# EFFECTIVE School Practices

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## FOCUS: TWENTY YEARS OF EFFECTIVE TEACHING



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## 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.

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# From the Field: Letters

## Direct Instruction
## (To the tune of "Down in the Boondocks")

Angela D. Martinez

(Chorus)

Direct Instruction, Direct Instruction,
Working with what works, oh yes, that's what we all believe in.
All kids learn, research based, mastery is what we must embrace!
Lord have mercy for what works, Direct Instruction!

One fine day they learned how to teach effectively.
To guarantee that all kids learn,
Skills and strategies.
If they succeed, then we succeed,
We've all met with sucess,
Working hard to get it right,
Direct Instruction is the best!

(Repeat Chorus)
Direct Instruction!

Every time we teach a lesson we ask ourselves these things;
Did the kids feel good about themselves?
Did they master all the skills?
Were our signals clear and pacing quick?
Were our corrections done the right way?
We want to do the best we can,
To teach GREAT everyday!

(Repeat Chorus)
Lord have mercy for what works, Direct Instruction.
Lord have mercy for what works, Direct Instruction.

Note from the author: I rewrote the words to the song "Down in the Boondocks" and performed it for a Direct Instruction training session I presented last November. What a blast!

I hope my passion for Direct Instruction was felt by those attending the workshop. This passion was passed onto me by Ziggy and his lifelong efforts to improve instructional programs, delivery, student performance, and the overall educational system. I feel it my mission to "spread the word." It is our students' successes that tell the tale.

# The NCTM's Empty Promises

Editor's Comment: *The following series of letter exchanges and articles illustrates the risks involved in widespread implementation of teaching practices that have not been tested first on a small scale. The National Council of Teachers of Mathematics (NCTM) has violated the fourth statement in the philosophy of* Effective School Practices: *"Experiments should not be conducted using an entire generation of Americans" (see inside front cover). The first letter below is the NCTM response to parent Allan Bloom's request for "data which is not anecdotal, prospective or extrapolative that justifies the adoption of the NCTM practices and methods." The NCTM reply indicates that there are no data YET to support the teaching practices currently being implemented. In fact, the "Assessment Standards" will not be released until 1995, 4 years after the widespread adoption of the "Teaching Standards."*

*When the NCTM granted us permission to reprint their letters, they added the October 24 addendum, which implies that the report of the National Assessment of Educational Progress (NAEP) attributes a general nationwide rise in mathematics performance to the effectiveness of the NCTM teaching standards. The letter exchange between Allan Bloom and the authors of the National Assessment of Educational Progress report clarify that this interpretation was not implied. To evaluate the effects of the NCTM practices on student performance, one must look at the specific locations where the NCTM practices have been implemented. We have included recent news stories from several such places: Texas, Oregon, and Boise, Idaho. All of these places are implementing the NCTM teaching practices. Oregon showed "flat" results and a downward trend in math scores on the Oregon Statewide Assessment, a measure designed to align with the NCTM goals in mathematics instruction. The Texas Education Agency (TEA) recalibrated their statewide measures between the earlier and the more recent testing occasions. Though TEA reported improved scores, the reprinted editorial by John Pisciotta raises considerable doubt as to the veracity of these claims and points out that recalibrating the measures makes comparisons impossible. Why would anyone recalibrate the ruler in the middle of an experiment? The front page story from Boise, Idaho, one of the first big districts to adopt the NCTM practices, indicates that scores have definitely decreased on standardized tests over the four years that the NCTM practices have been in place there. The article includes some claims that students might be learning complex problem solving skills instead, but please notice, there are no data reported to verify these claims.*

*A more responsible evaluation of NCTM practices would compare the new NCTM practices with viable alternative instruction on measures of the kinds of performance they claim to value, rather than simply looking at national trends on measures of performance they claim not to value. The NCTM has not acted responsibly in this way. Without evaluation data, the NCTM standards seem nothing more than empty promises.*

9 September 1994

Allan H. Bloom
5916 Sam Snead Trail
Billings, MT 59106

Dear Mr. Bloom:

Thank you for your interest in our organization. We received your request for "data which is not anecdotal, prospective or extrapolative that justifies the adoption of NCTM practices and methods in situations such as ours." First, this reply is to inform you that I am not aware of any research study that relates the "adoption" of NCTM's Standards to improved scores on the Iowa Tests of Basic Skills, a fact that your school district's administrators and board of trustees have correctly stated.

Enclosed is a letter written by NCTM's president, Jack Price, which provides a brief explanation of the Council's documents that delineate NCTM's standards for the mathematics curriculum, mathematics teaching, and assessment in mathematics.

The standards emphasize the importance of students growing comfortable with mathematical problems that occur in actual life. The curriculum Standard's themes of problem solving, connections, reasoning, and communication transcend reliance on paper and pencil tests to assess students' aptitudes and achievement in mathematics. While the

Standards recognize the importance of such tests, they also emphasize the necessity of students being able to tackle and solve everyday mathematics problems in non-academic settings. This concern helps explain the rather widespread support the Standards have among both business and academic leaders.

**The curriculum Standard's themes of problem solving, connections, reasoning, and communication transcend reliance on paper and pencil tests to assess students' aptitudes and achievement in mathematics.**

These changes in emphases help explain why data of the type that you requested are not yet available. Presently researchers and teachers are considering how educators might assess the success of Standards-based curricula. Undoubtedly, one aspect of any evaluation will entail mathematical proficiency in the areas similar to those measured by the Iowa tests. Other areas needing to be assessed are new, as are methods to assess those areas. Textbook publishers and test publishers are in dialogue with NCTM in efforts to develop performance assessments, open-ended assessments, and assessment of problem-solving skills (as opposed to the assessment of purely computational skills).

The number of variables that are involved in assessing a school's curriculum do not lead to a simplistic research model or a simplistic interpretation of research findings. This fact was prominently brought to light as a Council-supported project, Recognizing and Recording Reform in Mathematics Education, began its work to study the effects of "The Standards" in classrooms and schools. This is still a work-in-progress.

Transitions, such as the current push toward reforms in mathematical education, take time and are often uncomfortable, unsettling, and fraught with misunderstandings. We trust that the learning and teaching of mathematics in Billings will soon begin to show measurable improvements.

Sincerely,
W. Virginia Williams, Ed.D.
Field Services Coordinator

Dear Colleague:

The National Council of Teachers in Mathematics (NCTM) has been a leader in mathematics education reform since its inception in 1920. NCTM's *Curriculum and Evaluation Standards for School Mathematics* and *Professional Standards for Teaching Mathematics* have been embraced by education leaders nationwide and are the foundation for the mathematics education reform movement that is currently sweeping the nation.

NCTM is currently in the process of expanding the standards for assessment published in its Curriculum and Evaluation Standards. This new document, *Assessment Standards for School Mathematics*, will be released in March 1995. These three documents are more commonly referred to as the Standards.

NCTM's Standards have heightened expectations for what students must learn about mathematics and for what teachers themselves must accomplish as professionals in the classroom. The vision of these direction-setting documents depicts mathematics as a means to solve problems, reason, communicate and make mathematical connections. This approach goes beyond students' knowledge of various mathematical practices, such as counting, memorizing multiplication tables and simplifying algebraic expressions, by focusing on students' understanding of real-life applications of mathematics.

*Curriculum and Evaluation Standards for School Mathematics*, published in 1989, describes the dramatic changes needed in mathematics education. Specifically, it draws upon the reality that students must possess a suitable mathematics background to function in today's complex informational and technological society. The 54 standards detailed are presented in four distinct sections: Kindergarten-4th grade which consists of 13 curriculum standards; grades 5-8 which consists of 13 curriculum standards; grades 9-12 which consists of 14 curriculum standards; and evaluation which consists of 14 standards for evaluation and assessment.

*Professional Standards for Teaching Mathematics*, published in 1991, focuses on the very heart of education: teaching. It offers ways mathematics teachers can create a successful learning environment for every student and promotes the professional growth of teachers with standards for evaluation. This document includes 24 standards outlining the support, training and evaluation required for good teaching and 55 vignettes depicting out-

standing mathematics teaching. Recommendations for change are designed to create classrooms where instruction is focused on problem solving and real-world applications so each student has an opportunity to develop his or her own mathematical power.

*Assessment Standards for School Mathematics*, to be released in 1995, espouses the vision that to develop mathematical power in *all* students assessment needs to support the continued mathematics learning of *each* student. Six standards supporting this vision are offered as critieria to judge the appropriateness of assessment activities.

In short, the ***Curriculum and Evaluation Standards for School Mathematics*** tells what needs to be taught in school, the ***Professional Standards for Teaching Mathematics*** depicts how this bold vision for mathematics education can be implemented, and the ***Assessment Standards for School Mathematics*** reflects the values and goals associated with an assessment system that must be achieved if the reforms envisioned in the teaching and learning of mathematics are to become a reality.

The reform of mathematics curriculum and instruction, as described in the Standards, is directed toward achieving two major results:

1. Student performance will shift from a narrow focus on routine skills to development of broadbased mathematical power. Among other things, students will be able to perform mental calculations and estimates with proficiency; know which mathematical methods are appropriate in particular contexts; use calculators and computer software confidently and appropriately to perform mathematical tasks; and make decisions based upon the collection, representation and interpretation of real data.

2. Teacher performance will shift from authoritarian models based on "transmission of knowledge" and "drill and practice" to student-centered methods featuring "stimulation of learning" and "active exploration." Teachers will help students learn how to verbalize their mathematical ideas; explore mathematical questions with careful reasoning and disciplined understanding; and understand that some mathematical questions have more than one right answer.

To date, more than 40 states and the District of Columbia have aligned their mathematical curriculum to meet the NCTM standards.

To assist teachers in the classroom implementation of the Standards, NCTM has undertaken the task of formulating an Addenda Series, focusing on a specific grade level and content area. The Addenda Series, to include 22 booklets, features classroom activities, assessment suggestions, and uses for technology with direct references to the ***Curriculum and Evaluation Standards for School Mathematics.***

NCTM has also developed numerous projects, programs and information packets that depict the value of mathematics education and the benefit of parental involvement in mathematics education. Working with schools, businesses, local communities and other educational associations, NCTM is educating the public about the important role mathematics plays in our schools, on the job and in the home.

With more than 110,000 members and over 250 affiliated groups located throughout the United States and Canada, NCTM is the largest organization dedicated to the improvement of mathematics education and meeting the need of mathematics educators nationwide.

Respectfully,

Jack Price
President

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Addendum, October 25, 1994

The National Assessment of Educational Progress (NAEP), a project of the U.S. Department of Education's National Center for Educational Statistics (NCES), was established in 1969 and is the only assessment of its kind. This nationally representative assessment provides information about the educational performance of our nation's students over time. Mathematics assessments were conducted in 1973, 1978, 1982, 1986, 1990, and 1992. A 1993 NCES publication, *Executive Summary of the NAEP 1992 Mathematics Report Card for the Nation and the States*, includes the following statements.

"For the nation, there were statistically significant increases in average mathematics proficiency between 1990 and 1992 for fourth-, eighth-, and twelfth-grade students, both public and private schools combined. Eighteen of 37 states and territories that participated in the grade 8 Trial State Assessment Program in both 1990 and 1992 showed significantly increased average mathematics proficiency for their public-school students." (p.1)

"Within and across participating states and territories, there was considerable variation in performance." (p.2)

"NAEP's 1992 mathematics assessment included nearly 250,000 fourth-, eighth-, and twelfth-grade students attending approximately 10,000 schools across the nation and the states. The assessment itself was forward-looking, comprising several hundred questions at each of the grades assessed. Consistent with standards developed by the National Council of Teachers of Mathematics, many questions required students to construct their responses and some questions asked for explanations of their reasoning." (p.4)

Commenting on the NAEP report when it was released 8 April 1993, Secretary of Education Richard Riley made the following statements. "Today's report on mathematics achievement provides early evidence that curriculum standards and assessments can work to improve student performance...I applaud the National Council of Teachers of Mathematics for the work they've done in establishing standards that are now in use, or being considered for use, in more than 40 states."

Virginia Williams

*Reprinted with permission.*

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5916 Sam Snead Trail
Billings, Montana 59106

The Last Best Place
September 23, 1994

W. Virginia Williams, Ed.D.
National Council of Teachers of Mathematics
1906 Association Drive
Reston, Virginia 22091

Dear Dr. Williams:

Thank you for your letter of 9 September which enclosed another by Mr. Price on the subject of NCTM's curriculum and standards. I am gratified that you troubled to respond in detail to my expressed concern. On the other hand, I must say that you have intensified that concern. While I have no predisposition toward criticism of education, I want to forward my reaction more as catharsis for me rather than in any hope of changing your approach. As you point out, NCTM is a big outfit, your program is widespread and I am only one parent.

As a firm believer in public education as a cornerstone of American democracy, I have been concerned at widespread and growing criticism of education for years. Since my retirement from a very different profession about four years ago and since my interest is focused because I have a sixth-grade son who likes school and does very well, I have been looking into some of the problem areas in detail. The basis for my personal concern and probably the most disturbing aspect of much of what passes for reform in education today is its dissociation from reality because it proceeds from "vision." Very simply: vision=dream=fantasy.

Vision is excellent when postulated as objective or goal but in the absence of the discipline test, performance and assessment data, it is experimental and risky. Frankly, I think it is unprofessional and therefore reprehensible that you would expose the core object of your profession, the children, to unnecessary risk.

Maybe I can clarify this by a metaphorical example or two. Would you subject your children to unverified medical treatment? How would you react when you learned, after committing to the treatment, that it was experimental? Or I wonder if you would send one of your children off to college with a fully qualified pilot in an airplane whose airworthiness had not been demonstrated and verified? I suspect your answers must be no, with anger and no. Certainly my son's life is not at risk with you and your organization but his intellectual development is and there is nobody in this world more dear to me—I suppose that accounts for my emotional reaction to what you are doing.

For your information, an initial anecdotal reaction to our new math curriculum (not from my son) just yesterday was "it's harder than last year—I hate mathematics." Like you, I trust learning and teaching of mathematics here will soon show measurable improvements. But I wish Iwas certain and I wish I knew who would get fired if it doesn't.

Very truly yours,

Allan H. Bloom

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5916 Sam Snead Trail
Billings, Montana 59106

The Last Best Place
November 3, 1994

Dr. Gary Phillips, Associate Commissioner
Education Assessment Division
U.S. Department of Education
555 New Jersey Avenue, N.W.
Washington, D.C. 20208

Dear Dr. Phillips:

I am engaged in a dialogue by correspondence to ascertain the efficacy of the National Council of Teachers of Mathematics standards for mathematics curriculum, teaching, and assessment. In a letter to me, an official at the NCTM headquarters has stated that there are no known data demonstrating improved scores to justify the adoption of their standards. In other correspondence, this same official cited a reference to one of their standards in an executive summary of a 1993 NCES publication *Executive Summary of the NAEP 1992 Mathematics Report Card for the Nation and the States*. Although she did not say so, my inference is this reference is meant as an endorsement of the efficacy of their standards by the U.S. government.

While I have been unsuccessful in identifying any direct experimental data to support these standards for curricula, teaching and assessment, I have found other direct data (Raising Mathematics Problem-Solving: Do the NCTM Teaching Standards Help? Grossen and Ewing, *Effective School Practices*, Spring 1994) which seem to demonstrate a better way to go.

What was the basis for your endorsement of the NCTM standards and how did you evaluate the ADI study?

Very truly yours,

Allan H. Bloom

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Mr. Allan Bloom
591
6 Sam Snead Trail
Billings, Montana 59106

Dear Dr. Bloom,

I am enclosing a copy of the *Executive Summary of the NAEP 1992 Mathematics Report Card for the Nation and the States*, which you reference in you recent letter. The National Center for Education Statistics (NCES) neither endorses nor opposes the standards developed by the National Council of Teachers of Mathematics.

The statement referencing the NCTM standards is on page 4 of the *Executive Summary of the NAEP 1992 Mathematics Report Card for the Nation and the States*: "Consistent with standards developed by the National Council of Teachers of Mathematics, many questions required students to construct their responses and some questions asked for explanations of their reasoning."

Thank you for your inquiry about the NAEP mathematics assessment. If you need additional information about the NCTM standards, contact Dr. Roy Truby, Executive Director of the National Assessment Governing Board at (202) 357-6938. His address is 800 North Capitol Street NW, Suite 825, Washington, D.C. 20002-4213.

Yours truly,

Gary Phillips
Associate Commissioner
Education Assessment Division

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From: *The Oregonian*, Saturday, October 1, 1994
Report: "Math scores falter," page E3

Despite less money overall for schools, Oregon students last year posted improvements in reading and writing at the third, fifth, eighth and 11th grades, according to the report. Oregon ranked first among the 23 states in which a large number of students take the Scholastic Assessment Test, the most widely used college admissions test.

But test scores for math were flat in the third, fifth and eighth grades and actually declined for 11th-graders, the report showed. Paulus said parents must press local schools for more and better math instruction to reverse that.

# Bloom Takes His Case to the Billings Gazette

The Billings Gazette

Tuesday, December 27, 1994

■ SAVE OUR SCHOOLS

# Education becomes a lost art

## Plummeting test scores are sign of things to come

GUEST COLUMNIST

**Alan H. Bloom**

Education observer

THE FIRST SENTENCE of a major front page Gazette article on Dec. 7 quotes a University of Montana director who says our high school graduates can't write whole sentences and says that college remedial instruction of high school subjects is widespread and increasing.

It was also reported the governor is considering measures which will not allow kids to leave high school without proving they can read, write, and so math. This discouraging education reality is as sobering and sharp as a Montana winter morning.

Meanwhile, back in our prize-winning schools, in November the administration quietly presented and our school board quietly received a closely held report buried within which was an update of School District 2 wide Iowa Test of Basic Skills results. This test, which measures the core education learning our kids demonstrated compared to a diverse reference group of three hundred thousand American children, is the best and only indicator available to see how we measure up.

The results show decline again in all core subjects from last year — the fifth year of steady decline. Last year, for the first time, math computation was below the national average. This year spelling joins math below the national average.

Some criticize the test as old and fraught with error and it is certain to be less than perfect. It is, nevertheless, the best we've got at the moment, and we are paying for it. Our school board continues to reject any action to investigate the situation and does nothing while the trend worsens.

They will wait until next year when we will use updated test. For what reason and in expectation of what? These data indicate the likelihood of a situation so serious that updated test only can be expected to confirm what has been evident for years. In the meantime we will have lost another year before they ask the administration to do — what?

When the board is absolutely, no fooling around, 100 percent sure that there might be a problem with core education, what then? Last year, the superintendent asked for $15,000 to investigate. The request was granted but nothing seems to have happened.

It is interesting that these core education indices continue to decline at the same time funding for education in District 2 is increasing. The cause of this poor and worsening performance must be complex, difficult to determine and to fix. Student demographics, curricular considerations, scheduling priorities, non teaching demands on teachers and class room techniques should be investigated. The only other possibility is that nothing is wrong with what we are doing; it is just that students are getting dumber.

Our education professionals perhaps will convene a committee and seek outside help to figure what is going on and what to do about it. How long will it take to stop the downward trend, reverse it and get us back to where we were five years ago? Some may wonder whether our system — at $75,000.00 yearly the largest public enterprise in Montana — which got us into this fix, can correct it. Why can't we get started now? Why can we not demonstrate interest with some sense of urgency to learn why our children may not be able to compute and spell as well as the average of a third of a million American children from all social, economic, ethnic and regional strata in this country who have taken the same test?

