. They continued to be within the average range.

The number of subjects remaining in the Direct Instruction reading program is presented in Table 5 (page 28). It can be observed that for cohort 1 their original number was 10. For the second year this was reduced to 4, and 3 for the third year. This represented decreases of 60% and 70% respectively. Cohort 2's original number of 10 subjects was reduced to 8 for the second year with 2 to continue into the third year. These were reductions of 20% and 80%.



To date, these figures represent a reduction of from 20 to 5 in the total number of subjects regarded as requiring reading support. This is an overall reduction of 75%.

### Discussion

From the results it would appear that the subjects made educationally significant gains on both the Macquarie Probes and the Neale Analysis. It was also evident that most subjects reached a level of competency that satisfied their teachers to the extent that they no longer needed the support of the Direct Instruction reading program.

It should be remembered, however, that this was a pilot study. Being such there is no claim that all the major threats to validity were addressed. For example, the subjects and the program teacher were not randomly selected for inclusion in the study. There was no control group employed. During the period for which the subjects experienced the program, it cannot be assumed that they did not receive other forms of reading instruction. Those subjects who left the program earlier would, of course, have received an even greater level of other reading instruction.

extensive experimentation is warranted.

If further experimentation was carried out the researchers would find that the program itself is extremely inexpensive. Presently it costs less than \$30. They would also find it is easy to implement in that it is simply a matter of setting up and timetabling for regular contact between the teacher and the pull-out group, and with little preparation required on the part of the teacher. They would also find the selection of a teacher to administer the program is not a major concern in that the scripting of the lessons means little effort has to be expended in funding and/or training a teacher. The teacher does not have to be expert in Direct Instruction technology as the technology is built into the program via the scripting.

It appeared the program was appropriate for all of the selected year one students. It can be noted, however, that of the original 20, five still required support. Consideration will be given to using Reading Mastery (1983) with them since with this program the skills and concepts are introduced at a much slower rate and there are more expansion and review activities included.

Stanine Levels—Neale Analysis						
Years of Instruction	No more than 2 years instruction			No more than 3 years instruction		
	Accuracy	Comprehension	Mean	Accuracy	Comprehension	Mean
Cohort 1	5.1	4.5	4.8	5.2	4.9	5.0
Cohort 2	5	4.2	4.6			

Table 4: Neale Analysis of Performance in Stanine Scores.

In other words, there were defects in the research design that did not permit one to conclude that any noted improvement could definitely be attributed, either partly or totally, to the Direct Instruction reading program. As well, defects in the research design would not allow one to confidently extrapolate from these subjects to other similar students.

Whilst acknowledging, however, that there were major shortcomings in the research design the results were consistent with previous research into the effectiveness of Direct Instruction technology. From this, one might deduce that it is possible the program was solely or partly responsible for the observed improvement. In view of this being a pilot study, the results would tend to suggest that more

### References

- Adams, M. J. (1990). *Beginning to Read: Thinking and Learning About Print*. Cambridge, M. A: MIT Press.
- Ball, C. W & Blackman, B. A. (1991). Does phoneme awareness training in kindergarten make a difference in early word recognition and developmental spelling? *Reading Research Quarterly*, 26, 19-66.
- Bradley, L. (1988). Making connections in learning to read and spell. *Applied Cognitive Psychology*, 2, 3-18.
- Engelmann, S. & Bruner, E. (1974). *DISTAR Reading I/FAST CYCLE*. Chicago: SRA.



Year of Direct Instruction Reading Program					
	1st	2nd	(% reduction)	3rd	(% reduction)
Cohort 1	10 (1991)	4 (1992)	60	3 (1993)	70%
Cohort 2	10 (1992)	8 (1993)	20	2 (1994)	80%
TOTAL	20	12	40%	5	75%

Table 5: Number of subjects in each year of instruction.

- Engelmann, S., Haddox, F., Bruner, E. (1986). *Teach Your child to Read in 100 Easy Lessons*. New York: Simon and Schuster.
- Gersten, R., Darch, C. and Gleason, M. (1988). Effectiveness of a Direct Instruction academic kindergarten for low-income students. *The Elementary School Journal*, 89, 227-239.
- James, J. & Stier, S. (1975). A comparative description of the DISTAR Head Start and Follow Through Early Education program. *Seattle School District Report No. 75-40*. Seattle Public Schools, Seattle, Washington.
- Juel, C. (1988). Learning to read and write: a longitudinal study of 54 children from first through fourth grades. *Journal of Educational Psychology*. 80, 437-447.
- Lundberg, I., Frost, J. & Peterson, O. (1988). Effects of an extensive programme for stimulating phonological awareness in pre-school children. *Reading Research Quarterly*. 23, 263-284.
- Lockrey, M. & Maggs, A. (1982). Direct Instruction research in Australia: a ten years analysis. *Educational Psychology*, 2 (3-4), 263-288.
- Macquarie University. *Word Attack Skills Screening Tests*. University Special Education Centre: Sydney.
- Neale, M.D. (1989). *Neale Analysis of Reading Ability-Revised*. Australian Council for Educational Research Limited, Melbourne.
- Stanovich, K. E. (1986). Matthew effects in reading: some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, 21, 360-407.
- Williams, J. (1987). Educational treatments for dyslexia at the elementary and secondary levels. In R. Bowler (Ed.), *Intimacy with Language: A Forgotten Basic in Teacher Education*. Baltimore: Orton Dyslexia Society.



---

# Seven-Year Overview of Direct Instruction Programs Used In Basic Skills Classes At Big Piney Middle School

Jonita Sommers  
Big Piney Middle School, Wyoming

## Introduction

The basic skills program at the Big Piney Middle School in Big Piney, Wyoming was in existence for seven years from 1985-86 school year through 1991-92. During this time, 112 students went through this program. Program design, yearly schedule structure, placement of students and teaching programs used were presented in detail in the Fall 1991 *Direct Instruction News*, "Direct Instruction Programs Produce Significant Gains with At-Risk Middle School Students." The Big Piney Middle School basic skills program used the Direct Instruction programs of Corrective Reading, Corrective Mathematics, Expressive Writing, and Corrective Spelling Through Morphographs (for ordering information, call SRA at 1-800-468-5850).

## Subjects

All students had to be below the fiftieth percentile on two standardized tests to be placed in the program. Most of the students were two or three years behind their grade level. In the past, they had not gained a month for each month of instruction, but had fallen further behind.

## Results

Using Direct Instruction, more than a month was gained each month for each subject when the 112 students scores were averaged. The learning of students who have fallen behind can be accelerated so that these same students learn at a faster rate than average, using Direct Instruction. The following charts show the mean score for each class using a particular Direct Instruction program each year:

---

**Using Direct Instruction, more than a month was gained each month for each subject when the 112 students scores were averaged. The learning of students who have fallen behind can be accelerated so that these same students learn at a faster rate than average, using Direct Instruction.**

---



## Result Charts

**Grade-Equivalent Gains in Reading Using Corrective Reading Decoding B, Decoding C, Comprehension B, and/or Comprehension C Programs (Test: Gates MacGinitie Reading)**

### Eighth Graders

Year	Mean Years Gained by Class
1985-86	+2.9
1986-87	+2.37
1987-88	+1.08
1991-92	+ .8
Total mean	+1.77 for 8 months (2.5 months gained each month)

### Seventh Graders

Year	Mean Years Gained by Class
1985-86	+1.16
1986-87	+1.1
1987-88	+ .47
1988-89	+1.32
1989-90	+ .91
1990-91	+1.97
1991-92	- .1
Total mean	+ .98 for 8 months (1.35 months gained each month)

### Sixth Graders

Year	Mean Years Gained by Class
1985-86	+1.04
1986-87	+1.0
1987-88	+ .28
1988-89	+1.31
1989-90	+1.9
1990-91	+ .34
1991-92	+ .67
Total Mean	+ .93 for 8 months (1.1 months gained each month)

**Grade-Equivalent Gains in Spelling Using Corrective Spelling Through Morphographs (Test: Kaufman Test of Educational Achievement )**

### Eighth Graders

Year Mean	Years Gained by Class
1985-86	+ .76
Total Mean	+ .76 (.095 month gained each month)

### Seventh Graders

Year	Mean Years Gained by Class
1985-86	+ .7
1986-87	+2.0
1988-89	+ .5
1989-90	+ .4
1991-92	+ .5
Total mean	+ .82 for 8 months (1.03 months gained each month)

### Sixth Graders

Year	Mean Years Gained by Class
1985-86	+1.07
1986-87	+1.7
1989-90	+ .29
1990-91	+1.08
1991-92	+ .6
Total mean	+ .95 for 8 months (1.2 months gained each month)



## Result Charts

### Grade-Equivalent Gains In Math Using Corrective Mathematics (Test: Key Math Diagnostic)

#### Eighth Graders

Year	Mean Years Gained by Class
1988-89	+ .8
1990-91	+1.06
Total Mean +.93 for 8 months (1.16 months gained each month)	

#### Seventh Graders

Year	Mean Years Gained by Class
1985-86	+1.2
1986-87	+1.54
1987-88	+1.06
1988-89	+ .57
1989-90	+ .71
1990-91	+1.12
1991-92	+ .94
Total Mean +1.02 for 8 months (1.28 months gained each month)	

#### Sixth Graders

Year	Mean Years Gained by Class
1986-87	+1.65
1987-88	+ .77
1988-89	+ .66
1989-90	+1.1
1990-91	+ .9
1991-92	+ .96
Total Mean +1.01 for 8 months (1.26 months gained each month)	

### Written Language Quotient Gains In Writing Using Expressive Writing 2 (Test: Test of Written Language)

#### Seventh Graders

Year	Mean WLQ Gained by Class
1986-87	+2.6
1988-89	+6.0
1989-90	-6.0
1991-92	+9.7
Total Mean +3.07	

#### Sixth Graders

Year	Mean WLQ Gained by Class
1989-90	+ 2.86
1990-91	+ 7.6
1991-92	+14.0
Total Mean +8.2	

During a Seven-Year Period 112 Students Averaged  
the Following Gains:

#### Math

9.9 months gained in 8 months  
(1.2 months gained each month)

#### Reading

1.2 years gained in 8 months  
(1.75 months gained each month)

#### Spelling

8.4 months gained in 8 months  
(1.05 months gained each month)

#### Writing

5.64 Written Language Quotient gained in 8 months



## Result Charts (cont.)

### *Percentage of Students Graduating from High School:*

Year Graduated	# of Students	Percentage
90	5	100%
91	3	100%
92	6	83%
93	14	100%
Total	28	96%

All of the students who completed eighth grade at Big Piney Middle School went on to high school. Of the 112 students who were in the Big Piney Middle School basic skills program, 82 of them completed their education or are still in Sublette County School District #9. Twenty-eight of the 82 students were at the age to graduate from Big Piney High School. Twenty-seven students (96 percent) graduated as of May 1993. Of the 27 students who graduated, 19 (70 percent) went on to higher education.

