

# Direct Instruction

## NEWS

ADI Effective School Practices

SARA G. TARVER, Editor, University of Wisconsin, Madison

## Same? Different? Both Same and Different!

In his “View From Askance” column in this issue of *DI News*, Bob Dixon reveals the fallacies in the myth that DI (the “cookie cutter”) produces students (the “cookies”) who are all the same. To put that old myth another way, DI stifles teachers’ creativity (by providing them with a cookie cutter) and students’ individuality (by making them identical products of the cookie cutter). Bob explains that DI does treat students as though they are the same in some ways but also treats them as different in other ways.

Students are the same in that they all learn if provided with a well designed curriculum and a teacher who presents the lessons effectively. Students differ in what they have learned prior to their first exposure to a DI curriculum (let’s call that prior learning *prerequisite skills and knowledge*, not *readiness*).

That’s why we give placement tests to determine the *different* starting points for *different* students. Students differ also in rate of learning and rate of progression through a curriculum. That’s why we emphasize ongoing assessment of individual progress and *flexible* homogeneous grouping.

In short, learners must pay attention to both sameness and difference. Even the simplest discriminations require attention to both. The young child who is asked to “put all the red blocks in one pile” must pay attention to sameness of color (what IS red) and, at the same time, pay attention to differ-

ences of color (what IS NOT red). Sameness and difference are two sides of the same coin. Fortunately, we can help children learn by structuring tasks to communicate critical samenesses and differences. DI curricula are designed to do just that. This particular aspect of DI is most apparent in the DI language programs and Level A of the *Corrective Reading Comprehension* program in the lessons in which children are taught that things are the same in some ways yet different in others. Too bad some educators never learned those basic same/different lessons.

Schools, like individual students, also share important samenesses or similarities even though they differ along many dimensions. Schools that implement DI with fidelity are the same in this way: their students’ academic achievement improves tremendously. To be sure, schools may differ in level of academic achievement before and after DI implementations. They may also require different DI curricula with different emphases. For example, teachers in low performing schools often spend more time on DI language instruction, relative to DI reading instruction, in kindergarten and/or first grade, whereas teachers in high performing schools are likely to spend more time on DI reading instruction. Also, low performing schools may choose to implement a particular DI reading program (e.g., *Reading Mastery*) while high performing schools may

choose to implement a different DI reading program (e.g., *Horizons*).

The body of evidence supporting the claim that DI implementations lead to improvements in academic achievement continues to grow. Highlighted in this issue of *DI News* are two reprints of *Milwaukee Journal Sentinel (MJS)* articles that report the success stories of Clarke Street Elementary School and Siefert Elementary School in Milwaukee.

Both are inner city schools in high poverty neighborhoods. As reported in the *MJS* articles, authored by Alan Borsuk, the academic gains of both

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## 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:

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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.

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schools are remarkable. To expand upon the information provided in Borsuk's article, we have included a table showing percentage of students scoring at proficiency or advanced levels on the Wisconsin Knowledge and Concepts Examination (Grade 4) in 1997, (prior to DI implementation) 1999, 2000, and 2001 (after DI implementation). As the table shows for Reading, the percentages increased by 46, 49, and 50 points for Clarke Street and 32, 47, and 46 points for Siefert. For Language, the percentages increased by 61, 71, and 71 points for Clarke and 47, 54, and 62 points for Siefert. For Social Studies, percentages increased by 66, 70, and 63 points for Clarke and 48, 55, and 52 points for Siefert. Obviously, Clarke and Siefert are the same in one way: Both made tremendous improvements in Reading, Language, and Social Studies after implementing DI. Congratulations to Clarke and Siefert (whose Principal, Sarah Martin-Elam was recipient of a 2000 Excellence in Education award from ADI) for outstanding accomplishments!

It's great to see DI getting some good press in Wisconsin these days (goodness knows it's long overdue). But even the good press usually contains some of the same old not-good stuff. And Alan Borsuk's *MJS* article about Clarke Elementary is an example of the good being contaminated with the not-good, for the sake of "balance" I suppose. David Ziffer and John Shewmaker, two frequent contributors to the DI listserv, wrote letters to Borsuk objecting to his inclusion of invalid criticisms of DI (the "not-good"). Apparently Borsuk chose not to publish the Ziffer and Shewmaker letters for they have not appeared in *MJS*. However, I think those letters will be of interest to readers of *DI News* and, as editor, I made the decision to publish them in this issue. They follow Borsuk's article about Clarke.

Also reprinted in this issue is a *Baltimore Sun* article that reports the tremendous turnaround of City Springs Elementary in Baltimore, Maryland. Under the direction of Principal Bernice E. Whelchel (recipient of a 2001 Excellence in Education award from ADI), the school has made gains sufficient to get it removed from the state's list of low performing schools that are in danger of takeover by the state. It is one of only four schools ever to have been removed from that list. City Spring's percentage of children performing satisfactorily on the Maryland Student Performance Assessment Program changed from 6.5% in 1996-97 (before DI implementation) to 42.4% in 2001. That 42.4% figure is considerably above the city average of 22.5% and just below the state average. Once again, hats off to Bernice and the City Springs staff!


It should come as no surprise to anyone that a key factor in the success of City Springs and other Baltimore schools is the teacher training. Getting research-based teaching practices into the hands (and minds) of large numbers of teachers is a major challenge of the day. In response to this challenge, Melissa Hayden and Muriel Berkeley, both of whom have played key roles in the Baltimore Curriculum Project, developed an on-line course and field tested it with 23 teachers from inner city Baltimore. As you will see when you read their article in this issue, the results are very encouraging. Great work, Melissa and Muriel!

DI success stories continue to mount for individual students also, many of whom have disabilities. One heart-warming story is that of Alex, reported by parents Gary and Karen Shmerler in this issue. This is a story of how a charter school that uses DI is helping Alex to learn like other children despite significant handicaps.

I find it particularly amazing that DI has been used successfully with deaf and hard-of-hearing students. The fall, 2001, issue of *DI News* contained a report of a study in which the per-

formance of high school deaf and hard-of-hearing students improved greatly after they were taught with DI programs in reading comprehension, spelling, and writing. Decoding instruction was not a part of the intervention. Of course not, you might say, because deaf children can't benefit from phonics instruction—they can't hear sounds! But perhaps you, like I, will be surprised to learn that deaf and hard-of-hearing students can benefit from explicit phonics instruction. In her paper in this issue of *DI News*, Beverly Trezek presents research on this topic and attempts to explain how deaf and hard-of-hearing students benefit from phonics. In that paper, she includes the results of her own pilot study in which she used *Corrective Reading Decoding* with four high school students who are deaf. Interesting results!

For the most part, *DI News* will publish (a) success stories that show what is possible when DI is implemented with fidelity and (b) papers describing the practices that are entailed in successful implementations. We'll include a tad about the political and philosophical hassles that folks go through as they attempt to initiate and carry out DI implementations. And we also want to include a few papers that enlighten us about the basic principles of DI and stimulate us to think more deeply about philosophical undergirdings. Chuck Baxter's "Myth vs. Science" paper (in this issue) is such a paper. He begins by stating three basic principles that determine logical scientific process and goes on to show how these principles relate to the DI mantra "If the student hasn't learned it, the teacher hasn't taught it."

Hope you enjoy reading this issue as much as I enjoyed editing it. Please send your reactions, stories, questions, and technical tidbits so that they can be shared with others. 



## Cookie Cutter Curricula

Direct Instruction programs comprise a cookie cutter curriculum. At least that's what I've heard for years and years. More recently, I've heard that Success for All is also a cookie cutter curriculum. I've even heard that Core Knowledge is a cookie cutter curriculum, although I didn't know that Core Knowledge was any type of *curriculum* at all.

Normally, I react to "cookie cutter curriculum" about the same way I react to "rote learning," which is to say, barely at all. There seem to be several phrases many educators use to communicate the same message: "I may not know anything about instruction, but I know what I don't like."

But tonight, I'm sitting in a hotel room, drinking the world's most expensive Canada Dry Ginger Ale (from the room refrigerator), with a little time on my hands. At moments like this, I can get very analytical about the most mundane things.

For instance, my first question about a "cookie cutter curriculum" is whether we're talking about a metaphor or an analogy. I suppose that depends on how we phrase things. Direct Instruction is to children as cookie cutters are to cookies. That's clearly an analogy, so one pressing question is answered.

But in what ways is DI like a cookie cutter, and in what ways are the products of DI like cookies? Given that I didn't make up this analogy myself, I can only guess. I think whoever did make up the analogy was trying to say something like, "DI treats all kids as if they were the same."

Now, that doesn't bother me a lot because I know for a fact that *a major intent of Direct Instruction programs is that of treating kids as if they were all the same—in some ways.*

But to explain how that can be both true and positive, I have to consider briefly this corollary statement: All kids are different.

I've actually heard people say this out loud, and heard people say it proudly, as if they were saying something entirely unique and profound. But to observe aloud that all kids are different is about as profound as observing out loud that the Yankees buy good players. Yeah? Really? Wow! Rocket science. Of course all kids are different. Would anyone ever suggest otherwise? Show me any two kids in the world and I'll show you two kids who differ from one another in many, many ways.

When I hear someone actually state out loud that all kids are different, I want to scream out: Yeah? So what? We all know that. What's your point?

