Direct Instruction *news*

RANDI SAULTER and DON CRAWFORD, Editors

DI News and Views Span Classrooms and Continents

This edition of the *DI News* brings you two new co-editors: Randi Saulter and Don Crawford. Our goal is to make the *DI News* helpful as well as interesting for those of you in the trenches doing Direct Instruction. We have brought you reading delicacies from the entire gamut of the educational spectrum, from the individual classroom level all the way up to commentary on the national and international scene.

At the classroom level we have "Top Five Teaching Errors for Primary DI Teachers." This piece looks at the kinds of teacher behaviors critical for primary age students that are most frequently missing in classrooms. Those of you who are practicing DI all by yourselves (in what we lovingly call the Lone Ranger mode) can use these ideas to self-evaluate and either pat yourself on the back, or improve your practice.

Also at the classroom level we are introducing what we hope will become a regular feature—"Tips from Teachers." These tips have come from an SRA Web site that has been collecting them for several years. We hope to bring you some tips from the archives each issue. We also give you directions on how to go to the Web site and sign up to receive the tips monthly, direct from SRA.

At the level of reading in general we have included what we consider the best article on remedial reading you can find anywhere. It happens to be from the teacher's guide in *Corrective Reading*, but it is great stuff. Our esteemed founder, Zig Engelmann, succinctly describes exactly what is wrong with what has been learned by students who haven't correctly learned how to read. He then goes on to describe precisely and eloquently what needs to be done to fix them. It is really a joy to read—and probably good enough to commit to memory.

At the level of math in general we bring you Chapter 1 from the fourth edition of the "DI Math Text," whose actual title is *Designing Effective Mathematics Instruction: A Direct Instruction Approach*. This terrific text by four ADI members—Marcy Stein, Diane Kinder, Jerry Silbert, and Doug Carnine—tells you everything you need to know about how to design math lessons the DI way. Chapter 1 covers the basics and explains the key concepts in how to apply Direct Instruction principles to your math lessons.

At the school level we have an article by Jerry Silbert entitled "Direct Instruction Implementations: Problems to Avoid." This is a great summary of the most common errors to be avoided in implementing Direct Instruction at the school-wide level. Jerry has seen as many implementations as anyone and has seen the good, the bad, and the ugly. His rec-

ommendations are pithy and to the point. There is no better place to start a DI implementation than here. So this is "must" reading for anyone considering a school-wide implementation. We're happy Jerry agreed to share this with everyone.

Also at the school level we have a good news story about an Early Reading First grant for implementing DI in preschool

In this issue

Contribute to DI News:

DI News provides practitioners, ADI members, the DI community, and those new to DI with stories of successful implementations of DI, reports of ADI awards, tips regarding the effective delivery of DI, articles focused on particular types of instruction, reprints of articles on timely topics, and position papers that address current issues. *The News'* focus is to provide newsworthy events that help us reach the goals of teaching children more effectively and efficiently and communicating that a powerful technology for teaching exists but is not being utilized in most American schools. Readers are invited to contribute personal accounts of success as well as relevant topics deemed useful to the DI community. General areas of submission follow:

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

News: Report news of interest to ADI's members.

Success stories: Send your stories about successful instruction. These can be short, anecdotal pieces.

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

Book notes: Review a book of interest to members.

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

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

Submission Format: Send an electronic copy with a hard copy of the manuscript. Indicate the name of the word-processing program you use. Save drawings and figures in separate files. Include an address and email address for each author.

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

Completed manuscripts should be sent to:

ADI Publications
P.O. Box 10252
Eugene, OR 97440

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

and kindergarten in Kentucky. The article is from active DI presenter and ADI member Donna Dressman, and it talks about how to give kids a great head start academically using effective instructional programs.

At the national level we have a review of a new book by another ADI member, Dr. Vicki Snider. Her book, *Myths and Misconceptions About Teaching*, explains why so much of American education misses the mark. She helps us under-stand what incorrect notions grip the imaginations of American teachers and how those ideas prevent excellence and the adoption of Direct Instruction. The review will hopefully pique your interest in this important book.

Also at the national level we have a recent and very interesting piece writ-ten by Zig Engelmann. His commen-tary asks, "How scientific is *Reading First*?" For all the efforts to make read-ing instruction more scientifically based in this nation, *Reading First* may not really be achieving its goal. His insights make it clear that political compromises and scientific clarity don't mix very effectively.

And finally, at the international level, we hear from Down Under. A *DI News* reader from Australia gives us his per-spective of DI implementations and acceptance in his country—which could be characterized as under-whelming.

We hope you will find this issue of the *DI News* entertaining, enlightening, or both. **ADI**

DENNIS SPARROW, Department of Education and Children's Services, South West District, Grange, South Australia

Letter From Australia, Where Direct Instruction is Treated Differently

Editors' Note: We love hearing from readers and this was a most entertaining letter. How-ever, space issues required us to edit it severely, down to our self-imposed 500-word limit. Our apologies to Dennis Sparrow.

I read my *Direct Instruction News* with pleasure, but also with bemusement.

I am the manager of student support and disability (as well as having my own private psychology practice) in the South West District of the South Australian Education Department. Our education department is often described by our politicians and the education department hierarchy as having the best educational system in the world (there must be hundreds of these best systems in the world). I have no idea how they have come to this conclusion or based on what data, but it is relevant to how my depart-ment views Direct Instruction. Although they do not have an official view, the unstated view is clear—that it is a form of child abuse and does not fit with any of the priorities or direc-tions or pedagogies (yes, they actually use words like this to describe the ran-dom collection of practices in our classrooms) promoted by the state.

I read in each of your editions about problems with implementation of DI in your schools. I am astonished. We do not have issues with implementa-tion, it just doesn't happen. There are DI programs used by the very occasional teacher, and in a handful of schools there might even be a principal who is pushing DI, but it never would be on a whole school basis. I was an engineer before becoming a teacher and psychologist. At my first introduction to the old *DISTAR* in 1978, I thought that there was really no reason to look into other ways of doing things and that this was clearly an approach that worked and could be proven to work. It just made so much sense to me. Whenever I supervise new psycholo-gists, I introduce Direct Instruction concepts to them. Many of them have believed to some extent and even maintained their beliefs, but they work within a system that has never supported what they do.

I did implement some DI programs in special classes and in a special school, and so have a few others. But there was no intention that these programs would receive positive press, or any press, despite the results.

Our system says it uses phonics and other approaches to reading. However, I have seen how it is done and it is a slap-dash, unclear methodology and curriculum without logical steps. I know there are some Australian aca-demics who are striving for change, but I also know they are having little real impact on what is happening in schools.

I just had to get that off my chest. After reading *War Against the Schools' Academic Child Abuse*, it is so clear that American and Australian issues are very much the same, but the United States has a federally driven education system and Australia has a state-driven system. However, we all appear to be less data-driven and more feel-ing-driven, and DI remains as far in the wilderness as in our Australian deserts. **ADI**

ADI News

Summertime means conference time at the Association for Direct Instruction, and this summer is no different. This year we offer four outstanding regional conferences and, of course, a terrific National Direct Instruction Conference. Following is a brief description of each training event and details about the location. Full brochures are available by calling our office (800-995-2464) or on the Web at http://www.adihome.org.

June 20–23 we will host the Ninth Southeast Conference. Located in Orlando at the Florida Mall Hotel, this conference is gaining in popularity as a place for families to come. While mom and/or dad are in session, families enjoy all the attractions the area has to offer. When sessions are over there is still plenty of time left to see the mouse or try and shake a few brain cells loose. Another option is the huge mall attached to the hotel. This year we are pleased to have Stuart Greenberg as our keynote speaker. Stuart is a longtime supporter of Direct Instruction and is currently deputy director of the Eastern Region Reading First Technical Assistance Center. We also have added a Consultant Training Institute to address the needs of those wishing to teach others to use DI programs.

Next we will be back to Colorado Springs for the Mountain States Conference July 10–12. About 200 people will gather at this regional conference. Cary Andrews will present a spectacular keynote that is motivating and entertaining as well as informative. We also have added sessions on classroom setup and procedures. People will enjoy downtown Colorado Springs and the great restaurants within a few steps of the historic Antlers Hilton.

For the past 32 years DI users have looked to the National Direct Instruction Conference and Institutes at Eugene as more than just a training conference. This year the conference is July 23-27. Attendees will have the opportunity to get to meet and talk to people from all over North America and the world that share a passion for DI. The national conference has 46 different sessions as well as four comprehensive institutes. New sessions include Coaching II, High School DI Mathematics, and many others. Zig Engelmann will give opening and closing remarks, and we are excited to hear Marcy Stein's keynote on Monday the 24th. Prominent program authors and trainers are accessible and will meet with participants in both formal and informal settings. Popular social events are the SRA Welcome Reception on Sunday night, the picnic in the park on Monday night, and the Excellence in Education and Hall of Fame Awards banquet on Wednesday night. Also available are tours to the fantastic Oregon Coast and a winery tour. Eugene's warm summer days are also a huge attraction.

Located just three blocks from Michigan Avenue and the famed Miracle Mile, the Holiday Inn–Mart Plaza is an excellent venue for the Midwest Direct Instruction Conference. The event will be held July 31 through August 2. Tiffany Parker will provide a keynote that will chronicle her efforts at making sure children have a chance to learn with effective programs and her career thus far. We have added a session on DI and *DIBELS* and another on Increasing Vocabulary and Comprehension Development.

The final summer conference is the Atlantic Coast Direct Instruction Conference, August 7–9. This event has been held in Baltimore for the past few years. This year it will take place in Cherry Hill, NJ, a five-minute cab ride to downtown Philadelphia. Chris Jones from Longwood University will present the keynote address. He has been working with several school districts in Virginia to implement successful three-tier intervention models that include DI. Ed Schaefer will build on the groundwork that Chris lays in his session on Response to Intervention and Reading Mastery. There are many other sessions for experienced and new users of DI.

As you can see, there are some great sessions and locations to get your Direct Instruction training. I hope to see you at one of our events this summer! *ADI*

The schools and organizations listed are institutional members of the Association for Direct Instruction. We appreciate their continued support of quality education for students.

Altar Valley School District #51
Tucson, Arizona

American Preparatory Academy
Draper, Utah

Baltimore Curriculum Project Inc.
Baltimore, Maryland

Barren County Board of Education
Glasgow, Kentucky

Basin School District
Idaho City, Idaho

Beacon Services
Milford, Massachusetts

Bend Elementary School District
Red Bluff, California

Berks County Intermediate Unit
Reading, Pennsylvania

Bethel School District #52
Eugene, Oregon

Big Lake Elementary
Big Lake, Alaska

Bristow Elementary
Bowling Green, Kentucky

Burlington Area School District
Burlington, Wisconsin

Cache Valley Learning Center
Logan, Utah

Chief Leschi Schools
Puyallup, Washington

Chrysler School
Modesto, California

Clayton County Public Schools
Jonesboro, Georgia

Cleveland Municipal School
District
Cleveland, Ohio

Consortium on Reading Excellence
Berkeley, California

Culver Middle School
Culver, Oregon

Danville Schools
Danville, Kentucky

Educational Resources Inc.
Cape Coral, Florida

Evergreen Center
Milford, Massachusetts

FDLRS/Crown
Jacksonville, Florida

Foundations for the Future Charter
Academy
Calgary, Alberta

Frank Elementary School
Kenosha, Wisconsin

Gering Public Schools
Gering, Nebraska

Granite School District
Salt Lake City, Utah

Grayson County Middle School
Leitchfield, Kentucky

Great Western Academy
Columbus, Ohio

Hattiesburg School District
Hattiesburg, Mississippi

Hawthorn School District 73
Vernon Hills, Illinois

Hermiston School District 8R
Hermiston, Oregon

Highland Elementary
Hopkinsville, Kentucky

Hinckley - Finlayson School
District
Hinckley, Minnesota

Hinsdale Community CSD 181
Westmont, Illinois

Houston Middle School
Big Lake, Alaska

Humboldt Park School
Milwaukee, Wisconsin

iLearn, Inc.
Marietta, Georgia

Institute for Effective Education
San Diego, California

Jackson Elementary
Medford, Oregon

James Irwin Charter Schools
Colorado Springs, Colorado

Joint School District No. 2
Meridian, Idaho

JP Associates
Valley Stream, New York

La Gloria Elementary
Gonzales, California

Lasson View School District
Los Molinos, California

Laurel Nokomis School
Nokomis, Florida

Lincoln Elementary
Coquille, Oregon

Livermore Joint Unified School
District
Livermore, California

Los Molinos Unified School
District
Los Molinos, California

Lost River Elementary
Bowling Green, Kentucky

Martin Luther King Jr Elementary
Huntsville, Alabama

McDonnell Elementary
Huntsville, Alabama

Millcreek TWP School District
Erie, Pennsylvania

Morningside Academy
Seattle, Washington

Mountain View Academy
Greeley, Colorado

Mountain Vista Community School
Colorado Springs, Colorado

Natrona County Schools
Casper, Wyoming

New Plymouth Elementary School
New Plymouth, Idaho

Norfolk Public Schools
Norfolk, Nebraska

North East ISD/Special Ed. Dept.
San Antonio, Texas

Oakridge School District 76
Oakridge, Oregon

OCISS-ISB-Languages Section
Honolulu, Hawaii

Palm Beach County School District
Loxahatchee, Florida

Randolph Elementary School
Chicago, Illinois

Rapides Parish School Board
Alexandria, Louisiana

Richfield School
Corning, California

Riverside Academy
Cincinnati, Ohio

Rogers Middle School
Lawndale, California

Saint Anthony School
Milwaukee, Wisconsin

Santa Maria JUHS
Santa Maria, California

School District of New Richmond
New Richmond, Wisconsin

SELPA-Monterey County
Salinas, California

Shelby County Board of Education/
Special Services Center
Alabaster, Alabama

SRA McGraw Hill–Northeastern
Region
Moorestown, New Jersey

SRA/McGraw-Hill–Western Region
Mountlake Terrace, Washington

Step by Step Academy
Columbus, Ohio

Stevenson Elementary
Russellville, Kentucky

Sto-Rox School District
McKees Rocks, Pennsylvania

Thurgood Marshall Elementary
Morrow, Georgia

Tri City Elementary
Myrtle Creek, Oregon

Tuttle Elementary School
Sarasota, Florida

Washington Elementary
Norfolk, Nebraska

Wasilla Middle School
Wasilla, Alaska

Wasilla Middle School
Palmer, Alaska

Wildwood Academy
Oakville, Ontario

Woodland Park Elementary
Norfolk, Nebraska

A Lifetime of Achievement

Congratulations to Zig Engelmann, who has been honored by SRA/McGraw-Hill with the Pride of SRA Academic Recognition Award for Lifetime Achievement in Education. He was recognized May 2 at Chicago's Field Museum, in a ceremony that coincided with the International Reading Association (IRA) annual conference.