## Conclusion

### *Percentage of Students Attending Higher Education:*

Year Graduated	# of Students	Percentage
90	5	60%
91	3	33%
92	6	50%
93	14	79%
Total	28	70%

The Direct Instruction programs of Corrective Reading, Corrective Mathematics, Expressive Writing, and Corrective Spelling Through Morphographs were very successful when used with the basic skills students at the Big Piney Middle School. It appears the structure of the programs and theory behind them, which was developed by Siegfried Engelmann, is the reason the programs were so successful. The Direct Instruction programs appear to be an excellent way to teach students who have had difficulty learning in grade school when the programs are used by trained teachers.

## Higher Order Thinking Designing Curriculum for Mainstreamed Students

Edited by Douglas Carnine and Edward J. Kameenui

Many educators are skeptical about higher order thinking for students with mild disabilities. This book helps dispel that skepticism. Rationale, interventions, and research findings are provided for a variety of subject areas—mathematics, science, social science, spelling—and for a variety of higher order tools—reasoning, problem solving, composition, and comprehension.

These chapters are built around a common theme: Teaching students to understand and apply “big ideas.” This theme also has strong implications for reorganizing the general education curriculum and for preservice and inservice teacher training, topics that are addressed by various chapters. This book is intended to be responsive to the educational demands of the 21st Century, to increase the learning and employment options for all students.

Order from:

PRO-ED

8700 Shoal Creek Boulevard

Austin, Texas 78758-9965

512/451-3246

Fax: 512/451-8542

Postage free if prepaid.

If not prepaid, add 10% for postage & handling.

est. 225 pages, Spring 1992

#5199, paperback

\$24.00

ISBN 0-89079-557-6



# The Multiple Effects of Whole Language, Precision Teaching and Direct Instruction on First-Grade Story-Reading

Malcolm D. Neely  
Federal Way School District, Washington

*The story-reading performance of three groups of first grade children are compared. The year 1 first-grade pupils received instruction from the Silver Burdett-Ginn (SBG) World of Reading series. The year 2 pupils also received instruction from the SBG World of Reading with the most at-risk receiving additional Precision Teaching practice and chart viewing. The year 3 class received instruction from Science Research Associates Reading Mastery, Fast Cycle I/II with additional Precision Teaching practice and chart viewing. All three years experienced language arts skill development with whole language concepts and SBG World of Reading materials. The median test with both Fisher's exact and chi-square probabilities determined the significance of differences between the distributions of each group's learning rates. Major conclusions are: (a) Reading Mastery and Precision Teaching combined to produce faster story reading fluency development (1.7 and 1.6 times faster). (b) Reading Mastery and Precision Teaching combined to produce faster word-list accuracy development (1.8 times faster). (c) Precision Teaching assisted in faster at-risk pupils' fluency development (1.5 times faster). (d) Faulty curricula, not faulty teachers, are the cause of faulty reading development.*

This paper reports reading results for three years of first-grade instruction at Camelot Elementary School in Federal Way, Washington. Camelot is primarily a walking school with only a couple of small buses bringing district special education pupils. From year to year Camelot's free and reduced lunch (breakfast available) population ranges from 30 to 33%. This range is largely due to a federal housing project nearby. Camelot's now 380 student enrollment is declining due to the aging of the surrounding community. Once the school year begins, enrollment remains fairly steady. A Primary Intervention Program for counseling K-3 pupils-at-risk, a building counselor for others, and the principal all address Camelot's pupil and parent social problems. The Camelot community makes a very positive and pleasant school in which to learn and work.

Previous reading programs, phonics-based and linguistic-driven *Economy Keys to Reading*, and the more recent reading program, sight-based and whole-language-driven *Silver Burdett-Ginn World of Reading*, produced a 30 to 50% Camelot population eligible for Chapter 1 reading service consideration. Those numbers equaled enough reading problems to justify a teacher for Chapter 1 pupils along with

two teaching assistants, and a resource room teacher and assistant. Two years of fluency data and continued teacher dissatisfaction still indicated too many pupils with poor reading skills.

A review of the literature showed a need for a different instructional program. Camelot's Chapter 1 Steering Committee decided to focus on the first grade where reading development is most crucial, rather than to continue "band-aiding" with limited Chapter services across the grades as before.

---

**Faulty curricula, not faulty teachers,  
are the cause of faulty reading  
development.**

---

SRA's *Reading Mastery Fast Cycle I/II* was the reading program chosen to address Camelot's reading development problems during the third year. Schools that start Direct-Instruction programs in preschool and kindergarten, and continue with these programs, show highly skilled pupils, afterwards. Some time



ago, the Seattle School District evaluation department discovered that a disproportionately high percentage of black children in the district's gifted program had attended the District's CAMPI program. The CAMPI schools are a totally Direct-Instruction pre-school-kindergarten program (Engelmann, 1992).

---

**SRA's Reading Mastery Fast Cycle III** was the reading program chosen to address Camelot's reading development problems during the third year. Schools that start Direct-Instruction programs in preschool and kindergarten, and continue with these programs, show highly skilled pupils, afterwards.

---

Wesley Elementary is another Direct Instruction school (SRA, 1991). Wesley is in the center of one of Houston's poorest neighborhoods. Virtually all of its pupils come from low income backgrounds; the majority receive free lunch. Generally, the number of free lunches determines eligibility for Chapter 1 moneys. However, because of Wesley Elementary's achievements, the school was rendered ineligible for Chapter 1 services in spite of their free lunch count.

Parents throughout North America are teaching their bright three-and-a-half year olds, and average or better four and five year olds, to read using a book entitled *Teach Your Child to Read in 100 Easy Lessons*, a book for parents patterned after the *Reading Mastery I* program (Engelmann, Haddox, & Bruner, 1983).

The reports for *100 Easy Lessons* are exciting. For example, a Kindergarten child here in Federal Way finished the program by his sixth birthday in late October. The youngster's dad, his teacher, shared his son's extraordinary learning with others in the community.

In addition, precision-teaching (PT) techniques, where students chart their progress daily and teachers use the data to make instructional decisions, provides motivation and prompts changes in the instructional program. PT charts indicate a pupil's current performance, rate of learning (celeration lines), and aims. From this information future performance can be projected. A decision to continue or change instructional tactics to meet or beat an aim is

possible during the intervention, rather than after a unit is over. Pupils are motivated by viewing their own charts. Pupils charting their own performance seem to become more dedicated to their practice. Pupils' ownership in their own learning comes from viewing and discussing their data. Lindsley reports, "Many teachers have found that behavior changes are much greater when students take such an active role" (1990).

## Procedures

### Years One and Two: The Comparison Groups

*Whole language.* Three Camelot teachers taught fifty '90-91 first-grade pupils (WL) reading instruction in three rooms for 60 to 75 minutes each day. They used SBG's *World of Reading* with a whole language approach. A teaching assistant pulled 15 Chapter 1 pupils into groups of three to five for 15 minutes of additional instruction each. These pupils tried to reread the story of the day.

*Whole language plus precision teaching.* Two Camelot teachers taught fifty-seven '91-92 first-grade pupils (WL/PT) reading instruction in two rooms for 60 to 75 minutes each day. They continued to use SBG's *World of Reading* with a whole language approach. As before, the teaching assistant pulled 15 Chapter 1 pupils into groups of three to five for 15 minutes of additional instruction. Again, the pupils tried to reread the day's story.

In addition, precision teaching was used. Forty-four of the 57 students received additional practice through two or three one-minute daily practice projects during the first three-and-a-half months when one to three parent volunteers assisted an hour-and-a-half per day as additional Chapter 1 help. As the volunteers decreased for various reasons, only the least skillful pupils continued to practice and chart-view.

Neely's interest in effective educational measurement led to the test materials and testing in '90-91 and '91-92. Fortunately the data were available for administrative decision making and subsequent comparative data for the '92-93 year.

---

**In addition, precision-teaching (PT) techniques, where students chart their progress daily and teachers use the data to make instructional decisions, provides motivation and prompts changes in the instructional program.**

---

### Year Three: Whole Language and Reading Mastery with Precision Teaching

In year three, *Reading Mastery Fast Cycle I/II* was to supplement SBG's *World of Reading* instruction for forty-four youngsters found to be at-risk (i.e. eligible for Chapter 1 or special education services).

A changed population met Camelot's "new program"—a population with even more challenges than previously considered. Replacing its usual population were 11 Ukrainian children, one Pakistani child, one Korean child, all with limited English, and twins with IEP's from Special Education's pre-school program. Moreover, a greater number of the rest of the September first-graders showed lower reading readiness skills. Of the 55 first graders, 44 pupils were defined as eligible for Chapter 1 support services or special education. In contrast, in the previous two years, only 15 pupils were eligible for Chapter 1.

All first-grade pupils received reading instruction from SBG's *World of Reading* with a whole language approach. In addition, the forty-four pupils eligible for special education or Chapter 1 received 60 to 75 minutes daily of SRA's *Reading Mastery Fast Cycle I/II* instruction from the teachers and three assistants; plus up to five daily one-minute PT practice projects. Three *Reading Mastery* groups and one *World of Reading* group comprised each classroom. Only the data for the 44 pupils receiving all three instructional interventions (WL/PT/DI) are analyzed in this study and compared to the performance of first-grade students in the previous two years.

Each classroom alternated *Reading Mastery* instruction between 9:30 to 10:45 and between 1:15 to 2:15 every other day. That way each class received five morning and five afternoon *Reading Mastery Fast Cycle I/II* instructional days in a ten day period and five morning and five afternoon sessions with *World of Reading* during the same period.

The classroom teacher taught her *World of Reading* group on Mondays and Fridays and taught each *Reading Mastery* group on Tuesday through Thursday. That way the teacher kept informed with the program and progress of all her pupils, and practiced *Reading Mastery* teaching techniques. While the team of three was in one first-grade classroom, the other classroom teacher or assistant taught reading and language arts development using whole language techniques with the *World of Reading* first-grade materials. The teacher also used the *DISTAR Library* and *Reading Mastery* spelling activities.

#### Training

Science Research Associates' sponsored a Direct Instruction Workshop in Bellevue, Washington in

August 1992. Two staff members had some experience with *Reading Mastery Fast Cycle I/II*. Two members had little or no exposure to the program. One teacher was unable to attend the workshop. She received help from those who attended and who had some experience. With SRA's Representative Neil Schroeder's help, SRA also sponsored Molly Olson, a well-qualified DI Trainer, to provide the staff with follow-up training four times during the year. In addition, the District bought training tapes (J/P Associates, Inc.). The staff members used the tapes to study, compare, and improve their skills using *Reading Mastery Fast Cycle I/II*.

#### Measurement

*Reading Mastery Fast Cycle I/II* provides for in-program mastery testing. Periodic individual and group tests are also scheduled into the program.

PT techniques supplied additional decision making data from one-minute timed practice sessions. Pupils said their *Reading Mastery* orthography sounds from Say-All-Fast, Minute-Every-Day, Shuffled cards (Lindsley, 1978; Graf, 1994) and from a practice sheet, and read their *Reading Mastery* words from seven practice sheets composed from eight stories spaced throughout the *Fast Cycle I/II* series. The adults charted each pupil's number of errors and number of correct responses in one minute on the Standard Daily Learning Chart (Behavior Research Company) while the pupil watched (Pennypacker, Koenig, & Lindsley, 1972). The support staff provided this service for individual pupils within the two classrooms throughout the school day.