Of course, I know their point. If all kids are different, then they must all be taught differently, and treated differently, and "respected as individual human beings," and a bunch of stuff like that. Minor league political correctness. I suppose that if all kids differed from one another in *every way possible*, and were not the same as each other or similar to each other in any ways whatsoever, then maybe we would have to teach them all differently. And what a nightmare that would be. We might pull that off, with some success, if we could manage a ratio of about three teachers to every one child.

I'm going to take a wild guess at something. The person who says out loud, right in front of people, that all kids are different is probably a person who does not give a lot of thought to all the ways kids are the same as, or very similar to, one another. If we were to "say the whole thing," I think we'd have to say: All kids differ from one another in many, many ways, and all kids share some similarities or likenesses or "samenesses." Otherwise, what would be the basis for classifying kids as "kids." (Please don't get on me about the word "kid." Yes, you can use that word to refer to a baby goat, but you can also use it to refer to a child, which is what I'm doing.)

We cannot classify instances of anything, whether dogs or humans, except upon the basis of similarities or shared characteristics. That's what concepts are all about. If we're interested in teaching kids something, then our interest is in specifying the ways in which kids differ, and the likenesses they share, and then sorting out which characteristics influence learning and instruction.

I think that if we spent a lot of time contemplating that question, we'd have to conclude that at least the vast majority of differences among kids have little or nothing to do with instruction and learning. Most obviously, physical characteristics have little to do with instruction. We can safely use cookie cutter curricula with kids who have different hair colors and different sizes and different noses, and so on. We might start to argue when we consider more psychological differences, such as different interests. But that's pretty easy to settle, I think. There is neither a credible analytical argument nor empirical evidence of any sort to support the cultish *belief* that accommodating the interests of different children, instructionally, makes any difference when it comes to instruction and learning.

Content, it seems to me, is independent of a child's interests. Let's say that I'm a young boy who is interested in sports. The *nature of reading*, rather than the boy's interest, dictates about 90% or so of what has to be taught to that boy. Content, and the nature of content, doesn't change according to the interests of children, nor according to any other characteristic of children. If we were trying to teach a gorilla to read, the nature of reading wouldn't change. Obviously, when it comes to the nature of content, differences among learners don't have much to do with anything.

If we accept that the fundamental nature of content does not change according to differences among learners, then perhaps the *nature of learners*, independent of content, dictates differences in instruction. But are learners really more alike in the way they learn or more different? Well, lots of folks like to think that all kids learn differently, but it's difficult to pull hard, specific examples from them. How, exactly, do differences in the way kids learn influence learning some category of knowledge, such as concepts? I've never seen any such specific examples, probably because they can't happen. On the other hand, top notch DI instructional designers, such as Engelmann and Carnine and Steely, could come up with unlimited examples of how very different kids can learn various concepts all through a single teaching presentation. That can happen, and does happen, and it is therefore easy to come up with examples, and pretty easy to prove empirically, and impossible to disprove, because it's true.

One way of illustrating the way a single teaching presentation on a concept can produce uniform learning of that concept is through the use of a DI parlor trick, in which we design a teaching presentation with the intent of ensuring that everyone misinterprets the presentation and does not learn the concept being taught. But why waste

the time on such parlor tricks, when there is such a pressing need for kids to learn accurately, and efficiently?

The point is that all kids (and humans) share some characteristics that are useful for learning, and, therefore, instruction has to accommodate those samenesses among learners, rather than the many differences among them. Learning styles and "intelligences" and student interests and modalities couldn't possibly have *too* much influence on learning, not when the nature of content doesn't vary among learners, and not when some of those things that make us all human are so central to learning.

*For example, a child with a reading learning disability, from a poverty home, might still be impoverished after finishing Reading Mastery I, but might no longer qualify for having a learning disability.*

The cookie cutter analogy breaks down for me in one sense. Yes, every copy of *Reading Mastery I* looks pretty much the same. And if all your cookie cutters happen to be the same, and you always use the same recipe, then all your cookies are going to turn out about the same. But after widely varying kids successfully complete *Reading Mastery I*, guess what: they all differ from one another mostly in the same ways they differed from one another before they started the program. There might be a few differences, but we can live with changing kids in some ways. For example, a child with a reading learning disability, from a poverty home, might still be impoverished after finishing *Reading Mastery I*, but might no longer

qualify for having a learning disability. But otherwise, kids end up preserving most of their differences. They don't look like a sheet of cookies in that respect.

On the other hand, such kids might end up looking like a sheet of cookies in another respect. After a good teacher teaches *Reading Mastery I* to a bunch of differing kids, there is a pretty good chance that every one of them will end up the same, in that they will all be well on the road to becoming literate, and they'll all be roughly at the same mile post on that road. In that, I'll concede, the cookie cutter analogy might not be too bad. Do DI programs comprise a cookie cutter curriculum? Yes, I guess in some respects, they do.

That is why I said early on here that *a major intent of Direct Instruction programs is that of treating kids as if they were all the same—in some way*. Put another way, the Direct Instruction programs make every effort to communicate the essential nature of content to all learners (because it is the same for all learners), and they make every effort to take full advantage of the ways all humans generalize more accurately and efficiently. Here's something a little funny: it isn't that easy to do! The work and effort and thinking and analysis required for treating all kids the same is extreme. It's *easy* to treat all kids differently. Anyone—absolutely anyone—can design instruction that does not result in highly uniform, cookie-like achievement across widely varying students. If anyone really wants kids to emerge at very different achievement levels from an instructional program, based upon the notion that all kids are different, then they can do it, and they can do it as easily as falling off of a log. I think we could come up with a lot of analogies to describe the resulting instructional program, but "cookie cutter" wouldn't be one of them. That's too flattering. *ADI*

## *Great Expectations, Greater Results* *Clarke Street School uses orderly approach,* *achieves stellar scores*

From the heart of a neighborhood filled with poverty and marred by crime, from the roots of a school district with one of the worst records in America for black students graduating from high school, from the third-floor gym of a 99-year-old school building, hear the voices of third-graders at Clarke Street Elementary School, in chorus:

Brains are working, wheels are turning,  
Now we're ready, now we're learning.

Of course, it's not that simple. You don't just sing a song at the school's quarterly honors assembly and get results.

But do what is being done as a whole at Clarke Street, and you get results, year after year, test after test.

You get 90% of fourth-graders at Clarke Street scoring proficient or better in reading on last spring's state standardized tests. For Wisconsin as a whole, 78% reached those levels; nationwide the figure was 63%; for Milwaukee Public Schools, it was 54%.

You get 89% of students scoring proficient or better in math. In Wisconsin, the total was 65%; across the U.S., 54%; for MPS, 36%.

You get the same kind of results in language arts (Clarke was 49 percentage points above the MPS average), for science (45 points above MPS as a whole) and social studies (41 points above the MPS average).

Results like those make this 470-student neighborhood school in Metcalfe Park an important front in the biggest struggle in American education today.

At a time when the goal of raising the performance of students in central city schools is at the heart of much of the national debate about education, Clarke Street School may be able to teach lessons not only to its students but to anyone who cares to debate how to raise performance across the board.

If the recipe for Clarke Street's success were easy to duplicate, more schools would be succeeding. You can't just decree that a school have good chemistry among its staff, good leadership from a principal or a culture that demands success.

But a series of visits to Clarke over several years, including 6 school days this fall, yields a list of ingredients in the recipe. Describing eight of them sheds light on what works in the school:

**High standards, clear goals:** Kerry Lozano, an upper-grade teacher who grew up on a farm near Campbellsport, formerly taught in Houston, where, she said, a teacher's goals were just to make it through the day and keep the place from getting out of control. When she started at Clarke Street 6 years ago, she was surprised: "What? Inner city kids and you have to teach them, too?"

The answer is yes, an answer that appears to be shared throughout the school.

Principal Keith Posley says the school's central goal is for every student to learn fundamental skills in what he calls "the big three"—reading, writing, and math. The pursuit of that goal

brings to mind phrases such as straight-on, no excuses, and no frills.

Milwaukee School Superintendent Spence Korte says, "They have defined their goals as clearly and unequivocally as anyone, and everything in that school is aimed at those goals."

**Pushing the basics:** You won't see much at Clarke Street of education practices such as cooperative learning or other student-directed intellectual explorations educational experts advocate. And there is no specialty program that would attract an above average cut of students.

In large part, this is a drills-and-repetition zone, using many of the educational techniques that appeal to the more conservative side of educators' debates.

Direct Instruction—a teaching technique that emphasizes phonics and relies heavily on teachers and students literally following a script provided by the publisher—is used heavily for reading. But other systems are used also, including another phonics technique and the popular "Accelerated Reader" program that involves students reading books and then taking computerized quizzes to win prizes.

Denise Johnson, parent coordinator for the school, gives her answer why the school is successful: "They drill the kids."

That starts in kindergarten classes such as the one taught by Camilla Wakeman, a 60-year-old, first-year teacher.

Wakeman's class is broken into small groups for reading instruction. One

recent morning, she started with eight students—the Dolphins, as the group is named. She sat on the inside of a semicircular table, with the students around the outside.

They sounded out long Es and short As, Ms, and Ss, as she held up a workbook and each student followed her finger. They said each sound as a group, then individually as she called on them, following the script. They sounded short words like “fun,” first slowly, then quickly, together and then individually.