Zig has dedicated the past 40 years to advancing the theory and practice of Direct Instruction. "Direct Instruction has proven time and again to be effective with students of all learning styles," said Peter Sayeski, president of McGraw-Hill Learning Group, which includes SRA/McGraw-Hill. "Zig's unique philosophy that all children can learn when taught well drives the curricula. We're taking this special opportunity to thank him for his years of dedication to educa-

tion that has helped millions of children to succeed."

Zig's career began with a philosophy degree from the University of Illinois, Urbana-Champaign. After working briefly in advertising, his focus shifted to education in the 1960s, including empirical research and field-testing of instructional techniques.

While teaching his own non-identical twins in the 1960s, Zig became fascinated with education and started forming theories about how, through scientific methodology, one could determine the most efficient ways to teach ideas. He developed the Direct Instruction teaching method, which he refined and tested through field work with thousands of children.

His work for the U.S. Office of Education led to the Bereiter-Engelmann Preschool Program, which demon-

strated that well-crafted instruction could boost cognitive skills. Zig was involved with the U.S. Office of Education's Project Head Start as well as Project Follow Through, referred to as the largest controlled comparative study of teaching methods in history.

The American Institutes for Research's Comprehensive School Reform Quality Center, funded by the U.S. Department of Education, rated DI as one of just two programs of 22 total reform models showing evidence of positive effects on student achievement in a study.

Zig's extensive accomplishments include 18 books and an array of curricula, including 20 reading programs, 8 spelling programs, 18 mathematics programs, and 13 language/writing programs. Some of the most well known DI programs include *Corrective Reading*, *Horizons*, and *Reading Mastery*. In 1994, the American Psychological Association honored Zig with the Fred Keller Award of Excellence. *ADI*

Tips From Teachers

Direct Instruction teachers can get tips from other DI teachers through a monthly e-newsletter from SRA/McGraw-Hill. "Making the Difference" compiles teaching tips and suggestions that help educators swap ideas and share their experiences.

One DI teacher asked, "I am looking for suggestions to motivate high school students in *Corrective Reading Decoding C* and *Comprehension B and C*."

A reader of the e-newsletter responded: "When teaching *Corrective*

Reading Comprehension Level B several years ago, I added a graphic component and had the students illustrate the story. For example, they charted the seed, the seedling, the sapling, the full-grown Redwood tree, and the fire. In another example, the students drew the timeline for Bruce and his adventures on the island. This appeared to be effective."

In another edition of the newsletter, a reader contributed this tip: "As principal, I am lucky enough to be included in the *Reading Mastery* pool

of teachers at my school. Many of my students know that I love to sing. If there is time after our lesson, we go back to the words and sing the pronunciations opera style! It is hilarious to hear them making sure they pronounce and blend correctly (with vibrato, I might add) while pretending to be opera stars!"

Another teacher wrote: "I have been using *Horizons* for several years now, and I have added a fact notebook to the program. This is an empty notebook of blank pages I bind together. The students use the fact notebook to record all they know about a specific topic, one topic to a page. They also can add pictures to help them remem-

ber. We have pages about each new topic such as trees, frogs and toads, measurement, breeds of dogs, camels, flies, etc. Students become quite proud of their fact notebooks and want to share from them. Reviewing the notebook is more interesting than just doing review orally."

Here are some other submitted tips:

"Create a color-coded system for identifying students without having to call attention to it. For example: Students low in vocabulary get an extra red stick in the cup, phonetic analysis students get an extra green stick, and students low in comprehension get an extra blue stick. When you are on those parts of the Direct Instruction lesson, be sure to pull those sticks as well as the plain, uncolored sticks. This way the students with the greatest need are called on the most often, without singling them out in front of their peers. This is done during the lesson and during individual turns."
—*Jan Anderson, resource teacher, George W. Munroe Elementary School, Quincy, Florida*

"I have my students keep track of their reading rate by charting their progress on a graph. They are motivated by seeing their reading rate increase visually, and it helps with my own record-keeping, as well."
—*Rhonda Stelling, grades K-4 LD teacher, Unity Schools, Balsam Lake, Wisconsin*

Read the current issue of "Making the Difference" and sign up for the free e-newsletter at http://sraonline.com. Click on "Free E-Newsletters." Submit your own Direct Instruction teaching tips by e-mailing SRA_News@McGraw-Hill.com. *ADI*

DONNA DRESSMAN, Conquest Consulting LLC, Currently Serving Covington Independent Public Schools

Early Reading First Grant Fuels DI in Kentucky Preschool

The Covington Independent Public Schools (CIPS) in Northern Kentucky wanted to see students arriving in kindergarten with more literacy skills. Many students in the CIPS district live at or near poverty level; one in five has special needs of some type.

We wrote and were awarded an Early Reading First grant to put Direct Instruction and other research-validated programs into our preschool programs. The No Child Left Behind grant of over $3 million is one of 33 funded throughout the country and is the only one of its kind in Kentucky. The plan is to make this project a Center of Excellence that will help disseminate information about effective instructional practices and programs throughout the region.

Here's what we are putting in place: We will provide over 4 hours per day of research-based literacy instruction to 3- and 4-year-old children at the James E. Biggs Early Childhood Education Center. Of the students currently enrolled at Biggs, 75% have some type of disability and 85% are eligible for free or reduced-price lunch programs. The 3-year-olds will receive *Language for Learning* and *DLM Early Childhood Express*. The 4-year olds will have *Language for Learning*, *Reading Mastery*, and *Open Court Reading Pre-K* programs. This DI-focused instruction will align with the DI curriculum already being provided in all Covington Independent Public Schools. Students entering kindergarten reading near the end of *Reading Mastery I* will no longer be the exception but now the rule.

The program, the first of its kind in Kentucky, serves 200-plus students at the Biggs Center. In addition, five satellite classrooms, housed in elementary school sites, now allow full-day, full-year pre-K services for many more. Initial enrollment was set at 300 but continues to increase, as no child meeting criteria for admission is turned away. Any 4-year-old living in the district automatically qualifies for the program. Three-year-olds qualify if families meet income criteria, or if screening determines the children are behind in their development of cognitive, communication, self-help, social, or motor skills.

Monies from this three-year Early Reading First grant have provided for the hiring of five additional preschool certified teachers and five instructional assistants. Six additional literacy coaches have also joined the literacy team providing modeling, coaching, and monitoring on a daily basis. To facilitate a strong school/home relationship, two recently hired family liaisons conduct home visits and hold weekly parent literacy workshops.

Sufficient funding, now coupled with proven DI language/reading instruction and a strong literacy team, has set an unprecedented stage for life-long reading success for the littlest learners at CIPS. *ADI*

Direct Instruction Implementations: Problems to Avoid

The Direct Instruction Model is a comprehensive school-wide model designed to improve student performance. At the core of the model are Direct Instruction curriculum materials that have been uniquely designed to accelerate the performance of students. While these materials have proven effective with children from all backgrounds, they are especially effective with more at-risk populations.

The gains that can be achieved with the Direct Instruction model are dependent on the implementation of a number of critical components. Some of these components are unique to Direct Instruction; others deal with aspects that would be critical to the success of any reform initiative. All are critical to create a system that promotes success for teachers and children at the classroom, school, and district levels.

A number of critical actions that can lead to success are listed below according to when they need to be initiated. Some activities ideally should be initiated in the winter and spring preceding the implementation. This preplanning is critical to providing the teachers with adequate support to facilitate initial success. The importance of creating an implementation in which teachers see their efforts immediately producing gains in student learning is great.

This paper is not meant to be a comprehensive guide: it simply lists important implementation elements and points out problems to be avoided. Specific problems to be avoided are listed under each critical support component.

Winter and Spring of School Year Preceding Implementation

School staffs receive adequate information about rationale and requirements of the model before decision to implement the model is made.

Problems to avoid:

- Letting teachers vote on adopting the model before they know the requirements of the model.

- Making the decision to implement the model with no effort ahead of time to secure teacher ownership.

Decision makers listen to and use input from persons with appropriate experience.

Problems to avoid:

- Not providing district leaders in-depth information on what is needed to successfully implement Direct Instruction.

- Not relying on input of a person with sufficient experience with *successful* Direct Instruction implementation(s) in comparable school(s).

- Not checking out the experience and qualifications of advisers.

Timely planning for the implementation.

Problems to avoid:

- Not making the decision to utilize the model in time to do adequate placement testing of students in spring (not important if only kindergarten and first grade is to be implemented).

- Not ordering materials in time for them to arrive before the beginning of the school year.

- Not making arrangements early enough to secure the services of qualified trainers.

Arranging for teachers to receive an adequate quality and quantity of training.

Problems to avoid:

- Not carefully checking out the qualifications and abilities of persons who will assume trainer roles.

- Not providing for an adequate quantity of training before teachers begin using the programs (e.g., at least 3 days of training if teachers are just learning one program, and 4-5 days if they are learning two programs).

- Not assessing the training needs of a school before deciding on the quantity of support that is required. If staff has good management and teaching skills to begin with, much less training time is needed. If staff is not skilled in keeping kids attentive during teacher-led instruction, more time will be needed. The greater the number of students performing significantly below grade level and the more difficult it is to keep students highly engaged during instruction, the greater the training needs of the staff.

Taking into consideration the capacity of training resources in making decisions on the scope and sequence of the implementation.

Problems to avoid:

- Implementing in more classrooms than there is capacity to support with quality training. If there is not a person on staff who is highly experienced with DI and who can

coach teachers in classrooms, the school will need services of an outside consultant. Ideally, for a high-poverty school with a history of low achievement, 1-2 days of consultant training should be provided per classroom. So a school with 20 classrooms needs to arrange for about 30-40 days of consultant services during the year. In addition, the work of the consultant should be followed up by a school-based coach. If the school-based coach is an expert with the programs, less outside consultant input will be needed. In a very high needs school, one trained "coach" should be able to support 12-15 new teachers with outside consultant help.

- Implementing in schools with poor management structures without providing training and accountability for the principal to institute an effective school-wide behavior management system.

- Providing the same amount of support regardless of the capability of school staff and student needs. The needs of the students and staff increase greatly based on the number of students who enter school significantly behind in the development of literacy and language skills. The higher the number of students who enter school significantly behind, the higher the need for intensive services. For one thing, more students at higher grade levels will be further behind and will require more intensive assistance. For another, the number of students in the primary grades with few school-related skills will be greater. Of course, behavior may be a problem at all levels in schools where students have spent one or several grades in curricular materials not on their instructional level.

Planning an implementation that does not have the power to close the "academic gap."

Problems to avoid:

- Not establishing a program for children with low language development that includes sufficient emphasis on instruction and practice of language concepts and skills in kindergarten and first grade. A strong implementation for these children would include: *Language for Learning* followed by *Language for Thinking* and/or *Reasoning and Writing A and B*. *Reasoning and Writing Levels A and B* provide an application of language skills and a good deal of work on story grammar.

The needs of the students and staff increase greatly based on the number of students who enter school significantly behind in the development of literacy and language skills.

- Not establishing a program that will enable most children to be fluent readers by the end of first grade. Ideally this would mean starting beginning reading instruction in kindergarten. Kindergarten is the year that students can get a jump on learning to read. The goal should be to finish *Reading Mastery I* by the end of the kindergarten year.

Note: If starting a Direct Instruction reading program in first grade, the schedule must include at least two full reading periods a day for students in order to accelerate their progress. For example, students need to finish *Reading Mastery II* by the end of first grade to be performing at a strong end-of-first-grade performance level. It will take at least two periods a day of instruction to accelerate the students adequately. (There is a program,

Reading Mastery Fast Cycle, which covers the content of Levels I and II in just a year. While *Fast Cycle* may work well with children who enter first grade with developed pre-literacy skills, the lesson schedule is too fast for many students.)

- Not establishing a program that facilitates children who are below grade level making gains to close the gap and reach grade-level performance as soon as possible. Again, these students should receive reading instruction for at least two complete periods *every day*. Two daily reading periods a day should be continued until these students are at a point in the program at which they can complete the program one number above their grade level by the end of the school year—e.g. so that third graders finish *RM IV*.

- Not teaching to mastery while trying to accelerate student progress. Teachers should not teach two lessons a day if students are not at mastery. The second period would be used to provide review when students are not at mastery on tasks from the first lesson.

Making the implementation of Direct Instruction the main focus of the school.

Problems to avoid:

- Having a district curriculum initiative in addition to Direct Instruction that takes up major instructional and in-service time.

- Having too many in-services on other topics, leaving inadequate time for teachers to focus on Direct Instruction.