PT techniques also supplied the basis for the *circa* 60-day progress checks. There were seven, one-minute-tests administered by staff and volunteers to each pupil during a 60-day progress check. Standard Monthly Summary Learning Charts (Behavior Research Company) displayed the charted results. The seven, one-minute-tests were:

1. see mixed upper and lower case letters, and say the letter names;
2. see lower case letters, and say the letter sounds;
3. see all 50 *World of Reading* Readiness and Preprimer-1 words, and say the words;
4. see all *World of Reading* Readiness words in sentences, and say the words;
5. see *World of Reading* 34 critical-plus-one-Support Preprimer-2 words and 35 critical-plus-two-Support Preprimer-3 words and say the words;
6. see *World of Reading* 42-tested-plus-two-additional critical-primer words and 31-tested-plus-13-additional critical-first-



- grade-reader words and say the words;  
7. see *World of Reading's* "A New Day in the City" first-grade reader story, and say the words (see Figure 1).

The 16 readiness words introduced in kindergarten and 23 family member words made the ten sentences that tested kindergarten word fluency. Some sentences came from the SBG's *World of Reading* Placement Test; we invented the other sentences.

"A New Day in the City" comes late in the first-grade *World Of Reading* reader. According to Microsoft, Flesch-Kincaid and Flesch word readability formulas, readability levels varied from 2.8 to 6.0. The same story was used to compare performances and learning rates (celeration lines) for all three years.

There are lots of surprises in the city," said Benita.	10
"I'll be glad when Lisa is well again. I know she'd like to see them, too. Wait! I know a way to show her everything I saw."	23
	35
	37
When Benita got home, she ran to get some paints and paper. She painted a picture of Missy and her puppies. She painted the duck family on the pond. She painted the little birds flying from the nest.	48
	59
	70
	75
After Benita had painted the pictures, she called Lisa.	84
Benita said, "I'm sorry you weren't with us today. I miss you. You can't go for a walk with me today. But I can show you all the surprises Mother and I saw. Just wait and see!"	94
	107
	118
	121
The next afternoon Benita and her mother took the pictures to Lisa's house. Together they put up the pictures in her room. The room looked just like the park. Lisa was so happy.	130
	139
	150
	154
"I'm glad you're my friend, Benita," she said. "I can't wait to go for a walk with you. Then we can look for all the new things in the park."	163
	176
	184

Figure 1. Reading Passage.

The SBG Progress-Check timed tests were compared with the *Reading Mastery Fast Cycle I/II* reading program to determine alignment. When the pupils completed lesson 170 in *Reading Mastery Fast Cycle I/II*, the pupils practiced 345 (82%) of the 420

representative *World of Reading* critical, support, and story words found in the progress checks.

Most 60-day Progress-Check tests had more sounds or words than pupils could respond to within the allowed time. Pupils stopped reading when the timer signaled the minute's end. As pupils got faster, they completed some tests in less time than one minute. The testers instructed the pupils to start over from the top and continue until the signal sounded.

The testers were the support staff, parents, student-teachers from state universities, and teachers freed by their student-teachers. During 60-day Progress Checks, a group of six to nine recorders administered the seven, one-minute timed tests to the 55 pupils within 70 to 90 minutes. A *maitre d'* maintained efficiency by bringing just the needed number of pupils from their classroom. Ushering pupils conserved pupil time for classroom activities, as well.

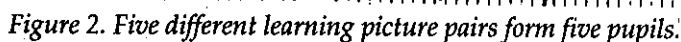
## Results

### Individual Learning Pictures

Figure 2 shows five learning picture pairs for five, one-minute SBG *World of Reading* first-grade story reading tests for five pupils from the different first-grade classes. The correct and error learning lines drawn through the six checks of each test, when viewed together, are a *learning picture pair* (All, 1977; Sokolove, 1978; Lindsley, 1990).

Errors are as important as corrects in learning picture pairs. *The Handbook of the Standard Behavior Chart* (Pennypacker, Koenig, and Lindsley, 1972) describes the *split-middle, quarter-intersect method* for drawing these learning lines. Adequate precision comes from visually determining and drawing a "best-fit line" with the assistance of a clear, straight-edge ruler. The "best-fit lines" are called by many names; *behavior-change rate line, change line, celeration line, learning line* are a few. Lindsley's Standard Celeration Chart made same-angle celerations standard anywhere on the chart, independent of frequency, allowing quantification of learning rates. A rate finder is available from Behavior Research Company. Familiarity with the charts leads to visual recognition of learning rates.

All (1977) and Sokolove's (1977-1978) pupils descriptively named learning picture pairs. Using these naming criteria, Parwiz's picture is *cross-over jaws*; Sabrina's picture is *jaws*; Elizabeth's picture is *up-hill*; Donald's picture is *dive*; Tony's picture combines *mid-level-errors-with-rock-bottom-corrects*. *Cross-over jaws* or *jaws* pictures show reading skill improvement. The last three pictures, *up-hill, dive*, and *mid-level-errors-with-rock-bottom-corrects* indicate



EFFECTIVE SCHOOL PRACTICES, FALL, 1995 37



the learning lines of the WL and WL/PT in years 1 and 2. Most of the WL/PT/DI (year 3) pupils' fluency learning lines are steeper, showing faster learning rates. Most of the WL/PT/DI pupils' fluency learning lines end in June as high as the WL year; and higher than the upper half of the WL/PT year 2.

Figure 4 (page 39) shows seven-point fluency performance rate profiles from September to end-of-year for the story reading test for the three school years, '90-91, '91-92, and '92-93. The black circles represent the middle pupil fluency performance for each progress check during the academic year. The small lines above and below the middle represent the quartiles. The small dots to either side of the vertical line represent the 10 and 90 percentile points. Finally, the ends of the vertical line represent the fastest and the slowest pupil fluency performance rates. *Retrojection* (backward projection) produced the September 1990 data (seven-point line with open-circle) since the measurement system was not yet in place.

Applying the median test to the September scores indicates the year 3 September median (middle) score (1 correct word per minute) was two times lower ( $p = .0012$  and  $p = .064$ , respectively) than the previous two years. However, the year 3 end-of-

year story reading median score (40 correct words per minute) was only 20% lower ( $p < .05$ ) than the year 1 end-of-year median score and was equal to the year 2 end-of-year median score.

The bottom quartile of year 2 (WL/PT) shows faster learning rates of the least prepared September '91 pupils. It shows a catch-up rate ( $\times 21$  every 6 months), that if sustained, would propel these learners beyond their neighboring peers. These were the pupils that received a full year's focus of Precision Teaching rapid practicing and pupil chart monitoring as supplemental to the *World of Reading*. The other year 2 pupils received less or no Precision Teaching practice and their slower learning lines reflect the omission.

The pupils' learning lines on Figure 3 and the classes' learning lines on Figure 4 all show the steeper learning lines of the year 3 WL/PT/DI program.

The middle pupil learning rate ( $\times 15$  every 6 months) for WL/PT/DI group was one-and-a-half times faster ( $p < .0001$ ) than the middle pupil rates of the previous two years. Analyses of the other respective pupil percentile fluency learning lines show the learning rates of the WL/PT/DI group at least one-and-a-half times faster. Analyses of class median changes show  $\times 1.7$  and  $\times 1.6$  faster growth for year 3 than years 1 and 2, respectively.

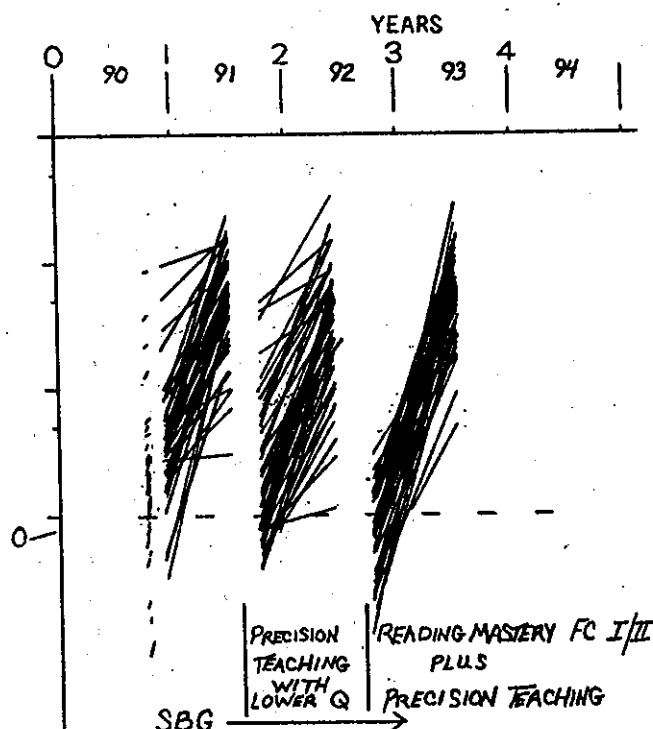


Figure 3. Learning lines for first-grade pupils on 60-day progress checks for correct words per minute on end-of-year story.

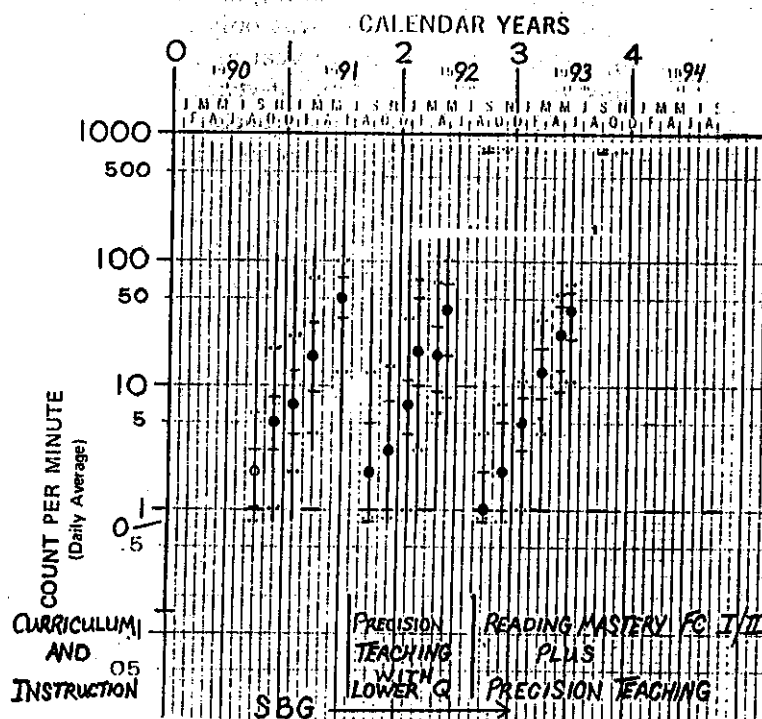


Figure 4. Seven-point fluency performance rate profiles for 60-day progress checks on end-of-year story.