The repetition is rhythmic, almost monotonous. Most of the kids are staying with the exercise; the attention of a few wavers. But it would be tough for any of them to walk away from the table not knowing that M makes an mmm sound.

**A stable staff, strong on teamwork:** First-grade teacher Rebecca Feider was a student teacher at Clarke Street a year ago. After spending time in five schools during her training, she was eager to return to Clarke this year, her first full year of teaching.

“I’ve never seen a school that had such a bond and cared for the kids so much,” she says. “The teachers are so dedicated here. That’s how I always envisioned teaching.”

Unlike many central city schools, there is relatively little staff turnover. Reading resource teacher Sherrion Perkins is in her 31st year at the school; librarian and math specialist Michael Turck is in his 30th.

Nancy Maney-Meer, in her 11th year, says, “We’re a good team.”

**Strong leadership:** A top quality principal is just about mandatory if you want a top quality school. Clarke Street had a principal who was regarded as a star, Diane Neicheril. Many of the programs and philosophies at the

school were brought in under her leadership, and the school’s reputation for high results was established under her.

When she retired in 1999, people such as Korte wondered if the school would slip. It hasn’t.

That has quickly vaulted Posley into the front ranks of Milwaukee principals. Posley grew up in a small town in Mississippi and was recruited out of college to come to Milwaukee, starting in 1989 as a gym teacher at Ben Franklin School. He later became an assistant principal at Forest Home Elementary School, before being named to succeed Neicheril.

*“The teachers are so dedicated here. That’s how I always envisioned teaching.”*

He does the job differently than Neicheril—more emphasis on basics and strict enforcement of discipline, less experimenting—but the school culture of success continues. Many teachers describe him as supportive and eager to help them get training.

Korte says Clarke Street has shown “absolutely consistent leadership now across two principals, with an unrelenting commitment to student performance.”

**Small group learning:** You almost never see a class at Clarke Street where there is only one adult present. Sometimes, there are as many as four present at the same time. Especially with reading work in young grades, almost everything is done in small groups, with no more than eight students working with a staff member.

For years, Clarke Street has been part of the state’s P-5 program, which provides extra resources to schools with a high proportion of low-income students. In general, Clarke Street has used the P-5 money to hire people and not buy things. There is no computer lab and relatively few computers throughout the school, for example. But there are three faculty members called “focus teachers,” who rotate through several classes to strengthen work on specific subjects, and the staff includes a relatively high 18 positions for educational assistants.

**Structure, structure, structure:** Everything seems to be highly structured at the school. Class time is firmly scheduled. Walking in the halls is covered by strict, enforced rules. During the one recess each day, specific areas are designated for specific activities, and a lot of staff monitor what’s going on.

Staff members say that the children, many of whom lead very unstructured lives outside school, need, like, and benefit from structure.

Teachers tell heartbreaking stories about what goes on in the lives of some of their students—lives shaped by poverty, crime, drugs, alcohol, and severe dysfunction at home. School, especially for such children, is the safest, steadiest place in their lives.

Second-grade teacher Carolyn Davis, in her 11th year at Clarke Street, says, “The number one thing is being organized and structured. These children need a lot of it.”

**Firm discipline, starting with small things:** Take two stairs in one step, leave your homework at home, throw your coat down on the playground, and you’re likely to be spending recess standing against a wall, answering stern questions from Posley.

Discipline is tight and strongly enforced at Clarke Street, starting with things that many would regard as minor. Posley says, “I’m a firm believer that you nail kids for little things, they don’t become big things.”

The school treats recess as a privilege, earned by good behavior. Break a rule, and you can bet you’ll be spending recess with your back against a wall in a large entrance area that leads to the playground. And you’ll be there as long as 10 days in a row.

Posley holds court in the entrance area, pacing the middle of the open area while kids line the walls on three sides. The usually affable principal is stern, even cold as he grills students.

“Why are you on this wall?” he demands of one student.

The boy says he doesn’t know why. Posley challenges the answer. They repeat the dialogue. The student finally admits it’s because he balled up his fist when he was angry at another student.

Posley overhears a boy outside on the playground say something out of line. He opens the door and shouts: “Take your hat off and get in here. You’re with me now. I heard your mouth.”

To another child, he asks, with a tone of wonderment, “You’re in fifth grade? And you’re talking in class?”

The students stand silently, sometimes sullenly, as Posley proceeds through the roster of offenders. But they know the rules and know they’ll be enforced. The faculty appears to strongly back the strict approach.

**Rewards and incentives:** The flip side of tight rule enforcement is a broad program of incentives. Show up for school, turn in your homework, act politely, and you can earn “dollars” with Posley’s picture on them. They

can be redeemed for prizes, ranging up to bicycles and boomboxes.

The quarterly awards program is one of the key incentives. In two shifts, all the students gather in the gym. They are instructed to sit cross-legged on the floor, hands folded, quiet. Compliance is quite good.

Posley announces that school officials are bestowing high honors today—things like “that wonderful Most Improved pencil,” and the opportunity to be called to stand in front of most of the school and have Posley and your teachers shake your hand for receiving a “good citizenship” award.

*But the school’s philosophy is clearly that the tough realities of life for students aren’t a reason why they can’t learn.*

Five students among those with strong records of being on time to school are picked to choose among a set of prizes such as sports equipment or art kits, donated by the North Shore Rotary Club. The room that wins the best attendance award gets to display a trophy and a banner and have a party.

Posley ends the assembly with a pep talk: If students read everything they can, come to school every day, and do their classwork and homework, they will earn honors in school and beyond. “I want you to get used to coming up and having someone shake your hand and say congratulations,” he tells them.

The school does not benefit from one of the normal pillars of strong schools,

parent involvement. The school undertakes efforts to get parents or guardians involved. But, as at many urban schools, participation is far below the ideal.

Even with incentives for parents, such as a chance to win a night’s stay at the downtown Hilton, several teachers said they met with parents representing well below half of their students at recent conferences, and those were usually from their “better” kids.

But the school’s philosophy is clearly that the tough realities of life for students aren’t a reason why they can’t learn.

Posley says none of the disadvantages of central city children such as poverty or coming from households not conducive to success in school, have anything to do with how their brains work.

“We have to believe in our children and expect from our children what everyone else expects from their children,” he says. “Our students can stand up against anyone in the state, anyone in the nation. We’re right there with them. I’ve never had any shadow of a doubt that our students could do it.”

## *Testing’s role*

While test results are the signature of the school’s success, the school staff is conflicted about the role of testing. Many agree that test scores reflect only part of what students ought to accomplish in school, and they would be hugely relieved if they weren’t under pressure to produce good scores. Some say they would teach more creatively.

Teachers say they don’t “teach to the test,” but the existence of the tests shapes much of their work.



They frequently present material to students in formats used on tests, such as by using reading passages followed by multiple-choice or short-answer questions.

Staff members say one key to getting high scores is carefully picking the atmosphere in which kids take tests, emphasizing small groups and quiet settings.

Posley says the school closely monitors the performance of individual students and intervenes early with those who are not doing well, particularly in reading.

“These children are going to read, read, read,” he says. Some get three reading sessions a day, including one in the after-school program in the building.

A large majority of the school’s students also attend 6 weeks of summer school in the building, which almost surely helps reduce the widespread problem of children’s performance levels regressing over summer vacations.

Lozano laughs at those who want to know the secret of Clarke’s test score results.

“There’s no magic potion, there’s nothing we sprinkle on the kids before the tests,” she says. “It’s just a lot of hard work. . . We expect—and they rise to it.”

### *Critic sees ‘mindless obedience’*

But schools such as Clarke Street—and there are a handful of them around the country—have strong critics.

Alfie Kohn, a widely known author and commentator from Massachusetts, said in an interview, “There is a dismaying tendency to subject low-

income kids of color to an environment that is rigid, harshly punitive, competitive, characterized by low level ‘bunch o’ facts’ teaching. . . If we are looking to produce mindless obedience and better scores on bad tests, then that may make sense. If we’re looking to help kids become responsible and compassionate human beings, who love learning and think deeply, then this model should be avoided like the plague.”

*“There’s no magic potion, there’s nothing we sprinkle on the kids before the tests,” she says. “It’s just a lot of hard work. . . We expect—and they rise to it.”*

One of Kohn’s books is titled *Punished by Rewards*. He says reward-and-punishment plans such as the one at Clarke Street ultimately discourage the behavior they are meant to encourage.

As for the school’s reliance on highly structured rules for behavior, he says, “You’re not describing structure, you’re describing control. Many times, educators will invoke the idea of structure to justify an environment of top-down control. The latter is what makes it harder for kids to learn to be good decision makers and enthusiastic learners and decent people.”

No one has done an analysis of how students from Clarke Street do in middle school, high school or beyond. While the assumption is that students with strong skills at the end of elementary school do better in the future, that is unproven, and it is clear that the forces of the street and of adolescence in general mean the

long-term Clarke Street record is far from perfect.

Asked about what becomes of her students, Lozano says, “I’ve attended some of their graduations, and I’ve attended some of their funerals.”

Korte says that the success of Clarke Street School demonstrates “it is possible to take the most challenged kids and bring them to a level of excellence.”