Establishment of an evaluation program sensitive to the gains being made by students through Direct Instruction.

Problems to avoid:

• Basing evaluation of Direct Instruction implementation during the first years on upper-grade tests that are not sensitive to gains made by students. Value-added assessment may pick up greater than expected growth among DI students who are still below grade level, however, tests that only count the number of students who are proficient will not show any results until students are completely caught up to grade level—which may take several years.

• Not using, during the first two years, testing measures that are congruent with skills taught in Direct Instruction. There are differences between standardized/norm-referenced tests and their sensitivity to showing gains made through the use of Direct Instruction materials. For example, reading questions that require prior knowledge of literary terminology not taught in *Reading Mastery* or math tests that have very few computation questions will not show all that students have learned in the DI programs.

• Not testing students in lower grades.

• Not doing baseline testing at the beginning of the implementation.

• Not setting up comparable control groups.

Pre-testing of students in the spring to determine their instructional level.

Problems to avoid:

• Not using the Direct Instruction placement tests to determine students' instructional level.

• Inadequate training and supervision of placement testing leading to unreliable data. It is very easy for novices in the placement testing process to make what appear to be "minor" errors in following the directions or to fail to write down "trivial" pieces of information, with the result that some students are misplaced and unable to learn—creating huge problems for the teachers.

• Failure to pretest during the spring of the previous year so that needed instructional materials can be ordered over the summer, and teachers can be trained for the program they will be teaching in the fall.

Curriculum materials are ordered and organized.

Problems to avoid:

• Not basing the order on the accurate placement testing of students.

• Not ordering in a timely manner.

• Not getting the appropriate level of materials into the hands of teachers.

• Not anticipating and budgeting for additional materials students will need as they progress through the school year.

Activities That Occur During the Summer Preceding the Implementation of Direct Instruction

Summer in-service training prepares teachers to implement Direct Instruction.

Problems to avoid:

• Not having qualified and knowledgeable trainers present the in-service.

• Not providing sufficient teaching and practice of critical content and skills.

• Teachers do not receive training in programs that they will be teaching at the beginning of the school year.

• Inadequate practice time is provided for teachers to become proficient during training. Good

training requires teachers to practice teaching rather than simply listen to the lecture.

- Not having assessment following training with a criteria for mastery established. At the end of the training, there should be checkouts to determine if teachers have mastered presentation skills. Teachers demonstrating difficulties or having problems with formats or corrections during the pre-service training should be identified by the trainer.

- Not providing immediate extra practice for teachers who do not become proficient with techniques during the initial training. These teachers should be prioritized to receive intensive services when classes begin. In addition to in-service practice sessions, the trainer needs to provide direct classroom assistance. There is strong research supporting the effectiveness of ongoing side-by-side coaching.

Activities That Occur During the First Weeks of the School Year

Placement, grouping, and scheduling criteria of the model are implemented.

Problems to Avoid:

- Placing and grouping students on the basis of standardized tests or other means rather than on the results of DI placements tests.

- Placing too many students in a group. A good rule of thumb would be *RM 1* and *2*: 4-12 students depending on the performance level of the students. Middle and higher performing groups: 8-12 students. Groups with more naïve learners should be 4-6 students in size. Grouping recommendations as spelled out in the teacher's manual

for each program should be followed carefully.

- Not scheduling sufficient instructional time. For example, the following breakdown is commonly utilized: 30 minutes per group in *RM 1* and *2*; *Corrective*, 45 minutes; and 90 minutes for *RM 3* through *6*. Schedules should allow for 60 minutes for *CMC*, 30 minutes for *Spelling Mastery*, 30 minutes for *Language for Learning* and *Language for Thinking*, and 60 minutes for

Good training requires teachers to practice teaching rather than simply listen to the lecture.

Reasoning and Writing. Again, following the time specifications for each program as spelled out in the teacher's manual for each program is critical for success.

Coordination of activities with all district departments.

Problems to avoid:

- Title I, ESL, and special education personnel in the school do not coordinate instruction with Direct Instruction requirements.

Evaluation of personnel is made congruent with requirements of Direct Instruction.

Problems to avoid:

- The evaluation criteria for personnel conflict with the requirements for Direct Instruction.

Ongoing Activities That Occur During the School Year

In-service training during the school year adequately prepares

teachers to present Direct Instruction lessons.

Problems to avoid

- Not scheduling format practice for at least 1 hour per week. The format practice gives teachers the opportunity to practice the formats correctly, to see changes in the program, and to try out new formats before instructing the students.

- Not scheduling sufficient in-service training during the school year. Assuming strong initial training, during the first year of implementing Direct Instruction a minimum of one in-service session of 2-3 hours should be provided each month. In-services of 45 minutes to an hour can also be provided weekly if a trainer is available to deliver the in-service.

- Not focusing on critical Direct Instruction implementation content during the in-service.

In-classroom coaching is provided to teachers.

Problems to avoid

- Not providing sufficient in-class coaching. There is not an exact formula that can be plugged in to answer the question, "How much is enough?" The amount of in-class coaching needed depends on how much teachers prepare for lessons, the ability of teachers to keep students on task, and the relative ability of the students. Some teachers will thrive with weekly visits, while other teachers may require visits more often. On average, therefore, the building coordinator should be able to see every teacher in one week. An average of 6-8 classroom visits per day is typical. If there is an external consultant/coach, the same number of classroom visits would be a good goal.

- Not providing coaching from a person who is able to demonstrate when necessary. A coach who cannot take over the groups and model lesson procedures and management techniques will not be successful. "Book knowledge" is insufficient to be effective.

- Not providing follow-up to ensure coaching efforts are successful. When a coach presents suggestions, the coach should visit the classroom the next day or soon after to determine if the teacher is able to implement the suggestions.

- Persons assigned to coach Direct Instruction are assigned to too many other tasks.

Monitoring of student performance.

Problems to avoid:

- Not checking the number of lessons being covered weekly.

- Not checking mastery test data regularly.

- Little or no involvement by the principal in monitoring data on student performance and progress.

Responding quickly and effectively to any situation in which student progress and performance are not acceptable.

Problems to avoid:

- Principal does not take an active role in monitoring classroom activities.

- Not responding to student lack of progress or inadequate performance with sense of urgency.

- Not responding in a timely manner to assist teachers who are not producing adequate levels of performance and progress.

- Not following up on solutions to problems to ensure that the solutions are effective.

Clear communication of expectations by principal to staff to implement programs with fidelity.

Problems to avoid:

- Principal does not visit classrooms frequently enough during instructional time.

- Principal is not familiar enough with teacher delivery elements to be able to determine when problems exist.

- Principal does not provide positive feedback when teachers are implementing the program well.

- Administration does not facilitate a *contagious* sense of urgency. **ADI**

SIGFRIED ENGELMANN, SUSAN HANNER, and GARY JOHNSON

The Decoding Programs and the Poor Decoder

The Decoding programs are designed to change the behavior of the poor decoder. The specific decoding tendencies of this student suggest what a program must do to be effective in changing the student's behavior.

The poor decoder makes frequent word-identification errors.

The student makes a higher percentage of mistakes when reading connected sentences than when reading words in word lists. Often, the student reads words correctly in word lists and misidentifies the same words when they are embedded in connected sentences.

The specific mistakes the reader makes include word omissions, word additions, confusion of high-frequency words (such as **what** and **that, of** and **for, and** and **the**). The student also reads synonyms (saying "pretty" for beautiful). The student often guesses at words, basing the guess on the word's beginning or ending. And the student is consistent, making a mistake on one word in a sentence and then making a different mistake when rereading the sentence.

The student doesn't seem to understand the relationship between the arrangement of letters in a word

and the pronunciation of the word. Often, the student is confused about the word meaning (a fact suggested by synonym reading, opposite reading, and word guessing). The strategy seems to be based on rules the student has been taught. The poor decoder follows such advice as: "Look at the beginning of the word and take a guess," "Think of what the word might mean," and "Look at the general shape of the word." The result is a complicated strategy that is often backwards: The student seems to think that to read a word one must first "understand" the word, then

select the spoken word that corresponds to that understanding.

Although the poor decoder may use a strategy that is meaning based, the reader is often preempted from comprehending passages. The reason is that **the student doesn't read a passage with the degree of accuracy needed to understand what the passage actually says.** (Omitting the word **not** from one sentence changes the meaning dramatically.)

Furthermore, **the student's reading rate is often inadequate, making it difficult for the student to remember the various details of the passage, even if they were decoded accurately.** Often, the poor decoder doesn't have an effective reading comprehension strategy because the student's poor decoding and slow rate don't make the material sensible.

Finally, the poor decoder is not a highly motivated student. For this student, reading has been punishing. The student often professes indifference: "I don't care if I can read or not." But the student's behavior gives strong suggestions that the student cares a great deal.

The student's ineffective reading strategies and negative attitudes about reading become more ingrained as the reader gets older. To overcome them requires a very careful program, one that systematically replaces the strategies with new ones and that provides lots and lots of practice.

The procedures that are used in the program derive directly from the difficulties that students have with particular tasks.

Based on the problems students have, we can identify two major levels of difficulty. The less difficult level is reading isolated words. The more difficult level is reading words that are in a connected sentence context.

• *Isolated words* are easier because they do not prompt the student to use inappropriate guessing strategies that the student applies when reading connected sentences. When the student reads word lists, therefore, the student is not as likely to guess on the basis of the order of the preceding words, or on the basis of images that are prompted by pre-

Lessons in Corrective Reading *are designed to give students practice that leads them to become stronger in what is easier for them to do, and that gives them progressive practice in the more difficult reading endeavors.*

ceding words. Not all word lists are the same level of difficulty.

• *Less difficult lists* require reading words that have similar parts. *More difficult lists* require reading words that do not have similar parts. This type of list is sometimes called a "mixed list" because all types of words appear in it.

• *Reading words in connected sentences* is more difficult than reading words in isolation. The task of reading a particular passage can be made relatively more difficult or less difficult.

• *Passage reading* is less difficult if the student has read the passage and received feedback on all errors.

• *Passage reading* is more difficult if the student is reading the passage for the first time.

Lessons in *Corrective Reading* are designed to give students practice that leads them to become stronger in what is easier for them to do, and that gives

them progressive practice in the more difficult reading endeavors. The lessons do this while remaining within the skill limits of the student, which means that an appropriately placed student will not be overwhelmed with difficult tasks or bored by tasks that are too easy.

Each lesson presents words in isolation and gives students practice with easier lists and more difficult lists. When new words are introduced, they often appear in lists of words that have similar parts. In later lessons, these same words appear in mixed lists where the students must rely more in the decoding skills taught earlier. Except for the early lessons in Level A, all lessons provide students with practice in reading familiar words in sentence contexts.

The procedures require the students to read sentences or passages and then re-read them. In Levels B1, B2, and C, students keep error data on their individual second reading and on the first reading, called "reading checkouts." The lower errors on the second reading provide students with evidence that they are learning. Their improved performance on the first reading provides further evidence of their ability to retain and apply the decoding skills they have been taught.

The structure of the lessons addresses the student's skill deficiencies directly but positively, in a manner that provides the type of practice students need to relearn fundamental strategies and to learn new skills, and that does not overwhelm them with material or rules that result in a high rate of errors.

The Problems

An effective corrective reading program must address the specific needs of the poor decoder.

1. The learner must learn to look at the order of letters in a word and learn that this order suggests the

general pronunciation of the word. Furthermore, the student must learn that the game is simple: First figure our how the letters suggest to say the word. Then see if the word you say is one that you recognize, one that has meaning. (Note that this strategy is basically the opposite of the one the typical poor decoder uses.)

2. The poor decoder must receive practice in reading connected sentences that are composed of words that have been taught in isolation. Merely because the student reads words in lists does not imply transfer to written sentences.

3. The student must receive strong reinforcement for working on reading because the task is very difficult and frustrating for the student. The student has received a great deal of evidence that reading is a puzzle that seems to be unsolvable.

4. Finally, the student must receive practice in reading a variety of passages. If the student practices reading only narrative passages, the student will not automatically transfer the reading skills to textbooks, articles, or other forms of expository writing. Therefore, different styles must be introduced.

The Solutions

SRA's Corrective Reading Decoding programs are successful with the poor decoder because they provide the careful integration, the practice, and the management details that the student needs to succeed.

The student receives daily practice in oral reading, with immediate feedback. (Only through oral reading can we discover what the student is actually reading.)

The student reads word lists with information about how to pro- nounce various letter combinations (such as **th** or **or**). The student also reads sentences and passages composed of words that have been taught. The sentences and passages are designed so they are relatively easy if the student approaches words as entities that are to be analyzed according to the arrangement of letters, but difficult if the student guesses on the basis of the context or syntax of the sentence. (The sentences are designed so that guesses often lead to identification of the wrong word.)

The Mastery Tests and checkouts in the Decoding programs assure that the student observes progress in reading rate and reading accuracy.

The Decoding programs present comprehension items in a way that demonstrates the relationship between what is decoded and how it is to be understood. Initially, the comprehension activities are deliberately separated from the decoding activities so that the student's misconceptions about reading are not exaggerated. The comprehension activities, however, show the student that what is read is to be understood.

Finally, the Decoding programs address the poor decoder's low self-image. The programs are designed so the student can succeed in real reading tasks. Furthermore, a point system that is based on realistic performance goals assures that the reader who tries will succeed and will receive reinforcement for improved performance.

In summary, the programs use a two-pronged approach. Each level teaches effective reading skills to replace the student's ineffective approach to reading. Each level also contains an effective management system that turns students on to reading. This turn-on is not achieved by "seducing" the reader with entertaining topics but by rewarding the reader for steady improvement in reading performance. The approach **works.** *ADI*

How Scientific is Reading First*?*

In her interview with Dr. G. Reid Lyon in *EducationNews.Org* (2006), Nancy Salvato asked a direct and reasonable question: "What particular instructional programs do you endorse in order for teachers to implement what you've learned through your research?"