At this rate my son now in the sixth grade will be struggling to get into college by the time things could change. Most of his time in school will have been spent in a deteriorating system. There has been not a single elementary program put in place in Billings in the past five years the specific purpose of which was to improve the ability of students to read, write and compute.

Instead we are lost in a morass of making learning fun, developing higher order skills and a bold new language approach. Confidence in core education emphasis sinks lower when I read of educators enthusing over math programs that make students happier because they are taught what they want to learn and others which 'place students in their proper niche' designed to attract 'substantial, wealthy industry' to Montana.

Why would 'wealthy' or any industry come to Montana when our graduates can't read, write and compute?

Allan H. Bloom was a candidate for School District 2 Board of Trustees in the last election.

# How Students' Scores Mislead: Education Agency's New Criteria Inflate Rankings of Schools

**John Pisciotta**

*Reprinted from* The Houston Post, *August 21, 1994, with permission from the author.*

Remember the story?

The dateline was Lake Placid, N.Y.; the time was February 1980. And the headline? U.S. Upsets U.S.S.R. for Hockey Championship.

The 1980 achievement of the American Olympic hockey team was amazing. An achievement every bit as amazing was announced on Aug. 2 by Texas Education Commissioner Skip Meno. Texas public schools have produced startling gains in student achievement between the 1992-93 and 1993-94 school years. The Texas Education Agency classifies schools into four categories based on student achievement on the Texas Assessment of Academic Skills. The four categories are low-performing, acceptable, recognized and exemplary. Approximately 5,000 of the more than 6,000 public schools in Texas received the acceptable rating. (For various reasons, a few dozen schools were not rated.) The table in the next column shows the "Miracle of '94." There was a huge drop in the number of low-performing schools, from 326 to 55. Meanwhile, the number of recognized schools doubled and the number of exemplary schools tripled.

**The Miracle of '94**

| | 92-93 | 93-94 |
|---|---|---|
| Low-performing | 326 | 55 |
| Recognized | 256 | 504 |
| Exemplary | 22 | 64 |

Wow!! What a heartening achievement. Texas public schools are significantly improving the education of our children. School reforms implemented in recent years are working. Our taxes are being used more effectively.

Unfortunately, this glowing assessment may not be justified. The TEA changed the way TAAS tests are used to rank public schools. The changes established for the 1993-94 school year have brought criticism of the TEA scorecard. The Republican gubernatorial candidate, George W. Bush, has claimed the new TEA procedures are giving a false picture of school improvement.

There are several ways that the TEA has changed its ranking system.

One change is that the grade level tests, given in the areas of math, reading and writing, have been made easier and have been graded easier. Also, the grades included in the TAAS testing were expanded from 4th, 8th and 10th to include four additional grades: 3rd, 5th, 6th and 7th. Since primary grades have performed better on TAAS than upper grades, the additional grade-level testing may have boosted school rankings. The final change was in the pass rate calculations used in the school rankings. While other changes may have some significance, this article focuses on changes in the pass rate standards.

The dividing line between low performing and acceptable schools is based on the percentage pass rate on TAAS examinations.

In 1992-93, a school's pass rate was measured by the percentage of its students that *passed all three sections* of the TAAS test. To avoid low-performing status, 20 percent or more of a school's students had to pass all TAAS tests.

For 1993-94, the TEA stopped focusing on the overall performance of individual students. The pass rate was measured in terms of the percentage of students passing individual TAAS sections. To win the acceptable designation, a school had to have at least a *25 percent pass rate on all three sections* of the TAAS test. That is, at least a 25 percent pass rate in math, a 25 percent pass rate in reading, and also a 25 percent pass rate in writing.

A school that dropped under a 25 percent pass rate on one or more sections of the test would be placed in the dreaded low-performing category.

Just looking at this summary of the "old math" and "new math" standards, it is not obvious whether the standard for school success has been raised or

lowered. I will examine this issue by looking at some hypothetical examples of school performance. My overall conclusion is that if the TEA scorecard shows that a school's ranking has improved, parents and citizens cannot be confident that an improved school ranking is the result of better education. The change may have resulted from the TEA's new math.

**Table 1 . TAAS Test Comparisons**

EXAMPLE 1: 10%=10%

Student 1 passes math, reading and writing. Students 2-10 fail math and reading, but pass writing. This table shows that this school is low-performing under the old and new standards.

| | Math | Reading | Writing |
|---|---|---|---|
| #1 | + | + | + |
| 2 | - | - | + |
| 3 | - | - | + |
| 4 | - | - | + |
| 5 | - | - | + |
| 6 | - | - | + |
| 7 | - | - | + |
| 8 | - | - | + |
| 9 | - | - | + |
| 10 | - | - | + |

EXAMPLE 2: 10%=40%

Student 1 passes math, reading and writing. The failing students again pass only one exam, but the passes and failures are distributed over the three exams.

| | Math | Reading | Writing |
|---|---|---|---|
| #1 | + | + | + |
| 2 | - | - | + |
| 3 | - | - | + |
| 4 | - | - | + |
| 5 | + | - | - |
| 6 | + | - | - |
| 7 | + | - | - |
| 8 | - | + | - |
| 9 | - | + | - |
| 10 | - | + | - |

EXAMPLE 3: 10%=70%

Students 2-10 fail just one test instead of two as in the previous example. Their passes and failures are distributed evenly over the three tests. A school with no student improvement jumps from low-performing to the recognized category.

| | Math | Reading | Writing |
|---|---|---|---|
| #1 | + | + | + |
| 2 | - | + | + |
| 3 | + | - | + |
| 4 | + | + | - |
| 5 | - | + | + |
| 6 | + | - | + |
| 7 | + | + | - |
| 8 | - | + | + |
| 9 | + | - | - |
| 10 | + | + | - |

10%=10%

The first example shows a school that would have ended up in the low-performing category with both the old math (1992-93) and the new math (1993-94). Assume the school has 10 students. You can think of each student in the table as representing 50 or 100 students to get a more reasonably sized school of 500 or 1,000.

Student One passes the math, reading and writing tests. Students 2-10 fail math and reading, but pass writing.

The table for Example 1 shows that this school is low-performing under the old and the new standards. With only Student One passing all tests, the school has a 10 percent pass rate. Since the 1992-93 standard required a 20 percent pass rate to be acceptable, the school is low-performing.

Now look at each individual test to see where the school comes out under the TEA's new math. The school has a 100 percent pass rate in writing. However, this doesn't count because of the performance in math and reading. The school has only a 10 percent pass rate in math and reading. The school is low-performing because it had to have at least 25 percent pass rate on each section to gain an acceptable ranking.

The first example of school ranking is not very realistic because all failing students have the same strengths and weaknesses. However, the example does show the possibility of a school's receiving the same designation under the old and new standards.

**10%=40%**

In Example 2, Student One is still a superstar, passing all TAAS tests. The failing students again pass only one exam. However, the passes and failures are distributed over the three exams.

This school that was low-performing in 1992-93 becomes acceptable under the TEA's new math. Using the old math, this school again has a 10 percent student pass rate because Students 2-10 did not pass all the sections of the TAAS.

However, with the new math's definition of success, we see that 40 percent passed the math, 40 percent passed the reading, and 40 percent passed the writing sections. Without a single student passing one additional test, the school "achieves" the acceptable ranking with a new math calculation.

This second example of school ranking shows the fundamental impact of the TEA's new math.

In general, where A) many students have a mixture of passes and failures on the three tests and B) where these passes and failures are broadly distrib-

uted over the three sections of the test, the school's percentage pass rate increases. A school can advance its rankings simply because of the TEA's new math.

**10%=70%**

The third example shows an even more astonishing possibility: A school with no student improvement leaps from the low performing designation, past acceptable, and into the recognized category. Students 2-10 fail just one test instead of two as in the previous examples. Also their passes and failures are evenly distributed over the three sections.

Using the old math, the school in Example 3 has just 10 percent of its students passing all three tests. The school is low-performing.

However, when we look at the performance with our new math glasses on, we find that 70 percent of the students passed each of the three sections. The TEA's requirement for the recognized school designation is a 65 percent pass rate. The formerly low-performing school has become a recognized school. (In addition to the overall pass rate of 65 percent or better, to get the recognized ranking the school would have had to meet certain other requirements, such as achieving a high attendance standard.)

I do not suggest that the jump from low-performing to recognized is a common result of the TEA's new math. But the very possibility of this happening illustrates the substantial likelihood of a school's moving from low-performing to acceptable (or acceptable to recognized) with little or no improvement in student performance. When the TEA released the 1993-94 school ranking on Aug. 2, members of the education establishment and Gov. Ann Richards went to great lengths to argue that the new standard had very little impact on the Miracle of '94. Texas Education Commissioner Skip Meno was quoted in the Dallas Morning News on Aug. 3 saying, "The evidence is there that the (1994) standard is very equivalent."

While defending the new procedures for 1993-94, the public school education establishment has generally conceded that there had been some lowering of the standards.

The Fort Worth Star-Telegram reported Aug. 2 that TEA spokeswoman Della May Moore stated that if any school was rated higher on the new math standard than the old standard, the names of the schools would not be released.

Commissioner Meno stated that if the old math standard had been used with the 1993-94 TAAS tests, the number of low performing schools would have been 60 compared to the 55 under the new math.

But the Dallas Morning News cited a "state analysis" indicating that if the 1992-93 standards had been used with the 1993-94 TAAS results, the number of low performing schools would have been 169—not the 60 indicated by Commissioner Meno.

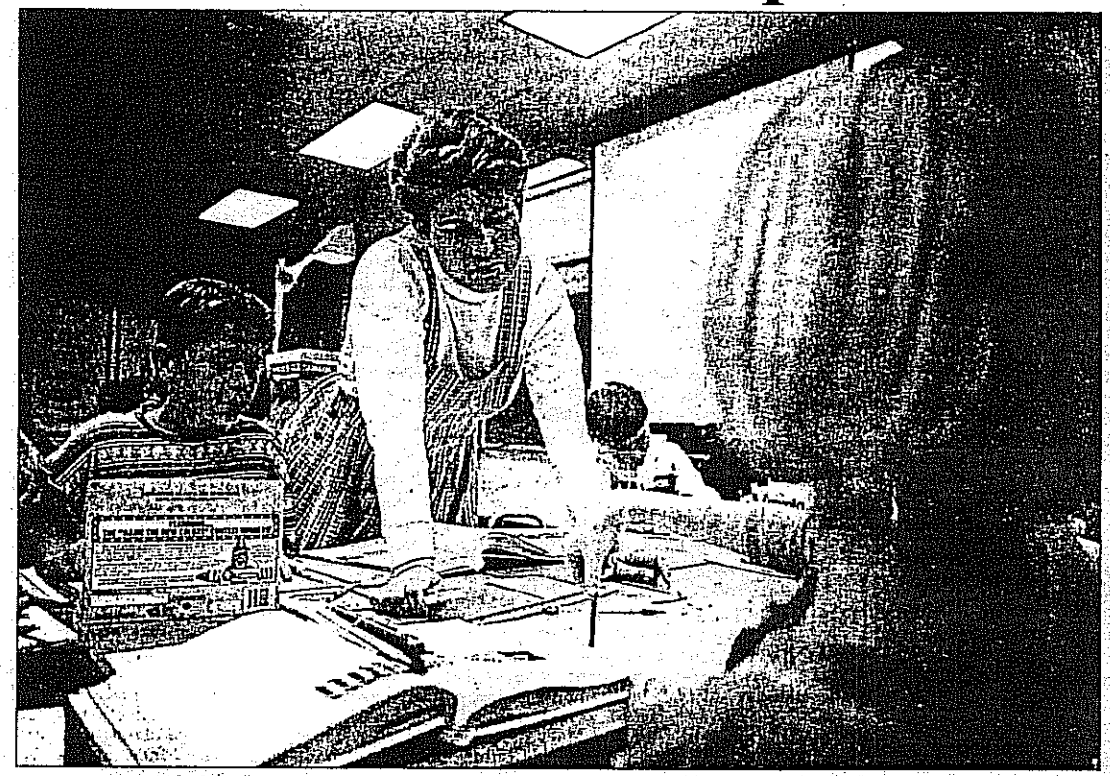
Another glaring contradiction comes from the Dallas Independent School District. According to the Miracle of '94, the number of low-performing schools dropped from 37 to seven in DISD. A DISD official told the Dallas Morning News that the number of low-performing schools would have been 21 under old math calculations. This is a difference of 14 schools for one school district. Commissioner Meno claims a difference of just 5 schools for the entire state.

Finally, the Austin-American Statesman cited a source close to Gov. Richards as stating that if the new math had been applied to the TAAS data for 1992-93, there would have been 406 schools in the low-performing category rather than 326. This implies that the new math standard is actually a higher standard. This contradicts Commissioner Meno, the source at TEA and DISD—all of whom agree that some easing of the standards has occurred.

Investigating the complexity of changed standards and the contradictions within the public education establishment is not very enjoyable. However, it is enormously important because it strikes at the heart of the issues of public school accountability. Texas voters, taxpayers, parents and teachers should have good information on the performance of public schools. Our elected officials and the Texas Education Agency have decided that TAAS tests and school rankings should be the main yardstick for school accountability.

By dramatically changing the standards for the 1993-94 school year, the TEA has made clear-cut comparisons virtually impossible and has damaged its credibility.

# Basic arithmetic stumps Boise's 4th-graders

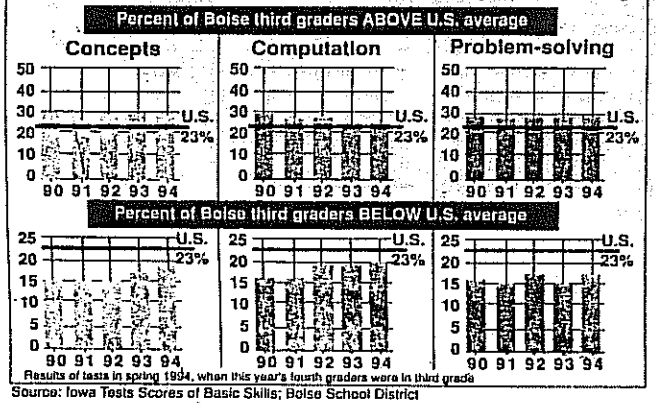


Kevin Clark/The Idaho Statesman

Kathy Compton, a fourth-grade teacher at White Pine Elementary in Southeast Boise, works with her students on a geometry lesson involving line segments and rays. Compton tries to use real-life examples to illustrate geometry.

## Boise Schools math performance

Over the past five years, problem-solving has become the strongest area in math for Boise School District students, while computation has become the weakest. The percentage of below-average students has increased in all three subject areas, while the percentage of above-average students increased only in problem-solving.




Results of tests in spring 1994, when this year's fourth graders were in third grade

Source: Iowa Tests Scores of Basic Skills; Boise School District

### Test Your Math

Here's a sampling of what Boise students are tested on in math and how their scores compared nationally, using problems representative of the types of skills measured on standardized tests:

**DIVISION**

Q: 63 divided by 9. A: 7.

- BOISE: 39 percent of students answered correctly.
- NATION: 60 percent of students answered correctly.

**MULTIPLICATION**

Q: 76 multiplied by 7. A: 532.

- BOISE: 19 percent of students answered correctly.
- NATION: 36 percent of students answered correctly.

**PROBLEM SOLVING**

Q: A fast-food restaurant routinely sells 77 hamburgers a day and 54 cheeseburgers at lunch. How do you determine how many more hamburgers are sold over five days than cheeseburgers?

A: You subtract 54 from 77 and multiply the difference by 5.

- BOISE: 40 percent of students answered correctly.
- NATION: 34 percent of students answered correctly.

## Teaching focuses on how to attack math problems, not on getting answers

By David Woolsey
The Idaho Statesman

A string of red yarn connected two youngsters during a geometry lesson this week at White Pine Elementary School.

Their fourth-grade classmates watched as they stretched the yarn further to demonstrate what a line looks like. Then teacher Kathy Compton asked them to stretch their minds.

"If there were no gravity and an unlimited amount of yarn, how far could they walk from each other?" she queried. The response came: "Forever."

The class learned from the demonstration that a line goes forever in each direction. They also learned that the principle exists in the real world, not just in a textbook.

Boise fourth-graders can tell you why a line goes on forever. But they can't put pencil to paper and tell you that 86 times 9 equals 774.

Here's what this fall's standardized test scores show:

- Six of 10 Boise fourth-graders were unable to divide a two-digit number by a one-digit number — such as 78 divided by 6.
- Only one in five fourth-graders were able to solve a two-digit number multiplied by a single-digit number — such as 78 multiplied by 6.

Some administrators are so concerned about the decline in computation skills that they're looking to see whether there's a flaw in how math is taught in Boise schools.

**Can't multiply, divide**

District officials don't know why students are having more trouble. But the solution to the problem may mean that youngsters will spend less time using calculators and talking about how to solve problems, and more time practicing basic math by hand.

Fourth-grade math computation scores on the Iowa Tests of Basic Skills are among the lowest test scores in the district and below the national average.

Some schools have higher computation or problem-solving scores than others. But an analysis of the items covered on the test found that district-wide, the most serious weaknesses were with students' ability to multiply, divide — and even subtract.

Boise's computation problems show up mainly in elementary grades. By the time students are high-school juniors, they've improved their computation skills to above the national average.

The Idaho Statesman
Boise, Idaho
Friday, February 3, 1995
35¢

# Math

Five years ago, Boise began de-emphasizing basic, pencil-and-paper calculations. The district placed more emphasis on learning how to decipher word problems.

Example: "The ceiling in Mr. Roth's classroom is 3.5 meters high. Mr. Roth is 1.85 meters tall. How far is the ceiling from the top of his head?"

Students can solve the problem by hand. Or they may just be asked to determine what they need to do to solve the problem. They then can use a calculator — or simply estimate — to find the final answer.

The district's decision came about the same time as the National Council of Teachers of Mathematics issued a set of standards changing what its members — more than 100,000 math teachers — felt needed to be stressed.

By reacting quickly, the Boise district was in the forefront of the national trend.

Now kids are getting into algebra in elementary school and they're learning how to use graphs and charts to solve problems, rather than just hand calculations. And they're learning how to communicate in mathematical terms.

### Reaction is mixed

Many parents say they're satisfied with how math is taught in Boise.

"My son is introduced to basic concepts in algebra and geometry so when he gets to junior high and high school it won't be a big surprise," says Brenda Tominaga, the mother of a Franklin Elementary fifth-grader, "I think Andrew's teachers have stressed basic math facts."

But other parents have their doubts about the national movement away from stressing traditional basic skills.

They say teachers often focus too much on the process of problem-solving rather than the answer, which leaves children unprepared for the workplace — where correct answers are important.

"My son is introduced to basic concepts in algebra and geometry so when he gets to junior high and high school it won't be a big surprise."

Brenda Tominaga

Boise parent Marge Litster stresses traditional drill-and-practice of math problems in home-schooling her two elementary-age children.

"I think it's important because it gives them an honest knowledge of numbers," she said. "I believe the understanding of numbers and the ability to look at a number and know whether it's right or wrong come from rote calculation — doing it over and over until you can do it with your eyes closed."

But Steve Grantham, the chairman of Boise State University's mathematics department, supports the move toward problem-solving and real-life application of math.

"There certainly is a minimum level of rote competency that's required. When a student has to use a calculator to solve 7-times-6, it is a problem," he said. "What is more important is for someone to be able to recognize how the problem can be formulated in an arithmetic question and determine what tools are needed to solve it."