That, he says, leads to an obvious question: If it can be done at one school—or at a handful, including other relatively strong performers in Milwaukee—why not at many others?

“Why not every place in the city?” he asks. **ADI**

## *Percentage of Students Scoring At Proficiency or Advanced Levels on the Wisconsin Knowledge and Concepts Examination (Grade 4):*

<b>Clarke Street Elementary School</b>					<b>Siefert Elementary School</b>				
	<u>1997</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>		<u>1997</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>
Reading	42	88	91	92	Reading	22	54	69	68
Language	22	83	93	93	Language	6	53	60	68
Social Studies	28	94	98	91	Social Studies	14	62	69	66

Dear Mr. Borsuk and *Milwaukee Journal Sentinel* Editors:

I was gratified to see your web site publish Mr. Borsuk's article on Direct Instruction (November 1, "Great Expectations, Greater Results" at [www.jsonline.com/news/metro/nov01/clarke18111701a.asp](http://www.jsonline.com/news/metro/nov01/clarke18111701a.asp)). Many people, both within and outside of Milwaukee will tell you that with Direct Instruction you can "do what is being done as a whole at Clarke Street, and you get results, year after year, test after test," as Mr. Borsuk so aptly points out.

I was however distressed to see that Mr. Borsuk apparently went out of his way to solicit the opinion of Alfie Kohn, who was quoted as describing Direct Instruction as "rigid, harshly punitive, competitive, characterized by low level 'bunch o' facts' teaching," and who put forth the opinion that Direct Instruction "should be avoided like the plague."

No doubt Mr. Borsuk was following some sort of requirement that he produce a "balanced" report, a mandate which seems to compel education columnists to seek out the most outrageous contrary opinions and insert them, without rhyme or reason, into the midst of otherwise reasonable stories. Indeed, I cannot recall ever reading any article about Direct Instruction in the popular press that did not use precisely this same technique to contrive a sense of controversy (presumably to increase readership?).

I would guess that Mr. Borsuk is unaware that asking Alfie Kohn for a contrary opinion on Direct Instruction is about as original and interesting as collecting Beanie Babies or displaying a "Baby On Board" sign in your car window. It's gotten to the point where I can predict with certainty at the start of any Direct Instruction article that the author will make a point of cleverly inserting this worn-out device, using either Mr. Kohn or one of his peers, people who apparently make their livings by stoking the imaginations of the most extreme and irrational elements of the educational community.

Of course there is nothing wrong with controversy. It's just that true controversy requires that the opposing view come from a credible source. To the best of my knowledge, Mr. Kohn is neither currently nor formerly involved in the implementation of any school reform program that raises the achievement level of any group of children anywhere by any objective standard. Since Mr. Kohn cannot supply us with any tangible evidence that he knows what he's talking about, it seems strange to me that you would solicit his opinion.

As a practitioner who uses Direct Instruction almost every day, I can tell from Mr. Kohn's comments that he is almost totally ignorant about both Direct Instruction and of the effects that it has upon children, and so it would seem that you have assisted him in disseminating misinformation about subjects he doesn't understand. I recommend that you do your readers a service in the future by leaving Mr. Kohn out of your stories on Direct Instruction until such time as he can demonstrate his involvement in an educational reform effort that competes favorably with it.

If you were to publish an article about the latest discovery in astrophysics, and for the sake of introducing controversy you sought out the opinions of the Flat Earth Society, readers would regard you as ignorant. So too when you quote the opinions of demagogues who have apparently achieved nothing in the field of education. I hope your columnists will use better judgment in the future.

Sincerely, David Ziffer

Dear Mr. Borsuk:

It is not necessary in writing an information article about what's Good to give equal voice and moral authority to the Bad.

We do not, for example, give Mr. Osama bin Laden much newspaper or television space for his views on how the United States in particular and the Western World in general are morally corrupt, incompetent, selfish, and present a bad model for others to follow. His views may or may not be objectively correct, but we are not about to listen to him preach on the subject, and no newspaper and no reporter in this country is obliged in the name of impartiality to give Mr. bin Laden column space, whether those views are, in the eye of God, some Muslims, or anyone else, correct or incorrect.

Direct Instruction has much genuine statistical support for its accomplishments, perhaps more than you may be aware. The congruence of the various independent studies, done over 30 years, favorable to Direct Instruction is outstanding. It is that congruence which is particularly persuasive. A single study is one thing, but the consistent results of dozens of studies says something important. If you would like to know more, I suggest you talk to the management of P.R.E.S.S., which is a Wisconsin organization with lots of information available. You can find it at: <http://www.execpc.com/~presswis/index.html>. I attended its last meeting, and it is an impressive bunch of folks, folks who have children to educate and are not easily taken in by Hoopla and Noise.

Mr. Kohn is scarcely a lone voice crying in the wilderness: He represents the views of many professors of education, many teachers, many principals, and even many superintendents, the very people who have brought us the present mess and perpetuate it, and especially does Kohn represent, in almost its purest form, the teachings of John Dewey and the Columbia School of Education and all its myriad followers, who have pretty well ruined the public schools throughout the entire country over the past century.

Mr. Kohn certainly does not reflect the views of parents anxious to get their children to learn to read, write, and do arithmetic. If you have any doubt on this, please do as I did, and purchase Mr. Kohn's books and read them carefully. They have a superficial plausibility, and that is all. They are utterly one-sided.

But not only have people who think like Mr. Kohn ruined the schools (see: *The Schools We Need and Why we Don't Have Them*, by E. D. Hirsch), they may inadvertently put you personally on the street without a job. "How so?" you may well ask.

Fewer and fewer people read newspapers, and this correlates well, albeit inversely, with the number of people who either do not know how to read or can't do it very well. The fewer the people who read and care to read, the fewer newspaper readers there are, and the fewer the number of daily newspapers. The wasteland of TV is not the problem. Enough good regular readers to sustain a paper is the problem.

Educational methodologies and curricula are fairly complex topics worthy of your consideration as a reporter, and we are glad you addressed them in this case, but there is much much more to be written.

You could have, for example, addressed the real difficulties of installing and maintaining the Direct Instruction curriculum in a particular school. This is not an easy trick to accomplish, and there are emerging data that indicate that it may be easier to install Direct Instruction throughout an entire district than simply on one school. This would be a helpful thing to study and write about. Mr. Kohn's demagogic views are not, however, useful in such a context.

Those of us who have been searching desperately for systematic, replicable, educationally sound and verifiable means to fix the atrocious mess of the public schools, need good, well-researched stories about what really works. We do not need to hear quoted off-the-wall apologists for the current mess trumpeting again and again the latest buzzwords celebrating as successes the continuing ruinous failures of the last century. Mr. Kohn spouts words of outrage and fury, but he has yet to offer a means to teach children well and truly. His views should not be put in the limelight under these circumstances. He may be a "constructivist" critic, but he is scarcely a constructive critic.

Yours, John Shewmaker

## *Scores Soar at Siefert School With Aid of Structured Lessons: What's That Slapping Sound?*

As you walk the halls of Milwaukee's Siefert Elementary School, you hear it frequently coming from the open doors of classrooms: The steady clap of a palm against a book or the back of a hand against a palm or some similar combination, producing a pop-pop cadence.

Each beat is followed by the sound of children's voices in unison, providing a word, a phrase, an answer.

If you ask the teachers, or look at the school's test scores, this is the sound of success, the sound of a school on the rise.

Until 4 years ago, Siefert was, as Milwaukee School Board member John Gardner put it, a basket case, one of the system's worst performing schools.

At that point, Principal Sarah Martin-Elam called the faculty together. "My challenge to the entire staff was, 'It's just not working, so let's find something that is,'" she said.

What they found, after teachers and others examined possible programs, was Direct Instruction, a method that relies heavily on drills, repetition and scripted materials that dictate almost exactly what both teachers and students are supposed to say. It has been used since then for most of Siefert's reading and some teaching in other subjects, including math.

The results: The percentage of Siefert fourth graders who scored proficient or better in reading on the state's standardized tests rose from 22% in 1997-98 to 57% in 1999-2000. In math, the proficient or better score

rose from 11% to 48% over the same period. In social studies, the increase was from 13% to 61%.

For third graders, the number rated as proficient or better on reading in the state tests went from 58% in 1997-98 to 72% in 1999-2000.

Based on last year's results, the 540-student school just missed getting on the Milwaukee Public School's semi-official honor roll of schools with high reading scores paired with high percentages of minority students from low-income homes.

*Music teacher Nicki Bryant said, "The structure gives our kids a sense of security."*

Another sign of changing times at the school: The School Board this week unanimously approved converting Siefert into a charter school, a step greeted by applause from about two dozen staff members in the audience. They hope charter status will give the school greater independence to pursue its curriculum choices.

Siefert makes a good poster school for those who argue that reading instruction should lean first on phonics, which largely uses drills to teach children how to associate sounds and letters, rather than on Whole Language, which puts greater emphasis on learning to recognize full words visually and on reading literature.

But that's only part of the school's new identity. Ask a gathering of more than

a dozen staff members what makes Direct Instruction a success, and you get the kind of answer-by-chorus heard during classroom drills: "Structure," many of them answer simultaneously.

Music teacher Nicki Bryant said, "The structure gives our kids a sense of security."