The WL/PT/DI class of forty-four pupils, including students with disabilities, children of poverty qualifying for Chapter 1, and children with limited English began in September with fewer reading skills, learned at faster rates, and caught up with the previous two classes composed of only 15 Chapter 1 pupils and others who could already read.

#### Error Charts

Figure 5 (page 40) shows a collection of the error rate lines for the first-grade pupils for the three school years. These error learning line collection pictures show annual forces that gain more control with each year. The year 3 force began with less spread, narrowed in the middle, and ended with less spread than the previous two years. The middle narrowing shows that many pupils with high beginning errors improved faster than other pupils with fewer beginning errors. One stand-out line and four small-angle lines show worsening performances.

The year 2 force shows a dark path of many learning lines dividing down the center of the collection surrounded by a spread of wayward lines. Three stand-out lines and a small-angle line show worsening performances while approximately five lines show no improvement.

The year 1 force appears even more diverse. The lines appear as though a dust-devil blew through the center causing disarray. Five stand-out lines and four small-angle lines show worsening performances while four lines show little or no improvement.

Most of the year 3 WL/PT/DI pupils' error rates were higher at the beginning of the year than most of those in the previous two *World of Reading* years.

The year 3 WL/PT/DI class of forty-four at-risk pupils began in September with around 50% more errors, improved their accuracy at about the same rates as the previous two years, and ended their first-grade year in June with about the same level of difference in error rate in story reading.

#### Discussion

Several confounds should be considered in interpreting these results. First, we eliminated the ten highest performing pupils on the pretest from the data analysis for year 3 (they were to continue with the SBG curriculum), but we did not eliminate data of the top pupils who were already readers from years 1 and 2. Second, more parents assisted and encouraged pupils the first two years. The thirteen ESL students in the WL/PT/DI group had parents



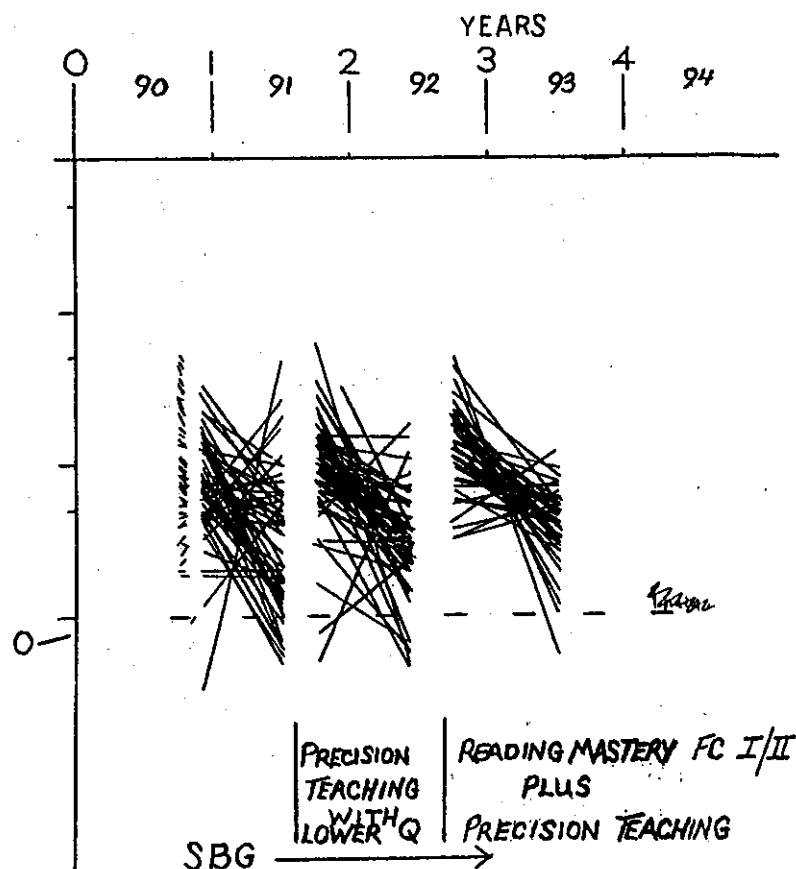


Figure 5. Learning lines for first-grade pupils on 60-day progress checks for errors per minute on end-of-year story.

who were not able to assist in the classroom or at home.

*Reading Mastery, Fast Cycle I/II* and Precision Teaching's daily practicing by, and reporting to the 44 most-at-risk pupils did promote catch-up learning rates. The combined word-list and story fluency learning for year 3 improved twice as fast and accuracy improved 1.8 times faster than the previous years. Altogether, the year 3 class WL/PT/DI program was three-and-a-half times more effective (Neely, 1994). The two special education pupils in the WL/PT/DI group read with the top third of the class. All 13 ESL pupils were June readers, including the January non-reading entry. The story reading data show the WL/PT/DI group's grade-one story selection increasing from significantly behind to about the same fluency and accuracy performance rates as obtained in previous years.

The May first-grade reading scores of the year 3 class on the Iowa Test of Basic Skills (ITBS) were equal or slightly higher than the previous two years. The increases in reading scores contrasted a continuing downward trend in mathematics and lan-

guage arts.

The year 3 class' progress, starting lower but exceeding or equaling the other classes' reading skills, shows what educationally effective curriculum, instruction, and practice design can do.

The *daily measurement* of the year 3 pupils' reading of *Reading Mastery's* story-of-the-day showed an average of 25 correct words-per-minute in January. Four pupils read their story-of-the-day in June at 50 correct words-per-minute. The remaining 39 pupils met or beat our 70 to 90 words-per-minute aim range by reading in June between 70 to 180 correct words-per-minute. Accuracy for all was near perfect to perfect.

Subjective observations corroborate these findings. The higher grade teachers noted the more accomplished year 3 first graders' reading skill attainments. From time to time adult visitors, including higher grade Camelot teachers, told the first-grade reading team how impressed they were with the reading and progress of the first-graders during the year. By spring-time, visiting teachers could not discern the Ukrainian ESL youngsters from among

their respective reading groups.

The research that led Camelot's Chapter 1 Steering Committee to select SRA's Direct Instruction *Reading Mastery Fast Cycle I/II* Series was confirmed. The members counted on the curricular and instructional designs to make a difference. They did with multiplying effects.

The downward Camelot trend of first grade pupils entering with lower skills after kindergarten was corrected using *Reading Mastery* Direct-Instruction and PT practice and measurement. These trends may even be reversed by implementing these practices earlier—in Kindergarten and Head Start.

Unfortunately, the Camelot WL/DI/PT program has been discontinued in favor of a more intense whole language program than the SBG series by a new building principal selected by a district assistant superintendent.

### Conclusions

1. Labeled pupils (e.g., special education, ESL, Chapter 1 pupils) learn to read effectively with effective curriculum, instruction, practice, and measurement.

2. *Reading Mastery* and Precision Teaching combined to produce faster (steeper) fluency learning (1.8 and 2.0 times faster than the previous two class average learnings of the five, one minute tests, respectively; and 1.7 and 1.6 times faster than the class' average learning of the SBG grade-one story selection, only).

3. *Reading Mastery* and Precision Teaching combined to produce faster '92-93 accuracy development of the bundled five, one minute tests reading skills (1.8 times faster than the previous classes' learnings); but produced the same average accuracy development for the SBG grade-one story selection.

4. Precision Teaching assisted in faster at-risk pupils' fluency development (1.4 times faster than the class' average learning of five, one minute tests covering say-sounds, say-list-words from six first-grade instructional levels, and say-story-words from a SBG grade-one story selection; and 1.5 times faster than the class' average learning of the SBG grade-one story selection, only).

5. *Reading Mastery I* followed by *Reading Mastery II* is more appropriate than *Reading Mastery, Fast Cycle I/II* for the more at-risk pupils.

6. The SBG *World of Reading* three pre-primer books and the *Reading Mastery I* are not appropriate for September first-graders who already read fluently. Fluent and accurate pupils can profit from more challenging levels.

7. Teachers are not the cause of faulty reading development. The same teachers taught all three

years.

### Recommendations

Neely listed the following recommendations for the Federal Way School District (1994). These nine recommendations are fairly universal except replacing the word *continue* with *begin* for districts or schools that have no such plans in place.

1. Raise district expectations by setting the goal that *all* pupils will learn to read by the end of first grade.

2. Beginning in September or October use the Direct-Instruction *DISTAR Language I* program with identified Kindergarten ESL youngsters.

3. By just before winter break, begin *Reading Mastery I* with all pupils in Kindergarten to better prepare them for first grade.

4. Continue the first-grade pilot *Reading Mastery, Fast Cycle I/II* Direct-Instruction program plus Precision Teaching's pupil practice, pupil response, and pupil learning measurement. The materials are all in place, but currently stored.

5. Continue Direct-Instruction *Reading Mastery* instruction with identified second graders.

6. Use currently trained *Reading Mastery* staff to train the Kindergarten and new Basic Skills teacher(s).

7. Evaluate the contribution of the whole language component by aligning the precision-teaching component with the *Reading Mastery* series and dropping the whole language program with one group of children.

Note: Data from five, one-minute tests bundled together as one five-minute observation are reported elsewhere (Neely, 1994). The bundled tests were say-letter-sounds, say-words from the three word-lists (six first-grade instructional levels), and say-words from the story.