Lyon's short answer to this question was, "I have never nor will I endorse a program."

As part of his long answer, Lyon asserted, "Everything I do comes from my scientific training."

If that's true, his scientific training was curious. In his long answer, he observed, "The value of any program is data driven and based on its impact on kids."

We know from reports like those published by the American Institutes for Research that there are two programs that have substantial evidence of effectiveness with whole-school reforms, Direct Instruction and Success for All. We assume that Lyon has this information. A combination of these facts would create an argument that goes something like this:

> Programs are judged according to their impact on kids.
>
> Program D creates a large positive impact on kids.
>
> Therefore, I will never endorse program D.

The argument doesn't make a lot of sense because we assume that the programs an investigator would endorse are the programs that create a substantial impact on kids. We would recognize that Salvato's question was reasonable, something a thoughtful

teacher might ask. If the teacher is working with at-risk kids, the chances are 9 out of 10 that her kids are failing. She is failing and knows that she is failing. She wants her kids to have a chance. So she asks someone who has specific data on which programs create a great impact on kids, and the response is, in effect, "I know the answer, but I'm not going to tell you."

Lyon's illogic does not stop there. As part of his long answer, he indicates that *Reading First* was initially designed to endorse only those programs that had scientific evidence of effectiveness. "What we originally wanted in *Reading First* was that if you want to buy a program with federal money, it should have gone through clinical trials to be sure it is effective. But there weren't enough programs that went through that level of rigor; so many programs would be screened out and only a limited number of programs would be available. The Department of Education made the decision to make the criteria more general. Programs had to be comprehensive and the instructional interactions must be based upon principles supported by converging scientific evidence."

The main problem with Lyon's position is that it is what is called an argument from ignorance. For any program without experimental evidence of effectiveness, the reasoning goes like this:

> We don't know if program A is effective or not.
>
> Therefore, we'll assume that it is effective.

Translated into a response to the teacher who asks the question about what works, the answer now becomes

something like this: "Well, I can tell you this much. There are at least two programs in this group that work, and some that we don't really know about, but instead of identifying which are which, I'm going to treat them all the same because they have some of the same features. So you just have to make your best guess. Good luck."

Viewed differently, it's the educational variation of Russian roulette, in which "at least one chamber is empty and the other chambers have some of the features of the empty chamber. Good luck."

In an article for *Education Week* (Engelmann, 2004), I pointed out the illogic of the argument type that Lyon uses about programs that have the features of effective programs. It is as illogical as this argument:

> If a dog is a Dalmatian, it has spots.
>
> Therefore, if a dog has spots, it is a Dalmatian.

Lyon is saying:

> If a beginning-reading program is highly effective, it has various features: phonics, phonemic awareness, and so on.
>
> Therefore, if a program has these features, it will be highly effective.

No. Programs are effective only if they have been demonstrated to be effective. The features that Lyon has identified (phonemic awareness, phonics, etc.) are global features that do not determine the details of a successful

program, merely the details fairly naïve observers have noticed. In other words, one who knows how to create programs that are effective could design a beginning-reading program that produced horrible results, but that met all the criteria that Lyon specifies.

Geoff Colvin and I have written a rubric for identifying authentic Direct Instruction programs. The rubric is over 120 pages long and lists over 40 criteria. All these have been experimentally demonstrated to make a difference.

Consider Lyon's reasons for changing the selection criteria from programs that are successful to programs that share features of successful programs: "… there weren't enough programs that went through that level of rigor; so many programs would be screened out and only a limited number of programs would be available."

This reasoning seems to be based on the idea that there should be a large number of programs available, whether or not they have been demonstrated to work. Someone on Lyon's side might support this strange argument by saying, "Some of those programs that would be screened out might be able to show evidence of effectiveness. They just haven't been evaluated that way."

Consider the response that would result if this logic were applied to the drug industry. In addition to the drugs that have evidence of effectiveness, large numbers of drugs that have never reached "this level of rigor" should be included on the grounds that some of them might be able to demonstrate effectiveness if we tested them.

I think a majority of people would vote no on this practice.

Lyon's position about increasing the number of available programs, ultimately, is an example of a false dilemma—either we change the crite-ria from programs with demonstrated success to programs that have common features or we will have an unacceptably small number of programs. There is a middle ground, which would be to tell it as it is: *Reading First* would identify the programs that have significant data and acknowledge that the other programs on the list have some of the features of the programs with significant data. In this way, the answer to the teacher's question would be, "Well, I can't endorse a program, but I can tell you that the two programs with the asterisk after their names have significant data of effectiveness.

The other programs don't, but they have basic features in common with the programs that are known to be effective. Your choice."

Lyon adds an abstract, historical layer to his argument. "It is important to note that we designed *Reading First* so that it would also stimulate publishers and program developers to develop and test programs scientifically to ensure their effectiveness. This is a very slow culture change, but there is some indication that the major publishers are beginning to move in this direction."

This perspective seems to favor a kind of affirmative action for publishers, designed to wean them slowly from their right to benefit from federal funds by supplying products with no evidence of effectiveness to at-risk classrooms. I suppose that if one considers the publishers more important than the kids, this position makes sense. If this is the case, a straight message to the teacher would be something like, "Understand that we are playing this game so that publishers who have unproven products don't suffer financially; therefore, you'll just have to subsume your concern over your kids to our concern over these corporations."

In Lyon's defense, his position about never endorsing specific programs has a strong traditional basis, and is apparently intended to avoid conflicts of interest. Yet, the nature of the problem suggests that programs need to be named. The only thing a school or a teacher will use is some specific program, not information about phonemic awareness or phonics or guidelines about selecting programs with these features.

The slow cultural change that Lyon refers to is not encouraging because it could have started with Project Follow Through in the 1970s. Follow Through, involving over 140 districts and 100,000 at-risk kids, showed what works with at-risk kids in K-3, but in the tradition of not naming specific programs, the winner was not named. Instead, the entire project was judged to be a failure, with the implication that all of the approaches tested in Follow Through failed, which was false. Third graders who went through Direct Instruction outperformed kids in all other models in reading, language, math, and spelling. DI students performed near the 50th percentile in all subjects; the average of 13 other models was around the 18th percentile. If this information had been disseminated at the time, a generation or more of kids may have benefited. (Of course, the outcome may have been unacceptable because there was only one winner—too small a number.)

The fact that some publishers are "beginning" to do what they should have been doing 35 years ago does not

seem to generate much hope for at-risk kids who are in kindergarten and first grade now, and who will not benefit from a cultural change that may have impact after they have failed and dropped out of school. In the meantime, they will fail, like the millions who have failed since the '70s.

I wrote an article that defended *Reading First* (Engelmann, 2005) on the grounds that *Reading First* required schools to take an important first step, using test results to determine whether programs are working and using back-up plans if they aren't working. This is a crude first step; however, I believe that *Reading First* is better than no *Reading First*. The tragic part is that *Reading First* uses teachers and kids as experimental subjects, although programs and training that would turn around the most

seriously devastated schools are available now.

I would not have written the present article if Lyon had acknowledged that *Reading First* was a political compromise that had some potential because it required states and schools to accept responsibility for failure and to respond constructively to data. But to frame arguments for political compromise and folksy analysis of features as either science or best practice is burlesque. Thirty-five years ago, a colleague pointed out, "We have warnings and directions for usage on a bottle of aspirin, but not a word of warning about using instructional programs that have not been demonstrated to be effective with children of poverty."

Such warning still does not exist and it probably won't occur until the pub-

lic recognizes that we need some kind of pure Food and Drug Administration for at-risk kids. However, the first step in real cultural change requires a simple resolution that says, "No, kids won't fail. We will consider them FIRST, not as mere victims in the slow development of cultural change, or grist for another effort that keeps commercial interests happy and current prejudices well fed. We will use what is shown to be effective and implement it well." *ADI*

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Top Five Teaching Errors for Primary DI Teachers

Here are the top five most common and most important teaching errors I see in classrooms. If you can improve these five things your lessons will improve dramatically. Or put another way, a person who masters these five things is so much more successful that they are viewed as an excellent teacher by everyone who comes to their room.

1. *Not being close enough to the children when you are teaching.*

   Young children have a lot of difficulty paying attention to someone who is any distance away from them. Your instruction becomes abstract and not part of their world if you are not close to them. How do you get close to them?

If your group is eight or less (which it should be in reading), put them in chairs (not desks) around you, as close as possible so they are "kneecap to kneecap" with you. If you have a kidney-shaped table you can use one of those—but kneecap to kneecap is better. Don't use a second row except for extremely on-task high performers.

You want the children close enough to touch during the lesson. Use lapboards for writing, rather than letting them get far away at tables. Touch them for reinforcement—a pat on the shoulder or the arm. Touch their books to redirect their eyes back to the book when they are reading. Touch their hands or their finger to redirect them back

to tracking. Move their fingers to the right place if they are not tracking. Touch their knee if they are looking away from the lesson. If the children are close to you, that enables you to redirect them without interrupting the flow of the lesson. If they are reading from the book, read off their book upside down, rather than look in your book, so you can monitor to see if they are tracking properly.

If you are teaching whole groups where the children need to be in desks or at tables, you can't be close to everyone all the time. The next best thing is to be close to every student *frequently*. You have to *move around* as you teach. Circulate around the room to positions over the shoulder of every single student while you are giving the lesson. Once you have "visited" every student in the class, go through the rotation again. Be obvious about looking at their papers. Get close

enough to see what is written on every student's paper (because presumably they are writing something or you wouldn't have them spread out at desks).

Again, pat the children on the arm or shoulder to reinforce that they are doing the right thing. Touch their hand or their paper to redirect their attention towards their work. Touch the item on which you are working if they are lost. Move their finger to make them track if they are not. All of these redirections can be done without stopping the lesson if you get close to the children. If something has to be written on the board, try using a student or a paraprofessional so you can stay close to the children. If you cannot, write what you must and then hurry back to get near the children.

The shorter the attention span of students, the more frequently you have to intrude on their body space to get their attention. You can bet that a young child whose teacher never got closer than 10 feet away throughout an entire lesson missed some, or all, of that lesson. Either sit yourself close to the children during the entire lesson, or get close to them many times during each lesson.

2. *Not monitoring closely enough during the lesson.*

Teaching requires the instructor to present the lesson, but it is equally important to monitor student responses closely. Your mission in monitoring, should you choose to accept it, is to catch every single error and correct it immediately. Catching errors is not too hard to do in a choral response, when one or more children sing out the incorrect answer. Most teachers monitor those kinds of errors easily.

Monitoring is more difficult if the students who do not know the answer simply keep silent. Then you have to notice mouths not moving or a drop in volume. You

have to be looking and listening very carefully. Simply repeating the question immediately and saying "everybody needs to answer" always will get you a louder and stronger response. Many teachers do repeat questions pretty regularly, thinking that is adequate. It is not. Many children learn to simply repeat whatever words everyone else just called out, without necessarily connecting that to the question. So repeating the same

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question again immediately doesn't tell you if they really learned the right answer. You aren't really monitoring who was wrong initially and whether they learned it after the correction procedure.

It is critical that you monitor, so you have to do a delayed test. You absolutely have to wait a few items and then ask that question again to know if they really did learn the correct answer. You will need to monitor closely so you'll know who kept silent and did not answer the first time, and you'll need to watch to see if they answer on the delayed test. Give them an individual turn as soon as you do individual turns.

Monitoring written work demands that you *move around* a lot during a lesson. If you are teaching any lesson that requires students to write responses, such as math, spelling, writing, and the like, then you must be teaching while walking with the teacher book. You have to look at the papers of students while they are writing and catch as many errors as you possibly can. The

more errors you can catch, the better you are at monitoring, and the better teacher you are. If you don't catch errors in written work until they turn it in to you, then you are not doing a good job. By doing it wrong without being corrected until the next day, they will be learning it wrong and that will make it 10 times harder to teach it the right way. Think about that. The only reason tutoring is more effective and efficient than large-group teaching is that a tutor won't ever let a student practice an error. You can be as effective as a tutor if you catch all the errors. Monitoring is extremely important.

3. *Not providing enough motivation for correct answers.*

Children need adult guidance to know what is important. They will do more of what you treat as valuable, important, and exciting. You want them to be focused on getting the lesson—which they prove to you by saying or writing the correct answers. Therefore you have to treat the right answers as if they are very valuable. Your enthusiasm, amazement, wonder, joy, glee, shock, or happiness must be evident whenever you see or hear students get it right—particularly when not everyone does. When only one or two students get it right, that's the time to jump on that answer and praise the student(s) who were really paying attention:

> "Yes! Michael got that right! That was so smart, Michael. I love the way you are paying attention. I'm giving you a…"

When you move around the room, look at workbooks and papers. Say loudly enough for others to hear, "Yes! That's right. You've got it." Then pass by and don't say anything—but perhaps shake your head sadly—when students don't have it right. Your students should want

you to see that they are getting it right. You don't want blurting out, but silent behavior of showing you their correct answers. You want them to *care* that they got it right. This is the key to them making an effort to be learning when you are doing the lesson.

It is certainly OK to praise the whole group when the whole group is correct. That's a great opportunity to tell the class how smart they are. But it isn't necessary to wait for that to happen before you can begin praising correct responses. Make a big deal about right answers and be sad or disappointed about incorrect answers all the time.