Janice Reed, a reading specialist, said, "Teacher and student both know what is expected of them." That often applies almost literally word-for-word to the materials used.

According to a 1998 analysis from the Northwest Regional Educational Laboratory, a government-funded organization, Direct Instruction was launched as a curriculum in 1968, based on the work of Siegfried Engelmann, now a professor at the University of Oregon.

"Direct Instruction uses highly prescribed curricula and classroom procedures. Instruction is fast-paced and demands frequent interaction between teachers and students," the analysis said.

Numerous studies of Direct Instruction "have found significant positive effects on student achievement in reading, language arts, and/or mathematics," the analysis said. The program has been used mostly at schools in high-poverty areas.

To critics, a heavy phonics program lacks the creativity and opportunity for individualized intellectual growth that can be found in less-scripted programs. Some have gone so far as to suggest Direct Instruction does psychological damage to students in the long run.

But phonics is in the ascendancy these days, and, according to SRA/McGraw-Hill, the company that publishes the materials used at Siefert, the school was one of 7,000 nationwide purchasing the curriculum this year.

When Direct Instruction was introduced at Siefert, not all the faculty agreed with the move. Some teachers opted to leave the school rather than adopt a method they didn't like.

Now, support among teachers is strong and some say the criticism from teachers elsewhere has given way to questions about what makes it work.

Kelly Collin, a first-grade teacher who now coaches other staff members on how to use Direct Instruction, said: "Teachers resent it because it's so scripted. But is it about me being happy or them (the students) learning?"

She's emphatic in her own answer to that: "They can read anything. They're successful, and that breeds happiness."

A visit to Collin's classroom, where a group of students is reading aloud a relatively complex story about monsters, backs up her claim. Most of the students are working in the second- or third-grade textbooks in the Direct Instruction series. The school's goal is to have students finish the first-grade book before the end of 5-year-old kindergarten; some kindergartners are well into the second-grade book.

"We expect them to be reading above grade level," Martin-Elam said.

The first part of the school day at Siefert is devoted to reading, with almost every teacher, including specialty subject teachers, taking small groups of students. Groupings are flexible, so that a student can move up as quickly as materials are mastered—or

be kept at the same level until performance is reliable.

Students are tested often to see how they're doing. In addition, second through fifth graders must take standardized tests required by the state and MPS.

Martin-Elam admitted, "Sometimes, it appears we're doing more assessment than teaching."

Bryant, who has been the school's music teacher for 11 years, said she sees the success of the program in her classes. Previously, so many students couldn't adequately read material she wanted to use in class that she had to alter her lesson plan. Now, she said, she can count on the kids' reading ability in choosing what to present.

Direct Instruction, she said, is "just absolutely the best thing we can do for our kids here." *ADI*

ERIKA NIEDOWSKI, *The Baltimore Sun*

## *Giant Leap in Learning: Teachers at City Springs Elementary Attribute Pupils' Success to Hard Work, Smaller Classes and a New Instruction Method.*

The sounds of "Pomp and Circumstance" and the rap song "#1" filled the auditorium at Baltimore's City Springs Elementary School yesterday as pupils and teachers celebrated the end of an ugly notoriety.

After posting remarkable gains on Maryland's latest student achievement tests, the East Baltimore school has been removed from the state's list of failures, and is no longer in danger of being taken over. Few city schools have accomplished a greater turnaround. In the 1996-97 school year,

only 6.5% of children at City Springs performed satisfactorily on the Maryland Student Performance Assessment Program exams.

Now, after a 23.5-point gain announced Monday, the percentage of children meeting the standard is 42.4—just below the state average. The city average, while up for the 5th straight year, is 22.5.

Pride was on display yesterday; the first day pupils were back in class since statewide MSPAP results were released.

"You, boys and girls, proved to everyone that you know how to read, that you know how to write, and that you know how to do math," Principal Bernice E. Whelchel said during the morning assembly.

City Springs got here the way education reformers like best: slowly but surely. Those who work there attribute its success to a combination of hard work, a highly scripted and sometimes controversial teaching method known as Direct Instruction, and a small school.

City Springs' latest increase was driven in large part by its fifth-grade scores, which rose sharply in all six content areas. In reading, the percentage of children meeting the standard jumped

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from 10.9 to 50. In math, it leaped from 16.4 to 75.9.

Third graders improved, too, increasing their reading score from 9.3 to 17.9 and their math score from 5.7 to 38.5.

Success at City Springs hasn't been limited to the MSPAP. On last year's national Comprehensive Test of Basic Skills, first graders had one of the highest reading scores in Baltimore, with 82% performing at or above the national average.

Muriel Berkeley, president of the non-profit Baltimore Curriculum Project, which runs City Springs as part of the city system's New Schools Initiative, said that the school probably benefited from its smaller size.

The school's population fell to between 270 and 300 children last year in part because a nearby housing project was torn down. Only 38 third graders and 29 fifth graders took the May exams. (The year before, 47 third graders and 50 fifth graders took the exams.)

But she said size alone doesn't explain the success.

"There are plenty of small schools—smaller than us—that didn't score as well," Berkeley said. "I think the scores went up because of hard work and good instruction and kids learning."

City Springs was more aggressive last year in moving children in the upper grades through lessons, even skipping some, meaning that they reached higher levels.

"We felt that our kids were strong because of the proper implementation of Direct Instruction, and because of that, we became more aggressive—I'm going to say 'greedy,'" said Whelchel, 54.

A former special education teacher, reading specialist, and assistant principal who has worked in Baltimore schools for 31 years, Whelchel doesn't believe City Springs would have progressed so much without Direct Instruction, which she called the most "effective" and "efficient" method of learning.

DI is quick-paced and regimented, with teachers working from a script and prompting dozens of responses from children in a single hour. Some say DI takes the creativity out of the classroom.

"It bothers me that the critics say, 'Oh, Direct Instruction, so robotic,'" said Whelchel. "It's what you make it."

Whether a curriculum is engaging to pupils and helps them learn depends on how teachers teach it, she said.

"Any curriculum can be boring to a kid," she said. "If you give the kid

motivation—that they are achieving—you've got them."

Sixteen other Baltimore schools use DI, though none for as long as City Springs. Of those, 11 exceeded the citywide gain of 2 points on last year's MSPAP. Charles Carroll Barrister increased its composite score by 22.2 points, while Federal Hill went up 17.4.

Scores at two DI schools dropped slightly, including at Dickey Hill Elementary-Middle, which was added to the state's list of failing schools this week.

At City Springs yesterday, fourth and fifth graders in Phyllis King's U.S. history class read aloud from a seventh-grade textbook.

Whelchel took over for a few minutes and asked how the children felt about their class.

"I feel good about being in U.S. history because you learn a lot of important things," Brittany McCready, 10, said.

"I'm very proud," said Renee Maultsby, whose son Kenneth Flomo, 11 today, is also in King's class. "Miss Whelchel is Mom No. 2. The majority of the students know what she stands for and what she will accept and what she will not accept, and I really thank her for hanging in there with us." *ADI*

MELISSA B. HAYDEN and MURIEL V. BERKELEY, Baltimore Curriculum Project

## *On-Line Staff Development in Reading Skills*

**Melissa Hayden, Ph.D., is a Research Associate with the Baltimore Curriculum Project and has held assistant and associate professorships at universities in Maryland, Michigan, and Pennsylvania.**

**Muriel Berkeley, Ph.D., Founder and President of the Baltimore Curriculum**

**Project, taught for 10 years in the Baltimore City public schools, and has held several visiting assistant professorships at universities in Baltimore and the District of Columbia.**

During the winter of 2001, we conducted a 4-month pilot study to evalu-

ate teachers' reactions to an on-line course on the processes and acquisition of reading, using only course materials that present techniques of reading instruction demonstrated to be effective by research. The course focused on the early reading skills necessary to decode and comprehend text.

Reprinted with permission of the Council for Basic Education. Article originally appeared in *Basic Education*, November 2001.

We anticipated that teachers would appreciate such a course due to increasing certification requirements in reading and to the plethora of current research about how people learn to read. We were the first to offer a course on-line, and one based solely on empirical research.

Twenty-three teachers from inner city Baltimore elementary schools enrolled in the course to earn credits required to maintain their certification and to take advantage of the convenience that an on-line class offers. Many also stated that they wanted to learn more about the research base and instructional design features underlying the curriculum that they used to teach reading. Most of the teachers had never taken an on-line course before. Their experience ranged from that of a first-year novice with no formal teacher training, to a veteran of 25 years with 30 credits beyond her master's degree. Eighteen teachers used *Reading Mastery*, a Direct Instruction reading program. The others used Open Court or Houghton-Mifflin.

For the course, the teachers used Blackboard internet software, which they were taught during a 3-hour training session, to access course materials, send and receive assignments, post comments on the virtual discussion board, and check grades. Course materials were posted on the Baltimore City Public Schools website (<http://bcps.org>). Each week the teachers answered questions about the readings and wrote in their journals about one of the instructional techniques shown by research to be effective. The teachers kept weekly logs in which they discussed the readings and noted how much time they were spending on the class.

The instructor reviewed assignments and provided feedback within a day. Students could interact with the instructor by telephone, e-mail, or face-to-face appointments. The class met each month to discuss the

research findings in the course readings and techniques for applying this information in their reading lessons.