### Calculators in classrooms

Boise students use calculators starting in elementary school. The idea is to give them the chance to solve complex real-life problems without having to continue to do tedious paper-and-pencil math.

In high school classes, where students are doing complex algebra, they can even use calculators on tests, because the point is to see whether they can understand formulas, not whether they can do the math. Students can even use calculators on the Scholastic Aptitude Test.

However, Don Coberly, who is in charge of the district's curriculum, says local educators concerned by worsening math abilities will go back and try to strike a balance between problem-solving and computation.

The district won't have a solution until officials can meet with teachers and find out what's causing the problem.

In order to improve computation skills, it could mean spending more time on drill-and-practice work, giving students supplemental material that stresses computation, or setting aside lessons to go back and review computation skills.

### Math at work

Calculators won't disappear from Boise schools. Educators say that using technology is a part of today's workplace.

They're right. Few employers require that their employees do math calculations by hand.

"Mostly on math skills we want them to be able to handle a computer — or a calculator," says Philip Brollier, the owner of a Boise insurance agency. "We rarely do any math in our heads. It takes too long."

Nationally, business and industry have pushed for education to teach students more problem-solving skills in math.

Businesses agree that the ability to work out calculations on paper is less important than the ability to use math to handle tasks in the workplace.

"We want our employees to be able to correctly figure rates for our customers," Brollier said. "They need to know how to use the formulas and they need to be able to tell if the answers they get as they're punching in the numbers are reasonable."

## 3rd- and 4th-grade curriculum

Ten things third-graders are expected to learn in math, and the amount of time spent on the subject in class.

1. Place value — 15 days
2. Three- and four-digit addition and subtraction — 16 days
3. Time, measurement and geometry — 11 days
4. Multiplication concepts and facts — 23 days
5. Multiplication computation — 13 days
6. Division concepts and facts — 26 days
7. Time and money — 13 days
8. Fractions and decimals — 15 days
9. Statistics, graphing and probability — 10 days
10. Geometry and measurement — 13 days

Ten things fourth-graders are expected to learn in math, and the amount of time spent on the subject in class.

1. Addition and subtraction — 12-19 days
2. Time and money — 6-9 days
3. Multiplication of one- and two-digit numbers — 21-33 days
4. Division of one- and two-digit numbers — 24-36 days
5. Fractions — 16-22 days
6. Measurement — 10-14 days
7. Geometry — 7-11 days
8. Decimals — 7-12 days
9. Problem-solving strategies — 5 days
10. Place value — 8-11 days

## 12th grade curriculum

Ten things students are expected to learn in 12th grade math in the workplace.

1. Solving problems that involve linear equations
2. Graphing data
3. Working with statistics
4. Working with probabilities
5. Using right-triangle relationships
6. Factoring
7. Patterns
8. Quadratics
9. Geometry in the workplace
10. Solving problems with computer spreadsheets

Ten things students are expected to learn in 12th grade advanced calculus.

1. Cartesian geometry
2. Epsilon-Delta limits
3. Chain rule
4. Rolle's theorum
5. Infinite limits
6. Business applications
7. Newtonian approximations
8. Sigma notation
9. Trapezoidal rule
10. Improper integrals

**The Idaho Statesman**



OUR VIEW

# Parents want to see results in reading, 'riting, 'rithmetic

A school district where students can't accurately multiply, divide or subtract fails the course. If fixing the problem means having youngsters spend more time practicing basic math by rote, then fine, so be it. But make certain they get the basic computation skills.

News that basic arithmetic stumps fourth-graders in the Boise School District puts one of the essential three R's on a shaky stool. When you realize that studies show that students have trouble with the other two R's — reading and 'riting — you can see why parents in Idaho are joining the growing national chorus to revamp public schools.

They want three things: results, results and results. Some ways they can get them include:

■ Insisting on the basics. At the very least, parents and taxpayers expect high school graduates to punctuate and use the English language correctly. Yet an alarming number of them can't. Tests show that one-third of high school juniors in Idaho can't write clear, grammatically correct essays.

■ Stopping grade inflation. More than half of all high school students receive A's and B's. Such high grading cheats students out of a realistic assessment of their academic performance.

A Friday news story by Statesman education reporter David Woolsey outlined the current math problem facing the Boise schools: Fourth-graders' computation scores on the Iowa Tests of Basic Skills are among the lowest in the ~~district~~ state and below the national average.

In short, too many kids can't put pencil to paper and tell you that 86 times 9 equals 774.

District officials aren't exactly sure why that is, but one thing is clear: Five years ago, Boise began placing more emphasis on deciphering word problems than on getting the right answer in math calculations.

Not surprisingly, those students who learned math before the system changed — high school juniors and seniors — do much better. Their computation skills are above the national average.

Too many high school students already are only marginally equipped to compete. Now colleges and businesses alike spend unnecessary time and money teaching recent graduates remedial skills in math and language.

Boise can't afford to send its children out into the world unprepared for the workplace. A strong secondary educational system is essential to the future of the area.

Fortunately, the Boise School District recognizes that changes are needed and is taking action, including strengthening students' computation skills. For the most part, Boise is blessed with a safe, clean and, to a great extent, satisfactory public school system.

But the more complex world students live in today makes powerful new demands for a more aggressive curriculum and a higher standard of achievement from students and teachers alike.

# Opening Address, Eugene Direct Instruction Conference

**Jean Osborn**
**Associate Director of Center for the Study of Reading**
**University of Illinois, Champaign, Illinois**

## Direct Instruction: Past, Present, Future

People come to conferences for a number of reasons. We are here to exchange ideas, learn more, and find out what's new. We are also here to see old friends, make new ones, and check out the best spots in Eugene. But I suspect a compelling interest in effective teaching—and the resulting effective learning of our students—is what really brings us here.

The title of this conference, "Twenty Years of Effective Teaching" certainly implies that an anniversary is being honored. And indeed, that is the case. It was twenty years ago, in July of 1973, that the first Direct Instruction Conference took place in Eugene, Oregon. About 200 people attended that conference. Not quite 500 people are at the conference that begins today. Between 1973 and now, I estimate that about 8000 people have taken part in the Eugene Direct Instruction conferences. I think it goes without saying that each one of these events has focused on effective teaching, and I certainly *will* say that as a result, thousands of children in American schools have benefited from what teachers and administrators have learned at the conferences.

From my point of view, however, the title, "20 Years of Effective Teaching," doesn't take a long enough view. To tell you why, I have to bring up the name of a particularly effective teacher whose name is closely associated with Direct Instruction—and that is Siegfried Engelmann. I won't call him the original effective teacher, the history of the world has provided us with a number of effective teachers—thank heavens. But I will permit myself to say that this particular effective teacher has made it possible for thousands of other teachers to learn a lot about effective teaching, and therefore a lot about helping their students become successful learners.

Ziggy Engelmann has been engaged with effective teaching for more than the 20 years acknowledged by the title of this conference. This longevity allows us to celebrate three anniversaries. 1) 20 years of Direct Instruction conferences in Eugene, 2) Ziggy's 25th year at the University of Oregon, and 3) the 30th year of the-beginning-of-it-all. It was 30 years ago this summer that Ziggy began working with a group of children on a grant that Carl Bereiter, a professor at the University of Illinois, had received from the Carnegie Corporation.

I am honored to have been asked to open this conference, and even though I have established that this is a triple celebration, I will continue with my plan to give the talk titled, "Direct Instruction: Past, Present, Future." This title implies sequence: I will start with the past, move to the present, and end up with the future. But, I will warn you that my past with Direct Instruction is more extensive than my present, and that I will talk more about the past than about the present. I hope you will agree that in this case, the past does lend insight to the present and perhaps even forecasts some of the future.

Someone once asked me to write a little essay about what it was like to work on an instructional program with Ziggy. Because I had spent a number of years sitting beside him as we worked on language and reading programs, I figured it would be an easy task to write about these activities and thus give an idea of Ziggy at work—which, by the way, is something he does a lot of. Here is what I wrote: He is sitting at an old, beat-up typewriter dashing out a page of important prose. Many typed pages are stacked on the table next to the typewriter. A smile of pride is on his face because he is thinking of the many students—students other people have given up on—who will learn from what is written on those pages.

I imagined an audio component to this paragraph. Peppy music was playing in the background. Children's intense but happy voices, in group-response mode, were heard in the foreground.

Although this paragraph, and its audio accompaniment, provided a description of Ziggy that was clear and perhaps heartwarming, it was much too

simple, and therefore deceiving. What did I need to add? How about the crumpled-up papers that have been tossed across the room? What about the open bag of potato chips next to the typewriter? What about the anguished helper (Cookie, Doug, Jerry, Phyllis, Susie, Bernie, Steve, me, or someone else) who is sitting in the corner, clutching a much altered scope and sequence chart? And that imaginary sound track doesn't reveal the quality of the Ziggy voice—loud and outraged. Nor does it inform us of the content of the utterances that remark (colorfully) upon the shortcomings of university professors, the shortsightedness of publishers, the limitations of some school administrators, the problems with the United States Department of Education, the worrisome condition of the state of Oregon's Department of Education, and the stupidity of the man down the street—and of his dog.

Well, I could never figure out how to put it all together, so I resigned from the task of describing Ziggy at work. But, in preparing this talk, I decided to try again. I decided to concentrate on the beginnings of Engelmann's life as an educational interventionist, because I am one of its few witnesses. To convey these beginnings to this audience, I put together a collection of snapshots that I wish I had taken 30, 28, 26, and 24 years ago. I will give the period of each snapshot, the place, describe the event, and give an interpretation.

**SNAPSHOT 1**

**Period:** Early fall, 1963.

**Place:** College of Education, University of Illinois, Champaign, Illinois.

**Event:** This picture is placed in one of the tiny second floor offices in the College of Education. The office belongs to Carl Bereiter who is sitting at his desk. Ziggy is sitting in a small chair next to Carl's desk. He is too big for the chair and too big for the office. I have distanced myself and am sitting on a chair in the corner of the room. This is my first grown-up job, and I can't figure out what the job is. Carl and Ziggy both look wild-eyed. Ziggy is pounding Carl's desk with his fist. These two men are engaged in a big discussion that is bordering on a big argument. Off in the corner of the room, I am looking alarmed.

Because I was there, I can report what they are discussing. The topic is Carl's Carnegie Corporation grant: "The Acceleration of Intellectual Development in Young Children." Ziggy is proposing all kinds of radical plans for accelerating the development of young minds, and at the same time settling some daunting questions about the development of children. He is claiming that it's all environment—and that any child can be taught anything. Carl is unwilling to abandon heredity as an important contributing, and sometimes limiting, factor in the development of human beings. Ziggy proposes to split up forty sets of identical twins and to provide one of each pair with a superstimulating environment and let the other one grow up in the direst poverty, deprived of physical and mental stimulation. Carl is proposing caution.

I can also tell you what I was thinking and why I looked alarmed: Is this what working at a University is like? I won't let them get near any twins I know. All these guys ever do is talk. I can't see how we are going to accelerate the intellectual development of any child. I don't think this is where I want to be.

**Interpretation:** These long-winded meetings were probably essential to the development of the ideas that were the foundation of the first Bereiter Engelmann preschool. They were also essential to the "official" educational education of Ziggy. Carl was his mentor, in the best sense of this now somewhat overused word. We will look at the next snapshot to find out how the idea for the preschool came about.

**SNAPSHOT 2**

**Period and Place:** Same as above, but a couple of weeks later.

**Event:** Carl and Ziggy are looking at me, I am holding up an issue of Life Magazine. I am showing them a full-page photo of a little boy in a New York city classroom that is run by a psychologist named Martin Deutsch. I am telling them that the article is about helping children who are likely to fail in school, and that Martin Deutsch has organized a preschool for poor children to teach them things that will improve their achievement in regular school. Ziggy (or maybe it is Carl) says: If we work with children who come from families where everyone does poorly in school, we can more easily measure the effects of what we are doing to accelerate their intellectual achievement. Carl (or maybe it is Ziggy) says: You're right. Let's do that. Let's find some four-year-old kids.

"I have worked with the principal in an elementary school on the north end of town," says Carl. "I'll get the kids."

"You'll find lots of families who can use what we can offer," says Ziggy, not yet really knowing what we had to offer.

"Jean, you find a place and organize the car pools," says Carl.

And I think: At last they have stopped talking. I think we're going to have some action. (Sexism wasn't an item in 1963, so without missing a beat, I found a space in a campus church and convinced

some of my right-minded women friends to drive into the north end and car pool the students.)

Snapshot 2 features a picture within a picture. Ziggy really likes the Life Magazine picture that I am holding up. It shows an intense looking four-year-old boy standing next to the toy stove in the kitchen corner of the preschool. He is vigorously stirring something in the toy frying pan. The caption at the bottom of the page reveals what he is saying: "I'm just cooking up these goddamn grapes."

**Interpretation:** This was an important day in the careers of each person in that room, and to the school and the life-achievement of a lot of students in American schools. That Carl Bereiter was an ambitious—and already prolific—educational researcher meant that the project would be a research project and that very soon books and papers about the project would be appearing in the academic press. And that the project would be discussed at meetings—which leads us to Snapshot 3.

SNAPSHOT 3

**Period:** About 18 months later.

**Place:** The annual American Educational Research Association conference, in a session being held in a meeting room in a downtown Chicago hotel.

**Event:** Phil Reidford, Dave Brison, Carl, Ziggy, and I are members of a panel. Lots of serious looking academic people are in the audience. They are attending this session on a newly fashionable subject: the education of poor children. Remember, this is long before the Head Start program was established. Carl is at the lectern talking about the progress of the students in the preschool. Phil, Dave, Ziggy, and I are nervously examining our notes. We will soon talk, in turn, about how the children are learning reading, arithmetic, and language. Everyone, except Carl—who has done this sort of thing before—is very nervous.

**Interpretation:** This session was well attended and well received, but Ziggy thinks more people should have been there, and that the press should have been there to report on the importance of this work. "We will turn American education around," he says to me after the meeting. But it turns out that Ziggy, Phil, Dave, Jean—and even Carl—should have been even more nervous. Unbeknownst to them, a lot of those serious looking and seemingly agreeable academic people in the audience are going to be detractors, mockers, attackers, and enemies. And it turned out that not all the detractors, mockers, attackers, and enemies were in that room. Some were in residence at the University of Illinois College of Education. Next, we'll see a snapshot about that situation.

SNAPSHOT 4

**Period:** One year later.

**Place:** University of Illinois College of Education, Wes Becker's office.

**Event:** Carl and I are walking into Wes Becker's office. Wes, because of his interest in education, has just moved from the Psychology Department to the College of Education. Carl and I are ready to explain the situation to Wes. Carl, who has moved to Canada, is on a visit to the Illinois preschool project. The project is moving forward, we now do pre-school and kindergarten. The kids are doing well. But because no one in the College likes it very much, it is threatened with extinction. Carl and Jean have the idea that Wes might be able to provide the leadership (and the protection) that the University administration would accept—and thus permit the project to be continued. Much to their amazement, even before they sit down, Wes says, "You've come to ask me to work with Engelmann. I'm willing to do that because I think those classes are the most interesting thing going at this University."

**Interpretation:** Wes Becker's active interest in those classes not only saved the program but turned all of us into "official" behaviorists. Which, of course, would lead us into more trouble with some of the academics who were in the meeting room at the AERA meeting. (I also felt that sometimes that label got in the way of people seeing what we really were promoting, which was instruction.)

That we were held together turned out to be very important, because it was only a few months later that a man named Robert Egbert called from the United States Office of Education and presented the project with an offer to take part in a Planned Variation program for Head Start and something called Project Follow Through. We were being asked to take part in a comparative study of different instructional models, to be one of those models, and to organize classrooms in school districts throughout the country. Becoming a part of Project Follow Through also meant we had to gear up to work in first, second and third grades. Someone said, "Sure, we'll be pleased to become part of Follow Through." So, we all got to work. But, in the midst of all that work, a big move occurred. The next snapshot shows what happened.

SNAPSHOT 5

**Period:** Summer, 1968.

**Place:** The airport in Champaign, Illinois.

**Event:** Ziggy is climbing up the steps to get on an airplane to fly to Eugene. He looks worried. I look sad. I am at the gate, waving good-bye. It was the move of Ziggy and most of the Direct Instruction

Follow Through staff to the University of Oregon.
**Interpretation:** But, as it turned out, I needn't have looked so sad. It was because of the nation-wide nature of Follow Through, that I continued to meet Zig and a whole bunch of other people in various school districts throughout the country. Our task was to help teachers learn to be Direct Instruction teachers. I also continued to work on programs, as did a lot of other people involved with the Follow Through project. The next snapshot gives some idea of the nature of the Follow Through activities.

**SNAPSHOT 6**
**Period:** The entire Project Follow Through period.
**Places:** Lots of them—Tupelo, Mississippi; Washington D.C.; Dayton, Ohio; East St. Louis, Illinois; Grand Rapids, Michigan; Ocean Hill-Brownsville, New York City; Williamsburg, South Carolina; Uvalde, Texas; East Las Vegas, New Mexico; Rosebud Indian Reservation, South Dakota; Smithville, Tennessee—and more.
**Events:** The events of Project Follow Through cannot be shown without displaying an entire photograph album of snapshots and writing an accompanying book. What I will try to convey here in a sort of photo montage are the huge amounts of travel, optimism, frustration, planning, negotiating, and effort that were associated with the Project. Lots of familiar people appear in this montage; some are from the Follow Through staff and others are teachers and administrators from the schools in which they worked. We can see Doug, Linda, Susie, Liz, Gary, Bob, Jim, Alice, Ruby, Geraldine, Phoebe, Glenda, Eunice, Jim, and many, many more. Several images of Ziggy appear at the center of this picture—they show him looking exhausted, triumphant, enraged, and disappointed.
**Interpretation:** For Ziggy and the Direct Instruction Follow Through staff, this is a period of superhuman exertion, major triumphs, enormous rages, and big disappointments. Zig looks exhausted because the work is overwhelming and can be accomplished only by the exertion of enormous amounts of effort. The 15 hour work days have gone on for years. Zig looks triumphant because of the achievements of students and their teachers in the most unlikely classrooms in schools throughout the country. His rages are caused by obstacles (reasonable and unreasonable) that stand in the way of achieving the major changes in American education he had talked about at the AERA meeting in Chicago. I have come to believe the disappointments he faced in Project Follow Through were inevitable and were (and still are) based in the nature of the American educational system. But, in the next snapshot, we see some of the best aspects of the American educational system.

**SNAPSHOT 7**
We have another photomontage. In the foreground are a whole bunch of Illinois people who have settled into life in Eugene. Zig, Doug, Susie, Gary, Karen, Carol, Liz, Jessica, Don, Linda—and even more are clustered together. They are learning to cope with the mountains, the ocean, tall trees, rain, rhododendrons, the counter culture—and the Eugene Airport. Ziggy is in one corner of this picture. He is in the middle of a forest and is sitting on a motorcycle. He has discovered the thrills of planting trees in his own forest, and of motorcycle riding. But the most interesting aspect of this picture is that lots of other people are walking into the picture. There are teachers and administrators from school districts in Oregon, Washington, California, and in fact, the whole country. There are undergraduate and graduate students who are attending the University of Oregon to learn about Direct Instruction teaching, supervision, and program writing. Other people appear—the curious and the devoted. In fact, lots of people in this room are in this picture. The next picture shows yet another group of people.