### References

- Adams, M. J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge: The MIT Press.
- All, P. (1977). *From get truckin' to jaws, students improve their learning picture*. Unpublished master's thesis, University of Kansas.
- Behavior Research Company. (no date). *Learning (celeration) charts, rate finders, and related materials available from Behavior Research Company, Box 3351, Kansas City, KS. 66103.*
- Chall, J. S. (1967). *Learning to read: The great debate*. New York: McGraw-Hill.
- Chall, J. S. (1977). *Reading 1967-1977: A decade of change and promise*. Bloomington, Ind.: Phi Delta Kappa Educational Foundation.
- Edwards, J. S. (1960). *Precisely teaching children labeled learning disabled* (Doctoral dissertation,



- University of Kansas). *Dissertation Abstracts International*, 1970, 30, 5162A (University Microfilm No. 70-11,017)
- Engelmann, S. (1992). *War against the schools' academic child abuse*. Portland, Or.: Halcyon House.
- Engelmann, S., Haddox, P., Bruner, E. (1983). *Teach your child to read in 100 easy lessons*. New York: Simon and Schuster.
- Graf, S. (1994). *How to develop, produce and use SAFMEDS in education and training*. 35 Newton Ave., Youngstown, OH 44512: Zero Brothers Software.
- Johnson, N. J. (1971). Acceleration of inner-city elementary school pupils' reading performance (Doctoral dissertation, University of Kansas, 1971). *Dissertation Abstracts International*, 32, 6250A. (University Microfilms No. 71-27,160)
- J/P Associates, Inc. (no date). 8719 Radburn Dr.; Baldwinsville, NY. 13027.
- Lindsley, O. R. Precise Behavior Management Trainer Course, Summers, Late 1960's and Early 1970's.
- Lindsley, O. R. (1978). Personal communication.
- Lindsley, O. R. (1990). Precision teaching: By teachers for children. *Teaching Exceptional Children*, 22, 10-15.
- Lindsley, O. R. Summarizing learning. Tenth Annual Precision Teaching/Precision Learning Conference. Park City, Ut, 1992.
- Lindsley, O. R., Calkin, A. & White, O. (1993). How to numerically and graphically summarize learning across classrooms, schools, and published teaching studies (metacharting). Eleventh Annual Precision Teaching/Precision Learning Conference. Salt Lake City.
- Neely, M. D. (1978). Six years of supervising a special education program by learning products (Doctoral dissertation, University of Kansas). *Dissertation Abstracts International*, 1979, 39, 6443A (University Microfilms No. 79-10,622).
- Neely, M. D. (1994). Camelot's first-grade reading pilot report of the performance & learning effects from three years of SBG's World of Reading with the '93 class enhanced by SRA's Reading Mastery, Fast Cycle I/II and Precision Teaching. *Journal of Precision Teaching*, 11(2), 36-58.
- Neely, M. D. & Lindsley, O. R. (1978). Phonetic, linguistic, and sight readers produce similar learning with exceptional children. *The Journal of Special Education*, 12, 423-441.
- Pennypacker, H. S., Koenig, C. H., & Lindsley, O. R. (1972). *The Handbook of the Standard Behavior Chart (Preliminary ed.)*. Box 3351, Kansas City, KS. 66103: Precision Media.
- Science Research Associates. (1991). On track: Fifteen years of student improvement. *Success Stories, Direct Instruction*, 2 (10), 1-3.
- Sokolove, H. E. (1977-1978). *The accelerator*. Kansas City, KS.: Shawnee Mission Public Schools.
- Sokolove, H. E. (1978). *Blueprint for PRODUCTive Classrooms*. Kansas City, KS.: Shawnee Mission Public Schools.

## VISIT OUR WEB PAGE!

Now you can find

*Effective School Practices*

on the Web at:

<http://darkwing.uoregon.edu/~adiep/>



# FACT SHEET

## PREVENTING READING FAILURE

Bonnie Grossen  
University of Oregon

- FACT** Most schools in the nation are now using the same reading approaches that resulted in California's children placing last in the nation in reading.
- FACT** California set the national whole language trend when it mandated the exclusive use of whole language for teaching beginning reading in 1988.
- FACT** Most states adopted whole language because it was a new trend in education, not because whole language has achieved superior results anywhere. (E.g., State of Oregon IMS Evaluation Training Sessions, May 3, 1993).
- FACT** Most schools in the nation subsequently purchased whole language programs.
- FACT** California's 4th-grade children now score last in the nation in reading, just above Guam, according to the results of the 1994 NAEP just released in 1995 (1994 NAEP READING: A First Look; 1-800-424-1616).
- QUESTION** *Aren't the low scores due to low levels of funding?* No. California falls slightly below the national average in per pupil expenditure. In 1991-2 California spent \$4491 per pupil. Across the states per pupil expenditures ranged from \$2960 (Utah) to \$8645 (New Jersey).
- QUESTION** *Aren't the low scores due to a large population of minorities?* No. Among white children, California's white children scored last in the nation; among children of college-educated parents, California's scored second from last. Among Black children, California's scored fourth from last.
- QUESTION** *Why are California's children reading so poorly?* The whole language method. A 1995 California task force on reading concluded that mandating whole language statewide was a mistake. On September 12, 1995, the California legislature passed AB170, which requires the State Board of Education to ensure that the materials it adopts for reading instruction include "systematic, explicit phonics." The vote was unanimous in both legislative chambers.
- QUESTION** *How is it possible that an entire state could make such a terrible mistake?*  
California did not use research on what works best for teaching reading to determine what approach to adopt in 1988, although definitive research was available (e.g., Adams, 1988; Anderson, Hiebert, Scott, & Wilkinson, 1985). In fact, the California courts found in 1989 that the adoption of whole language violated a "learner verification" law, which required the State Board to adopt only tested approaches. The decision against the Board was upheld all the way through the Court of Appeals to the Supreme Court (No. 3 Civil C008701). Rather than comply with the law and adopt tested practices though, the legislature removed the law allowing the statewide mandate of the exclusive use of the untested whole language approach to continue.
- QUESTION** *If this is true, isn't anyone else concerned about the widespread use of whole language?* Yes, 40 researchers in linguistics and psycholinguistics from Harvard, MIT, University of Massachusetts, and other research institutions in Massachusetts have signed a petition to the state of Massachusetts to reverse the direction of the proposed language arts standards advocating whole language methods for reading instruction.



## What can we do?

**ACTION** We need to change the way we teach beginning reading right now. To prevent massive reading failure in other states, as occurred in California, schools must balance whole language with systematic, explicit phonics in initial reading instruction, an approach that has never been "in," not during the '80s, not during the '70s, not during the '60s.

**ACTION** We need to legislate better decision-making processes nationwide.

**ACTION** At the state and national level, education agencies should disseminate information on what programs are working (research information) and how schools are doing comparatively.

**ACTION** At the local level, school communities need to use the information to choose programs and practices that will best meet their specific needs.

Research says, to teach beginning reading successfully...

- Introduce each letter-sound correspondence explicitly. (Only 55 are needed.)
- Show students how to blend sounds to read words.
- Provide immediate feedback on oral reading errors.
- Provide extensive practice in a code-based

## Where do we begin?

**ACTION** Copy and share this fact sheet with your local school board members. Attend your local school board meetings.

**ACTION** Copy and share this fact sheet with your friends.

**ACTION** Demand that (1) the schools include systematic, explicit phonics instruction now.  
(2) schools and states adopt more reliable decision-making processes.

**FACT** "That direct instruction in alphabetic coding (phonics instruction) facilitates early reading acquisition is one of the most well established conclusions in all of behavioral science."  
Keith Stanovich

**FACT** "Phonic/linguistic programs used in first grade produced strikingly larger effects than language experience approaches (whole language)."  
Steve Stahl & Pat Miller

## References

- Adams, M. (1988). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.
- Anderson, R., Hiebert, E., Scott, J., & Wilkinson, I. (1985). *Becoming a nation of readers: The report of the commission on reading*. Washington, DC: National Institute of Education.
- Grossen, B. (1990). Translating research on initial reading instruction into practice. *Interchange*, 21(4), 15-23.
- Engelmann vs. California State Board of Education, Court of Appeal No. 3 Civil C008701.
- State Instructional Materials Services Evaluation Training Sessions, (May 3, 1993). *Research & Trends in English Language Arts* [videotape].
- Stahl, S., & Miller, P. (1989). Whole language and language experience approaches for beginning reading: A quantitative research synthesis. *Review of Educational Research*, 59, 87-116.
- Stanovich, K. (1994). Romance and reality. *The Reading Teacher*, 47, 280-291.

*Permission to copy is granted the holder of this document.*



# Research on the Effects of Direct Instruction on the Higher Level Thinking of Students with Disabilities

## Reasoning

1. On a variety of measures of argument construction and critiquing, high school students with learning disabilities scored as high as or higher than high school students in an honors English class and college students enrolled in a teacher certification program (Grossen & Carnine, 1990).

2. In constructing arguments, high school students with disabilities scored significantly higher than college students enrolled in a teacher certification program and scored at the same level as general education high school students. All of these groups had scores significantly lower than those of the college students enrolled in a logic course (Collins & Carnine, 1988).

## Science

3. On a test of problem solving to achieve better health, high school students with disabilities scored significantly higher than nondisabled students who had completed a traditional high school health class (Woodward, Carnine, & Gersten, 1988).

4. On a test of problem solving that required applying theoretical knowledge and predicting results based on given information, middle school students with disabilities scored higher than a class of general education students taught in a student-centered treatment (Grossen, Carnine, & Lee, 1996).

5. On a test of misconceptions in earth science, middle school students with learning disabilities showed better conceptual understanding than Harvard graduates interviewed in Schnep's 1987 film, *A Private Universe* (Muthukrishna, Carnine, Grossen, & Miller, 1990).

6. On a test of earth science problem solving, middle school students with learning disabilities scored significantly higher than nondisabled students who received traditional science instruction (Woodward & Noell, 1992).

7. On a test of problem solving involving earth science content, most of a group of middle school students with learning disabilities scored higher than the mean score of the nondisabled control students (Niedelman, 1992).

## Mathematics

8. On a test of problem solving requiring the use of ratios and proportions, high school students with disabilities scored as well as nondisabled high school students who received traditional math instruction (Moore & Carnine, 1989).

9. On a test requiring the application of fractions, decimals, and percents, fifth and sixth grade low-performing students scored significantly higher than high-performing students in a constructivist treatment (Grossen & Ewing, 1996).

## History

10. On a history test that required analyzing primary source documents, the scores high school students with learning disabilities attained on the use of principles and facts in writing did not differ significantly from nondisabled control students (Crawford & Carnine, 1994).

## References

- Collins, M., & Carnine, D. (1988). Evaluating the field test revision process by comparing two versions of a reasoning skills CAI program. *Journal of Learning Disabilities*, 21, 375-379.
- Crawford, D., & Carnine, D. (1996). *Promoting and assessing higher order thinking in history: Using performance assessment to evaluate effects of instruction*. (Technical Rep. 101). Eugene, OR: National Center to Improve the Tools of Educators, University of Oregon.
- Grossen, B., & Carnine, D. (1990). Diagramming a logic strategy: Effects on more difficult problem types and transfer. *Learning Disability Quarterly*, 13, 168-182.
- Grossen, B., & Ewing, S. (1994). *Raising mathematics problem-solving performance: Do the NCTM teaching standards help?* (Technical Rep. 102). Eugene, OR: National Center to Improve the Tools of Educators, University of Oregon.
- Grossen, B., Carnine, D., & Lee, C. (1996). *The effects of considerate instruction and constructivist instruction on middle-school students' achievement and*



- problem solving in earth science. (Technical Rep. 103). Eugene, OR: National Center to Improve the Tools of Educators, University of Oregon.
- Moore, L., & Carnine, D. (1989). Evaluating curriculum design in the context of active teaching. *Remedial and Special Education*, 10, 28-37.
- Muthukrishna, N., Carnine, D., Grossen, G., & Miller, S. (1993). Children's Alternative Frameworks: Should They Be Directly Addressed in Science Instruction? *Journal of Research in Science Teaching*, 30(3), 233-248.
- Niedelmann, M. (1992). Problem solving and transfer. In D. Carnine & E. Kameenui (Eds.), *Higher order thinking: Designing curriculum for mainstreamed students* (pp. 137-156). Austin TX: Pro Ed.

- Woodward, J., & Noell, J. (1992). Science instruction at the secondary level: Implications for students with learning disabilities. In D. Carnine & E. Kameenui (Eds.), *Higher order thinking: Designing curriculum for mainstreamed students* (pp. 39-58). Austin TX: Pro Ed.
- Woodward, J., Carnine, D., & Gersten, R. (1988). Teaching problem solving through a computer simulation. *American Educational Research Journal*, 25(1), 72-86.