Another way to make them care is to challenge them by saying that the next bit is very hard and you're doubtful if they can do it correctly. Telling them "This next part is really hard" increases their motivation to try extra hard on this next part. You have an obligation to "pay off" by being totally amazed at what they could do. Be surprised that they could do that well. What better reward than to prove you're smarter than the teacher realized? There are many ways to motivate children to "get it right." Do something that fits your personality, providing you find some way. If you aren't working on making the children "care" whether their answers are right or not, you're not doing your job and you aren't going to be very effective as a teacher.

4. *Not giving delayed tests and extra review for "hard" or "missed" items.*

Oftentimes it appears as if teachers are embarrassed that their students make an error. They treat it like a social slip: "Think nothing of it. We won't mention it."

Instead, any item that students miss must be re-taught with extra attention, vigor, and intensity. When items are missed, there must be a clear correction, although you always correct the group rather than the individual. After correcting the error you have to go on a few items and then come back to give the students a delayed test. This allows you to be sure that the students learned the missed item.

Then, when you reach the end of that part or page, you need to give individual turns. Be certain to give an individual turn to the student who missed the item in the first place. This is very important for two

If you aren't working on making the children "care" whether their answers are right or not, you're not doing your job and you aren't going to be very effective as a teacher.

reasons: (a) It assures you that the student has learned from his mistake, and (b) it allows the student to redeem himself and prove that he now knows the material. It is smart for the teacher to give some extra praise at that point, saying something like, "I knew you could learn that one!" or "Wow! That was hard and you learned it well!"

I recommend that all teachers keep a list of items that have been missed on a chart or on the board somewhere. Then those items get extra review at the end of the lesson and at the start of the next day's lesson. It is important to overwhelm the errors with correct responses as soon as possible; the review chart is a great way to be sure to get back to those items before they are forgotten again. We call that a "goodbye" list, because after the students have correctly responded to any item three times in a row, we say "Goodbye" and that item goes off the list. These review or goodbye lists are just as effective for math ideas as

they are for word reading. If you can provide enough focus and extra review for "hard" or "missed" items, you will find that errors will be fixed up much quicker.

5. *Not practicing the script and lesson well enough to be able to bring it to life.*

Preparing for lessons the night before is not very exciting or glamorous, but it certainly can make a huge difference in how smart and effective lessons are the next day. There is nothing more disheartening to a coach than to hear a teacher read a script without any inflection or meaning, and then say, "Oh!" and read it again with a little more expression. It is obvious the teacher has never looked at that script before and is just figuring out what it means in front of the children. This is a teacher who possibly could be quite good but who has not done the homework and as a result is not bringing the script to life. Instead, the teacher is probably putting the children to sleep.

A great deal of meaning comes from how a person says something. Scripts that are not delivered with expression—where key phrases are not "paused and punched," where questions don't sound like questions—are terribly ineffective. The only way a teacher can make those effective is to read them ahead of time and practice all the new formats aloud until they sound interesting. Any set of questions can become fun for children to answer if the questions are delivered with some vitality and the teacher sounds like she really cares if the children know this material. This is especially true with primary-age ildren. It really is better to have fun with a script than to be dry and dull. If you lose control of the children, you can learn to bring them back under control. But it really is important to put some life into your scripts if you want the little ones to pay attention and try to answer correctly. *ADI*

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Designing Effective Mathematics Instruction: A Direct Instruction Approach — Chapter 1: Direct Instruction

Many mathematics texts discuss the philosophy and theory of mathematics instruction. Most methods texts provide activities and games involving mathematics. Few, however, deal extensively with the instructional specifics. *Designing Effective Mathematics Instruction: A Direct Instruction Approach* focuses on what teachers can do to maximize the likelihood that students will learn. The learning theory underlying this book is elaborated in detail elsewhere (Engelmann & Carnine, 1991) and cannot be adequately summarized here. Direct instruction provides a comprehensive set of prescriptions for organizing instruction so that students acquire, retain, and generalize new learning in as humane, efficient, and effective a manner as possible.

The need for effective instruction is growing rapidly. While many variables influence students' acquisition of mathematics, these variables are certainly central: (a) instructional design, (b) instructional delivery, and (c) classroom organization and management. These three variables are *all* essential ingredients of a successful mathematics program. A well-designed program and a good teacher will not produce significant gains if the classroom is poorly managed. Similarly, a well-designed program and a well-managed classroom will not lead to success if the teacher is not skilled. Finally, adequate organization and a skilled teacher will not adequately serve students if the materials are poorly designed. A discussion of each of these three critical variables follows.

Instructional Design

To effectively teach mathematics, teachers must construct the kinds of lessons and develop the specific teaching procedures that best meet the needs of their students. Throughout the chapters in this text, five basic instructional design components are emphasized to assist teachers in designing mathematics instruction or in evaluating and modifying the commercial programs that have been adopted for use in their school or district:

1. Sequence of skills and concepts
2. Explicit instructional strategies
3. Preskills
4. Example selection
5. Practice and review

Before designing instruction or modifying it, teachers need to clearly identify the objectives they want to teach. Most commercial programs specify student objectives for each instructional unit; also, many districts have developed curriculum frameworks that specify grade-level objectives that align with the curriculum they have adopted. Regardless of how the objectives are initially identified, the objectives must be written so that teachers are able to determine when the objectives have been met. That is, the objectives should be stated as specific, observable behaviors and include, if possible, both accuracy and rate criteria. For example, a clear first-grade objective for single-digit addition is: "Given 25 single-digit addition problems, students will correctly solve at least 22 in one minute with no

more than one error." Poorly stated objectives contain vague descriptions of student behavior that are difficult to measure, such as, "Students will *understand* the *concept of addition*."

Teachers can use the Instructional Sequence and Assessment Charts found at the beginning of most chapters in this book as a guide to selecting important grade-level objectives. These charts offer a sequence of instruction based on the difficulty level of the problem types. Teachers can use these charts to help them prioritize objectives, deciding which problem types to teach, which to delete, and which to add to the unit. Teachers of low-performing students initially should focus their instruction on higher priority skills. Higher priority skills are those skills that are used more frequently or are prerequisites for more advanced skills.

Once the teacher has determined the problem types students should be able to work when they have completed the unit, the teacher must decide on appropriate levels of mastery. Both accuracy and fluency must be considered when specifying levels of mastery. Unfortunately, there is little research available to guide decisions about determining accuracy and fluency criteria. Generally, teachers should provide supervised practice until students reach an 85% to 90% accuracy level for worksheet assignments containing a review of previously introduced types of problems. A fluency criterion usually depends on the relative complexity of the problem type. Most educators agree that students who work problems with relative fluency are more likely to retain strategies over a longer period of

time. More detail about fluency criteria can be found in the section "Progress Monitoring" later in this chapter.

Sequence of Skills and Concepts

The order in which information and skills are introduced affects the difficulty students have in learning them. Sequencing involves determining the optimum order for introducing new information and strategies. Following are three general guidelines for sequencing the introduction of new skills:

1. Preskills of a strategy are taught before the strategy.

2. Easy skills are taught before more difficult ones.

3. Strategies and information that are likely to be confused are not introduced consecutively.

Generally, the more steps in a strategy and the greater the similarity of the new strategy to previously taught strategies, the more likely some students will find it difficult to master. For example, in column subtraction, problems that require renaming (borrowing) are more difficult than problems that do not require renaming. However, not all problems that require renaming are of equal difficulty. A problem such as 3,002 – 89 is significantly more difficult than a problem such as 364 – 128, largely due to the presence of zeroes.

One of the preskills for renaming with zeroes in problems like the one above is hundreds-minus-one problems (e.g., 300 – 1 = 299). That preskill should be taught prior to introducing problems such as 3,002 – 89, which requires renaming 300 tens to 299 tens. This example of identifying and teaching the appropriate preskills illustrates the first sequencing guideline.

$$\begin{array}{r} 3002 \\ -\ 89 \\ \hline \end{array}$$

Since problems with zeroes can be confusing to many students, subtrac-

tion with renaming should be introduced first with problems without zeroes, such as 4362 – 67. The instruction of easier skills before more difficult ones is the essence of the second sequencing guideline.

The third sequencing guideline is to separate the introduction of information and/or strategies that are likely to be confused. The more similar two tasks are, the more likely students are to confuse them. For example, stu-

> *Teachers need to select the most generalizable, useful, explicit strategies to teach their students—strategies that draw attention to the relationships among the mathematical skills and concepts being taught.*

dents are likely to confuse the numerals 6 and 9. Thus, 6 and 9 should not be introduced consecutively. Likewise, the skip-counting series for 6s and 4s are quite similar in that they both contain 12, 24, and 36 (6, **12,** 18, **24,** 30, **36** and 4, 8, **12,** 16, 20, **24,** 28, 32, **36**). Introducing these series consecutively is likely to cause confusion for some students.

Teachers can use these sequencing guidelines in analyzing commercial programs. When teachers find instructional sequences that may cause confusion, they can modify the programs by providing additional instruction or changing the sequence of introduction for various skills.

Explicit Instructional Strategies

Research suggests that teaching students explicit instructional strategies increases their performance in mathematics. Explicit strategies are described as clear, accurate, and unam-

biguous instruction. (See Chapter 3 for this research.) In addition to being explicit, well-designed instructional strategies must be generalizable. That is, well-designed instructional strategies apply to a range of different problem types. For example, many programs teach strategies for identifying proper fractions using a single unit like a cookie divided into thirds or fourths. When students encounter improper fractions (e.g., 5/4), the strategies they were taught using a single unit don't work. Students cannot show 5/4 if given only a single unit (e.g., one cookie). A well-designed strategy for teaching students fraction concepts is one that applies to both proper *and* improper fractions. (See Chapter 12 for examples of well-designed fraction strategies.)

Some commercially developed mathematics programs suggest that students generate a number of alternative problem-solving strategies for the same skill. Rather than developing a conceptual foundation that highlights mathematical relationships, the introduction of alternative problem-solving strategies often confuses instructionally naive students. Teachers need to select the most generalizable, useful, explicit strategies to teach their students—strategies that draw attention to the relationships among the mathematical skills and concepts being taught.

Preskills

As mentioned previously, instruction should be sequenced so that the component skills of a strategy are taught *before* the strategy itself is introduced. The component skills, therefore, can be called preskills. For example, in order to solve a percent problem (e.g., What is 23% of 67?), the student must be able to (a) convert percent to a decimal (23% = .23); (b) work multiplication problems with multi-digit factors (.23 × 67); and (c) place the decimal point correctly in the product (15.41).

$$
\begin{array}{r}
67 \\
\times\ .23 \\
\hline
201 \\
134 \\
\hline
15.41
\end{array}
$$

It is possible that the necessary preskills for strategies presented in a specific unit were taught in previous levels. However, to ensure that the students have mastered the preskills before introducing a new instructional strategy, teachers should test students on those preskills. Each chapter in this text identifies critical preskills for the strategies presented so that teachers can design tests to determine whether the preskills have been mastered or must be taught.

Example Selection

Selecting examples means constructing or choosing appropriate problems to be used during teaching demonstrations and student practice. Several guidelines for example selection assist teachers in systematically designing their instruction so that students

experience success. The first example-selection guideline is simply to include only problems that students can solve by using a strategy that has been explicitly taught. For example, if students have been taught a renaming strategy for solving subtraction problems without zeroes, but have not yet been taught to solve with zeroes, the teacher should not give them a problem such as 3004 – 87. As mentioned previously, teaching students to rename in problems containing zeroes requires additional instruction in specific preskills. If students have not yet learned the preskill of hundreds minus one (e.g., 300 – 1 = 299) including examples with zeroes would cause many students to fail.

The second guideline is to include not only examples of the currently introduced type (introductory examples) but also examples of previously introduced problem types that are similar (discrimination examples). The purpose of including previously introduced problem types is to provide students with practice in determining

when to use the new strategy and when to use previously taught strategies. For example, after students learn how to regroup from ones to tens in column addition, the examples they practice should include both problems that require regrouping and problems that do not. Working a set of discrimination problems encourages students to examine the problems more carefully to determine *when* to apply the regrouping strategy instead of merely engaging in the rote behavior of just "putting one on top of the tens column." The importance of including discrimination examples cannot be overemphasized. Unless previously taught problem types are included, students will likely forget or misapply earlier taught strategies.

Many commercial programs do not include sufficient numbers of examples in their initial teaching presentations to enable students to develop mastery. Also, the programs rarely provide an adequate number of discrimination problems. Teachers, therefore, must be prepared to construct work-

sheets or other practice activities to supplement the practice provided by the program.

The second reason for including various problem types in practice activities is to provide the review necessary for students to maintain mastery of the previously taught skills. Without systematic review, students, particularly those with low performance, may forget and/or confuse earlier taught strategies. A discussion of example selection guidelines is provided for each topic in the book.

Practice and Review

A critical instructional goal of direct instruction is to teach skills or concepts in a manner that facilitates retention over time. Providing sufficient practice for initial mastery and adequate review for retention is an essential aspect of instructional design. Research suggests a strong relationship between student achievement and sufficient practice and review. Two guidelines can help teachers provide adequate practice and review. First, teachers need to provide massed practice on an individual skill until mastery is reached. Mastery is attained when the student can work problems accurately and fluently. Following this guideline requires that teachers monitor their students carefully and frequently to determine if and when mastery has been achieved. If students have not mastered a skill in the time originally allotted, teachers must provide additional practice opportunities.

Second, teachers must provide systematic review of previously introduced skills. Once students have reached a specified level of mastery on a given skill, the teacher can gradually decrease the amount of practice on that skill. However, practice should never entirely disappear. The skill should be reviewed systematically over time to ensure retention. In some cases, the review of previously introduced skills requires deliberate

planning, since many commercial programs do not provide an opportunity for that review. In other cases, built-in review is naturally provided because the skill serves as a component skill for a more advanced problem type. For example, as subtraction problems with renaming are mastered, those problems are integrated into problem-solving activities. Practice in the higher level skill of problem-solving provides review on the previously introduced skill of subtraction with renaming. Many Web sites are now available to help teachers

> *Practice in the higher level skill of problem-solving provides review on the previously introduced skill of subtraction with renaming. Many Web sites are now available to help teachers construct additional practice worksheets focused on specific skills.*

construct additional practice worksheets focused on specific skills.