We reviewed the weekly assignments to determine what the teachers were learning, and we observed in their classrooms to identify how they applied what they learned. We surveyed the teachers in the middle and at the end of the course to see what they thought about the class.

*In the 18 classrooms where we observed, teachers used skills and teaching strategies that they studied in the readings.*

### *Teachers' Responses to the Research-Based Information and Teaching Strategies*

The teachers excelled on their assignments, but even more important, they used what they were learning when teaching students, working with colleagues, and talking with parents. In the 18 classrooms where we observed, teachers used skills and teaching strategies that they studied in the readings. For example, during the class visits with the prekindergarten teachers, the observer noted that the lessons included the oral language and beginning reading skills covered in the readings. Teachers also: (a) taught reading skills to mastery, (b) assessed student performance within and across lessons, and (c) responded to the performance data.

The teachers reported transferring the information that they had learned to instruction. A novice teacher recounted a situation where she was able to

rely on the class information to solve an instructional problem.

"I had come to the lesson before the introduction of short y (/y/ as in 'yellow') and discovered the students were not at all firm with long y (/y/ as in 'my'). Because of what we've learned in the class, I didn't have any questions about what I needed to do. Since new sounds are firm for several [lessons] before appearing in words, the only part of the next few lessons I needed to change was sounds firm-up. I used the procedure for introducing a totally new sound and then made a page of sounds where I went to the new sound (/y/ as in 'yellow') then to one other sound, back to new sound, then two other sounds, then new sound, then three other sounds, and so forth. Because of the studying we did on how far apart to separate visually similar sounds, I knew that it would need to be firm for a minimum of 3 or 4 days before going on to the new sound."

A veteran teacher commented, "I can now question the curriculum from a knowledge base rather than a 'gut feeling' that things are not going well. Now I know why, at least for the phonics part. I can design a lesson with confidence I never had before."

All 23 teachers reported that the information they were learning was useful. One teacher remarked, "The material is so relevant that I am able to quickly comprehend it and relate it, therefore I don't spend a lot of time on it." Several teachers, however, reported that they spent more time, "because the material was extremely meaningful."

One teacher commented, "Taking this course has been a valuable experience. The knowledge I am gaining is helping me to become a better teacher and professional." Others agreed that the new knowledge they had acquired helped them to do their jobs better:

- "helps with coaching and parent conferences"

- “understanding student performance”
- “helps me to break down the process of reading and better instruct struggling readers.”

Interestingly, one teacher commented, “I have used Open Court for several years. Now I understand what I am doing and the importance of phonemic awareness.”

Several teachers observed ruefully that they had never been exposed to this information in their college teacher preparation programs. One teacher commented, “After 25 years—a B.S. and an M.Ed. as well as almost 30 credits beyond my masters—I have finally found a course to explicitly teach me how to teach reading.” Some teachers

remarked that they felt cheated, not having known the information until taking this class, “I value the information I’ve gained because it is research-based. The research-based principles are supported with evidence, and that’s what I like and expect from a curriculum. I am disturbed that my undergraduate school did not provide me with this information earlier.”

### *Teachers’ Reaction to the On-line Format*

Teachers reported that they appreciated the convenience of an on-line course but missed the in-person contact of traditional courses.

- “You are working at your own pace and you are working from your home.”
- “Less time spent driving. If I have any questions they can be answered immediately.”

One teacher commented, “It is a great thing to have such sophisticated conversations with other Baltimore teachers. It builds a network and boosts morale.”

In conclusion, we learned that teachers thought that the course information was interesting and useful, the time commitment reasonable, and the on-line experience one that provided flexibility in their schedules. We saw evidence that teachers used course materials with their students, their colleagues, and their students’ parents and guardians. *ADP*

GARY and KAREN SHMERLER, Verona, Wisconsin

## *Alex’s Story*

Our story begins in 1992 with the birth of our first child Molly, a perfect baby. Molly was a delightful baby girl who learned to talk at a very early age. By the time she was a year old, she could already speak in complete sentences. It was easy to see that Molly’s development was well within the average range. She was the joy of our lives! In 1994, we added another bundle of joy to our family. His name was Alex. From the start, Alex’s entry into the world was not so easy. From the minute he was born, he had problems. First, Alex could not breathe when he was born. We found out that Alex was born without nasal passages in the back of his throat. This is called Choanal Atresia. Alex was placed in the ICU with an oral airway in his mouth. Our hospital did not have a Pediatric Ear, Nose, Throat expert on staff, so a specialist from the University Hospital was sent for. Surgery was necessary and the doctor

assured us that she had performed this surgery before. So, at 9 days of age, the specialist operated on Alex. At 20 days of age, Alex was again having difficulty. It was at that point that we discovered the specialist performed the surgery incorrectly. Needless to say, we do not know how long Alex went without the proper oxygen levels in his blood or if some of the problems he has today were due to this surgery. In attempts to correct the mistakes, the specialist performed 15 more surgeries on Alex. It was at that point that we realized we needed to take Alex elsewhere to get him proper care. As parents, we realized that we were the only voice for our baby. If we didn’t stand up for him, who would? Now, we have to live with our stupidity and our choices that we made for Alex for the rest of our lives, and his. We learned that parents must always search for the right answer and if you are still unsure, then you have

to make a decision and hope it’s the best one you could make at the time.

At 7 months of age, we found out that a part of Alex’s brain was missing since birth. This is called Agenesis of the corpus callosum (ACC). ACC is a rare congenital abnormality in which there is a partial or complete absence in the area of the brain which connects the two cerebral hemispheres. It is actually the fiber network that connects the two sides of the brain and allows the two hemispheres to talk to each other. Kids can be perfectly normal or severely delayed. At this point, we asked for early childhood intervention. We paid for outside therapies for Alex to give him the best chance to succeed. We were committed to searching out the right answers for him in terms of therapy and education in order to give him the best shot at life.

By the time Alex was 2 years old, he had already gone through 37 surgeries. His life experiences had been filled with challenges to say the least. At 3 years of age, Alex was eligible to



attend Early Childhood classes in a public school system. We had heard that a neighboring school system had the best program for working with kids with disabilities. So, after checking into the program, we moved to that district.

It was now fall of 1997; Molly was starting kindergarten and Alex Early Childhood classes in this new school district. The school appeared to be a traditional educational system, but we were immediately disappointed with Molly's progress. We became painfully aware that our child was a victim of a classic school paradigm of passing kids through with little regard to performance. The lack of curriculum accountability was so bad that a teacher had prepared comments for Molly's report card without accurate knowledge about her learning experience. The principal had no answer and affected no change to rectify the situation. A perfect example of a system constructed around mediocrity. So, we looked at other school systems and found a charter school right within our own school district that offered Direct Instruction (DI) and Core Knowledge. We knew nothing about either DI or Core Knowledge, but again we did some research. We were told that at this charter school they teach the basics and worked on a foundation to build learning skills. The district central office told us that DI was the "old" way of learning and that it provided little flexibility and creativity for students. They also said that it required little flexibility and creativity from the teaching staff as well. We decided to observe the program and saw something completely different. The kids seemed to like the energetic style of teaching and they received a consistent teaching message. We were also told by educators outside of the charter school that the DI method of teaching wasn't for everyone. We couldn't understand why, seeing as how in the classrooms we observed every child appeared challenged, yet successful. The kids also seemed

happy. We thought that this type of instruction was exactly what Molly needed. There was only one problem. You could only get into this charter school by a mail-in lottery system. Your application had to be sent in and post-marked after midnight on a certain date. We believed so strongly that Direct Instruction was what Molly needed that we completed 72 applications. Beginning at midnight on the designated date, we proceeded to mail 72 applications at various post offices around the city. Molly's application was drawn first in the lottery, which placed her first on the *waiting list!* That was in December. It wasn't until right before school started in August of the next school year that a family from that school moved out and there was now an opening in first grade for Molly. So, Molly was in. We decided to hold Alex back one more year in the Early Childhood program.

*We became painfully aware that our child was a victim of a classic school paradigm of passing kids through with little regard to performance.*

Throughout that year, and given all of the specialists and observations, we came to the understanding that Alex's disability is a neurocognitive disorder associated with a significant language disorder, severe constructional apraxia, which greatly interferes with the development of cutting, coloring, pasting, and handwriting, significant right-left disorientation, gross motor delays, visual impairments, difficulty grasping the relevance of time, and severe delays in all basic academic skills. Alex's diagnosis is actually not specific to any one category, but is one that appears a mixture of many difficulties. We were all too well aware of the challenges Alex would face in school. We also recognized that his gregarious, socially interactive personality would

be his greatest asset in trying to overcome his learning disability.

Upon Alex reaching kindergarten age, we needed to make a decision about educational programs for him. Again, the district central office encouraged us to put Alex in the traditional setting so that he "wouldn't fall behind." We found that interesting, given the fact that their traditional setting had failed to teach our daughter Molly. We had already concluded that their traditional setting was consistent with a program designed and built around mediocrity. We knew that the DI programs taught at the charter school were working well for Molly. We did more research and believed that DI was exactly what Alex needed too. Therefore, contrary to the central office position, we decided to enroll Alex in the same charter school as his sister Molly. This time there was no need to fill out 72 applications and mail them at midnight. Alex was automatically enrolled in the charter school because he had Exceptional Educational Needs (EEN) and was a sibling. (Enrollment preferences were given to EEN children and siblings.) Given Alex's learning disability, we set up biweekly meetings with his IEP team. At first, Alex made very little progress. We then realized that the central office had provided an EEN teacher for Alex who had no DI background. At our family's own expense, we hired a DI consultant to train the EEN teacher and had some success. However, we later found that the EEN teacher did not always follow the specifics of the teaching method and inserted her own traditional teaching ideas after all. Alex progressed, but very slowly. It wasn't until after hiring one of the school's trained DI teachers to tutor Alex during the summer months that we saw unbelievable progress!