**SNAPSHOT 8**
**Period:** From 1966 to the present.
**Events:** This is another photo montage. The SRA editorial offices in Chicago are in the lower left hand corner. Ziggy is talking to an editor. He looks pained. She looks irate. I know what he is saying: "What, you want to add commas to that sentence? No way." An executive of SRA, looking grim, is in the right hand corner. He is talking to a regional manager. I also know what he is saying: "What? SRA is supposed to provide teacher training? I thought these programs taught themselves." In the upper part of the picture, you can see that the homes, garages, and cars of the SRA staff associates are loaded with *Distar* boxes. Up in the right hand corner are pictures of the staff associates talking earnestly—and on occasion, deviously—to public and private school curriculum directors, reading coordinators, committees of teachers, and individual teachers. They are telling them about these unusual programs. And in the middle of this picture are the programs:

Distar Reading
Distar Language
Distar Arithmetic
Reading Mastery
Morphographic Spelling
Spelling Mastery
Reasoning and Writing
Expressive Writing

Corrective Reading
Connecting Math Concepts
Corrective Mathematics
Mathematics Modules

**Interpretation** The interpretation is very simple. Lots of people worked very hard to create lots of Direct Instruction programs. The programs were edited and published in Chicago, and then sold by the SRA Staff Associates. Lots of teachers and students tried out those programs and found them useful. But of course this simple interpretation doesn't get anywhere close to the drama and stress that were—and still are—involved in every one of these activities.

There are no more snapshots to describe—which means I am finished with the past and that we are now at the present. The period is summer, 1994 and the place is the Hilton Hotel in Eugene. The event is this large roomful of people who are here to learn about and discuss Direct Instruction programs. To set us up for this meeting, I am going to list a few of the somewhat unusual general principles that are features of each one of the Direct Instruction programs. The programs feature:

1. A commitment to the belief that all children can achieve if taught well, and in some cases, persistently
2. Carefully designed instruction
3. Classroom tryouts that are the basis for program revision
4. A very rational, levelheaded, and unromantic approach to teaching and learning

In the prevailing climate of educational theory, policy, and practice, none of these general principles is particularly fashionable. Nor is it particularly fashionable to evaluate the success of educational theories and practices on the basis of student performance. But oddly enough, it is fashionable to ask if theories and practices are research-based. So, I will ask the question. "Are Direct Instruction programs research-based?" The short answer to that question is, "Yes." The long answer, which includes explanations of how and why, is another talk. But I will make a strange point about research-based and S. Engelmann.

In program after program, no matter what the subject, Ziggy has demonstrated the ability to analyze the knowledge structures implied by the subject matter and figure out what the learners need to know to grasp, understand, comprehend, "own," utilize (whatever term pleases you) that subject matter. Furthermore, he has demonstrated the ability to design and sequence instructional tasks, as well as practice materials, that permit teachers to teach and students to learn and understand this subject matter. In doing all of this, Ziggy has often figured out in advance what educational research later establishes.

Before leaving this point about the research base of Direct Instruction programs, I want to give you and idea of how Ziggy's insights not only have predicted the topics of current research about reading, but also some of the conclusions. I have selected three topics from research about reading.

1. Schema Theory. One of the most agreed upon results of the research of the past 20 years in reading and cognitive psychology is that the new information, facts, and ideas that we learn get hooked into the information, facts, and ideas that we already possess. The more we already know about a topic, the easier it is to learn more. This notion is at the heart of the organization of the content of all of the Direct Instruction programs, most especially *Reading Mastery III, IV, V* and *VI*. I challenge you to see any evidence of that kind of planning in a mainstream reading program.

2. Acquisition of Vocabulary. Some of the most respected researchers in the fields of linguistics and reading comprehension have demonstrated again and again that the probabilities of new words being learned is very low when they are presented in one vocabulary lesson, and then read in one paragraph in one story. For students to learn new vocabulary so that they "own" the new words requires repeated encounters with those words. Think of the number of times students encounter new vocabulary in *Reading Mastery III, IV, V* and *VI*. They discuss what the words mean with their teachers, they read them many times in their textbooks, and encounter them again in their workbooks and skillbooks. I challenge you to find that kind of care in other reading programs.

3. Beginning Reading. The latest discovery in beginning reading instruction is phonemic awareness. Phonemic awareness implies that students understand that spoken words, in addition to conveying meaning, contain individual sounds. And that it is the sounds of spoken words that map directly onto the letters of the written words. The first *Distar Reading* program, published more than 20 years ago, contained numerous exercises that helped children become phonemically aware. These exercises, only slightly refined, appear in the latest edition of the first level of *Reading Mastery I* challenge you to find such attention to this important aspect of beginning reading instruction in other reading programs. I could go on about some other important aspects of beginning reading instruction that appear in *Distar* and *Reading Mastery I*, for example, rhyming practice, attention to spelling

patterns, repeated readings, and the importance of relating the words in the student text to the sound/symbol relationships being taught in the student lessons. But, my time is running out.

I do not want to leave the present without talking about the economics of Direct Instruction. To find out SRA's current views of the economic viability of the Direct Instruction programs, I called Jack Chapel, vice-president of SRA. Jack has been involved with Direct Instruction programs ever since they were published. He reports that Direct Instruction programs are enjoying a significant increase in both interest and sales and believes this is due to the general concern of educators and parents about the achievement of children who are at risk of academic failure. Most particularly, he believes that the reauthorization of the Elementary and Secondary Education Act will provide even greater opportunities for the school-wide implementation of Direct Instruction programs. This is good news for the present and the future.

I want to make one more point about both the present and the future. As I pointed out earlier, and some of you know all too well, the educational climate is not uniformly sympathetic to Direct Instruction programs. Education is known for its swings, fads, and fashions—and for its varying approaches to instruction. I will list a few of the approaches that have surfaced in the past 20 years:

Open Classrooms
Language Experience Reading
Child-Centered Curricula
The New Math
Discovery Learning
Higher-Order Thinking Skills
Invented Spelling
Process Writing
Literature-Based Reading Instruction
Whole Language
Content Area Standards
Teacher Empowerment
Outcome-Based Instruction
Portfolio Assessment
School Restructuring

The innovations on this list were and are often surrounded by controversy. Support for many of them is based on strong belief systems and very little data. Many are exasperating. Some make us mad. Some have elements of good ideas, and in fact some will stay with us in one form or another. I think you will feel better about that last statement when I say that I feel totally confident in adding Direct Instruction to the list. It has been around for as long as any of the innovations on the list, and I predict it will be with us for a long time—long after some of these entries are relegated to the same status as Dick and Jane readers.

The list of educational innovations, with Direct Instruction programs added to it, permits us to slide very quickly into the future, which if you will recall, is the last section of my talk. I will give some advice for anyone involved with Direct Instruction programs, and next—and finally—I will delve into the past to reveal a message that should give all of us confidence as we face the future.

1. Keep the interests of the students foremost as you work in classrooms and make administrative decisions about what to teach and when. I have friends who can argue for hours about the merits of individual opera singers. These people are knowledgeable, opinionated and passionate about their beliefs. But, their arguments do no harm, because there are no victims. The singers keep on singing. In contrast, educational arguments—and subsequent decisions—are often made on the basis of factors that have very little to do with the best interests of the students. These arguments can have victims—those students who do not learn very well in approaches that are only supported by passionately held good intentions.

2. Keep data about student performance and use it as the basis for making changes, and supporting what you are doing.

3. Avoid odd bedfellows—not all people who support "Back to the Basics" are aware of the complexity of learning "the basics." Not all people who support phonics instruction know the difference between an effective and systematic beginning reading program and a pointless program of skill and drill.

To conclude my talk, I am going to dip again into the past. I hope you will agree that this particular message from the past illuminates both the present and the future. Here is how I got this message.

Last spring, at the most recent meeting of the AERA, I met Bob Egbert. Bob served for years as the National Director of Follow Through, and later became Dean of Education at the University of Nebraska. He is now a professor at the University of Nebraska. Bob asked about Ziggy. I told him I would be putting together a talk to celebrate 20 years of Direct Instruction conferences in Eugene. "Are you going to talk about Follow Through?" he asked.

"Of course," I said.

"Well, I'd like to say something about Ziggy and Follow Through," he said.

"Write him a letter," I said, "and send it to me."

And he did. Here it is.

July 21, 1994

Dear Ziggy,

No one who was not there during the early years of Head Start and Follow Through can know how much your initiative, intellect and commitment contributed to the development of those programs. You simply shook off criticism and attempts at censorship and moved ahead, because you knew you were right and that what you were doing was important for kids.

Lest you think that censorship is too strong a word, let me remind you that many in the early education field did not want your program included in Follow Through. As confirming evidence for my personal experience and memory I cite the Head Start consultant meeting held in, I think, September 1966, in which a group of consultants, by their shrill complaints, stopped the full release of a Head Start Rainbow Series pamphlet which described an approach to working with children that was somewhat more direct than the approach favored by main line early childhood educators—but one that was much less direct than the one you and Carl Bereiter were then developing and using. The endorsement of Milton Akers for inclusion of "all" approaches in Head Start and Follow Through Planned Variation made our task much easier.

Ziggy, despite what some critics have said, your program's educational achievement success through the third grade is thoroughly documented in the ABT Reports. Your own followup studies have validated the program's longer term success. I am completely convinced that more extensive studies of multiple outcomes, which the Department of Education has been unwilling to fund, would provide a great deal more evidence for your program's success in many aspects of the lives of its graduates. Rather than reciting or debating program success, however, I want to relate four brief incidents, each of which tells something that I treasure about Ziggy Engelmann. Each one of these little stories carries its own descriptive title.

1. **The Horse Race.** (Ziggy is competitive.) For Ziggy Engelmann, life consists, in part, of a series of exciting competitions. I'll never forget our Sponsor Meeting in "February" 1968 when we Feds were tiptoeing around, trying to get all sponsors to accept an evaluation which would permit examining programs in relation to each other. Ziggy didn't ease our task when he said, "Let's cut the crap. This is a horse race, and we intend to win." Incidentally, he also brought a different level of honesty, if some increased discomfort, to the discussion.

2. **I Promised Some of My Friends...** (Ziggy is forthright.) This incident occurred in April in the auditorium at 110 Livingston Street in Brooklyn—the New York City Board of Education. This was New York City's own version of the earlier sponsor selection meetings held in Kansas City. In New York City, parents, teachers, and principals had assembled to hear Illinois, Kansas, Bank Street, New York University, and others describe their models so that they could make sponsor selections. School people were in one part of the auditorium; parents were in another; and Feds and Sponsors were in a third. Following the presentations, a principal stood and spoke at length about how thrilling it was to see parents and teachers coming together in a common cause. He then asked if someone could help him understand how some of the approaches (meaning behavioral approaches) could help New York City's young, poor children. After a very softly worded, conciliatory response by one sponsor, Ziggy, who had been shifting from foot to foot throughout the question and the initial sponsor answer, stood up and said, "I promised some of my friends that I wouldn't say bullshit today, so I won't." He then went on to question how parents and school people could work together when they were seated separately, and continued with references to the so-called success of current early education programs for New York City's children. He concluded with a description of his own program, and predicted its likely success.

3. **The Mustache.** (Ziggy is not always conventional.) Some time after the New York City incident, Houston school district's Federal program representative asked us to take a group, including some sponsor representatives, to Houston to meet with the "deputy" superintendent and others. Of course we invited Ziggy. The day before the meeting, Houston's representative said to me, "Oh, by the way, I was instructed that there should not be anyone with a mustache." (Yes, I do know that in 1994 this sounds strange.) We did a quick memory check of who would be in Houston. The only person we could not be sure would not have a mustache was Ziggy. (Dick Snyder was not going.) Then we decided that principle was more important to Follow Through than having the largest city in Texas so we proceeded without any formal checks. When Ziggy arrived, he had no mustache, only a beard. The meeting was successful, if a little cool.

4. **The Teacher.** (Yes, the man is a Teacher!) Lawrence, Kansas, July 1968. The University of Kansas model was having its first summer workshop for teachers. Don Bushell had invited Ziggy to do a demonstration lesson. My image of that occasion is still crystal clear. Ziggy was at the front of the large classroom when a half dozen five-year-old children

were brought in. They were shy in front of the large audience and had to be encouraged to sit in the semi-circle in front of Ziggy. "How in the world," I thought, "will this large, imposing man who has not been educated as a teacher cope with this impossible situation?" I need not have been concerned. Within three minutes the excited youngsters, now on the edge of their chairs, were calling out answers individually or in unison, as requested, to the most "difficult" of Ziggy's challenges and questions. By the end of the demonstration lesson, the children had learned the material that Ziggy taught; they also had learned that they were very smart. They knew this because they could answer all of the questions that Ziggy had assured them were too hard for them!

Well, there they are—four little stories—each one of which reminds me of something important about this man. But, in conclusion, I will say that Ziggy, your programs have contributed immensely to children's education—and to their lives. Thus, the programs are important. But the nature and intensity of the dialogue that your work has produced may have been even more important than the programs, per se. Almost single-handedly you forced us out of our intellectual and programmatic complacency. Your work forced us to confront critical issues of how to provide better education for young children. Children's education today is not where it should be, but it is greatly advanced from where it would have been without Ziggy Engelmann.

My sincere gratitude, Ziggy.

I think all of us can express that kind of gratitude. Thank you very much.

# Empirically-Based Truths About Direct Instruction (DI)

**Sara Tarver**
**University of Wisconsin, Madison**

1. DI is effective at teaching higher order cognitive problem solving, as well as basic academic skills and strategies.
2. DI has a positive effect on students' self-concepts and affective learning; academic success in school promotes feelings of self-worth.
3. DI reading programs are effective at teaching both reading decoding and reading comprehension skills and strategies.
4. DI is effective at teaching disadvantaged students and mildly handicapped students.
5. DI is appropriate for average-achieving students.
6. DI teachers are concerned with both the *what* of teaching (i.e. , the content and curriculum design) and the *how* of teaching (i.e., presentation techniques).
7. DI progresses from structured teacher-directed lessons to less and less structured independent seatwork; it teaches students to apply independently what they have learned in structured lessons.
8. DI has long-lasing positive effects; students taught with DI in the early grades maintain achievement gains, drop out of high school less often, apply and are admitted to college more often.
9. DI is appropriate for preschool, elementary, secondary, and postsecondary students.
10. DI is both challenging and rewarding for teachers; teachers can continue to learn more and more about direct instruction and how to implement it more and more effectively across their careers.

**Title of Manuscript:** Observation of Direct Instruction Teaching Behaviors: Determining a Representative Sample of Time for Supervisors

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Abstract of Study—
The purpose of this study was to determine the optimal amount of time a supervisor needs to observe a teacher to obtain a representative sample of his teaching behaviors while Direct Instruction is provided. These data were gathered across two Direct Instruction programs—Spelling and Reading Mastery—presented by a teacher with over 10 years of Direct Instruction experience. A Direct Instruction observation instrument and rating form were used to gather and summarize these data across 3-, 6-, 9-, 12-, 15-, 18-, 21-, and 24-minute observation sessions. Results indicated that although there were minor variations in the percentages of teacher behaviors and scores received based on these percentages, the length of observation did not greatly affect the grade given to the teacher, Additionally, the least amount of time required to obtain a representative sample of the teacher's instructional behaviors was 12 minutes. Implications for supervising preservice teacher-trainees and making data-based decisions on trainee performance are discussed.

# In Search of Effective Instruction

Sara Tarver
University of Wisconsin, Madison

What a pleasure it is to be here among so many kindred spirits in this Mecca for Direct Instruction and what an honor it is to have been invited to address this esteemed audience. There is no place I would rather be on this historic occasion.

In this address, I will tell the story of my own search for instruction that would enable teachers to teach all students more effectively. In the telling of my story, I will share some of the more important lessons that I have learned across the years and some *déjà vu* experiences which suggest that the so-called profession of education, as a whole, has not learned the same lessons that I , as an individual educator, have learned. I offer my experiences as examples of the kinds of circularity in education which Doug Carnine wrote about in an article in *ADI NEWS* in 1992:

> Pre-professionalism is characterized by dogma. A scientific knowledge base to give the practitioner expertise and confidence is lacking... Dogma leads educators in circles. (p.26)

I believe that such circularity has been manifested, not only as repetitions of the same old mistakes, but also as recreations of the same old wheels. I will offer a few examples of both of these types of circularity.

My search for effective instruction has led me into many instructional lands. In the early years of my search , I journeyed through the land of Language Experience with its story charts and trade books (the land we know today as Whole Language) and the lands of New Math and Discovery Math (known by many today as the land of Cognitively Guided Math). I lingered far too long in the land of Perceptual-Motor Training (known today as the land of Sensory Integration Training) and the land of Modality Matching (known today as the land of Learning Styles). I dwelt in the land of Orton-Gillingham for more than a decade. In more recent years, I have travelled through the lands of ECRI, Behavior Modification, Cognitive Behavior Modification, Learning Strategies, Mnemonics, Reading Recovery, and the ever-enticing land of milk and honey known as Metaland. At various points in my travels, I stumbled across bits and pieces of what has come to be called "Direct Instruction," but it took me many years to put the bits and pieces together and to find my way to the Land of Direct Instruction. Lest, in the telling of my story, I should take a detour down some gravel road and fail to make it back to the main highway before my time is up, let me express now in one simple sentence what I have learned from my search. It's this: When it comes to teaching kids to read, write, spell, work arithmetic, AND think, nothing does the job like Direct Instruction, absolutely nothing.

My search began more than forty years ago when I was either a fifth or a sixth grader. I grew up on a farm in northern Louisiana, four miles outside a small town with a population of about 350. The school I attended in that town had no more than 250 students in grades 1-12. Just outside of town was another school, a two-room frame school that the blacks attended. Although there were more blacks than whites in the parish, the number of black children attending school was much smaller than the number of white children attending school because the black children, once they were old enough and strong enough to wield a hoe or pull a cotton sack, were in the cotton fields, and not in the classrooms.

From the beginning, I loved to go to school. And I missed it during those long, summer months when school was out. So, I created my own school, a school in which I could be the teacher. I convened younger children from homes and shacks within walking distance of my house to be my students (usually 7-10 students). Some were my younger cousins who, like I, were looking for something to do to break the monotony of the days (this was in the days before television), some were the children of white sharecroppers whose parents (both of them) were busy working in the cotton fields from dawn to dusk, and a few were black children who were not yet big enough or strong enough to work in the fields and whose parent (singular in nearly all cases) was also working in the fields.

Every afternoon I would gather my students on the veranda of the old farmhouse in which I lived to "play school." How well I remember laboring to teach my students all that I had already learned in school. I prepared math sheets, language sheets, and spelling lists. I remember finding it particularly

challenging to teach language. Teaching my students to identify and write sentences with subject-verb agreement, for example, was exceedingly difficult because my students, in speaking, said things like "I is" and "They was." I remember how those kids taught me that, if they were going to learn this stuff that was not only new, but also contradictory, my instructions were going to have to be very clear. And they taught me that being clear isn't always easy; it involves not only carefully worded explanations, but also a variety of examples (e.g., some sentences with plural subjects, some with singular subjects). When I attempted to teach my students math, they taught me to give them easy examples before moving to harder ones.

These were some of the more obvious lessons I learned in this earliest stage of my teaching career. More important, perhaps, were the subliminal lessons that I learned, lessons which didn't come into consciousness until many years later. I learned that the student's learning is a function of the teacher's teaching. Even then, I seemed to sense that the details of my instruction were all-important and I labored to perfect those details. I learned that students are great teachers of teachers. When my explanations were unclear or my examples insufficient, the students let me know by giving incorrect responses and when I had improved my explanations and examples sufficiently, they let me know that by giving correct responses. I learned that clear instruction benefits all students. To be sure, one of my students might need instruction in the decoding of simple *cvc* words while another needed instruction in more advanced reading strategies, but clarity benefited all of them. It benefited my cousins who went to school regularly, had a few books in the home, and had parents who would read to them, and it benefited my other students who had no books in the homes (except for the Sears Roebuck catalog that was kept in the outhouse, and perhaps a Bible) and who, in most cases, had no adult to read books to them even if there had been books.