The Editor

Hot off the Press!



## Understanding U.S. History

Described in Educational Leadership, School Psychology Review and Learning Disabilities Quarterly

**A text that empowers teachers  
to meet the needs  
of all their students – lower,  
average and higher performers**

### Instructional features that benefit all students:

- Clearly written text organized around big ideas
- Key vocabulary defined
- Frequently interspersed questions
- Alternative forms of test questions
- Concept maps
- Cumulative review of critical concepts and vocabulary
- Discussion questions designed to involve all students

**Research Finding:** Effective for special education students in mainstream and resource settings.

### Students engage in higher order thinking:

- Analyze primary source documents
- Compare and contrast events and times
- Give causal explanations that focus on multiple factors
- Make persuasive arguments focusing on different perspectives
- Write imaginative pieces focusing on "what if" situations

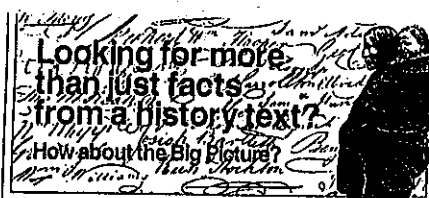
**Research Finding:** Significantly higher scores on essays written about primary source documents.

### Volume 1 - Through the Civil War (Available Now)

### Volume 2 - Reconstruction to the Present (Available Summer 1995)

<b>Address:</b>		<b>To purchase material:</b>		<b>A free copy of a student text is available for course adoption.</b>	
Name _____	_____	Student Textbook(s) @ \$25.00 \$ _____	Position: _____		
Institution _____	_____	Instructors Manual(s) @ \$50.00 \$ _____	Title of course: _____		
Street address _____	_____	Subtotal \$ _____	Number of books needed for course: _____		
City _____ State _____ Zip _____	_____	Add 10% Shipping and Handling \$ _____	When books would be needed: _____		
Phone _____ Fax _____	_____	Total \$ _____	Volume 1 _____ Volume 2 _____		

Send purchase order number or check payable to: Considerate Publishing • P.O. Box 10352 • Eugene, OR 97440 • Phone orders: (503) 485-1163 • Fax orders: (503) 683-7543





# Order Back Issues/Monographs on Important Themes

All back issues and monographs are \$5.00. Postage and handling is \$3.00 per order of any size. Prepaid orders only.

## **Planning for a Direct Instruction Implementation . \$5.00** *Effective School Practices*, Summer, 1995, Volume 13, No. 3

**ABSTRACT:** A workbook and guidelines provide a framework for planning a Direct Instruction implementation. The planning stages include: 1. Feasibility planning (Does the school have the support and resources to begin a DI implementation?), 2. Setting specific school policies (What policy changes regarding grouping and scheduling, report cards and discipline, inclusion and evaluation, substitutes and so on, need to be made?), 3. Deciding on the scope of the first year's implementation (Given the support and limitations, what level of implementation should the school schedule for the first year?), 4. Budget planning (What will the DI implementation cost?). A full set of placement tests for *Reading Mastery*, *Reasoning and Writing*, *Spelling Mastery*, and *Connecting Math Concepts* are included. The planning guide is particularly appropriate for the school administrator or leader.

## **Handbook for Grassroots Reform ..... \$5.00** *Effective School Practices*, Winter 1995, Volume 14, No. 1

**ABSTRACT:** An article by Russell Worrall and Doug Carnine describes the problem to solve: the irrationality of top-down educational decision-making. Individual school communities that wish to use a more rational process are provided with reference materials and guides for establishing bottom-up reform, particularly in the selection of the teaching practices and tools (textbooks, technology, media, software, and so on). A Handbook for Site Councils to use to improve schools guides local site councils in obtaining reliable information about what works, that is, site councils should select validated practices and tools or cautiously monitor the implementation of unvalidated practices. Reliable information is usually available in the form of research studies. Because research is often misused and abused, a guide for using research to identify superior teaching practices and tools is also provided.

## **Twenty Years of Effective Teaching ..... \$5.00** *Effective School Practices*, Fall 1994, Volume 13, No. 4

**ABSTRACT:** Two keynote addresses by Sara Tarver and Jean Osborn at the summer conference provide an overview of the history of Direct Instruction. Headline news articles featuring Direct Instruction and/or disappointing results from trendy approaches are reprinted. An exchange of letters between a Montana parent and the National Council of Teachers of Mathematics highlights issues regarding school adoption of unproven, faddish methods, textbooks, and philosophies. The NCTM is unable to provide evidence that the teaching methods they promote improve learning. NCTM claims there are no measures that

assess the kinds of outcomes they wish to achieve. They expect to have a guide for assessment published in 1995, 4 years after the guide for teaching practice was published. The Montana parent argues that the assessment should be used to evaluate the practices before they are promoted nationwide.

## **OBE and World Class Standards ..... \$5.00** *Effective School Practices*, Summer 1994, Volume 13, No. 3

**ABSTRACT:** This issue is a critique of outcome-based education. Criticisms from educational researchers and from the American Federation of Teachers are featured. Positive suggestions for education reform legislation are offered, as well as some guidelines for evaluating standards. The standards of most states are criticized for their lack of rigor, for their non-academic focus, and for their evaluation systems that do not provide information regarding the effectiveness of the school programs, but rather only evaluate individual students.

## **Achieving Higher Standards in Mathematics ..... \$5.00** *Effective School Practices*, Spring 1994, Volume 13, No. 2

**ABSTRACT:** The standards from the National Council of Teachers of Mathematics prescribe teaching practice more than they set standards for student performance. Several research articles provide evidence that the NCTM teaching practices are probably not the best practices for achieving the student performance standards implied in the standards.

## **Beginning Reading Instruction ..... \$5.00** *Effective School Practices*, Winter 1994, Volume 13, No. 1

**ABSTRACT:** Research still shows that systematic phonics instruction with a code-based reader are important components of effective initial reading instruction and are not incompatible with most whole language activities. Read Keith Stanovich's analysis of reading instruction issues in *Romance and reality* and Patrick Groff's review of *Reading Recovery* research. Read how a highly successful school teaches reading to Spanish-speaking children. Edward Fry also provides a set of tools for solving common reading problems.

## **Discriminatory Educational Practices ..... \$5.00** *Effective School Practices*, Spring, 1993, Volume 12, No. 2

**ABSTRACT:** Research has documented discriminatory effects for two popular school reforms: whole language and "developmentally appropriate practice" as it has been defined by the National Association for the Education of Young Children. This edition summarizes the research evaluating effects of these reforms on the upward mobility and learning of economically disadvantaged children, minority children, and special education children. These diverse



learners in programs incorporating the popular "child-centered" pedagogies are less likely to acquire the tools they will need for economic success and have lower self-esteem than children in traditional programs.

**Heterogeneous Grouping and Curriculum Design .... \$5.00**  
*Effective School Practices*, Winter, 1993, Volume 12, No. 1

**ABSTRACT:** Heterogeneous grouping is a superficial and ineffective solution to the problem of discrimination in education. Equal access to education involves much more than having equal access to a seat in the classroom. This edition presents research summaries and perspectives surrounding grouping decisions. Research finds subject-specific homogeneous grouping most effective in subjects that are skills-based, such as reading and mathematics. The reprinted education survey by the *Economist* compares educational systems around the world and finds America's attempt to provide equal education for all a failed experiment. The *Economist* praises Germany's ability to turn out the most highly skilled workers in the world. Both *Forbes* and the *Economist* criticize many of the currently popular American reforms, such as whole language and heterogeneous grouping, for the mediocrity they seem to encourage.

**Listing of Effective Programs ..... \$5.00**  
*Effective School Practices*, monograph, 1993, also *ADI News*, Volume 11, No. 5.

**ABSTRACT:** This issue features a complete annotated listing of Direct Instruction, programs authored by Zig Engelmann and his colleagues. Also included are procedures for obtaining funding, addresses of funding sources, and a model proposal.

**Wholistic Approaches ..... \$5.00**  
*ADI News*, Summer, 1992, Volume 11, No. 4

**ABSTRACT:** Effective instruction (e.g., Direct Instruction,) provides wholistic integration of skills that have been specifically taught. Wholistic programs that do not teach important component skills are inferior. A study is reported that shows that students learning from Direct Instruction programs in mathematics achieve higher scores than students learning from the new teaching standards promoted by National Council of Teachers of Mathematics. A synthesis of studies in reading shows that using Direct Instruction reading programs result in higher reading scores than whole language programs that provide no instruction in component skills, such as decoding.

**ADI News, Volume 11, No. 2 ..... \$5.00**

**ABSTRACT:** This edition includes a study comparing the effects of four procedures for parents to use in teaching reading to their children. Parents using *Teach Your Child to Read in 100 Easy Lessons* (see ADI materials list for ordering information) obtained the highest reading improvement scores with their children. This edition also reports a comparison of the achievement scores of Wesley Elementary, a Direct Instruction school, with ten other schools, the results of a comparison of meaning-based versus code-based programs in California, and other reports of the effectiveness of Direct Instruction programs with special populations.

**Historical Issue III ..... \$5.00**  
*ADI News*, Volume 8, No. 4

**ABSTRACT:** The historical series reprint highlight articles and contributions from earlier editions. The featured articles in this edition are divided into the following sections: (1) Implementation strategies and issues, (2) Direct Instruction research studies, and (3) Research related to DI's goals. Russell Gersten's response to a study that is widely discussed among promoters of the current child-directed instruction reform is reprinted in this edition. That study by Schweinhart, Weikart, and Lerner is highly critical of DI preschool programs. Gersten criticizes that study primarily for using self-report data to evaluate delinquency and for interpreting nonsignificant differences as if they were significant.

**Historical Issue I ..... \$5.00**  
*ADI News*, Volume 7, No. 4.

**ABSTRACT:** The featured articles in this issue are divided into the following sections: (1) Introduction, (2) Research studies, and (3) Management strategies. These include a classic essay by Zig Engelmann "On Observing Learning," a high school follow-up study on Follow Through children in Uvalde TX, a meta-analysis of the effects of DI in special education by W.A.T. White, and other studies reporting the effects of DI in teaching English as a Second Language, poverty level preschoolers, secondary students, and moderately retarded children. Also included are classroom management tips from Randy Sprick and Geoff Colvin, along with a school-wide discipline plan.