It is only October of Alex's first-grade year. He is successfully reading stories to us from his reading book. He is beginning spelling instruction. He can count to 40, recognize numbers, add and subtract, and is beginning to

understand math concepts. Alex is eager to go to school everyday. We are able to track his progress in a very measurable way. The staff has been creative in coming up with ways to accommodate Alex's learning needs while keeping to the DI method of instruction. What a team,

what a program, what a fine young man Alex will be able to become!

In closing, our family is grateful to have this educational approach to learning. DI has been successful for both of our children. We learned when Alex was only 7 months old that we, as parents, need to always search for

the right answers for our kids. Whether you search for medical advice or for proven educational systems, we encourage all parents to seek out the research for yourselves. Your children's future depends on it. We searched for the right answers in education, and we found it in DI! *ADI*

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## *Does Direct Instruction in Phonics Benefit Deaf Students? If So, How?*

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The National Reading Panel (2000) was established in response to a 1997 congressional directive. In April 2000, the panel published a report that represents the most comprehensive review of existing reading research to be undertaken in American education. The panel identified more than 100,000 research studies completed since 1966 and subjected them to rigorous criteria for review. From its review of the scientific literature, the panel determined that effective reading instruction must teach children (a) to utilize phonemic awareness skills; (b) to apply phonics skills; (c) to read fluently with accuracy, speed, and expression; and (d) to apply reading comprehension strategies to enhance understanding and enjoyment of what they read.

In the field of deaf education, two views exist regarding reading instruction for deaf individuals. The dominant view is that deaf individuals learn to read using essentially the same processes as hearing individuals. The opposing view is that deaf individuals learn to read using differ-

ent processes (Musselman, 2000). Adopting the dominant view of reading development among deaf individuals, along with the findings of the National Reading Panel, it appears as though deaf individuals, like hearing individuals, must "develop phonological processing capabilities in order to become skilled readers" (Musselman, p. 13). Leybaert (1993) concluded that our failure to address the phonological components of reading instruction is precisely what underlies the reading problems of deaf individuals.

It is well documented in the literature that deaf students who graduate from high school are significantly delayed in their reading achievement when compared to their hearing peers. The Gallaudet Research Institute recently reported performance on the Stanford Achievement Test for a national sample of deaf students. Results indicated that the average reading level for 18-year-old deaf students was fourth grade (Traxler, 2000). These findings are consistent with data collected over the past 70 years (Pintner & Patterson, 1916; Myklebust, 1960; Holt, 1994).

This paper presents a brief summary of the communication philosophy debate in the field of deaf education in order to appreciate the impact communication philosophies have on the type of reading instruction deaf children have received. The foundation of the alphabetic writing system of English and phonological knowledge will also be explored to determine the role of phonological knowledge in reading for deaf individuals. The evidence that deaf readers have access to phonological information and are able to gain this access by means other than hearing will be summarized. Finally, studies supporting phonological instruction for deaf students will be presented and discussed.

### *Communication Philosophies*

Until the 1960s, instruction for deaf children was primarily auditory-oral. The development of spoken language, the use of residual hearing and the acquisition of speechreading skills were primary goals of this method. A better understanding of the linguistics of American Sign Language (ASL), coupled with the failure of the auditory-oral method for many deaf children, led to the introduction of the Total Communication method. Total Communication incorporates gestures, fingerspelling and sign language to support deaf children's use

of residual hearing and speechreading. In practice, Total Communication generally refers to the simultaneous use of spoken language and English-based signs (Stewart, 1993).

The distinction between ASL and English-based signs is an important one. ASL is a natural language with its own vocabulary and syntax. Signs in ASL correspond roughly to words in spoken English. The order of signs in ASL, although different than the order of words in spoken English, conveys syntactic information. Unlike spoken English, however, syntactic information in ASL is also transmitted through body movements and facial expressions (Meier, 1991).

The English-based sign system, on the other hand, can best be described as a manual code of spoken English. Approximately 70% of the signs used in the English-based sign system derive from ASL but, unlike ASL, signs are arranged in English word order. In addition, artificial signs were created to represent function words and the inflectional morphemes of English. Despite this attempt to replicate English in a manual form, the English-based sign system failed to increase reading levels in deaf children (Stewart, 1993; Stokoe, 1975).

By the 1990s, several leaders in the field of deaf education began to promote the use of ASL, arguing that it was the natural language of deaf people. Advocates insisted that ASL should replace the English-based sign system and become the primary communication method for educating deaf children (Sacks, 1989). Johnson, Liddell, and Erting (1989) strongly endorsed a bilingual/bicultural approach for educating deaf children in their landmark paper, "Unlocking the Curriculum." Bilingual/bicultural programs incorporate both ASL and English, but emphasize English primarily in written form. Socialization in both the Deaf and hearing cultures is also stressed in a bilingual/bicultural model.

Despite the implementation of many bilingual/bicultural programs, the debate surrounding communication methods for deaf children continues and literacy levels among deaf children remain well below those of their hearing peers. Regardless of the communication philosophy adopted, the answer to improving reading achievement in deaf children may be found in the foundations of the alphabetic writing system of English and the associated implications for reading instruction.

*To learn to read, children must first develop an awareness of phonemes and utilize this awareness to develop phonological decoding strategies (National Reading Panel, 2000).*

### Foundation for the Alphabetic Writing System of English

In all alphabetic systems, print encodes spoken language. By design, alphabetic systems "build graphic-phonological mappings into writing systems at the subword level" (Perfetti & Sandak, 2000 p. 34). For example, when a hearing child is presented with the printed word *man*, the child is able to use their knowledge of spoken English to form a link between the written letters *m-a-n* and the corresponding sounds /m//a//n/. In other words, the hearing child is able to form a link at the subword level.

When presented with the same task of reading the printed word *man*, a deaf child must often rely on their knowledge of ASL or the English-based sign system to form a link. The link established by the deaf child between the printed word *man* and the sign for *man* occurs at the word, rather than subword, level. Even if a link is estab-

lished between the printed letters *m-a-n* and the letters *m-a-n* in the manual alphabet, the deaf child remains at a disadvantage because there is no relationship between the formational parameters (handshape, placement, movement, etc.) of the manual alphabet and the alphabetic code (Leybaert, 1993). Essentially, a mismatch exists between the type of link established by the deaf child when reading and the phonological link required for reading an alphabetic writing system such as English. This mismatch is further supported by program evaluation studies (Rogers, Leslie, Clarke, Booth, & Horvath, 1978; Geers & Moog, 1989) indicating that orally educated deaf children achieve higher levels of reading skills than those educated using sign language. One possible explanation for the higher levels of achievement is that orally educated deaf students have acquired phonological knowledge.

### Phonological Knowledge

Phonological knowledge is an important prerequisite to reading acquisition. Phonemes are the abstract building blocks of the phonological system. To learn to read, children must first develop an awareness of phonemes and utilize this awareness to develop phonological decoding strategies (National Reading Panel, 2000). In other words, learning to read English involves learning that letters correspond to speech sounds. Children who are successful readers use this knowledge and can apply it to reading tasks.

The crux of the problem for the majority of deaf readers, for whom ASL or the English based sign language is their first or primary language, is that they have not acquired strong skills in spoken English, and hence, have probably not developed phonological knowledge. If phonology forms the foundation for learning to read, a deaf child who lacks phonology is faced with a tremendous obstacle when learning to read.

In examining this obstacle, there are two general areas to explore. First, the information available regarding the use of phonological processes by successful deaf readers must be examined to determine if deaf readers are able to utilize phonological information in reading. Second, it is important to determine if access to phonological information can be achieved through a mode other than hearing.

## *Evidence of Deaf Readers' Access to Phonological Information*

Recently, several authors have summarized the evidence indicating that deaf readers have access to phonological information despite the inability to gain this information auditorially (see Leybaert, 1993; Musselman, 2000; and Perfetti & Sandak, 2000 for reviews). Several of the reviewed studies relied on rhyming and lexical decision making tasks to measure phonological processing by deaf readers. In one such study, Conrad (1964) assessed the ability of orally educated deaf adolescents to remember sets of written words. One set of words contained phonologically similar (rhyming) words while the second set contained visually similar words. Conrad suggested that the type of errors made by the deaf subjects would indicate how they were coding the words internally. He hypothesized that subjects coding words phonologically would have greater difficulty remembering the set of rhyming words because they would be easily confused. Similarly, subjects coding words visually would have greater difficulty remembering the set of visually similar words. In examining the responses, Conrad found that the majority of his deaf subjects made more errors with the phonologically similar set than with the visually similar set. He also noted that phonological coding was associated with higher

levels of reading comprehension among his subjects.