In this earliest stage of my career, the thought that some of my students might not be able to learn had never entered my head. In my naive state, I expected that all of them would learn if I taught them, and it seemed to me that they did.

I went on to become a real teacher. First, I was a regular classroom teacher in that small town in which I grew up. Then I moved to Richmond, Virginia, in the middle of a school year and applied for a teaching position. I remember being interviewed by the personnel director who asked if I would be interested in teaching in a junior high school in which some highly innovative things were going on. For example, all the seventh graders who failed the year before had been put into one home room. The personnel director was looking for someone to be the homeroom teacher of that group and also teach math and reading classes of "slow learners." The personnel director explained that they had difficulty filling that position on a permanent basis and that there had been a succession of substitute teachers. He mentioned that the substitute at that particular point in time was a retired army sergeant who was eager to return to his status as a retiree as soon as a permanent replacement could be found. When asked if I would accept the job, I, with all of the naivete of one from a small rural school district, said, "Sure, I'd love to," and I took the job.

It didn't take me long to learn why the retired army sergeant was eager to leave. This junior high school was an inner city school that drew students from the lowest socioeconomic neighborhoods in the city. It was a school in which kids often brought weapons to school (the weapons of the day were likely to be knives, rather than guns like today, but nonetheless they were lethal weapons) and policemen often roamed the halls to confiscate weapons or to question kids about things that had gone on in their neighborhoods. There were gangs. It was not unusual for teachers to get to the parking lot in the afternoon after school to find that their tires had been slashed or their car windows broken.

During the seven years that I taught at that school I saw many young teachers arrive with big smiles and bright ideas only to leave after a few short months in tears. They, like I, came with ideas about providing their students with opportunities to learn social studies and citizenship by reading meaningful and interesting materials like newspaper articles, magazines, even comic books rather than the traditional, boring textbooks. And they came with ideas about providing their students with opportunities to learn math in the context of real life situations. I remember that one teacher planned to have her students learn math by operating a small business in which they would buy t-shirts, decorate them in the art department, and then sell them, or attempt to sell them, at a profit.

These teachers, at first, were very enthusiastic and eager to support their students as they engaged in these learning activities, but it didn't take long for their enthusiasm to turn to disappointment and their smiles to turn to tears. And the sad thing is that, when most of those teachers left, they hadn't a clue as to why their bright ideas and their innovative practices hadn't worked. Because they didn't see the flaws in their well-intentioned practices, they concluded that the kids simply were not capable of learning.

It took me a while to figure out what went wrong, but eventually it dawned upon me that it was the teachers who hadn't learned. They hadn't learned that the kids, if they are to be expected to read meaningful and interesting materials, must first be taught to read. And it was the teachers who hadn't learned that the kids, if they are to be expected to compute profits and losses, must first be taught to compute. The so-called innovative practices of the teachers required the children to apply skills and strategies which they had never learned. Few students in that school could decode well enough to read a newspaper and even fewer could perform the mathematical operations required to run a small business successfully. It didn't take me long to learn that the students lacked these fundamental academic building blocks because I was teaching, or attempting to teach, the lowest performing students in the school.

**The so-called innovative practices of the teachers required the children to apply skills and strategies which they had never learned.**

To give you some idea of what my remedial reading and math classes were like: I taught five classes a day with 30-35 students in each class. Among my students were some who today would be labeled "cognitively disabled," others who would be labeled "behaviorally or emotionally disabled," and still others who would be labeled "learning disabled." Nearly all of them would be labeled "at risk" and nearly all of them were disadvantaged. When I started teaching in that school, less than half the students were minority students. When I left seven years later, over 75% were minority students. The lessons that I learned from the kids in that inner city junior high school have had a lasting impact on my thinking about kids' learning, teachers' teaching, and schools that should be places where teachers teach and kids learn but too often are not.

First, those kids taught me that what I had been taught in my education courses in college simply didn't work. I had been taught that, if teachers provided students with a variety of interesting books or other reading materials, the students would be motivated to read them and, if motivated to read them, they would read them. The trade book market flourished and I read dozens, if not hundreds, of trade books in order to select the most highly motivating ones for my students. But it didn't take me long to learn that kids can't read what they can't read. No matter how great the motivation, they simply can't do what they have not learned to do. Very few of the kids in the school read at grade level, most were significantly behind in reading, and many were nonreaders. I had more than a few students who could not even read and write their own names. It became clear to me that, for most of the kids in this school, something other than immersion in trade books would be required. Obviously the profession as a whole did not learn the same lesson that I as an individual educator learned during those years, for if it had, how could there be so many educators today who advocate immersion and support as the primary vehicles for increasing academic achievement and reforming our schools.

About the time that I was becoming disenthralled of the immerse and support approach, I began to hear about a new and very different approach to educating children with learning problems which came to be called "perceptual-motor training." Still determined to find something that would work for my students, I travelled to Philadelphia to learn to use one of those perceptual-motor programs—one that emphasized creeping and crawling exercises and wearing a patch over the nondominant eye while reading. And, at that junior high, I conducted an experimental program in which I took the 15 poorest readers in the school (all boys) and had them creep and crawl across the gym floor for 45 minutes a day. How I longed for the day when they would get up off their knees, pick up their books, and start to read. But, needless to say, that didn't happen. It was in the late 1960's that I finally gave up on perceptual-motor training. It was almost a decade later before the profession as a whole seemed to have learned the same lesson that I had learned.

During that decade, research had accumulated to show conclusively that perceptual-motor training had no positive effect on academic learning and, for a time, perceptual-motor training faded from the educational scene. But unfortunately, the profession's collective memory is short, and, in recent, years, we have seen some of the perceptual-motor programs reemerge under a variety of names, including "sensory integration training." This is a prime example of the profession's going around in circles and repeating the same old mistakes.

Today it is hard for me to believe that I ever bought into a creeping and crawling approach which obviously could not teach students to read without the aid of something like magic. It is also hard for me to believe that it took so long to "see through" the rhetoric of the immerse and support approach to teaching reading. But I suppose that I shouldn't be too hard on myself, because, apparently, it is taking

the profession a lot longer. Nonetheless, I sometimes feel a little ashamed to admit that I was such easy prey for sometimes well-intentioned and sometimes not-so-well-intentioned educators, psychologists, and business persons, whose tests, training programs, and trade books were selling like hotcakes.

In self-analysis, I have often asked myself why I was such easy prey. I like to think of myself as an intelligent, moral, and somewhat politically astute person. How is it that I bought into educational fads that, today, make absolutely no sense to me. The only answer that I've been able to come up with is this: I simply didn't know *what would work.* I had no model of *instruction that works.* I had long since discarded the primitive practices that I used in my school on that veranda back in Louisiana because, in college courses, I had been enlightened about the merits of child-centered approaches based on Piagetian theory and I had been enlightened about the demerits of teacher-directed instruction.

**How is it that I bought into educational fads that, today, make absolutely no sense to me? The only answer that I've been able to come up with is this: I simply didn't know *what would work.***

After I became a teacher at the inner city junior high school, I began to notice that the public, too, was being enlightened. It was during my years at that school (mid to late 60's) that one of the junior high's feeder elementary schools (there were three) was featured in *Life Magazine* as a model progressive school. In the article, the school was described as a child-centered school in which children learned through discovery and manipulation, a school in which children learned to read and write by writing their own stories and reading them. It was claimed that children from schools like this were to be our leaders of tomorrow—persons who would lead the way to victory in our War on Poverty (today it is claimed that kids from so-called "child-centered" schools will become the leaders who will save our rainforests). Needless to say, I was more than a little puzzled by that *Life Magazine* article, because I was teaching the junior high kids who had gone to that elementary school, and I had already noticed that the kids from the other two feeder schools tended to be better students. In fact, it had become quite apparent to me that the very poorest students in my classes had gone to the elementary school that was being described as a model school. And, for the life of me, I couldn't understand how these kids who had become so frustrated by school failure that they opted for violence and gangs rather than learning were to become our leaders. What I learned from that Life Magazine article was not exactly what the authors intended. What I learned, instead, was a lesson that Bob Dixon taught in his keynote address at this conference last year. It goes like this: The biggest lie is the easiest to sell.

The *Life Magazine* article appeared at about the same time that I was beginning to get pretty frustrated with this whole teaching business and I was on the verge of leaving it when I happened to find a couple of bits of instruction that seemed to work, at least to some extent. First, I found and read Jeanne Chall's *Learning to Read: The Great Debate.* What an eye-opener! Chall's conclusion that beginning reading programs which emphasize the code are superior to beginning reading programs which emphasize meaning made sense to me and I began to look for effective ways of teaching the code.

I didn't have to go far to find the Orton-Gillingham approach because it had been used in clinics and private schools on the east coast for a long time. I attended conferences and workshops up and down the coast and became quite an expert on the Orton-Gillingham method. In case you don't know it, it's a highly structured, multisensory, code-based approach to the remediation of reading, writing and spelling problems. In the junior high where I was teaching, I conducted another experimental program, using the Orton-Gillingham approach this time. I'm glad to report that this time I saw nonreaders learn to sound out words and read simple sentences and paragraphs. This progress in decoding was encouraging to me and to the students; but, as encouraging as it was, I soon began to sense that the Orton-Gillingham approach was not complete. I began to suspect that a complete reading program should contain fluency and comprehension skills and strategies as well as decoding skills and strategies.

One of the positive examples that I found while teaching at junior high was a math example. In my math classes for slow learners, I had been teaching "New Math." In the New Math program I used, kids were expected to count, add, and subtract in Base 2 and Base 5. I have no words to tell you how frustrating that was for both me and the kids—frustrating, because many of my students could hardly add and subtract in Base 10. I had assumed that most of them could count in Base 10, but that assumption was challenged when I found and read a book by a man named Sharpe, a book titled *These Kids Don't Count.* In that book, Sharpe made the point that kids don't understand our number system because they don't

know how to count. The student who can really count, said Sharpe, can start with any number and count forward or backward by any number to any specified number. If one can really count, one can start at 27, for example, and count forward by nines to 90 or start at 27 and count backward by nines to 0. As I read the book and thought about it, I began to see that it probably would be pretty easy to teach kids to multiply and divide if they could indeed count like this. After all, multiplication is counting forward by the same number again and again and division can be conceptualized as counting backward by the same number again and again. Asking what is 21 divided by 3 is the same as asking, "If you start with 21, how many times must you count backward by 3 to get to 0?" Although I found Sharpe's book intriguing, and I used his counting activities with some of my students, I soon sensed that this counting approach, too, was incomplete and I didn't really do much with it or even think much about it until several years later when I visited a Follow Through site and got my first glimpse of Direct Instruction.

After leaving that junior high in 1970, I took a job as a diagnostician in one of the first learning disabilities programs in the state of Virginia. During the two years that I held that position, I happened to experience two things that influenced my thinking and my career in ways that I could not even imagine at the time.

First, I attended a conference at which Barbara Bateman delivered the keynote address and talked about the things she had written in her book titled *Essentials of Teaching*. In the course of her talk, she recommended another book by a man named Siegfried Engelmann—a little yellow paperback book titled *Conceptual Learning*. I bought it, started reading it and found that I couldn't put it down until I had finished it. When I did put it down, I knew that I just had read something that made more sense to me than anything I had read before in the educational literature.

The second experience was a visit to one of the experimental sites for Project Follow Through. This was in the early 70's and word was getting around about this huge federal project that was designed to help us win our War on Poverty and I was eager to learn more about it. At that time, I didn't know the name of the instruction that I was about to observe; in fact, I didn't even know that different educational models were involved in Follow Through. I only knew that I was to observe Follow Through. And when I did, I saw disadvantaged preschoolers sounding out words and saying them fast and I saw them "getting it going" and skip counting by different numbers. And I saw these very young kids paying attention and enjoying learning in such a way and to such an extent that I had never before thought possible. As I watched this amazing demonstration of instruction, I thought, "There's no way that the junior high kids that I used to teach would have been so far behind in reading and math if they had been provided with this kind of instruction when they were preschoolers."

At the time that I visited that Follow Through site, I didn't know that the instructional programs being used were authored by the same man who had written *Conceptual Learning*, the book with which I had been so impressed. But I went on to find and read other books by Engelmann—*Give Your Child A Superior Mind* and *Preventing Failure in the Primary Grades* and eventually I did notice the name Engelmann on a DISTAR kit and put the pieces together. About the time that I was putting these pieces together and becoming increasingly impressed and intrigued by this new Direct Instruction approach, my life took a turn and Direct Instruction was put on the back burner. I decided to take a leave from teaching to enroll in doctoral studies at the University of Virginia. Even though the professors with whom I studied knew nothing of this new Direct Instruction, they taught me a lot that I could relate to what I already knew about instruction and for their expert tutelage I shall be forever grateful.

From Jim Kauffman, I got a firm grounding in behaviorism and learned a lot about the behavioral methodologies that were becoming so popular in special education in the 1970's. As I learned about methods of reinforcing appropriate behaviors and ignoring inappropriate behaviors, and about systems for measuring and recording behaviors, I kept thinking, "If I had only known these things when I was teaching in that junior high, I could have been a much more effective teacher."

But, I also remember that something in the back of my head kept hinting that this behavior modification approach, great as it was, was lacking something. At first I couldn't put my finger on what was missing, but I remember the particular class discussion during which it began to dawn on me. Jim was describing Precision Teaching. He showed how specially prepared logarithmic sheets could be used to record student behaviors and related this to reinforcement for improvements in performance. The behavior to be recorded, in this particular demonstration, was number of words read correctly and the reading material or instructional stimuli consisted entirely of one word list. The only instructions that the student received prior to reading the list was "read these words."

As I looked at the word list, I remembered that Jeanne Chall had reported that research favored beginning reading approaches in which words were controlled on the basis on phonetic regularity and I remembered that the Orton-Gillingham folks insisted that letter-sound correspondences be sequenced in a particular way and that word lists be constructed to contain only those letter-sound associations that had been taught. But I couldn't see any rhyme or reason to the word list being used in this Precision Teaching demonstration. "If there is an underlying structure to this list," I thought, "it has to be a frequency-of-usage structure, and not a phonetic structure."

I wanted to hear some rationale for that list, but none was offered. And since the whole discussion was focused on how to record and reinforce student responses, I could only conclude that behaviorists are much more concerned with methods of measuring student responses and principles of structuring the consequences to follow responses than they are with structuring the instructional stimuli to which the student is to respond. Furthermore, it seemed to me that there was a lack of concern for how isolated stimuli (a list of words, in this case) are related to the whole from which they have been extracted (the whole of "reading" in this case). In my thinking, structuring that to be learned to communicate relationships was as important as structuring the consequences for learning.

**In short, it seemed to me, and still seems to me, that the pure behavioral approaches are limited, severely limited when it comes to academic learning, by their failure to structure that to be learned with the same care that they structure the consequences for learning.**

In fact, it seemed to me that careful structuring of that to be learned could enhance the effectiveness of this behavior mod approach in two ways. First, it could increase the chances that the learner's first response would be the correct one that would be deserving of positive reinforcement. Secondly, it could increase the probability that the learner would learn something about the structure of our written language system that would enable her to generalize and read new words. In other words, it seemed to me that, in the absence of a carefully structured word list designed to reveal the alphabetic code of our written language, kids would be much less likely to discover the code. And, for the life of me, I couldn't figure out how kids could learn to read new words that they had never seen before without learning that code.

In short, it seemed to me, and still seems to me, that the pure behavioral approaches are limited, severely limited when it comes to academic learning, by their failure to structure that to be learned with the same care that they structure the consequences for learning.

I found theoretical support for my growing awareness of the importance of structuring that to be learned in other courses that I took as a doctoral student. In a child development course, I was introduced to the cognitive theory of Jerome Bruner, who, in a book titled *The Process of Education*, wrote:

> To aid the learner in making connections, a body of knowledge must be structured in such a way that a learner can use the propositions acquired to generate new knowledge, conclusions, or propositions. In other words, in learning how to make connections, the learner "learns how to learn" .... To learn structure, in short, is to learn how things are related. (pp. 6-7)

Bruner wrote that in 1960. Yet the pure behavioral approaches that were so limited by their failure to structure the knowledge to be learned predominated in special education well into the mid 1980's. However, special educators did eventually conclude that, although behavioral methods can be used successfully to change some kinds of behaviors, they are not sufficient to change academic behaviors and promote higher order learning. It was not until the 1980's that I came to recognize that which is missing in the pure behavioral approaches was Zig Engelmann's "sameness analysis" of the knowledge to be learned.

It was in a psycholinguistics course that I took as a doctoral student that I began to understand, in a very rudimentary way, why it is important that students be taught the phonological structure of our spoken language system–why they should be taught, for example, that spoken language is composed of phonological units of different sizes. As I was acquiring this understanding, a little voice in the back of my head kept saying, "Remember what you read in Engelmann's book, *Preventing Failure in the Primary Grades*. Remember that he recommended that young children be taught that spoken sentences can be segmented into words (for we can't assume that kids know this when they start school). Remember that he went on to say that, after teaching them to

segment sentences into words, we should teach them to segment words into parts, starting with words such as 'cowboy' and 'hamburger' before moving on to the harder task of segmenting words such as 'ham' into 'h/a/m.'"

Today we refer to the segmentation of words into phonemes as "phonemic segmentation." The learner's awareness that words can be segmented into phonemes is called "phonemic awareness." A very impressive body of research has shown conclusively that phonemic awareness is our best predictor of reading success in school. In an interview for "Failing Grades," a videotape produced by Dr. Joe Freedman and the Society for Advancing Educational Research, Marilyn Jager Adams said that increased knowledge of phonemic awareness is the single most important pedagogical breakthrough of this quarter century. I couldn't agree more.

It is interesting to note, however, that several well-known educational researchers are devoting their efforts to the development of print and computer programs designed to teach phonemic segmentation. What I know of these programs leads me to believe that the authors are unaware of the fact that highly effective methods of teaching phonemic segmentation have been with us since the earliest DISTAR kits were published. Perhaps these educators are suffering from a lack of instructional awareness. Most of us in this room know what to do to teach kids to segment words into phonemes; when we do that, the kids necessarily become aware of the fact that words can be segmented into phonemes. Awareness of what is involved in a task comes about as a natural byproduct of effective instruction in how to perform the task.

Despite the fact we in this room have known how to teach phonemic segmentation and its byproduct, phonemic awareness, for more than twenty years, the profession as a whole has remained completely ignorant of that know-how. Current attempts to develop phonemic segmentation programs are viewed as ground-breaking efforts when in fact they are prime examples of educators wasting time and effort to recreate the wheel.

Unfortunately, I have seen no evidence to indicate that the new phonemic segmentation wheels will function as well as the original phonemic segmentation wheel created by Engelmann, Bruner, Osborn, and their colleagues over twenty years ago. Furthermore, I believe that many of the new programs are doomed to failure because they are designed to teach phonemic segmentation in isolation from other prereading skills. In a complete reading program, such as Reading Mastery, phonemic segmentation exercises are carefully integrated with lots of other prereading and reading skills and strategies.