Instructional Delivery

Once teachers have designed their mathematics instruction using the five components discussed above, they need to integrate instructional delivery components into their instructional plans. While the instructional design components focus on *what to teach*, instructional delivery components address *how best to teach*. They address issues of program implementation. Included in this section on instructional delivery are:

1. Initial assessment and progress monitoring

2. Presentation techniques

3. Error-correction procedures

4. Diagnosis and remediation

Initial Assessment and Progress Monitoring

In order for teachers to deliver mathematics instruction in the most efficient manner to all of their students, they must design and implement an assessment system for determining how students are currently performing and must monitor their progress once instruction has begun. Progress monitoring serves two major functions. First, through monitoring student progress, teachers can determine to what extent students have mastered the material. Second, progress monitoring helps teachers make instructional decisions regarding how quickly to advance through the instructional program.

Initial assessment. Before teaching a specific unit, the teacher must construct and administer a pretest to determine what skills need to be taught. Pretesting prevents the teacher from overlooking a preskill that needs to be taught prior to the introduction of an important skill or concept. Pretesting also prevents teachers from spending instructional time on skills students have already mastered. The pretest can be used as an informal posttest, as well, to measure skill acquisition after the unit has been completed. The pretest for a specific unit should include the following:

1. Problem types in that skill area that were taught in earlier grades

2. Preskills required to solve the new problem types taught in the unit

3. Examples of the new problem types presented in the unit

Problem types taught in earlier grades are included so that the teacher can identify any deficits that should be remedied before new strategies are

Figure 1.1
Pretest Record Form

Unit _____

Pretest Date _____

Posttest Date _____

Student Names	Problem Type																					
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post

introduced. Generally, these items should be selected from the two previous grades. The preskills and problem types from the current unit are included so that the teacher can determine where instruction should begin—that is, whether preskills must be taught and/or what problem types require teacher-directed instruction.

Two or three problems of each problem type should be assessed. The Instructional Sequence and Assessment Charts in Chapters 4 through 20 provide a bank of pretest items to draw from. These charts include a sequential list of problem types by estimated grade level with several illustrative problems listed for each type. A fifth-grade teacher about to introduce a unit on multiplication, for example, can construct a pretest that includes all the multiplication problem types listed on the Instructional Sequence and Assessment Chart from grades three through five. Since these charts do not include every problem type students will encounter, teachers need to add any problem types that are not on the charts but are included in the unit.

A form that can be used to record student performance on pretests appears in Figure 1.1. Students' names are listed in the first column. Across the top of the form are spaces to indicate the specific problem types. Student performance on both the pretest and the posttest is recorded in the "Pre" and "Post" columns: a+ indicates the student got all the problems of a particular type correct, and a- indicates the student missed one or more problems of that type.

After pretesting the students, the teacher must decide where to begin instruction. As a general guideline, instruction should begin with the problem type failed by more than one-fourth of the students in the group. Starting at this point would ensure that the teacher was presenting material that is new to a significant proportion of the students in the group. However, teachers must be extremely cautious in following this procedure. Teachers are responsible for teaching *all* students. Therefore, teachers need to allocate time to work individually with the students who missed earlier problem types until those students have caught up with the rest of the group.

Progress monitoring. A major goal of progress monitoring is to determine

Teachers need to allocate time to work individually with the students who missed earlier problem types until those students have caught up with the rest of the group.

whether students have mastered the material presented through teacher-directed activities. Therefore, the problems selected to monitor student progress should be similar, but not identical, to those used during instruction.

A second goal of progress monitoring is to determine whether students are progressing at an optimal rate. One research-based approach to monitoring student progress that assists teachers in determining an optimal rate is called curriculum-based measurement (CBM). (See Chapter 3 for a discussion of research on CBM.)

CBM offers an alternative to both informal observations, which tend to lack consistency, and to achievement tests, which are administered too infrequently to help teachers make instructional decisions. According to Shinn (1998), CBM has two distinctive features that separate it from other curriculum-based assessments. First, the recommended procedures are as reliable and valid as most standardized achievement tests; second, the procedures are designed to be administered frequently enough to provide teachers with ongoing performance data.

The development of CBM procedures generally involves a four-step process (Fuchs, Fuchs, Hamlett, & Stecher, 1990):

1. Identifying a long-range goal; for example, given a set of computational problems representing a fifth-grade math curriculum, the student will work a specified number of problems and write a specified number of symbols correctly in two minutes;

2. Creating a pool of test items from the local curriculum;

3. Frequently measuring student performance;

4. Evaluating the results and making instructional changes as necessary.

(For more detailed information on CBM, see the relevant resources in Appendix B.)

One of the strongest advantages of using CBM is that by monitoring progress frequently, teachers can identify and remedy problems by making instructional changes before students fall too far behind their peers. Likewise, teachers can use CBM data to accelerate instruction.

Presentation Techniques

A major aspect of direct instruction involves attention to a group of teacher presentation techniques. How skillfully a teacher presents instruction significantly affects both the student's rate of learning and the student's self-concept. The relationship between success and self-concept, a primary tenet in the direct instruction approach to teaching, was articulated by Engelmann in 1969:

The sphere of self-confidence that can be programmed in the classroom has to do with the

child's ability to stick to his guns, to have confidence in what he has learned, and to approach school tasks with the understanding that he is smart and will succeed. For a child to maintain such an impression of himself, he must receive demonstrations that these descriptions of himself are valid. If he finds himself failing in school, displeasing the teacher, feeling unsure about what he has learned, he must reevaluate himself and perhaps conclude that he is not a complete success. (p. 68)

In general, mathematics instruction in the early grades relies more on teacher-directed instructional activities. Therefore, teachers in grades K-2 must be proficient in the variety of presentation techniques designed to maintain student participation in oral question-answer exchanges. It is during these exchanges that teachers carefully monitor the performance of their students. Although well-designed mathematics instruction requires teacher-directed presentations at all levels, intermediate-grade students will be asked to work more independently or in groups. For students at those levels, teachers must be skilled in orchestrating cooperative activities and managing students who are working independently.

The presentation techniques addressed here are those skills needed for effective teacher-directed group instruction. One means of determining whether teacher-directed instruction is effective is by examining the extent to which the teachers maintain student attention during the lesson. The more attentive students are during instruction, the higher the probability that the teaching demonstration will be successful. Attention is maintained by structuring tasks to keep students actively involved.

Several factors contribute to a successful teacher-directed lesson. For example, the length of a teacher's explanation or demonstration will affect the likelihood that students will be attentive. Teachers should make explanations brief and concise. The more time the teacher spends talking, the fewer opportunities exist for student involvement. Teachers working with primary-grade and lower performing intermediate-grade students should structure their presentations so that

> *Since teachers cannot call on every individual student, unison responses should be incorporated into the teacher-directed lessons. Unison responses help ensure that all of the students in the classroom are actively participating in the lesson.*

students are required to answer frequent questions.

Since teachers cannot call on every individual student, unison responses should be incorporated into the teacher-directed lessons. Unison responses help ensure that *all* of the students in the classroom are actively participating in the lesson. Two very specific presentation skills are necessary for teachers who incorporate unison responses into their instruction: appropriate use of signals and pacing.

Signals. A signal is a cue given by the teacher that tells students when to respond in unison. The effective use of signals allows participation by all students, not just the highest performing students who, if allowed, tend to dominate the activity.

To signal a unison response, the teacher (a) gives directions, (b) provides a thinking pause, and (c) cues the response. When giving directions,

the teacher tells the students the type of response they are to make and asks the question. For example, if presenting an addition fact task, the teacher might say, "Listen. Get ready to tell me the answer to this problem: 4 + 6."

After the directions comes the thinking pause. The duration of the thinking pause is determined by the length of time the lowest-performing student needs to figure out the answer. (If one student takes significantly longer to answer than the other students in the group, the teacher should consider providing extra individual practice for that student.) For easier questions (simple tasks involving review of previously taught skills), the thinking pause may be just a split second, while for more complex questions, the thinking pause may last 5 to 10 seconds. Carefully controlling the duration of the thinking pause is a very important factor in maintaining student attention.

The final step in the signaling procedure is the actual cue to respond. A cue or signal to respond may be a clap, finger snap, hand drop, touch on the board, or any similar type of action. This procedure can be modified for use with most tasks. On tasks calling for a long thinking pause, the teacher would say, "Get ready" an instant before signaling. The purpose of the get-ready prompt is to let the students know when to expect the cue to respond. Since the length of thinking pauses varies with the difficulty of the question, students do not know when to respond following a pause. Therefore, in order to elicit a group response in which each student has an equal opportunity to respond, the cue "Get ready" is given. This cue is particularly useful for teacher-directed worksheet tasks, since students are looking at their worksheets and cannot see a hand signal from the teacher.

The essential feature of a good signal is its clarity. The signal must be given so that students know exactly when

they are expected to respond. If a signal is not clear, students cannot respond in unison. The teacher can use the student responses to evaluate the clarity of her signals. A repeated failure to respond together usually indicates that the signals are unclear or that the teacher has not provided adequate thinking time.

Giving individual turns (i.e., called individual tests) is an essential part of any instructional activity in which students are asked to respond in unison. With unison responses, a teacher can never be absolutely certain whether each student has produced a correct response independent from the responses of nearby students. Giving individual turns helps teachers verify that all students are participating appropriately in the activity.

The teacher should give individual tests only after all the students in the group appear to be answering correctly during unison practice. Calling on a student who has not had enough practice to master the task may needlessly embarrass the student in front of his peers. Since individual tests are time consuming, they should not be given to every student after every task. As a general rule, turns should be given to all lower performing students each time a new or difficult task is presented. Higher performing students, on the other hand, can be tested less often.

Pacing. Anyone who has observed young children watching TV shows or playing video games can attest to the role that pacing plays in maintaining attention. Teachers should be familiar enough with their material to present it in a lively, animated manner and without hesitation. Teachers who are well practiced with their instructional materials not only can teach at a more lively pace, but also can focus their attention more fully on the student performance.

Error-Correction Procedures

The first step in correcting errors made by students during group instruction is to determine the cause of the error. Teachers must decide if the error resulted from inattentiveness or from a lack of knowledge.

Teachers can judge whether a student error was caused by inattentiveness by checking where the student was look-

The teacher diagnoses can't-do errors by examining the missed problems on worksheets and/or by interviewing the students about how they worked the problems they missed.

ing or what the student was doing when the question was asked. Teachers must be careful in responding to errors that appear to be caused by inattentiveness. Teachers do not want to inadvertently give students their attention for being off task.

Most error corrections follow a three-step procedure of *model, test*, and *delayed test*. If an error occurs when the teacher is presenting a strategy, the teacher should model the correct response or ask leading questions from the strategy so that students can generate the correct response. Next, the teacher tests the students by presenting the same task again, this time providing no assistance. The teacher then returns to the beginning of the original task and presents the entire task again, the delayed test. The function of a delayed test is to check whether the student remembers the correct responses when starting from the beginning of the task.

Teachers should also correct students who respond late or don't respond at

all during tasks requiring unison responding. For these errors, teachers should inform the students that because not all students responded (or because some students failed to respond on signal), they have to repeat the task. Teachers should not direct any attention to the students who made the errors but should praise students who performed well and attended to the task.

Specific recommendations are outlined in each chapter for corrections of errors students are likely to make for a given topic. Specific teacher wording is often provided along with additional recommendations for how to ensure that the corrections were effective.

Diagnosis and Remediation

Diagnosis is determining the cause of a pattern of errors; remediation is the process of reteaching the skill. Diagnosis and remediation, as used in this text, are not the same as a simple error correction. An error correction *immediately* follows the mistake a student makes during teacher-directed instruction. An error correction requires minimal diagnosis, since the teacher knows exactly what question the student missed.

A diagnosis, on the other hand, consists primarily of an analysis of the errors students make on independent work. The first decision to make in diagnosing errors is determining whether they are "can't-do" or "won't-do" problems. Won't-do problems occur when students have the necessary skills but are careless, do not complete their work, or are inattentive. A diagnosis of won't-do errors requires a remediation that focuses on increasing student motivation. A diagnosis of can't-do problems requires a remediation that focuses on the student's confusion or skill deficit.

The teacher diagnoses can't-do errors by examining the missed problems on worksheets and/or by interviewing the students about how they worked the

problems they missed. The following basic steps apply to diagnosing and remedying errors on most types of problem:

1. Analyze worksheet errors and hypothesize what the cause of the errors might be.

2. Interview the student to determine the cause of the errors if it is not obvious.

3. Provide reteaching through board and/or worksheet presentations.

4. Test the student on a set of problems similar to the ones on which the original errors were made.

An error can be one of three basic types: a fact error, a component-skill error, or a strategy error. Basic facts are the addition and multiplication facts formed by adding or multiplying any two single-digit numbers and their subtraction and division corollaries. Students often miss problems solely because they don't know their basic math facts.

Component skills are previously taught skills that are integrated as steps in a lengthier problem-solving strategy. Below is an example of a fraction problem a student missed due to a component-skill error:

$$\frac{3}{4} + \frac{2}{5} =$$

$$\frac{3}{20} + \frac{2}{20} = \frac{5}{20} \qquad \frac{15}{20} + \frac{8}{20} = \frac{23}{20}$$

incorrect   *correct*

Note that in the incorrectly solved problem, the student knew to convert both fractions to a common denominator but did not know the component skill of rewriting a fraction as an equivalent fraction. To remedy this component-skill error, the teacher presents instruction only on the component skill of rewriting fractions. Once the student masters the component skill, the teacher gives students problems to solve that are similar to the one originally missed.