**FREE WORKSHOPS ON MATHEMATICS**

FREE WORKSHOPS (US PUBLIC SCHOOL DISTRICTS ONLY) ARE AVAILABLE TO TRAIN PROFESSIONALS IN THE SKILLS NECESSARY TO RECOGNIZE EFFECTIVE INSTRUCTIONAL MATERIALS FOR MATH. BOTH IN REGULAR CLASSROOMS AND SPECIAL EDUCATION SETTINGS. CALL ABOUT PROJECT PRIME: BONNIE GROSSEN (503) 683-7543. (SPONSORED BY THE US DEPARTMENT OF EDUCATION, OFFICE OF SPECIAL EDUCATION PROGRAMS)



---

## CONTRIBUTOR'S GUIDELINES

**Effective School Practices** provides practitioners and decision-makers with the latest research and development news on effective teaching tools and practices. The journal emphasizes practical knowledge and products that have proven superior through scientific testing. Readers are invited to contribute to several different columns and departments that will appear regularly:

**FROM THE FIELD:** Submit letters describing your thrills and frustrations, problems and successes, and so on. A number of experts are available who may be able to offer helpful solutions and recommendations to persons seeking advice.

**NEWS:** Report news of interest to ADI's membership

**SUCCESS STORIES:** Send your stories about successful instruction. These can be short, anecdotal pieces.

**PERSPECTIVE:** Submit critiques and perspective essays about a theme of current interest, such as: school restructuring, the ungraded classroom, cooperative learning, site-based management, learning styles, heterogeneous grouping, Regular Ed Initiative and the law, and so on.

**RESEARCH STUDIES:** Present data from your classroom or the results of scientific research. The data should guide other practitioners and decision-makers in evaluating alternative options for school reform.

### TRANSLATING RESEARCH INTO PRACTICE

Integrate a larger body of empirical research into a defined practice that can be implemented in schools.

**BOOK NOTES:** Review a book of interest to members.

**NEW PRODUCTS:** Descriptions of new products that are available will be featured. Send the description with a sample of the product or a research report validating its effectiveness. Space will be given only to products that have been field-tested and empirically validated.

**LIST OF DEMONSTRATION SITES:** We wish to maintain an on-going list of school sites with exemplary implementations and impressive student outcomes. Submit the name of the exemplary school or classrooms, the names of the programs being implemented, and contact information so that visitations may be arranged.

**TIPS FOR TEACHERS:** Practical, short products that a teacher can copy and use immediately. This might be advice for solving a specific but pervasive problem, a data-keeping form, a single format that would successfully teach something meaningful and impress teachers with the effectiveness and cleverness of Direct Instruction.

---

## MANUSCRIPT PREPARATION

Authors should prepare manuscripts according to the fourth revised edition of the *Publication Manual of the American Psychological Association*, published in 1995. Copies may be ordered from:

Order Department  
American Psychological Association  
1200 Seventh St., N.W.  
Washington, DC 20036

Send an electronic copy, if possible, with a hardcopy of the manuscript. Indicate the name of the word-processing program you use. Save drawings and figures in separate files. Electronic copy should replace text that is underlined according to the APA format, with italic text.

**Illustrations and Figures:** Please send drawings or figures in a camera-ready form, even though you may also include them in electronic form.

Completed manuscripts should be sent to:

Bonnie Grossen, Ph.D.  
Editor, *Effective School Practices*  
PO Box 10252  
Eugene, OR 97440

Acknowledgement of receipt of the manuscript will be sent by mail. Articles are initially screened by the editor for content appropriateness, then sent out for review by peers in the field. These reviewers may recommend acceptance as is, revision without further review, revision with a subsequent review, or rejection. The author is usually notified about the status of the article within a 6- to 8-week period. If the article is published, the author will receive five complimentary copies of the issue in which his or her article appears.



## Join a local ADI chapter

The persons below are organizing local ADI chapters. They plan to form local support groups and to sponsor local workshops, discussion groups, and newsletters. Contact the person nearest you for more information on local chapters. If your name is not on the list and you would like to form a local chapter, contact ADI, PO 10252, Eugene, OR 97440 or call (503) 485-1293.

Carolyn Cittamlet  
1422 S. 13th St.  
Philadelphia, PA 19147  
Fax: 215-551-9790

Susan Kandell  
212 S. Woodhams St.  
Plainwell, MI 49080-1753

Kathleen Schaefer  
2668 Tareyton Cr.  
Stoughton, WI 53589

Patti Clark  
Phoenix Academy  
11032 Oak St.  
Omaha, NE 68144

Paul Koeltzow  
10318 Fern Dale Rd.  
Dallas, TX 75238  
214-341-5373

Diana Morgan/Thaddeus Lott  
Wesley Elementary  
800 Dillard St  
Houston, TX 77091

*New Chapter!*  
Ardena Harris  
5309 Vineyard Lane  
Flushing, MI 48433

Clark Walker  
300 West 100700  
Ftu Green UT 84632

Ken Traupman  
248 Nutmeg St.  
San Diego, CA 92103

Anna Mae Gazo  
3027 Ellen Ct.  
Marina, CA 93933

Cathy Watkins  
1956 La Linda Ct.  
Turlock, CA 95380  
cwatkins@koko.csustan.edu

Ursula Garrett  
PO Box 241, Apt 169  
Kahuku, Hawaii 96731

Chuck Main  
PO Box 8  
Silverdale, WA 98303

Betty Williams  
Dept. of Special Education  
AD Box 25

Gonzaga University  
Spokane, WA 99258

Babette Engel  
343 Dungeness Meadows  
Sequim, WA 98382

Helen Munson, Tricia Walsh-Caughlan  
1603 NW 41st Circle  
Camas, WA 98607

Larry Chamberlain  
1063 Stelly's X Rd.  
Brentwood 1324,  
Vosiao, BC

Dorothy Ross  
Terry Fox Sr. Secondary  
3550 Wellington  
Port Coquitlam, B.C. V3B 3Y5

*New Chapter!*

Angus Lloyd  
47 Brooklyn Ave.  
Toronto, Ontario M4M 2X4  
(416) 465-0606 (voice)  
(416) 564-3324 (fax)



### WHILE YOU'RE SURFING THE NET...

Check out the New Web Page: of the National Center to Improve the Tools of Educators (<http://darkwing.uoregon.edu/~ncite/>). Find valuable documents, research syntheses and information on free math workshops.

We now have **TWO Email Lists**: one for discussion and announcements (effschprac), another for announcements only (adinews).

To subscribe to the discussion and announcements list, send the following message from your email account:

To: Mailserv@oregon.uoregon.edu

Message: Subscribe effschprac

(Don't add *Please* or any other words to your message. It will only cause errors. Mailserv is a computer, not a person. No one reads your subscription request.)

By subscribing to the EFFSCHPRAC list, you will be able participate in discussions of topics of interest to ADI members. You will automatically receive in your email box all messages that are sent to the list. You can also send your news and views out to the list subscribers, like this:

To: Effschprac@oregon.uoregon.edu

Subject: *Whatever describes your topic.*

Message: *Whatever you want to say.*

To subscribe to the announcements only list (adinews), send from your email account the following message:

To: majordomo@lists.uoregon.edu

Message: subscribe adinews

On this list, you will receive announcements only, such as news of upcoming TV specials on DI, announcements from employers seeking persons with DI teaching skills and from those with DI teaching skills seeking jobs, and other news flashes.



*Theory of Instruction: Principles and Applications*  
By Siegfried Engelmann and Douglas Carnine

The revised edition with an introduction by Robert Dixon. *Theory of Instruction* is a systematic and rigorous presentation of the theory of Direct Instruction, developed through scrupulous application of logical analyses to existing empirical observation. *Theory of Instruction* is based on the idea that many major aspects of instructional design or curriculum development can be achieved analytically. While there may be many "theories" of learning, this is the *only* theory of instruction.

*The Surefire Way to Better Spelling*  
by Bob Dixon

*The Surefire Way to Better Spelling* is a two-part spelling book for adults. Part I is text about spelling and learning to spell. Part I does not teach spelling. Part II is a sixty-lesson spelling program, designed to help adults improve their spelling through self-study. The program in Part II features a morphographic approach to spelling, similar to the approach used in SRA's *Corrective Spelling through Morphographs*, and a sequence of instruction based upon Engelmann and Carnine's *Theory of Instruction*.

*Teacher Monitoring Program*  
by Colin Bird, Elizabeth Fitzgerald, and Margaret Fitzgerald

The *Teacher Monitoring Program* is an accredited training and assessment package for Direct Instruction users. It contains easy-to-use checklists, background notes, and research-based strategies designed to allow teachers to assess and strengthen their own teaching skills. The *Teacher Monitoring Program* also may be adapted and used for appraisal purposes with teaching styles other than DI.

*War Against the Schools' Academic Child Abuse*  
by Siegfried Engelmann

In this penetrating examination of our public schools, Professor Engelmann vividly explains how irresponsible practices have contributed to the paralysis of our school systems and injury to countless school children for decades. In an age demanding intellectual proficiency the cost to those children—and our nation—is incalculable.

*Structuring Your Classroom for Academic Success*  
By Stan Paine, JoAnn Radicchi, Lynne C. Rosellini, Leslie Deutchman, and Craig Darch

Teachers in training and teachers who would like more guidance in managing their classrooms successfully will find this book an invaluable guide. It provides specific guidance for setting up the classroom environment, defining class routines, communicating expectations of students and other details involved in ensuring that each student has a chance to win in the classroom. A unique feature of the book's practical approach is the use of scripts that outline specifically how to teach students the various procedures. Ultimately, students are trained to manage their own behavior without depending on the teacher's supervision. The authors' recommendations are based on empirical research and the practical experiences of outstanding teachers in elementary education. The specific procedures defined in the book have been field-tested and revised based on the field data.



# ADI MATERIALS PRICE LIST

## *Theory of Instruction (1991)*

by Siegfried Engelmann & Douglas Carnine

Membership Price: \$32.00

List Price: \$40.00

## *The Surefire Way to Better Spelling (1993)*

by Robert C. Dixon

Membership Price: \$8.75

List Price: \$12.00

## *Teach Your Child to Read in 100 Easy Lessons (1983)*

by Siegfried Engelmann, Phyllis Haddox, & Elaine Bruner

Membership Price: \$14.95

List Price: \$17.95

## *Teacher Monitoring Program (1992)*

by Colin Bird, Elizabeth Fitzgerald, & Margaret Fitzgerald

Membership Price: \$15.00

List Price: \$15.00

## *Structuring Classrooms for Academic Success (1983)*

by Stan Paine, J. Radicchi, L. Rosellini, L. Deutchman, & C. Darch

Membership Price: \$11.00

List Price: \$14.00

## *War Against the Schools' Academic Child Abuse (1992)*

by Siegfried Engelmann

Membership Price: \$14.95

List Price: \$17.95

Postage & Handling:

If your order is:

P & H is:

\$0.00 to \$20.99

\$4.00

\$21.00 to \$40.99

\$5.50

\$41.00 to \$60.99

\$7.00

\$61.00 to \$80.99

\$8.50

\$81.00 or more

\$10.00

Outside the continental U.S., add \$3 more

Subtotal \_\_\_\_\_

P & H \_\_\_\_\_

ADI Membership Dues \_\_\_\_\_

Check enclosed. ☐ (Make checks payable to Association for Direct Instruction.)

Bill my credit card. ☐ Circle one: VISA Mastercard

Number:

Expiration date: \_\_\_\_\_

Signature: \_\_\_\_\_

Name (please print): \_\_\_\_\_

Address: \_\_\_\_\_

Total \_\_\_\_\_

(U.S. Funds)

You may also phone in your order with VISA or Mastercard.