In my doctoral program at the University of Virginia, most of my studies of learning disabilities were carried out under the direction of my advisor and major professor, Dan Hallahan. From him, I learned much about cognitive information processing and the cognitive attention and memory problems of students with learning disabilities.

By and by, I came to see what I believed to be some important connections between what I learned in my studies with Hallahan and what I had learned in a psycholinguistics course. In the psycholinguistics course, I had studied about the relationship between language and cognition and, in so doing, I had read about Vygotsky's theories having to do with the role that verbalizations play in helping kids to control their motor behaviors, focus their attention, and store things in memory.

Eventually, it occurred to me that the so-called attention and memory problems of students with learning disabilities just might be linked to their inadequate use of language. As I was beginning to think like this, a little voice in the back of my head kept saying, "Remember what you saw when you visited that Follow Through site where teachers were using those DISTAR programs. Remember how the kids were answering out loud and remember how they were engaged in verbal interactions with the teacher throughout the lesson. Remember how the teacher sometimes modeled verbalizations, then led the children through the verbalizations a step at a time, and then tested the children to see if they remembered and could perform the verbalizations all by themselves."

As I remembered these things, I thought, "Aha, now I know why those kids were paying attention to the lesson and why they were remembering what they learned." And I went on to conduct several studies in which children with learning disabilities were taught to use verbalizations as an aid to memory and attention–studies which showed that teaching students with learning disabilities to use certain verbal rehearsal strategies did improve their performance on short-term memory tasks. Unfortunately, the kinds of short-term memory tasks used in those studies bore little resemblance to the academic tasks that students were required to perform in the classroom. And, unfortunately, improved performance on the laboratory task was not accompanied by improvements in academic learning.

By and by, we professionals who were conducting research with these laboratory tasks came to acknowledge that limitation and to recommend that researchers focus their research on academics and

develop programs for teaching students to verbalize as they are actively engaged in academic learning in the classroom. Interesting, isn't it, that this recommendation came forth from the research community years after some people who had been working with kids in classrooms had already developed highly effective academic programs that employ student verbalizations. You and I know who those people are (many of them are here in this room with us right now) and you and I know that student verbalizations are involved in each and every lesson in the programs they developed.

Unfortunately, most educational researchers do not know what you and I know about the details of those programs and the effectiveness of those programs. And, unfortunately, this is but one more example of educational researchers wasting years of effort and millions of tax dollars in attempting to recreate the instruction wheel–or, to put it more aptly–in attempting to recreate a single spoke in the instruction wheel.

**Included among the unsuccessful models were several which, today, would be included in the rubric of constructivist approaches to teaching–a Language Experience model, a Piagetian Cognitive Curriculum model, a Bank Street model, and an Open Education model. Unfortunately, some of those constructive approaches are still popular today, despite a dearth of evidence to support the preposterous claims that they are effective with all students, including disadvantaged students and students from culturally different backgrounds.**

Other examples of researchers attempting to recreate the wheel have become apparent to me during the 18 or so years that I have been a professor at the University of Wisconsin. Some of the more important examples come from Metaland. As the study of metacognition came to the fore in the 80's, I learned that this mentalistic process called metacognition has two major components–an awareness component and a regulation or monitoring component. As I learned still more about the instructional approaches that were being recommended to teach students important metacognitive strategies, a little voice in the back of my head kept saying, "What IS the big deal here?"

The Direct Instruction programs–which, by this time, I had come to know quite well–contain more metacognitive strategies than I have time to count, even though they are not called "metacognitive strategies." Remember that I had concluded several years earlier that awareness of any given strategy comes about as a natural byproduct of our communicating that strategy through effective instruction. This is no less true of so-called metacognitive awareness than of other kinds of awareness–phonemic awareness, for example, which is sometimes referred to as a form of metalinguistic awareness. And, I soon came to conclude that the kinds of instruction being promoted by the metafolks to teach the regulation or monitoring component of metacognition were clearly inferior to the kinds of monitoring instruction included in Direct Instruction programs.

To give a couple of examples: When we teach kids to edit their own writing in the way that we do when using the *Expressive Writing* program or the *Corrective Reading* program, we are teaching them to use metacognitive monitoring strategies.

And when we teach them to discriminate one strategy from another and to select the particular strategy that is most appropriate for a given situation, we are teaching them the most holy of all the metacognitive functions–the executive function. We do this when we teach kids to discriminate situations in which it is appropriate to use calculators from situations in which it is not appropriate to use calculators, and we do this when we teach students to discriminate word problems that can most appropriately be solved by multiplication from word problems that require addition.

To summarize my perspective on the so-called cutting edge metacognitive instructional approaches, they are but one more example of educators devoting much time and energy to the recreation of one or more spokes of the instruction wheel. This unnecessary waste occurs, I believe, because educational researchers simply do not know that the kinds of metacognitive strategies that they are researching have already been included in Direct Instruction programs and are already being taught effectively by Direct Instruction teachers. When will we learn that educational research should begin with the most effective instruction known at any point in time and build on that base to produce even more effective instruction, for even the most effective instruction known can be improved?

History suggests that educational researchers are not the only educators who are ignorant of Direct Instruction and of research which documents the effectiveness of Direct Instruction. Far too many

administrators, teachers, and school board members are equally ignorant. It seems to me that this widespread state of ignorance could have been avoided if we had learned the lessons that should have been learned from Project Follow Through.

It was in the late 1970's, after I had moved to Wisconsin, that the results of Follow Through were published. I was delighted to get my hands on reports of the findings and I was eager to share this monumental success story with my students and my colleagues. I began to include the Follow Through findings in my courses and to attempt to call the findings to the attention of my colleagues–professors in the School of Education.

**When will we learn that educational research should begin with the most effective instruction known at any point in time and build on that base to produce even more effective instruction, for even the most effective instruction known can be improved?**

But it didn't take long for me to see that most of my colleagues were not particularly interested in hearing about instruction that works with disadvantaged students. In fact, most of my colleagues chose to either completely ignore the Follow Through findings or to misconstrue them to such an extent that the resulting interpretations bore little resemblance to truth. And, as those who know the Follow Through story know well, the education profession, as a whole, responded in like fashion and failed to learn the important lessons that could have been learned from Follow Through. What happened in the aftermath of Follow Through constitutes what I believe to be the greatest educational tragedy of this century–a tragedy, because those events had the effect of denying to educators and taxpayers accurate information about the most effective educational model that had ever, and still has ever, been developed. The magnitude of the effects of that tragedy cannot be overstated.

As most of you know, the Follow Through findings showed conclusively that the Direct Instruction model was much more successful than a variety of other models at teaching disadvantaged kids in grades K-3 to read, spell, work arithmetic, AND think. Included among the unsuccessful models were several which, today, would be included in the rubric of constructivist approaches to teaching–a Language Experience model, a Piagetian Cognitive Curriculum model, a Bank Street model, and an Open Education model. Unfortunately, some of those constructive approaches are still popular today, despite a dearth of evidence to support the preposterous claims that they are effective with all students, including disadvantaged students and students from culturally different backgrounds.

Over the last decades, I have devoted much study and thought to the so-called constructivist approaches so that I might come to know them better and be able to describe their limitations more clearly to my students. My awareness of what is probably the most critical limitation was heightened considerably when I read an article by Carl Bereiter, published in *Review of Educational Research* in 1985. He wrote:

> Efforts to explain learning as a constructive process run into the paradox of having to attribute to the learner prior knowledge that is at least as complex as the new learning to be explained. (p. 201)

The constructive approaches are based on the assumption that students must construct their own meaning if learning is to be meaningful. The fact is that all too many students lack the knowledge and the skill required to construct any kind of sensible meaning from the kinds of unstructured learning environments that are prevalent in our schools. Furthermore, acquiring the knowledge and skills required to construct a sensible meaning is likely to be more difficult than constructing meaning once the requisite knowledge and skills have been acquired.

**The constructive approaches are based on the assumption that students must construct their own meaning if learning is to be meaningful. The fact is that all too many students lack the knowledge and the skill required to construct any kind of sensible meaning from the kinds of unstructured learning environments that are prevalent in our schools.**

Learning to decode words, for example, is much more difficult for most poor readers than is learning to construct meaning from passages after they have learned to decode adequately. To expect a nonreader to construct meaning from a written passage is to expect her to construct meaning from nothing,

for the written words on the page are like nothing to her. Builders do not construct physical structures out of nothing and learners do not construct cognitive structures out of nothing. *No thing* has ever been constructed out of *nothing* and *no thing* ever will be constructed out of *nothing*.

It seems to me that educators who are relying on the constructivist approaches today are making the same old mistake that I and other well-intentioned teachers made in the junior high school where I taught many years ago. We assumed that the students had already acquired a basic knowledge of how to read and how to compute and that by providing the students with opportunities to apply that knowledge, they would become even better readers and computers. But the students didn't have that basic knowledge and they didn't acquire it in the process of applying it, for how in the world can anyone learn what she doesn't already know by applying what she doesn't already know.

In summary, let me say that my journey in search of effective instruction has been an exciting one–always interesting and challenging, sometimes frustrating and disappointing, ultimately rewarding. Rewarding, because the search resulted in my knowing the most effective instruction ever developed–Direct Instruction. To know is the greatest reward for learning. Just to know Direct Instruction is cause for celebration.

I have also been rewarded in other ways for knowing Direct Instruction. I have been rewarded with success stories from teachers whom I have taught and stories from parents of children who have been taught by those teachers–stories of how teachers who were at the point of burn-out and ready to give up on hard-to-teach students became successful teachers of those students and regained their professional self-esteem after learning how to use Direct Instruction effectively, and stories of kids who were thought to be unable to learn, but who blew the minds of those around them after having been taught with Direct Instruction. Each of those stories is cause for celebration.

I could tell other success stories, but I don't need to because you in this room have your own collections of success stories, each one cause for celebration. I don't have the words to express adequately my gratitude to so many of you who have worked so hard to create Direct Instruction. Words are inadequate to express my appreciation to Zig Engelmann, in particular, for without Zig there would be no Direct Instruction as we know it today. So, I'm going to offer a very simple, but sincere, "thank you." And I know that many of you, on this 20th anniversary of the Association for Direct Instruction, are also experiencing strong feelings of gratitude, so I'm going to provide an opportunity for you to join in that simple "thank you." It goes like this:

My turn (sung to Happy Birthday tune):

We thank you dear Zig.
We thank you dear Zig.
We thank you dear Ziggie.
We thank you dear Zig.
Do it with me (audience participates):

We thank you dear Zig.
We thank you dear Zig.
We thank you dear Ziggie.
We thank you dear Zig.

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# Blackboard Jungle

**Charlie Smith**
**Canadian Broadcasting Corporation**

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*Siegfried Engelmann has made a career of challenging the education status quo. His combative approach has won him few friends, in spite of the success of his programs.*

In the summer of 1966, seven poor black kids walked into an Illinois classroom and performed an astonishing feat. In front of a room full of university students and two film cameras, these preschoolers solved problems of addition, subtraction, multiplication and fractions. They answered simple algebra questions. They even factored complicated expressions, such as 9a + 3b + 6c. "I don't know if anybody has ever come close to doing what we did in teaching math to these disadvantaged kids," recalls their teacher, Siegfried Engelmann, now an education professor at the University of Oregon. "They hadn't started first grade yet. That was from 20 minutes a day of instruction."

Almost three decades later, Engelmann still shatters all expectations about what poor children can achieve. He has taught ghetto kids how to understand Homer and Shakespeare. He has helped "dyslexics" learn how to read, and enabled low performers to score higher than "gifted children" on standardized tests. For several years, distraught parents from across North America have been bringing their youngsters to his modest offices in Eugene, Oregon. On other occasions, Engelmann has traveled hundreds of miles, free of charge, to help a struggling child.

His highly structured Direct Instruction program outperformed 12 other models in the largest educational research project in US history. His publishers sell approximately $15 million worth of his educational programs every year. Yet, despite all these successes, Engelmann remains a pariah among mainstream educators. That's because he refuses to adopt their most cherished teaching methods.

"The educational scene today is characterized by medieval logic," he snorts derisively. "It's an unprofessional as medicine was in the 1500's when they used leeches and put boiling oil on wounds."

Engelmann could be considered the educational equivalent of Martin Luther. With exuberance bordering on fanaticism, he attacks the educational establishment's most sacred dogma like a 16th century Protestant reformer going after the Pope. Brash and outspoken, his admirers believe he's the greatest American educator of the 20th century; some opponents say Engelmann's methods threaten our children's mental health.

Zig, as he is often called, is a maverick both inside and outside the classroom. At 61, he still rides a motorcycle to work. His hobbies include riding Harley Davidsons and tree farming.

Engelmann is also politically incorrect in the classroom. While many educators oppose measuring students' progress, he demands it. While others allow children to progress at their own rate, he sets rigorous standards for kids and even more rigorous deadlines for teachers. Engelmann rejects lumping kids of all abilities in one class to promote equality; he still insists on putting slower learners in special programs. This hard-nosed approach has put him on a collision course with school administrators across North America.

In 1988, the California Curriculum Commission banned the use of Engelmann's Reading Mastery series in public schools. State educators complained that he made "excessive use of skill exercises." Engelmann, who doesn't suffer fools lightly, filed a lawsuit and won a smashing victory.

Engelmann has had an uneasy relationship with traditional educators ever since his teenage years when he was sent to summer school for failing math. The son of a doctor, he grew up during the Great Depression in a blue-collar Chicago neighborhood. "A lot of guys I knew were as smart or smarter than I was," he recalls. "They didn't get to go to college. They ended up working in the Pullman yards and the steel mills." Perhaps those humble roots explain why he has devoted his life to educating underprivileged children.

Engelmann's colleagues all say he's an exceptional teacher. And not just with people. Once he was at a house party where the host's dog—a large boxer—was happy to fetch but refused to let go of what was in his mouth. A friend challenged Engelmann to train the boxer on the spot.

His own son, Owen, recalls his father saying it would take four tries. Engelmann threw a pillow across the room and the dog scurried back with it in his mouth. When the teacher ordered the dog to drop it, he refused. So Engelmann blew cigarette smoke in his face. He repeated this twice, and on the fourth attempt, the dog obediently responded to the command. From this point on, he always let go of whatever was in his mouth.

Owen says this reveals how clever his father can be, but his real passion comes from a desire to help children. "He gets hundreds of calls a year from people who are asking for his time, which is obviously very valuable," says his son. "I've never heard him say no." Engelmann combines that dedication with a single-minded zeal for excellence, which he applies to virtually everything. He took up painting in 1992. Over the next year, he produced dozens of shimmering watercolours.

He's also an efficiency nut. Engelmann's idea of fun is compiling massive amounts of data before going out to plant conifers on his 120-acre tree farm.

He employs similar methods in the classroom. His rapid-fire programs call upon teachers to pepper kids with questions. The results are frequently recorded with immediate feedback. This approach allows children to overcome academic obstacles immediately. "As far as I'm concerned, he's the foremost person in instruction," says Sara Tarver, head of special education at the University of Wisconsin.

Not everyone is so impressed with Engelmann's emphasis on "stimulus-response." Psychologist and author David Elkind accuses him of "miseducation" for accelerating children's learning before they are ready. Engelmann retorts that every child with an IQ above 80 should know how to read by the end of the first grade.

Elkind, whose developmental theories inspired British Columbia's controversial Year 2000 curriculum (*The New Pacific*, Fall 1992), also claims Engelmann pays too much attention to "right" and "wrong" answers. This, he says, can cause children to become overly dependent on adult direction—in effect, forcing them to become blind conformists.

Tarver, however, says there is plenty of empirical research that proves the success of Engelmann's methods. But she claims most mainstream educators aren't interested in empirical research, and that is why his programs have not come to dominate regular classrooms across North America.

Last year, one of Tarver's former students introduced an Engelmann math program to the lowest ranking group in her fifth-grade class. Three higher groups continued receiving regular instruction.

By the end of the year, the low performers had moved to second place, barely behind the master group. Naturally, the ecstatic teacher was anxious to share these results with the Parent-Teacher Organization. But the principal forbade this, fearing that dozens of other parents would demand similar improvements in their children's classes.

"You would think they would come in and say 'How wonderful, how great.' This is not what happens," says an angry Tarver. "The more successful you are, the more you are condemned for it in our school system. Until the message gets out to the public, nothing is going to be done to reform education in this country. Nothing."

Engelmann is not a bitter man. In fact, he's quick to laugh at his own foibles. But he bristles with frustration whenever the conversation turns to school administrators or faculties of education. "They give teachers these rules, these procedures, and they have no way of knowing what they're saying is a lie," he says. "If people knew just how dumb they were, they'd scalp 'em."

Engelmann's complaints are enough to rattle any parent's confidence in public schools. He accuses the educational establishment of cheating to obtain better results on standardized exams. He charges most education professors of knowing nothing about the technical details of instruction. He also claims there is not empirical research justifying freewheeling "learn-at-your-own-rate" programs now sweeping across the educational landscape.

Last year, Engelmann chronicled his crusade for effective instruction in his book, *War Against the Schools' Academic Child Abuse*.

"At present, there are strong advocacy groups for the spotted owl, the killer whale, the Alaska fur seal, and hundreds of other 'endangered species,'" he wrote.

"Paradoxically, millions of our kids are endangered. They will fail in school. They will suffer a very real form of child abuse. Yet these kids have far less real advocacy than the spotted owl does. Rhetoric abounds, but the fact is that decisions affecting their academic future are made by dilettantes whose behavior strongly suggests that they are far more concerned with their own status than they are with saving kids."

Engelmann has found his calling in life, but originally he had not planned on becoming an educator. He studied philosophy in university before hooking up with an advertising agency.

For one commercial he went looking for research explaining how children learn. He could not find any answers so he started to do his own experiments. Before long he was running a preschool in

Chicago with Carl Bereiter, who invited him to work at the University of Illinois.

There, Engelmann and Bereiter developed the first Direct Instruction programs. Through meticulous observation, Engelmann learned that kids' mistakes are almost always reasonable and often predictable. To him, the key was to anticipate these errors ahead of time, then put the appropriate responses into the curriculum. But first these responses were field-tested to ensure they worked.

Engelmann calls this his unique brand of consumer protection: "Commercial programs used by schools—your schools—for teaching reading, language, arithmetic, science, and social studies are not field-tested before publication. They are not shaped by learner and teacher problems. They are simply made up by people who know no more about excellent instruction than the typical copywriter or graphics designer.

By 1967 Bereiter had accepted a job elsewhere, and Engelmann needed an academic sponsor with faculty rank. Professor Wes Becker accepted, beginning a 25-year partnership that lasted until Becker's retirement in 1992.

Back in 1968, Becker and Engelmann had a chance to compare their approach to 12 different instructional strategies in what was to become the largest educational experiment in US history. Sponsored by the federal government, the $1 billion Follow Through Project was designed to determine what works best in teaching disadvantaged primary school children.

The Engelmann-Becker group's Direct Instruction model was applied to 9,000 children at 20 sites. In 1977, an independent firm tabulated test results and concluded that their program had outperformed all others.

For children who attended kindergarten through third grade, Direct Instruction came first in reading, arithmetic, spelling, language, basic skills, academic cognitive skills and even self-esteem. But it was never widely implemented because its approach contradicted the progressive dogma of the day.

In 1970 the Engelmann-Becker team moved to the University of Oregon because Illinois would not let them do teacher-training. Doug Carnine was one of the early researchers. "Myself, Wes Becker and Ziggy and a lot of the people initially involved were not trained as educators," he recalls. "We had a much more scientific background to our training, so we had the *mistaken* belief that [education] was a profession that was based on data."