A strategy error occurs when the student demonstrates that he does not know the sequence of steps required to solve the particular problem type. In the following example, the student subtracts the denominator from the numerator when instructed to convert an improper fraction to a mixed number, illustrating that the student does not have a strategy for reducing improper fractions. To remedy this problem, the teacher must teach the entire strategy of rewriting fractions to the student.

$$\frac{13}{6} = 7 \qquad\qquad \frac{15}{2} = 13$$

The evidence from the teacher effectiveness literature suggests that the more time students are successfully engaged in math instruction, the more they learn.

The diagnosis and remediation procedures recommended here are designed to increase instructional efficiency by helping teachers determine exactly how much additional teaching is necessary to bring students to mastery. If a teacher determines that student errors are due to deficient math fact knowledge, it is unnecessary to reteach lengthy problem-solving strategies. Similarly, if an error pattern reflected in a student's independent work is due to a problem with a single component skill, then only that skill, not the entire instructional strategy, must be retaught. These diagnosis and remediation procedures can save teachers valuable instructional time by focusing on only those skills that require remediation.

Classroom Organization and Management

The final component of direct instruction involves organizing

instruction in the classroom and throughout the school to ensure effective use of resources, particularly the use of time. Clearly, many books have been written addressing only issues of classroom organization and management that contain important recommendations for effective teaching. For the purposes of this text, however, this section discusses only the critical elements of daily mathematics lessons.

Elements of Daily Math Lessons

A daily mathematics lesson should include three parts: teacher-directed instruction, student independent work, and a teacher workcheck.

Teacher-directed instruction. The amount of time allocated in most classrooms for teacher-directed instruction in mathematics is generally no less than 30 minutes and as much as 90 minutes. The evidence from the teacher effectiveness literature suggests that the more time students are successfully engaged in math instruction, the more they learn. (See Chapter 3 for a discussion of this research.) Therefore, teachers must carefully manage and utilize the instructional time allocated in their daily schedules.

As mentioned previously, well-designed and well-delivered teacher-directed instruction is characterized by high rates of student-teacher interaction in a quickly paced instructional lesson. The lesson typically consists of the introduction of new skills and concepts and remediation of previously taught skills.

Introduction of new skills. The teacher introduces new skills to students typically by demonstrating the conceptual basis for the skill, modeling how to apply the skill, then leading students through several examples, gradually fading assistance until the students can perform independently.

In direct instruction, general teaching procedures are translated into teaching formats or scripts that specify teacher wording, examples, and often error-correction procedures. Formats are designed so that teacher explanations are clear and unambiguous and so teachers do not have to worry if the explanation they use one day is consistent with the explanations they've given previously.

The teaching formats reflect a carefully designed instructional sequence, beginning with a teacher demonstration of the strategy and followed by teacher-guided worksheet practice, worksheet practice with less teacher direction, supervised worksheet practice, and, finally, independent work.

(Chapters 4 through 20 contain teaching formats that address the major topics in most elementary and some middle school classrooms. Most of the formats in each chapter reflect the instructional sequence mentioned above and include four parts: a structured board presentation, a structured worksheet presentation, a less structured worksheet presentation, and supervised practice. During daily teacher-directed instructional time, teachers present structured board presentations, structured worksheet presentations, and less structured worksheet presentations. Supervised practice is usually done during independent work time.)

Remediation of previously taught skills. During the lesson, the teacher should remedy any of the previously taught skills or problem types with which several students demonstrate difficulty. If only one or two students experience difficulty, the teacher should work with these students individually, independent of group instructional time. Remediation exercises should be based on student performance on independent worksheets.

Independent work. Independent work refers to the exercises that students complete without assistance from the teacher at a designated time other than the teacher-directed instructional time. Exercises for independent work can include those found in workbooks or textbooks, problems written on the board, or cooperative activities designed for groups. Independent work should include massed practice on the most recently introduced problem types as well as practice and review of earlier introduced problem types. Teachers who use a direct instruction approach never assign independent work to students that the students haven't first demonstrated they can complete successfully during supervised practice.

Workcheck. A workcheck is an activity specifically designed to correct the errors students make during independent work time. Students' independent work should be checked daily in order to provide useful feed-

back to both students and teachers. The sooner a student's weakness or deficit can be identified, the easier it is to remedy. At the same time, the longer a student practices completing a problem the wrong way, the more difficult it is to correct.

Teachers of younger students will find it most efficient to check all student papers themselves prior to the workcheck and to have students cor- rect errors only during the allocated time. Teachers of older students can conduct a group workcheck in which the teacher reads the answers and the students mark their own papers and then correct their errors. The workcheck affords teachers the oppor- tunity to correct errors and to care- fully examine independent work to determine skills that might require additional remediation during teacher- directed instructional time. ~~ADI~~

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DON CRAWFORD, W. C. Cupe Community School, Columbus, Ohio

Review of Dr. Vicki Snider's *Myths and Misconceptions About Teaching: What Really Goes On in the Classroom*

I just finished reading *Myths and Miscon- ceptions About Teaching: What Really Goes On in the Classroom* by Dr. Vicki Snider (Lanham, MD: Rowman & Littlefield Education, 2006). What a terrific book! I wish that someone would hurry up and give copies to George Bush, Bill Gates, and everyone else who wants to help public education improve itself. Until well-meaning reformers truly understand the insidious power of these teaching myths, they will be unable to effect significant change in the current system. Snider does an exemplary job of explaining the myths that have sustained and perpetuated the status quo in education for many decades. Even though there are many books out that try to explain what's wrong in education, this one is excep- tional for a) limiting its critiques to sci- entifically defensible points, b) avoiding rancorous ranting, and c) explaining the interlocking and self- reinforcing nature of these teaching myths. Each of these accomplishments deserves further examination.

By limiting her critique of the teach- ing myths to what science has shown to be true, Snider has elevated the discussion above that of a debate amongst competing opinions. Most writers who begin to critique the edu- cational establishment start from a personal or journalistic point of view. They see, or their child experiences, a teaching practice, based on a teaching myth, that doesn't appear to make sense. The writers find out that there are articulate education writers or professors who disagree with both the myth and the practice. Then the writ- ers present both sides—the rationale for the practice as well as the critique of it—leaving the reader to decide which makes the most sense. The other side of the debate does the same thing. Unfortunately, many of the educational procedures that have been scientifically determined to be effective are counterintuitive, espe- cially in those in beginning reading. So in a debate about what makes intuitive sense, the teaching myths often sound pretty reasonable, and the layperson gives up in confusion. One of Snider's unique contributions is to argue from the point of view of what good scientific research has shown about the myths, rather than what makes intuitive sense. She shows the kernel of truth that makes each myth sound sensible, the scien- tific basis for rejecting the myth, and the harm that is ultimately done by acceptance of each of these myths.

The second accomplishment is that Snider has managed to avoid the angry, mean-spirited tenor of most critiques of education. Once one begins to see behind the façade of American educational practices it becomes extremely frustrating to see the harm that is done, the children who are failed, and the complacency that seems unassailable. This frustra- tion causes most writers who critique the educational establishment to become increasingly strident and vit- riolic and to end up sounding a lot like conspiracy theorists. The angry rhetoric of many critics is unconvinc- ing, precisely because it is so much at odds with our own experience talking to the earnest and well-meaning staff at the local school. In reading Snider's even-handed treatment of the issues one can finally see how teachers, whose only goal is to help children succeed, could fall victim to the pernicious influence of the teach- ing myths. The reader can under- stand how the benign intentions of affable, good-hearted teachers, edu- cation professors, and school adminis- trators still can cause harm to children. The harm is caused not by evil design but because of the nature

of the myths to which these well-meaning people subscribe. Snider's calm, rational explanation of the teaching myths and the harm they cause should be far more credible to the average person than more acrimonious attacks on education.

The third unique accomplishment of this book is to help the reader understand the way in which these myths work together to insulate the educational establishment from efforts to change it for the better. Snider shows how the myths are self-reinforcing, causing the problem, re-defining the evidence of the problem, and deflecting the blame for the results, all at the same time. The myth of "process" and the myth of "fun and interesting" cause the problem by preventing teachers from accepting scientifically supported practices. The myths of "eclectic instruction" and "good teachers" celebrate the unprofessional, *bricoleur* status of teachers as a good thing, rather than evidence that teachers do not know the science about how to teach more effectively. Snider's use of the French term *bricoleur* is especially helpful to describe the improvisational, down-on-the-farm (think duct tape and baling wire) nature of the pre-scientific teaching skills that are considered state-of-the-art by American teachers. Finally, the myths of "learning styles" and "disability" are used to place the blame for unsuccessful teaching practices squarely on the shoulders of the victims, without seeming mean about it. These teaching myths provide the impenetrable thicket of rationalizations that results in unsuccessful education for most minority children in poverty, like the ones served by our school. In order to effectively teach the students in our neighborhood, our teachers must recognize, reject, and defeat all of these myths at every turn.

This book is a well-written, easy-to-read, and easy-to-understand expose of the myths that prevent education in America from achieving excellence. It is important reading for anyone seeking to understand or reform education in this country. *Myths and Misconceptions About Teaching* describes the dangerous shoals upon which *all* educational reform efforts up to this point have foundered. There is no doubt that any plan to improve American education that does not take into account the influence of these myths will founder as well. Perhaps someone, having learned where these obstacles lie, can find a way around them. We can only hope. *ADI*

DI-ANNOUNCE Electronic List

An electronic list is now available: DI-ANNOUNCE. As its name indicates, DI-ANNOUNCE is an electronic list for announcements on resources for those studying or implementing Direct Instruction. List topics include the following:

- research articles, news articles, and other publications on DI;

- updates on DI implementations;

- meetings, conferences, and workshops on DI;

- authors' remedies for specific exercises in the DI programs that have been identified as being difficult for children;

- new DI products and resources;

- grant opportunities or awards for DI research or implementation;

- job opportunities for DI researchers or practitioners;

- sources of data on student performance for analysis or distribution.

Note that DI-ANNOUNCE postings are limited to ANNOUNCE-MENTS. The list is NOT a discussion list, and it is moderated. Any replies, jokes, or other off-task messages will be rejected. There is an on-line, web-based archive of postings for later reference and retrieval. In this way, the list is designed to be a streamlined tool for communicating information on the most critical developments in the field of Direct Instruction.

To subscribe, send a message to **join-DI-ANNOUNCE@lyris.nifdi.org.**

You will then receive a "welcome" message with additional information about the list. You can also go to **http://lyris.nifdi.org/** to see an archive of past announcements sent to the list, including the "welcome" message.

The list launched last October. You are invited to join the list and send announcements as appropriate. Feel free to call Kurt Engelmann at the National Institute for Direct Instruction (NIFDI) via 877.485.1973 toll-free or email kurt@nifdi.org if you have any questions about the list.

New from the Association for Direct Instruction
A tool for you...

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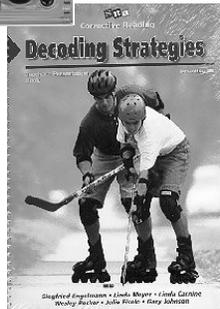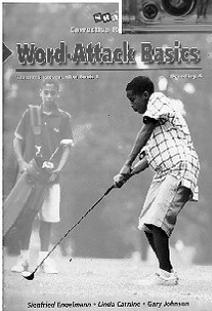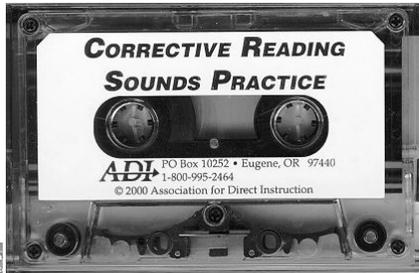
Dear *Corrective Reading* User,

A critical element in presenting *Corrective Reading* lessons is how accurately and consistently you say the sounds. Of course, when teachers are trained on the programs they spend time practicing the sounds, but once they get back into the classrooms they sometimes have difficulty with some of the sounds, especially some of the stop sounds.

I have assisted ADI in developing an audio tape that helps you practice the sounds. This tape is short (12 minutes). The narrator says each sound the program introduces, gives an example, then gives you time to say the sound. The tape also provides rationale and relevant tips on how to pronounce the sounds effectively.

Thanks for your interest in continuing to improve your presentation skills.

Siegfried Engelmann
Direct Instruction Program Senior Author

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Now Available from ADI…

COACHES TOOL KIT

These useful pre-printed Post-It® notes are used to help convey important teaching skills to users of the Direct Instruction Reading programs. Instead of having to write out the proper presentation of the correction or procedure, one simply peels a sheet off the pad and puts it in the next lesson or two where the correction/procedure would be used.

The primary set, for use primarily with *Reading Mastery I* and *II* and *Decoding A* contains correction procedures for
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- Individual Turns
- Comprehension Questions
- Reading Vocabulary (Sound Identification Errors)
- Looping for Sound-It-Out Words
- Word Identification Errors (Group Reading)

The upper level set, for use primarily with *Reading Mastery III–VI* and *Corrective Reading* contains correction procedures for
- Individual Turns
- Comprehension Questions
- Word Identification Errors (Word Attack)
- Word Identification Errors (Group Reading)

The two come together as a kit and are priced at $30.00 per kit ($24.00 for ADI members). Contact ADI for quantity pricing.

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Videotapes on the Direct Instruction Model

ADI has an extensive collection of videos on Direct Instruction. These videos are categorized as informational, training, or motivational in nature. The informational tapes are either of historical interest or were produced to describe Direct Instruction. The training tapes have been designed to be either stand-alone training or used to supplement and reinforce live training. The motivational tapes are keynote presentations from past years of the National Direct Instruction Conference.