1-800-995-2464

Send to:

**ADI**

**PO Box 10252**

**Eugene, OR**

**97440**

# Videotapes on the Direct Instruction Model

**Keynotes from the 1995 Conference**—2 hours. Titles and speakers include: Anita Archer, Professor Emeritus, San Diego State University, speaking on "The Time Is Now" (An overview of key features of DI); Rob Horner, Professor, University of Oregon, speaking on "Effective Instruction for All Learners;" Zig Engelmann, Professor, University of Oregon, speaking on "Truth or Consequences."

**Keynote Presentations from the 1994 20th Anniversary Conference**—2 hours. Titles and speakers include: Jean Osborn, Associate Director for the Center for the Study of Reading, University of Illinois, speaking on "Direct Instruction: Past, Present & Future;" Sara Tarver, professor, University of Wisconsin-Madison, speaking on "I have a Dream That Someday We Will Teach All Children;" Zig Engelmann, Professor, University of Oregon, speaking on "So Who Needs Standards?"

Price: \$25.00

**An Evening of Tribute to Siegfried Engelmann**—2.5 hours. On July 26, 1995, 400 of Zig Engelmann's friends, admirers, colleagues, and protégés assembled to pay tribute to the "Father of Direct Instruction." The Tribute tape features Carl Bereiter, Wes Becker, Barbara Bateman, Cookie Bruner, Doug Carnine, and Jean Osborn—the pioneers of Direct Instruction—and many other program authors, paying tribute to Zig.

Price: \$25.00

**Challenge of the 90's: Higher-Order thinking**—45 minutes, 1990. Overview and rationale for Direct Instruction strategies. Includes home-video footage and Follow Through.

Price: \$10.00 (includes copying costs only).

**Follow Through: A Bridge to the Future**—22 minutes, video, 1992. Direct Instruction Dissemination Center, Wesley Elementary School in Houston, Texas, demonstrates approach. Principal, Thaddeus Lott, and teachers are interviewed and classroom footage is shown. Created by Houston Independent School District in collaborative partnership with Project Follow Through.

Price: \$10.00 (includes copying costs only).

**Where It All Started**—45 minutes. Zig teaching kindergarten children for the Engelmann-Bereiter pre-school in the 60's. These minority children demonstrate mathematical understanding far beyond normal developmental expectations. This acceleration came through expert teaching from the man who is now regarded as the "Father of Direct Instruction," Zig Engelmann.

Price: \$10.00 (includes copying costs only).

**Direct Instruction**—black and white, 1 hour, 1978. Overview and rationale for Direct Instruction compiled by Haddox for University of Oregon College of Education from footage of Project Follow Through and Eugene Classrooms.

Price: \$10.00 (includes copying costs only).

**Corrective Reading: Decoding B1, B2, C**—4 hours, 38 minutes + practice time (3 tapes). Pilot video training tape that includes an overview of the Corrective Series, placement procedures, training and practice on each part of a decoding lesson, information on classroom management / reinforcement and demonstrations of lessons (off-camera responses).

Price: \$10.00 per tape (includes copying costs only).

Order from ADI  
VISA of Mastercard accepted  
Call 1-800-995-2464



## Subscribe to *Effective School Practices*

The Association for Direct Instruction is a non-profit organization dedicated to dissemination of information on effective, research-proven practices for schools. ADI publishes a quarterly magazine *Effective School Practices* featuring research from the field, implementation descriptions from schools around the world, and expert, easy-to-understand answers to questions about the problems school personnel face in teaching, supervising or administrating every day. ADI also publishes monographs on special topics and books, sponsors workshops, and markets other products that are available to members at a discount. Please consider becoming a sustaining member. ADI is increasing its efforts to promote the use of proven practices in schools and your contributions will help.

- ☐ \$20 Regular subscription and membership (includes one year of *Effective School Practices* and a 20% discount on ADI sponsored events and on publications sold by ADI).
- ☐ \$10 Student member (includes one year of *Effective School Practices*, a 40% discount on ADI sponsored events, and a 20% discount on publications sold by ADI).
- ☐ \$40 Sustaining member (includes regular membership privileges and recognition of your support in *Effective School Practices*).
- ☐ \$75 Institutional member (includes 5 subscriptions to *Effective School Practices* and regular membership privileges for 5 staff people).
- ☐ I'd like to do more. Enclosed is an additional contribution of \$\_\_\_\_\_

- For Canadian addresses add \$5.00 US to the above prices.

- For surface delivery overseas, add \$10.00 US; for airmail delivery overseas, add \$20.00 US to the above prices.

Contributions and dues are tax deductible to the fullest extent of the law.  
Please make checks payable to ADI.

\$   \$   \$   \$   \$   \$   \$   \$   \$   \$   \$   \$   \$

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

School District or Agency: \_\_\_\_\_

Position: \_\_\_\_\_

VISA or Mastercard No. ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ Exp. Date: \_\_\_\_\_

Signature: \_\_\_\_\_

## **Calling All Tapes**

The ADI products division is interested in your video tapes. We're not interested in the "America's funniest home video" type, but video tapes that you use as examples of good instruction, kids working hard, and so on.

Please call 1-206-754-1122 if you have something you think we might be interested in.

**NEW!**

Nominate a Student for

## **The Wayne Carnine Outstanding Student Improvement Award**

**\$200**

**in cash will be awarded  
to the student selected as the 1996 recipient**

***PLAN NOW!***

Doug Carnine and a committee of ADI Board Members will select the 1996 winner in the Spring of 1996. Be prepared to describe the outstanding academic and / or behavioral improvement of the school-aged student you may nominate.

Also, contributions to the Wayne Carnine Outstanding Student Improvement Memorial Fund may be sent to:

Carnine Award  
ADI  
PO Box 10252  
Eugene, OR 97440



# **Summer Direct Instruction Training Opportunities**

July 22-25

## **12th Atlantic Coast Conference on Effective Teaching and Direct Instruction**

Contact: ACCDI, PO Box 997, Rehoboth Beach, Delaware 19971

---

July 22-24

## **1996 Wisconsin Summer Conference on Effective Instruction**

University of Wisconsin-Madison • Madison, Wisconsin

Contact: Chris Dzemske, Wisconsin Center, Room 105  
702 Langdon Street, Madison, WI 53706

---

July 28–August 1

## **22nd Annual Eugene Direct Instruction Conference**

Eugene, Oregon

Sunday, July 28rd Pre-Conference Sessions:

Classroom Management–Randy Sprick

Study Skills–Anita Archer

Sensible School Reform–Joe Freedman

Introduction to Direct Instruction–Kathy Madigan

Boosting Your Child's Success–Ann Glang & Phyllis Haddox

Becoming a Direct Instruction Trainer–Team of ADI Lead Trainers

Contact: ADI, PO Box 10252, Eugene, OR 97440

---

August 12-14

## **Midwest Direct Instruction Conference**

Executive Plaza Hotel • Chicago, Illinois

Contact: ADI, PO Box 10252, Eugene, OR 97440

---

August 12-14

## **Utah Direct Instruction Conference**

Inn at Prospector Square • Park City, Utah

Contact: ADI, PO Box 10252, Eugene, OR 97440

---

August 14–16

## **DI Summer Institute**

Seattle, Washington

Contact: Willy Ertsgaard, 2665 NW 95th, Seattle, WA 98117

## Recommended Resources

**School's Out: The Catastrophe in Public Education and What We Can Do About It** (1993) by Andrew Nikiforuk.  
ISBN: 0-921912-48-X  
Price: \$19.95 from Macfarlane Walter & Ross  
37A Hazelton Avenue  
Toronto, CA M5R 2E3  
Ask for it at your local bookstore.

---

**Beginning to Read: Thinking and Learning About Print** (1990) by Marilyn Jager Adams (A summary by the Center on Reading).  
Price: \$7.50  
Mail orders to: Center for the Study of Reading  
University of Illinois  
51 Gerty Cr.  
Champaign, IL 61820

---

**Direct Instruction Reading** (Revised, 1990)  
by Douglas Carnine, Jerry Silbert, & Ed Kameenui.  
Price: \$64.00  
Order from: Prentice-Hall  
1-800-947-7700  
ISBN: 0-675-21014-3

---

**Antisocial Behavior in Schools: Strategies and Best Practices** (1995) by Hill Walker, Geoff Colvin, & Elizabeth Ramsey.  
Price: \$28.70  
Order from: Brooks/Cole Publishing Co.  
1-408-373-0728 (ext 137)  
Fax: 1-408-375-6414  
Email: adrienne\_carter@brookscole.com  
(Complimentary copies sent for review for college course. Send request on letterhead.)

---

**Failing Grades (Video) and Annotated Bibliography** (1993) featuring Joe Freedman, M.D. & Mark Holmes, Ph.D.  
Price: \$17.95  
Order from: Society for Advancing Research  
c/o VICOM Limited  
11603-165 Street  
Edmonton, Alberta  
CANADA T5M 3Z1

**If Learning Is So Natural, Why Am I Going To School?** (1994) by Andrew Nikiforuk.  
Price: \$16.99 from Penguin  
ISBN: 0-14-02.4264-3  
Ask for it at your local bookstore.

---

**Becoming a Nation of Readers** (1985)  
The Report of the Commission on Reading.  
Price: \$7.50  
Mail orders to: Center for the Study of Reading  
University of Illinois  
51 Gerty Cr.  
Champaign, IL 61820

---

**Direct Instruction Mathematics** (Revised, 1990) by Jerry Silbert, Douglas Carnine, & Marcy Stein.  
Price: \$64.00  
Order from: Prentice-Hall  
1-800-947-7700  
ISBN: 0-675-21208-1

---

**Interventions for Achievement and Behavior Problems** (1991) by 74 contributors, edited by Gary Stoner, Mark Shinn, & Hill Walker.  
Price: \$52.00  
Order from:  
National Association of School Psychologists  
8455 Colesville Road, Suite 1000  
Silver Spring, MD  
ISBN: 0-932955-15-0

---

**Higher Order Thinking: Designing Curriculum for Mainstreamed Students** (1992) edited by Douglas Carnine and Edward J. Kameenui.  
Price: \$24.00 (prepaid orders postage-free)  
Order #5199 from: PRO-ED  
8700 Shoal Creek Boulevard  
Austin, TX 78758-9965  
FAX: 512-451-8542  
ISBN 0-89079-557-6



Effective School Practices  
ADI  
P.O. Box 10252  
Eugene, OR 97440

Non-Profit  
Organization  
U.S. Postage  
PAID  
Permit No. 122  
Eugene, OR

## How soon will your subscription expire?

The number in the upper right hand corner of your address label indicates the number of the last issue you have paid to receive. Compare that number with the number of this issue: Vol. 14, No. 4. Each volume has 4 numbers. If your subscription ends soon, please renew. Don't miss an issue. Renew early.

If you are moving, please send us your new address. The Post Office will not forward *Effective School Practices*.