Carnine says Engelmann's philosophical training added intellectual rigor, but his creativity was equally important. "Kids would have trouble and Ziggy would be able to come up with lots of different ways of approaching the problem," he says. "That ability to quickly generate alternative solutions—and then try them out and evaluate them—was very different from what you typically get, even in higher education."

Faculty colleague Barbara Bateman says Engelmann has a unique ability to see the world from a child's perspective. "The man is an absolute educational genius," she says.

If he's that good, you would think politicians and school superintendents would be banging on his door looking for solutions. But for the most part, Engelmann is still a lonely voice crying in the wilderness.

"Those who made the decisions, the Bruners, the educational theorists and the district, they're talking in terms of tabloids," he says. "It's like trying to build medicine from slogans rather than from facts about learning."

Engelmann cites Jerome Bruner's popular spiral curriculum as a classic example of academic child abuse: "Don't they know that the suggested 'revisiting of topics' requires putting stuff that had been recently taught on the shelf where it will shrivel up? Don't they know that the constant 'reteaching' and 'relearning' of topics that have gone stale from three months of disuse is so inefficient and impractical that it will lead not to learning but to mere exposure? And don't they know that when the 'teaching' becomes reduced to exposure, kids will understandably figure out that they are not expected to learn and that they'll develop adaptive attitudes such as, 'We're doing that ugly geometry again, but don't worry. It'll soon go away and we won't see it for a long time?'"

Education writer and former teacher Andrew Nikiforuk has tremendous respect for Engelmann's intellect, but believes this sheer combativeness has isolated him from the mainstream. "It's unfortunate he doesn't have the stature he deserves in the educational community," says Nikiforuk. "Because when you look at all the theories, the one that is always excluded is the one that the research shows works best—and this is Direct Instruction."

Engelmann's team still oversees four primary sites as part of a downsized Follow Through Project. The University of Oregon offers HLE's (handicapped learner endorsement certificates) to established teachers. There is also a graduate program that turns out teacher-trainers. And every summer, teachers from across North America flock to Eugene for a week of seminars on Direct Instruction.

The captain of the ship, Engelmann, has seen some promising developments over the past two

years. In 1991, ABC-TV's "Primetime" program highlighted academic success at Wesley Elementary, a ghetto school in Houston, which long ago adopted his methods.

The program showed first-grade kids completing thoughtful compositions; by the fifth grade, they were reading "Macbeth" and outperforming suburban white kids on standardized tests.

After that show was broadcast, hundreds of calls poured in from across North America. Now, more schools in Texas, Florida and Illinois are turning to Engelmann to deliver them from academic mediocrity.

His son Owen has been spending a lot of time in Chicago, running in-service training sessions with classroom teachers. "All the kids are going to get taught," promises Ziggy. "None of them are going to be ripped off. Nobody is going to be sitting there in a group that's not appropriate for them...or with a teacher that can't teach them."

Three decades later, the circle has been completed. The son shuttles back to the family's original base to help kids in the slums. Meanwhile, the old man continues his crusade against traditional educators. "True reform," declares Engelmann, "will occur only when informed citizens become educationally literate and place demands on schools, Feds, publishers and colleges of education to put their action where their rhetoric is."

The Register-Guard

EUGENE, OREGON • FRIDAY, JANUARY 13, 1995

# Students study the big ideas

**Education:** Experimental curriculum aims to helped learning-disabled and regular students.

By TAD SHANNON
The Register-Guard

Last year, Drew Mueller struggled to finish his schoolwork. He had a hard time plowing through his reading assignments to the questions at the end of the chapter.

"I don't like the idea of going home and reading history books," says the Monroe Middle School eighth-grader. "Science is my favorite subject, but last year, we'd read these big thick textbooks and I didn't always turn in my homework."

This year, Mueller's getting A's and B's in history and science, holding his own with students at the top of the class.

Mueller is among a group of middle school students in half a dozen Eugene and Springfield schools who are learning science and social studies with an experimental curriculum that emphasizes big concepts instead of lots of small details.

Developed by researchers at the University of Oregon, it's the product of more than 10 years of studies into teaching techniques geared to students who are otherwise intelligent, but have difficulty reaching their potential.

JOE WILKINS III / The Register-Guard

Douglas Carnine, UO professor of learning, sits in on Earth science class at Monroe Middle School where new curriculum is being used.

The results are promising, says Douglas Carnine, UO professor of learning and instructional leadership and director of the National Center to Improve the Tools of Educators.

Not only are learning-disabled students doing appreciably better, but so are students without disabilities, Carnine said. That's particularly helpful in classrooms where special education students are mainstreamed, because teachers must be able to reach students with a wide range of abilities.

Most of Carnine's studies showed that kids diagnosed with learning disabilities who were taught with the new curriculum, matched or exceeded the performance of general education students taught with more traditional methods.

The studies also indicated that general education students taught with the curriculum also outperformed their counterparts taught with other methods.

In one group of studies, learning-disabled high school students who had received similar cirriculum did a better job constructing sound arguments than did college students in a teacher training program at Boise State University.

In another study of high school students, remedial and learning-disabled students who received special video-disc instruction in chemistry scored as high on a test of concepts as did advanced-placement chemistry students.

"We can say, with some confidence, that students with learning disabilities can learn very sophisticated content," Carnine said. "Our position is that it should be used with all our kids."

Carnine and his colleagues believe that students learn subjects best by studying big ideas rather than focusing on many small details. For example, in studying history, Carnine analyzes events by breaking them down into three concepts: problems, solutions and effects.

Each of the three concepts is further broken down.

Problems boil down to two types: economic problems and those involving people's rights.

Solutions fall into five categories: dominating, accommodating, tolerating, moving and inventing.

And effects come in three forms: solving the problem, failing to solve the problem or creating a new problem.

By using that structure, students are better able to make connections among historical facts and link past and present events, Carnine contends.

The system works especially well for students who have trouble remembering details, paying attention in class, or writing and speaking, Carnine said.

Carnine concedes that some educators have criticized similar approaches as too controlling. They think students learn best through self-discovery at their own pace.

But Carnine contends that by giving students well organized concepts, they can make connections and discoveries on their own.

Evelyn Elder, who teaches eighth-grade history with Carinine's new history textbook at Monroe, said she is sold on the curriculum.

Unlike traditional textbooks, which feature questions at the end of the chapter, Carnine's chapters are peppered with questions throughout. (Because it contains no glossy pictures, Carnine figures he'll be lucky to "only lose about $10,000" on it.)

Elder has her students take turns reading out loud from the text. When they reach a question, students answer and then go on. She said the method gives students like Drew Mueller a chance to succeed in class.

"He used to beg me not to make him read," Elder said. "Now he reads."

Anne Williams, special education teacher at Monroe, said of the roughly 10 special education students taking Elder's history class, eight are getting As and Bs. "They are doing much better," Williams said. "They learn more and retain more."

Williams said she has seen an improvement in students' self-esteem because they no longer have to ask their teachers as many questions and are better able to keep up with the work.

Stephanie Powers, who teaches eighth-grade history at Hamlin Middle School in Springfield, said she has been impressed with Carnine's history curriculum since she began using it about a month ago.

"Kids are saying, 'I really understand it,'" she said. "This book does not have all the facts of the regular history book. For me, I could go for a little more facts. But it has mastered the concepts of history."

In a recent unit on the American Revolution, Powers said students grasped the concept that the colonists faced a people's rights problem, while from the British perspective, the problem was largely economic.

"By using these main formulas they can grasp, they can put their ideas into nifty boxes and write their essays," she said.

Powers said she isn't yet sure how well the program is working for her top students, however.

"I see a little boredom setting in with the higher achievers," she said. "Are higher achievers being cheated? That's one of our questions."

At Monroe, teacher Sam Miller organizes his Earth science class around big ideas, presented graphically with a video disc player.

In a class on volcanos and earthquakes, Miller's students watched a presentation organized around the idea of convection — the movement of things in a medium.

"One of the biggest big ideas is convection," Miller said. "If they understand that, they understand many other things — plate techtonics, ocean currents and air movement."

Miller said combining the video disc technology, which allows kids to visualize concepts, and concentrating on the big ideas, which helps put information into a context, students seem to grasp scientific information more easily.

"This stuff is not magical," said Miller, who has been using some of these methods since about 1987. "I look at it as an elegant piece of instructional art — a way of teaching that is efficient, interesting and meaningful."

At the beginning of the school year, Miller gives all his students a 77-question test. He said the highest scorers typically get about 38 right. By the end of the year, he said all students get 70 or more correct, including special education students.

Miller said he's convinced that many students' problems stem as much from the curriculum as the individual learning problems.

"We tend to call it curriculum-disabled," Miller said. "Students are perfectly capable of doing real well if they have the curriculum to support it. I'd much rather find a way to support a kid with well-designed curriculum, than excuse their learning problems by hanging a label on them."

Houston Chronicle



# Bush touts Lott for top school post

By JOHN MAKEIG
Houston Chronicle

Gov.-elect George W. Bush told a Houston gathering Tuesday that Houston elementary school principal Thaddeus Lott would be seriously considered to be Texas' next commissioner of education.

Lott

The remark came during a wide-ranging speech to the Greater Heights Area Chamber of Commerce at the Wyndham Greenspoint Hotel. Bush was asked if Lott, 60, is considered a possible new head of the Texas Education Agency, a post now held by Lionel "Skip" Meno.

"He'd make a great replacement," Bush said, calling Lott "a fabulous educator."

Lott, principal of Wesley Elementary in Acres Home, said that he was flattered and surprised he was being considered, but that he has not been approached by Bush or his staff about the job.

"Naturally, to be considered for the highest post for education in the state for anyone would be quite an honor, and just the idea that it's on somebody's mind is quite interesting and exciting," Lott said.

He said he would be receptive to the offer, "but whether or not it materializes is another question."

Houston Superintendent Rod Paige called Bush's comment about Lott "a compliment to our district."

In his speech, Bush portrayed the Texas Education Agency as a bureaucratic monstrosity and stressed that he favors less state control of education and allowing teachers, principals and parents to make more decisions locally.

Bush said Meno, whose contract ends in February, is among the educators to be interviewed for the post after Gov. Ann Richards leaves office next month. Other prospects are Lubbock school Superintendent Michael T. Moses and Dallas school trustee Sandy Kress.

Lott said he expects Bush to emphasize basic skills. He said that education is clearly in trouble in Texas when colleges are forced to teach remedial courses to many freshmen and businesses must re-educate employees.

"The way that we do things in education in Texas and in this country has to change, and I think he was elected with the anticipation that he would make changes," Lott said.

During the gubernatorial campaign, Bush complimented Lott on several occasions, including an August visit to Wesley Elementary School, when he called him "an education hero."

Lott is known for battling officialdom to run his school as he sees fit. He pushes basic instruction, strict discipline and a phonetic approach to reading beginning with kindergarteners.

He attracted widespread attention in 1991 when students at his predominantly black school logged scores on achievement tests that were far above average. The scores were so good that Superintendent Joan Raymond accused a Wesley Elementary teacher of helping pupils cheat on the standardized exams.

Raymond later apologized for the remark. Lott since has become "head principal" over three elementary schools and a middle school in Acres Home.

Chronicle reporters Melanie Markley and Armando Villafranca contributed to this story.

# ANNUAL EXCELLENCE IN EDUCATION AWARDS

### Outstanding Administrators

***Milly Schrader***, principal of Leimbach Elementary School, has maintained the use of Direct Instruction programs in her school, in spite of the political pressures in California to abandon DI. Leimbach is now in its third year of DI implementation. Already at the end of the second year, the scores were dramatically higher. Unless you've had some direct involvement with schools in California it is difficult, if not impossible, to imagine how hard it is to maintain the use of DI in the California environment. A state-adopted framework that is the virtual antithesis of DI, a state bureaucracy that punishes any deviation from the state-adopted framework, a limited budget for materials, and teachers who have received no training in effective instruction and have only heard negatives about DI, all make it all the more amazing that Milly and her staff could implement DI so effectively. Milly's leadership is inspiring.

***Lynn Helmke***, coordinator of special education in Dubuque, Iowa, established an examplary special education Direct Instruction program there several years ago. Because the special education students from her program were in many cases outperforming the general education students, the general education teachers began to ask if they shouldn't also be learning how to teach kids like that. As a result, Direct Instruction spread to general education. Going above and beyond the call of her job, Lynn has now organized a unique DI conference at which educators from throughout the state can come to DuBuque to hear about and observe Direct Instruction being used during school visitations Lynn's leadership is persuasive, well organized, and highly effective.

Twenty-two years ago, ***Mollie Gelder*** became principal of Woodbridge School in Roseville California, a low-achieving school in an economically deprived area. She began by getting her staff to focus on student performance data. She did this by closely monitoring the performance data of each of the students in her school herself. She also observed her teachers closely, giving them specific instructions for improving their skills. She insisted that teachers forget about making excuses for poor students' low achievement by looking at home and community variables. For 22 years Mollie has remained adamant that no child, regardless of her handicap or home language, will leave Woodbridge Elementary unable to read. Nothing is allowed to interrupt the reading period, even the gardener at Woodbridge waits until after reading to mow the lawn. Mollie's dedicated hard work has paid off. Now Woodbridge scores are above the state averages and are much higher than scores for schools with similar socio-economic factors and remain so, even though many neighboring schools send their problem children to Woodbridge. Mollie's dedication and commitment are admirable.

**Mollie Gelder, Outstanding Administrator**

***Euhania Hairston***, principal of Martin Luther King Elementary School in Seattle, has a long career with Direct Instruction. She was the Director of the Campi / DI program in Seattle School District. This program has had a successful 26 year history achieving outstanding results using DI exclusively. Just recently, she became principal of Martin Luther King Elementary, where she has ***reinstituted*** DI. Consequently, achievement scores showed a marked improvement over the past year's scores, with some individual students making enormous strides in improvement. Her openness in communicating with parents and staff have reenergized the school. Euhania's leadership is persistent and remarkable.

***Ken Traupman***, director of the Institute of Effective Schools, is a visionary who knows how to make things happen. Ken created the non-public school system in San

**Euhania Hairston, Outstanding Administrator**

**Ken Traupman, Outstanding Administrator**

Diego over ten years ago, called the Children's Workshop then. The Children's Workshop was located in a church basement and soon became known in the county for providing excellent services for youngsters with learning and behavior problems. The students were typically students who had failed in every other school setting. Early in the development of the school, Ken emphasized professional development and brought several teachers to the Direct Instruction conference. Since then he has brought five to ten staff members every year. The entire curriculum of the school is Direct Instruction, and the school is now a school system, called the Institute for Effective Education. Ken can teach DISTAR Language, develop a million dollar budget, and maintain the integrity of an implementation as some of us can only dream about. Ken's true testimony of effectiveness is that children who had been written off by the system, who had been labeled unteachable or too retarded, have learned to read, write and do arithmetic. When a student labeled with a 40 IQ ends up in three years finishing Reading Mastery VI and loving metaphors, you know it was the teacher who made the difference. Ken provides his teachers with training, support, and, most importantly, he understands instruction. Ken's leadership makes the *job* of teaching truly the *joy* of teaching.

**Outstanding Teachers**

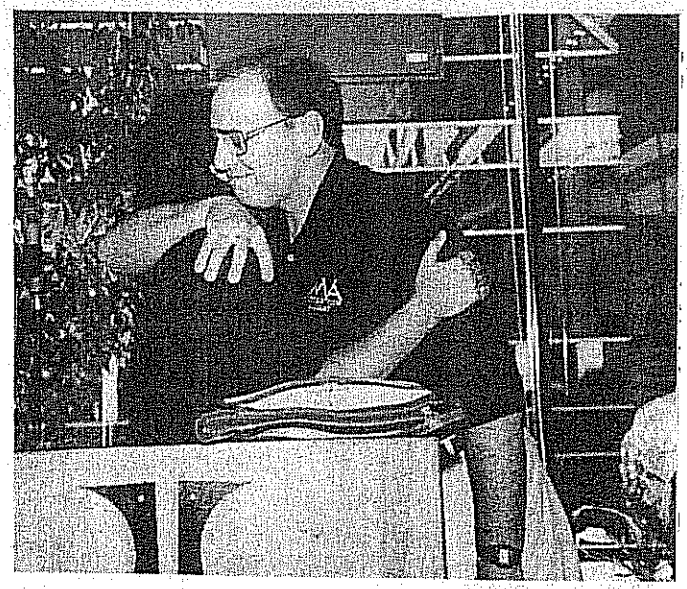
***Nancy Lindahl***'s classroom serves as a model cross-categorical classroom which serves as a demonstration and training room for fellow teachers and support personnel. She uses DI exclusively in her classroom and is widely acknowledged throughout Michigan for success in teaching. She frequently conducts in-service programs in DI for area teachers, both in and outside her classroom. Her classroom is described as "constantly alive with visitors and trainees." She was "outstanding Young Educator" for southwestern Michigan. She was a Christa McAullife Fellow, receiving one of only two awards in Michigan. She also conducts and supports research on instruction and management in her classroom, she presents at state conferences, and she teaches a class at Western Michigan State. She is a highly effective advocate for DI and resarch-based decisions in education.

After a career in special education, ***Dr. Malcom Neely*** decided he would make a difference in regular education at Camelot Elementary in Federal Way, Washington. With tenacity he managed to get Reading Mastery implemented and then worked as the consulting teacher. Camelot Elementary faces the problems of low socio-economics and many second language groups, including Russia, Korean, and Pakistani. At the end of the year the results were not only gratifying, but outstanding, considering the character of the school. Malcolm then faced the now familiar problem of getting school officials to share the data with the school board and use it for decision-making. This proved a much more difficult task than overcoming the problems of poverty and linguistic differences in teaching the kids. The results did not matter to the school officials, a familiar ending to a familiar story.

***Steve Hoffelt***, third grade teacher at Christa McAullife Elementary school for many years, has been a model teacher of DI and an influential leader. Many teachers and parents have come to know and love DI through his work. Steve is living proof that an outstanding, highly

competent DI teacher is not a robot. Steve is known to do such things to his class as say: "If you got all the problems in part 1 correct, watch. If you missed any, cover your eyes." What the third graders with their eyes open saw in the next few seconds was their over forty, over six foot teacher turn a cartwheel across the front of the classroom. What had Steve turning cartwheels was the performance of his students with the new Connecting Math Concepts program. Steve is on the cutting edge of DI, always implementing the latest DI programs. In today's current climate of education, though, he finds it will be easier if he starts his own school. He has worked with a team of other teachers and will be opening Mountain View Academy this Fall, a school entirely focused on academic objectives that teaches using Direct Instruction.