Informational Tapes

Where It All Started—45 minutes. Zig teaching kindergarten children for the Engelmann-Bereiter pre-school in the 60s. These minority children demonstrate mathematical understanding far beyond normal developmental expectations. This acceleration came through expert teaching from the man who is now regarded as the "Father of Direct Instruction," Zig Engelmann. Price: $10.00 (includes copying costs only).

Challenge of the 90s: Higher-Order thinking—45 minutes, 1990. Overview and rationale for Direct Instruction strategies. Includes home-video footage and Follow Through. Price: $10.00 (includes copying costs only).

Follow Through: A Bridge to the Future—*22* minutes, 1992. Direct Instruction Dissemination Center, Wesley Elementary School in Houston, Texas, demonstrates approach. Principal, Thaddeus Lott, and teachers are interviewed and classroom footage is shown. Created by Houston Independent School District in collaborative partnership with Project Follow Through. Price: $10.00 (includes copying costs only).

Direct Instruction—black and white, 1 hour, 1978. Overview and rationale for Direct Instruction compiled by Haddox for University of Oregon College of Education from footage of Project Follow Through and Eugene Classrooms. Price: $10.00 (includes copying costs only).

Training Tapes

The Elements of Effective Coaching—3 hours, 1998. Content in *The Elements of Effective Coaching* was developed by Ed Schaefer and Molly Blakely. The video includes scenarios showing 27 common teaching problems, with demonstrations of coaching interventions for each problem. A common intervention format is utilized in all scenarios. Print material that details each teaching problem and the rationale for correcting the problem is provided. This product should be to used to supplement live DI coaching training and is ideal for Coaches, Teachers, Trainers. Price…$395.00 Member Price…$316.00

DITV—Reading Mastery 1, 2, 3 and Fast-Cycle Preservice and Inservice Training—The first tapes of the Level I and Level II series present intensive preservice training on basic Direct Instruction teaching techniques and classroom management strategies used in *Reading Mastery* and the equivalent lesson in *Fast-Cycle*. Rationale is explained. Critical techniques are presented and demonstrated. Participants are led through practical exercises. Classroom teaching demonstrations with students are shown. The remaining tapes are designed to be used during the school year as inservice training. The tapes are divided into segments, which present teaching techniques for a set of of upcoming lessons. Level III training is presented on one videotape with the same features as described above. Each level of video training includes a print manual.

> *Reading Mastery I* (10 Videotapes) $150.00
> *Reading Mastery II* (5 Videotapes) $75.00
> *Reading Mastery III* (1 Videotape) $25.00
> Combined package *(Reading Mastery I–III)* $229.00

Corrective Reading: Decoding B1, B2, C—(2-tape set) 4 hours, 38 minutes + practice time. Pilot video training tape that includes an overview of the *Corrective* series, placement procedures, training and practice on each part of a decoding lesson, information on classroom management/reinforcement, and demonstration of lessons (off-camera responses). Price $25.00

Conference Keynotes

These videos are keynotes from the National Direct Instruction Conference in Eugene. These videos are professional quality, two-camera productions suitable for use in meetings and trainings.

Keynotes From the 2005 National DI Conference, July 2005, Eugene, Oregon

Carefully Designed Curriculum: A Key to Success. For the past 31 years Zig Engelmann has delivered the opening keynote of the National DI Conference, and this year was no exception. Zig focuses on the careful design of the Direct Instruction programs that make them effective in the classroom versus other programs that have some of the component design elements, but not all and are therefore less effective than DI. Pioneering author Doug Carnine describes some of the challenges we face in educating our children to compete on a world class level. Doug also goes into detail of how to create a school improvement plan and how to implement it. As a bonus, the conference closing is included. Price: Videotape $30.00, DVD $40.00

Keynotes From the 2004 National DI Conference, July 2004, Eugene, Oregon—Conference attendees rated the keynotes from the 30th National Direct Instruction Conference and Institutes as one of the best features of the 2004 conference. Chris Doherty, Director of Reading First from the U.S. Office of Elementary and Secondary Education in Washington, DC, delivered a humorous, informative, and motivating presentation. Chris has been an advocate of Direct Instruction for many years. In his capacity with the federal government he has pushed for rules that insist on states following through with the mandate to use programs with a proven track record. The way he relates his role as a spouse and parent to his professional life would make this an ideal video for those both new to DI as well as veteran users. In the second opening keynote, Zig Engelmann outlines common misconceptions that teachers have about teaching and learning. Once made aware of common pitfalls, it is easier to avoid them, thereby increasing teacher effectiveness and student performance. Price: $30.00

To the Top of the Mountain—Giving Kids the Education They Deserve—75 minutes. Milt Thompson, Principal of 21st Century Preparatory School in Racine, Wisconsin gives a very motivational presentation of his quest to dramatically change the lives of all children and give them the education they deserve. Starting with a clear vision of his goal, Thompson describes his journey that turned the lowest performing school in Kenosha, Wisconsin into a model of excellence. In his keynote, Senior Direct Instruction developer Zig Engelmann focuses on the four things you have to do to have an effective Direct Instruction implementation. These are: work hard, pay attention to detail, treat problems as information, and recognize that it takes time. He provides concrete examples of the ingredients that go into Direct Instruction implementations as well as an interesting historical perspective. Price: $30.00

No Excuses in Portland Elementary, The Right Choice Isn't Always the Easiest, and Where Does the Buck Stop? 2 tapes, 1 hour, 30 minutes total. Ernest Smith is Principal of Portland Elementary in Portland, Arkansas. The February 2002 issue of *Reader's Digest* featured Portland Elementary in an article about schools that outperformed expectations. Smith gives huge credit to the implementation of DI as the key to his student's and teacher's success. In his opening remarks, Zig Engelmann gives a summary of the Project Follow Through results and how these results translate into current educational practices. Also included are Zig's closing remarks. Price: $30.00

Lesson Learned…The Story of City Springs, Reaching for Effective Teaching, and Which Path to Success? 2 tapes, 2 hours total. In the fall of 2000 a documentary was aired on PBS showing the journey of City Springs Elementary in Baltimore from a place of hopelessness to a place of hope. The principal of City Springs, Bernice Whelchel, addressed the 2001 National DI Conference with an update on her school and delivered a truly inspiring keynote. She describes the determination of her staff and students to reach the excellence she knew they were capable of. Through this hard work City Springs went from being one of the 20 lowest schools in the Baltimore City Schools system to one of the top 20 schools. This keynote also includes a 10-minute video updating viewers on the progress at City Springs in the 2000–2001 school year. In the second keynote Zig Engelmann elaborates on the features of successful implementations such as City Springs. Also included are Zig's closing remarks. Price: $30.00

Successful Schools…How We Do It—35 minutes. Eric Mahmoud, Co-founder and CEO of Seed Academy/Harvest Preparatory School in Minneapolis, Minnesota presented the lead keynote for the 1998 National Direct Instruction Conference. His talk was rated as one of the best features of the conference. Eric focused on the challenges of educating our inner city youth and the high expectations we must communicate to our children and teachers if we are to succeed in raising student performance in our schools. Also included on this video is a welcome by Siegfried Engelmann, Senior Author and Developer of Direct Instruction Programs. Price: $15.00

Commitment to Children—Commitment to Excellence and How Did We Get Here…Where are We Going?—95 minutes. These keynotes bring two of the biggest names in Direct Instruction together. The first presentation is by Thaddeus Lott, Senior. Dr. Lott was principal at Wesley Elementary in Houston, Texas from 1974 until 1995. During that time he turned the school into one of the best in the nation, despite demographics that would predict failure. He is an inspiration to thousands across the country. The second presentation by Siegfried Engelmann continues on the theme that we know all we need to know about how to teach—we just need to get out there and do it. This tape also includes Engelmann's closing remarks. Price: $30.00

State of the Art & Science of Teaching and Higher Profile, Greater Risks—50 minutes. This tape is the opening addresses from the 1999 National Direct Instruction Conference at Eugene. In the first talk Steve Kukic, former Director of Special Education for the state of Utah, reflects on the trend towards using research based educational methods and research validated materials. In the second presentation, ***Higher Profile, Greater Risks,*** Siegfried Engelmann reflects on the past of Direct Instruction and what has to be done to ensure successful implementation of DI. Price: $30.00

Fads, Fashions, & Follies—Linking Research to Practice—25 minutes. Dr. Kevin Feldman, Director of Reading and Early Intervention for the Sonoma County Office of Education in Santa Rosa, California presents on the need to apply research findings to educational practices. He supplies a definition of what research is and is not, with examples of each. His style is very entertaining and holds interest quite well. Price: $15.00

Aren't You Special—25 minutes. Motivational talk by Linda Gibson, Principal at a school in Columbus, Ohio, successful with DI, in spite of minimal support. Keynote from 1997 National DI Conference. Price: $15.00

Effective Teaching: It's in the Nature of the Task—25 minutes. Bob Stevens, expert in cooperative learning from Penn State University, describes how the type of task to be taught impacts the instructional delivery method. Keynote from 1997 National DI Conference. Price: $15.00

Moving from Better to the Best—20 minutes. Closing keynote from the National DI Conference. Classic Zig Engelmann doing one of the many things he does well…motivating teaching professionals to go out into the field and work with kids in a sensible and sensitive manner, paying attention to the details of instruction, making sure that excellence instead of "pretty good" is the standard we strive for and other topics that have been the constant theme of his work over the years. Price $15.00

One More Time—20 minutes. Closing from 1997 National DI Conference. One of Engelmann's best motivational talks. Good for those already using DI, this is sure to make them know what they are doing is the right choice for teachers, students, and our future. Price: $15.00

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

Keynotes from 22nd National DI Conference—2 hours. Ed Schaefer speaks on "DI—What It Is and Why It Works," an excellent introductory talk on the efficiency of DI and the sensibility of research based programs. Doug Carnine's talk "Get it Straight, Do it Right, and Keep it Straight" is a call for people to do what they already know works, and not to abandon sensible approaches in favor of "innovations" that are recycled fads. Siegfried Engelmann delivers the closing "Words vs. Deeds" in his usual inspirational manner, with a plea to teachers not to get worn down by the weight of a system that at times does not reward excellence as it should. Price: $25.00

Keynotes from the 1995 Conference—2 hours. Titles and speakers include: Anita Archer, Professor Emeritus, San Diego State University, speaking on "The Time Is Now" (An overview of key features of DI); Rob Horner, Professor, University of Oregon, speaking on "Effective Instruction for All Learners"; Zig Engelmann, Professor, University of Oregon, speaking on "Truth or Consequences." Price: $25.00

Keynote Presentations from the 1994 20th Anniversary Conference—2 hours. Titles and speakers include: Jean Osborn, Associate Director for the Center for the Study of Reading, University of Illinois, speaking on "Direct Instruction: Past, Present & Future"; Sara Tarver, Professor, University of Wisconsin, Madison, speaking on "I Have a Dream That Someday We Will Teach All Children"; Zig Engelmann, Professor, University of Oregon, speaking on "So Who Needs Standards?" Price: $25.00

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ADI ➤ *Books Price List*

The Association for Direct Instruction distributes the following Direct Instruction materials. Members of ADI receive a 20% discount on these materials. To join ADI and take advantage of this discount, simply fill out the form and include your annual dues with your order.

Title & Author	Member Price	List Price	Quantity	Total
Preventing Failure in the Primary Grades (1969 & 1997) Siegfried Engelmann	$19.95	$24.95		
Theory of Instruction (1991) Siegfried Engelmann & Douglas Carnine	$32.00	$40.00		
Teach Your Child to Read in 100 Easy Lessons (1983) Siegfried Engelmann, Phyllis Haddox, & Elaine Bruner	$17.50	$22.00		
Structuring Classrooms for Academic Success (1983) S. Paine, J. Radicchi, L. Rosellini, L. Deutchman, & C. Darch	$11.00	$14.00		
War Against the Schools' Academic Child Abuse (1992) Siegfried Engelmann	$14.95	$17.95		
Research on Direct Instruction (1996) Gary Adams & Siegfried Engelmann	$24.95	$29.95		
Introduction to Direct Instruction N. E. Marchand-Martella, T. A. Slocum, & R. C. Martella	$44.00	$55.00		
Managing the Cycle of Acting-Out Behavior in the Classroom Geoff Colvin	$24.00	$28.00		
Corrective Reading Sounds Tape		$10.00		

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What is ADI, the Association for Direct Instruction?

ADI is a nonprofit organization dedicated primarily to providing support for teachers and other educators who use Direct Instruction programs. That support includes conferences on how to use Direct Instruction programs, publication of *The Journal of Direct Instruction (JODI)*, *Direct Instruction News (DI News)*, and the sale of various products of interest to our members.

Who Should Belong to ADI?

Most of our members use Direct Instruction programs, or have a strong interest in using those programs. Many people who do not use Direct Instruction programs have joined ADI due to their interest in receiving our semiannual publications, *The Journal of Direct Instruction* and *Direct Instruction News*. *JODI* is a peer-reviewed professional publication containing new and reprinted research related to effective instruction. *Direct Instruction News* focuses on success stories, news and reviews of new programs and materials and information on using DI more effectively.

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☐ $75.00 **Sustaining Membership** (includes Regular membership privileges and recognition of your support in *Direct Instruction News*).

☐ $150.00 **Institutional Membership** (includes 5 subscriptions to ADI publications and regular membership privileges for 5 staff people).

✔ Canadian addresses add $10.00 US to above prices.

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✔ Contributions and dues to ADI are tax deductible to the fullest extent of the law.

✔ Please make checks payable to ADI.

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