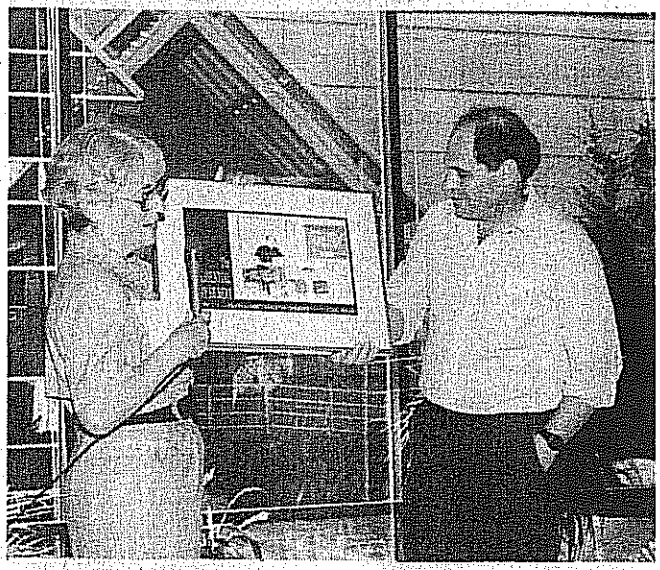
**Steve Hoffelt, Outstanding Teacher**



**Distinguished Service Award**

***Jerry Silbert*** received the Distinguished Service Award for his energy and dedication to effective use of the programs in new implementations. Experienced DI teacher and program developer, Jerry knows what the programs can do. He travels to Houston, Chicago, and back to Eugene, visiting schools, offering assistance, sleeping on couches and in churches, and carrying his dirty laundry in a blue duffle bag. Appreciative recipients of his personal investment in effective implementations presented Jerry with words of appreciation and praise, and a new and bigger duffle bag—so he can carry more dirty laundry. Due to Jerry's efforts, the Chicago White Sox Charities have given ADI a large grant for implementing Direct Instruction Reading effectively in Chicago's most challenging inner-city schools. Jerry is now directing the ADI / Chicago White Sox Charities Direct Instruction Reading Project.

**Jerry Silbert, Outstanding Researcher**



**Special! Award Winners From the Last 20 Years**

We have searched our records to find every award winner from the past. If we somehow missed you, please forgive us and notify us right away. We want to maintain a complete list and watch it grow.

**Outstanding Teachers**

Earline Alexander
Chip Kiger
Susan Dixon
Chuck Arthur
Barabara Dean
Debra Blumberg
Pat Baur
Shirlee Lehnis
Rita Colton
Jan Hasbrouck
Karen Garner
Nancy Woolfsen
Lorraine Killian
Pepe Quintero

**Outstanding Administrators**

Ramon Alvarez, Jr.
Judith Hurle
Joel Davidson
Stewart Greenberg
Duane Bresee
Phyllis Wilken
Roberta Weisberg
Tina Rosen
Thaddeus Lott

**Outstanding Supervisors / Teacher Trainers**
Paul McKinney
Sara Tarver
Arezetta Johnson
Georgina Hosmer
Ed Shaefer
Corene Casselle
Jean Robb

**Outstanding Researchers**
John Lloyd
Edward Kameenui
Russell Gersten
Robert Horner
Paul Weisberg
Alex Maggs
Galen Alessi

**Special Award**
Gary Davis

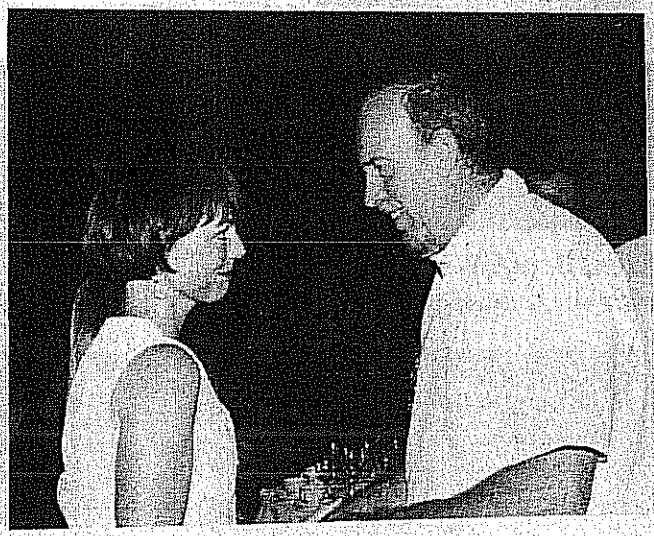
**Outstanding Follow Through Directors**
Alice Martinez
Margaret Aragon
Judy Borden
Rosali Wade

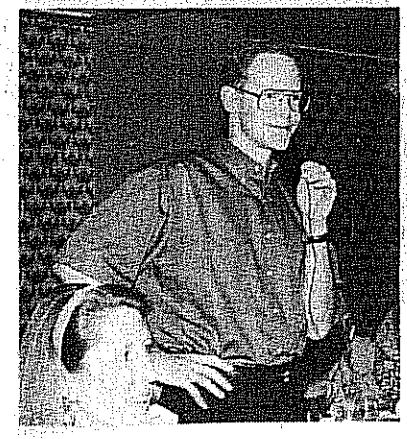
**Outstanding School Psych**
Mike Vreeland

**Distinguished Educator**
Dorothy Ross

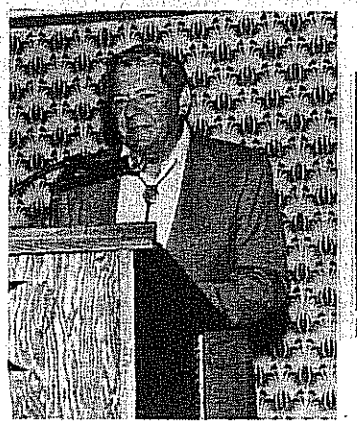
**Excellence in Education**
Candace Clark
Helen Van Heusen
Dawn Poston
Barbara Johnson
Sharon Dalkey

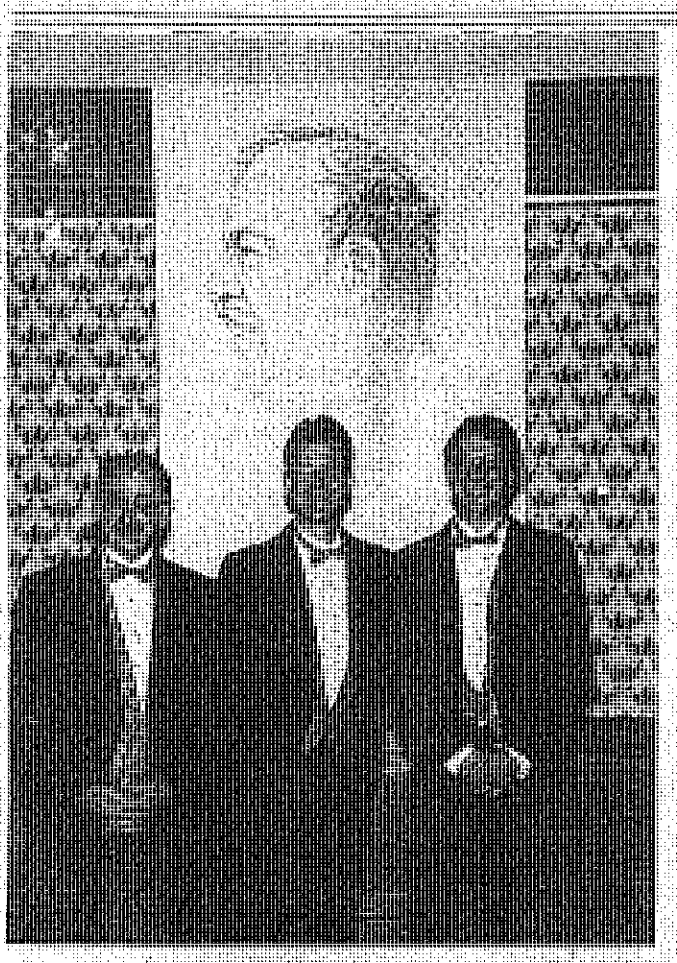
# An Evening of Tribute to Zig



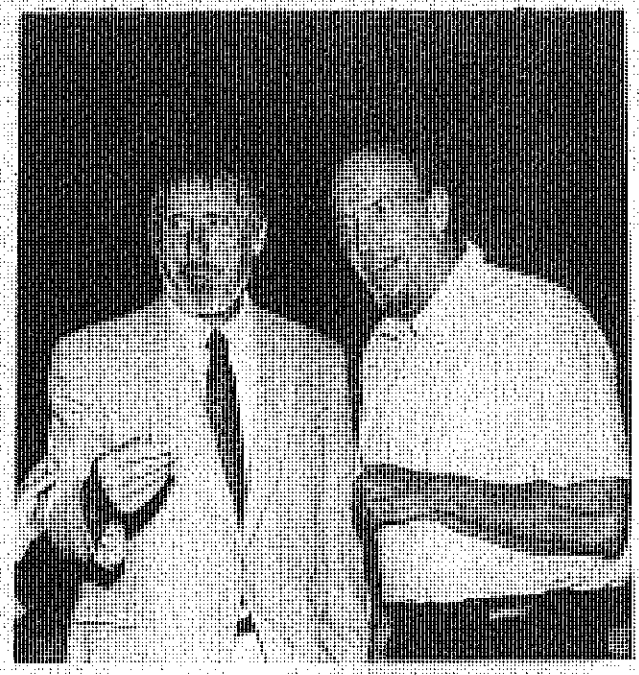


**Touching moments of tribute**

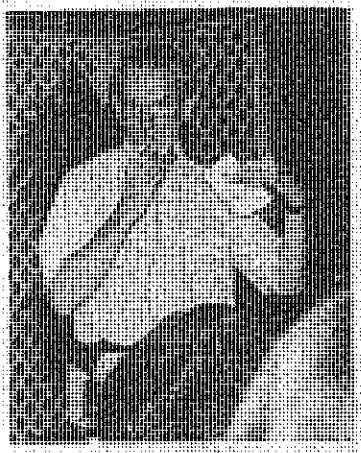




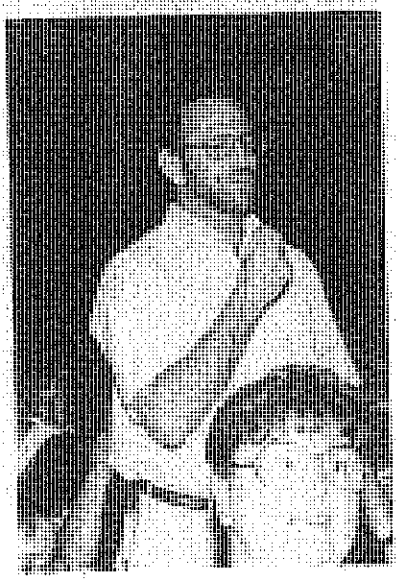
Geoff Colvin, Bob Dixon, Bryan Wickman, distinguished hosts for the tribute to Zig



Surprise guest speaker, Carl Bereiter



Zig with the subjects of his first educational experiment over 30 years ago: his own twins, Kurt and Owen



# ADI is Proud to Announce the Availability of these Two High-Quality Video Presentations...

## Keynote Presentations from the 20th Annual Eugene Conference

If you were at the 1994 Eugene Conference, use these tapes to help rekindle and spread the enthusiasm that you brought back with you. If you couldn't make it to the conference, this is your opportunity to see keynotes relevant to today's instructional issues. Total running time: 2 hrs. Titles and speakers include:

*Direct Instruction: Past, Present & Future*
Jean Osborn–Associate Director, Center for the Study of Reading, University of Illinois

*"I Have a Dream that Someday We Will Teach All Children"*
Sara Tarver–Professor, University of Wisconsin-Madison

*So Who Needs Standards?*
Zig Engelmann–Professor, University of Oregon

## An Evening of Tribute to Siegfried Engelmann

On July 26, 1995, 400 of Zig Engelmann's friends, admirers, colleagues and proteges 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. This video is not just a tribute to Zig, but also a lasting reminder of the value of the work we do every day. Total running time: 2.5 hrs.

**Order Now! Supply is Limited!**

Please send me

____ copies of Osborn/Tarver/Engelmann Keynote tape

____ copies of the Engelmann Tribute tape

Cost: 25.00 per tape, + 5.00 shipping & handling

Name _____

Address _____

City _____ St/Prov _____ Zip _____

*ADI, PO Box 10252, Eugene, Or. 97440*

# 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.**

**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 12, 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 Larner 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.

**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.

**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.

**OBE and World Class Standards.....$5.00**
*Effective School Practices*, Spring 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.

Add $3.00 postage & handling *per order*.
Prepaid orders only.

# 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* _____

***Subtotal*** _____

*Postage & Handling:*

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| *$0.00 to $20.99* | *$4.00* |
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*Please make checks payable to and send to:* ***ADI • PO Box 10252 • Eugene, OR 97440***

*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.


### Reviewers Acclaim Walker Book

With reviewers acclaiming it a "future classic," Antisocial Behavior in Schools: Strategies and Best Practices" by Hill Walker and Geoff Colvin of the University of Oregon, and Elizabeth Ramsey has been published and is now available.

The book examines practical strategies for preventing and correcting antisocial behavior in schools. It includes approaches that show educators how to:

- Design an optimally effective classroom environment.
- Establish a schoolwide discipline plan.
- Manage teacher-student interactions effectively.
- Conduct social skills training for entire classrooms of students.
- Involve parents.
- Identify students at risk for developing antisocial behavior patterns.
- Develop a pull-out intensive social skills instruction program which includes "normal" peers.
- Prevent escalated, hostile teacher-student confrontations.
- Improve the antisocial students's social interactions, peer relations, and ability to abide by playground rules.

*"The authors have produced the clearest and most practical guide to dealing with antisocial students on the market today," wrote reviewer Bob Rutherford of Arizona State University. "I believe it will become a classic."*

# *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.
Philadelphi, 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

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
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AD Box 25
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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

Vicky Vachon
148 Wolfrey Ave.
Toronto, Ontario M4K 1L3

# Summer Direct Instruction Training Opportunities

July 17–20
**11th Atlantic Coast Conference on Effective Teaching and Direct Instruction**
Cape Henelopen High School • Lewes, Delaware
Contact: ACCDI, PO Box 997, Rehoboth Beach, DE 19971

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July 23–28
**21st Annual Eugene Direct Instruction Conference**
***"World Class Standards for the 21st Century"***
Eugene, Oregon
New Feature: Sunday, July 23rd Pre-Conference Sessions:
Classroom Management–Randy Sprick
Study Skills–Anita Archer
Becoming a Direct Instruction Trainer–Team of ADI Lead Trainers
Contact: ADI, PO Box 10252, Eugene, OR 97440

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July 31–August 2
**Salt Lake DI Conference**
Hilton Hotel • Salt Lake City, Utah
Contact: Richard West, SRA, 10924 S. Shelbrooke Dr, South Jordan, UT 84095

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August 14–16
**1995 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

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August 16–18
**DI Summer Institute**
***"Achieving a Balance in an Integrated Classroom"***
Seattle Pacific University • Seattle, Washington
Contact: Willy Ertsgaard, 2665 NW 95th, Seattle, WA 98117

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August 21–23
**Chicago Direct Instruction Conference**
Site TBA • Chicago, IL
Contact: ADI, PO Box 10252, Eugene, OR 97440

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October 26–27
**21st Carmel Direct Instruction Conference**
Carmel Mission Inn • Carmel, California
Contact: Wes Robb, 6527 N Colonial Ave, Fresno, CA 93704

## *Call for Posters and Presentations*

### 21st Annual Conference
### Association for Direct Instruction

The 21st annual ADI Conference will include expanded opportunities for participants to see and hear about effective school practices around the nation. Two new types of presentations will be made available at the Eugene ADI conference this coming summer. Educators are invited to prepare either a poster session, or presentation for the final day of the four-day conference. These sessions will be scheduled throughout the day.

Poster sessions will take place in several common areas in the Hilton conference center. The posters should be designed to communicate clearly a project, study, or model program. The sessions will also be scheduled to provide conference participants with an opportunity for informal discussion with presenters.

Presentation sessions will be scheduled for one and one half hour periods throughout the day. These sessions may be panel presentations, school success stories, research, or projects related to effective teaching practices in schools.

Persons interested in presenting a poster or mini-session should submit an abstract and the attached form by May 1st. Notification of acceptance will be made by June 15th.

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## POSTER AND PRESENTATION APPLICATION FORM
## 21ST ANNUAL ADI CONFERENCE

Please use this form to submit your poster or session presentation abstract for the ADI Annual Conference held July 24 to 27, 1995 in Eugene, Oregon. Abstracts should clearly describe the program, research, or desired information related to effective teaching practices in order for the review panel to make a clear judgment of the presentation's quality. The text must not exceed 250 words.

Please send the completed materials, by May 1st, to:
ADI
21st Annual Conference Committee
PO Box 10252
Eugene, OR 97440

**I. Presenters**

Name:_____
Organizational Affiliation:_____
Address:_____
Telephone Numbers:
Office:_____
Home:_____
Co-Presenters:_____
Organizational Affiliation:_____

**II. Session type**: _____Research / Panel _____Poster

**III. Title of Presentation**:_____
_____
_____

**IV. Abstract** (250 words)

# READING MASTERY I
# FAST CYCLE I
# Pre- and In-Service
# TRAINING VIDEO SERIES

## 10 VIDEO TAPES
### Intensive Training and Practice
### with Facilitator's Guide/Participant's Manual
### from Developers of the
## Direct Instruction Model

The series may be used with teachers, assistants, tutors, supervisors, administrators and others who may have had no prior DI experience. It may also be used as a thorough review of DI TEACHING or TRAINING techniques for those with DI experience, including consultants and trainers.

***May be used as basis for college credit courses.***

The first **five tapes** present intensive **pre-service** training on the beginning lessons from READING MASTERY I / FAST CYCLE I. Tapes may also be used with individuals. The five pre-service tapes run slightly more than 6 hours; however, since the off-screen practice sessions are an essential part of training, the total pre-service time required is at least 11 hours. The first tape which runs 37 minutes may be used separately as an **orientation** to DI for school personnel, parents and community members. On the other tapes, **rationale** and **critical teaching techniques** are presented for each exercise; techniques are **demonstrated**; participants are lead through and then **practice** techniques. Periodically, classroom teaching demonstrations with pre-school and ESL students are shown. Tape 5 provides a review of teaching and classroom management strategies and shows a whole lesson with children.

Beginning with **tape 6, the series continues with in-service** training. Basic techniques from the pre-service training tapes are reviewed, but the focus of each of the in-service training segments is on the new formats and techniques introduced during a specific lesson range. Training segments cover 10 to 20 lessons in READING MASTERY I (and the equivalent lessons in FAST CYCLE I).

## 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.

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**Beginning to Read: Thinking and Learning About Print** (1990) by Marilyn Jager Adams (A summary by the Center on Reading).
Price: $5.00 Prepaid orders postage free
Mail orders to: University of Illinois
Summary
PO Box 2276, Station A
Champaign, IL 61825-2276

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**Direct Instruction Reading** (Revised, 1990) by Douglas Carnine, Jerry Silbert, & Ed Kameenui.
Price: $40.00
Order from: MacMillan Publishing
1-800-257-5755
ISBN: 0-675-21014-3

**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.

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**Becoming a Nation of Readers** (1985)
The Report of the Commission on Reading.
Price: $4.50 Prepaid orders postage free
Mail orders to: University of Illinois—BNR
PO Box 2276, Station A
Champaign, IL 61825-2276

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**Direct Instruction Mathematics** (Revised, 1990) by Jerry Silbert, Douglas Carnine, & Marcy Stein.
Price: $40.00
Order from: MacMillan Publishing
1-800-257-5755
ISBN: 0-675-21208-I

### WHAT DIRECT INSTRUCTION IS AND IS NOT

**Direct Instruction IS NOT a behavioral approach.**

***D*irect *I*nstruction IS NOT *d*irect *i*nstruction.**

**Direct Instruction IS (w)holistic.**

**Direct Instruction IS eclectic.**

**Direct Instruction IS NOT a "constructive" approach.**

**Direct Instruction IS effective.**

**Direct Instruction IS humanistic.**

From: Tarver, S. G. (1992). Direct instruction. In W. Stainback & S. Stainback (Eds.). *Controversial issues confronting special education: Divergent perspectives* (pp. 141-152). Boston: Allyn and Bacon.