Although the subjects of Conrad's study were educated orally, similar findings have been obtained with students educated utilizing sign language. Kelly (1993) investigated the presence of phonological encoding by deaf teenagers using a lexical decision task. In this study, deaf teens educated in a Total Communication environment were presented with strings of letters that were either phonologically and orthographically similar or orthographically similar only. Participants were asked to determine if the strings of letters constituted words. Kelly concluded that the deaf teens' faster reaction time for word pairs that were phonologically and orthographically similar compared to pairs that were only orthographically similar indicated an access to phonological information.

*Due to the control for spelling, these results infer that deaf participants accessed and applied phonological information to this reading task.*

Several studies involving deaf college students with profound hearing losses, unintelligible speech, and for whom ASL was their first language, provides further evidence that deaf individuals demonstrate knowledge of phonological information (Hanson & Fowler, 1987; Engle, Cantor, & Turner, 1989; Hanson & Lichtenstein, 1990; Hanson, Goodell, & Perfetti, 1991; Hanson, 1982). Hanson and Fowler compared the performance of college age deaf and hearing students on their ability to identify rhyming words. Participants were presented with pairs of written words and were asked to determine which pairs rhymed. The task was constructed so that participants were unable to rely on ortho-

graphic similarities alone when making their decision. All pairs of words used in this task were orthographically similar, but not all were phonologically similar (wave/save, have/cave). Although the deaf participants were less accurate in their ability to identify rhyming words than their hearing peers, both groups were able to make lexical decisions for rhyming words more quickly than for nonrhyming pairs. Due to the control for spelling, these results infer that deaf participants accessed and applied phonological information to this reading task.

Hanson et al. (1991) conducted an experiment comparing the ability of deaf and hearing college students to make semantic acceptability judgments of printed sentences, half of which were tongue-twister sentences. Results indicated that both groups made more errors on the tongue twister than the control sentences. Furthermore, prior to reading sentences, participants were required to read a list of digits and then recall the list after reading a sentence. When the list of digits were phonetically similar to the tongue twister sentence, (10, 12, 20—Tom and Tim talked together), both deaf and hearing participants made more errors than when the digits to be recalled were phonetically different from the words in the sentence.

Leybaert and Alegria (see Leybaert, 1993) supplied the first account of deaf readers using phonological coding during actual reading tasks. In a series of studies requiring participants to read aloud, deaf participants were able to pronounce words and pseudowords (word-like strings of letters without meaning) in a manner similar to hearing participants. Results indicated that pseudowords containing simple phonology and regular words were easier for the deaf participants to decode than pseudowords containing complex phonology and irregular words. Therefore, it appears that deaf readers are able to use phonological information during oral reading.

The majority of studies providing evidence that deaf readers have access to phonological information have been conducted with adolescents and college students. This has led some researchers to conclude that, for deaf readers, “phonological encoding is an outcome of learning to read rather than a prerequisite” (Musselman, 2000, p. 13). A study by Hanson, Liberman, and Shankweiler (1984) is one of the few conducted on beginning deaf readers. The authors of this study compared short-term memory for sets of letters under three conditions; phonetically similar (B C P V), manually or dactylically similar (M N S T) and visually similar (K W X Z). The sets of letters were presented repeatedly to beginning deaf readers educated in a Total Communication environment. Based on standardized measures of reading achievement, the students were divided into two groups: good readers and poor readers. Improved performance in the participants’ ability to remember letters in one condition over another was used as evidence of encoding.

Results of this study indicated that the deaf children classified as good readers used both phonetic and manual codes in short-term retention of printed letters. On the other hand, the deaf children classified as poor readers did not demonstrate the use of either of the linguistically based codes in recall. Neither group relied on visual cues as a strategy for recall. The authors concluded that “the success of deaf children in beginning reading, like that of hearing children, appears to be related to the ability to establish and make use of linguistically recoded representations of the language” (Hanson, Liberman, & Shankweiler, 1984, p. 378).

The existing data support the hypothesis that skilled reading by deaf individuals, like that of hearing individuals, involves phonological coding. Phonological coding is traditionally thought to be a function of hearing and speech. Leybaert (1993) suggest-

ed that acquisition of phonological information is not dependent on the use of residual hearing for deaf individuals. Evidence indicates that deaf readers may be able to gain access to phonological information by means other than hearing.

*The existing data support the hypothesis that skilled reading by deaf individuals, like that of hearing individuals, involves phonological coding.*

## *Alternatives to Accessing Phonological Information*

Many deaf individuals must rely on sources other than audition in order to gain access to phonological information. Deaf individuals use information provided by speechreading, Cued Speech, and articulatory feedback to develop knowledge of the phonological characteristics of English.

### **Speechreading**

One alternative source for gaining access to phonological information is speechreading. Researchers hypothesize that deaf individuals are able to link the speech that is visible on the mouth to printed letters and words. While reading, hearing readers connect letters to phonemes and retain them in acoustic storage. Deaf individuals, on the other hand, connect letters to articulatory movements retaining them in visual-spatial storage (Chalifoux, 1991). Anecdotal evidence supporting this hypothesis comes from observations of deaf children engaged in tasks evaluating short-term memory. These observations revealed that deaf children tend to mouth words when asked to respond to stimuli (Chincotta & Chincotta, 1996). A potential problem

with using speechreading as a source for gaining phonological information is that a particular mouth movement may represent more than one phoneme (i.e. /p/, /b/, and /m/) and some phonemes are not visible on the lips (/k/ and /g/) resulting in an incomplete or ambiguous phonological representation (Alegria, 1998; Leybaert, 1998). Cued Speech (Cornett, 1967) is a system designed to differentiate visually similar phonemes.

### **Cued Speech**

Cued Speech is a visual communication system developed by Dr. Orin Cornett in 1966 in an effort to raise literacy levels among deaf students. Cued speech employs eight hand-shapes representing the consonant sounds with four locations near the mouth representing vowel sounds. A speaker using Cued Speech makes hand cues that correspond to each spoken syllable thereby conveying the same sequence of consonant-vowel combinations as spoken English. Using Cued Speech, deaf learners have access to the phonemes of English via a sensory channel rather than the impaired auditory channel. Cued Speech also enables the deaf learner with no residual hearing equal access to the phonology of English. Finally, unlike speechreading, Cued Speech provides unambiguous access to English phonology. Unfortunately, Cued Speech is not widely used in the education of deaf students and therefore students may need to rely on articulatory feedback as a means of acquiring phonological knowledge.

### **Articulatory Feedback**

Another possible route for gaining phonological information is feedback from articulation. LaSasso (1996) suggested that deaf readers are able to use a tactile-kinesthetic feedback system to successfully utilize phonics as a tool for reading. The tactile-kinesthetic system refers to mouth movements and vocal sensation (e.g. voiced or unvoiced) and functions similarly to the auditory feedback system used by

hearing readers. Using this system, deaf readers use knowledge of how various words are pronounced and review possible pronunciations for the sequence of letters. Like hearing children, deaf children analyze whether the series of sounds, mouth movements, and vocal sensations are similar to a word in their experience. Deaf children are likely to recognize a word if the sensations produced in the vocal tract have previously been vocalized or subvocalized and meaning has been attached to the vocalization or subvocalization. Moreover, a tactile-kinesthetic system is not dependent on deaf children's ability to pronounce the resulting word accurately.

However, it is dependent on their ability to consistently use the appropriate mouth movement and tactile sensation for each letter-sound correspondence.

Several authors have argued that the acquisition of phonological information by deaf individuals relies on the combination of sources such as the written word, fingerspelling, speechreading, and articulation rather than one source. Because deaf individuals may have limited ability to hear speech, the primary means of accessing phonological information, several sources may be needed for deaf individuals to gain access to the phonological information necessary for successful reading (Leybaert, 1993). Despite the evidence that deaf individuals are able to acquire access to phonological information, relatively few studies have addressed teaching deaf children to utilize phonological information to learn to read.

## *Studies Supporting Phonological Instruction for Deaf Students*

In a recent study conducted by Schimmel, Edwards, and Prickett (1999), basic phonic skills were taught to 48 deaf elementary students at the Mississippi School for the Deaf.

Results indicated that most participants mastered the 21 consonants and consonant blends, short and long vowel sounds and 16 vowel combinations.

They concluded that consistent teaching of the letter/sound correspondences was an important factor in the students' success.

*Despite their limitations, they gained more than a grade level given less than a year of Direct Instruction programming in reading.*

Direct Instruction programs provide consistent teaching of skills through unique curricular design and specific teaching techniques. A recently conducted pilot study provides the first evidence that Direct Instruction programs can address the phonological needs of deaf readers. In this pilot study, four deaf high school students received instruction in levels B2 and C of the *Corrective Reading, Decoding A* program. After 7 months of instruction, students gained between 1.2 to 2.5 grade levels on standardized measures of basic reading and reading comprehension (Trezek, 2000). Pretest scores indicated that, prior to this study, those same students had gained only 0.2 to 0.3 grade level per year in school. These pretest findings are consistent with the averages for the 17,000 deaf students reported by Di Francesca in 1972.

The students in the Trezek (2000) pilot study were described as having severe hearing losses and varying degrees of aided residual hearing, speechreading abilities, and intelligible speech. Despite their limitations, they gained more than a grade level given less than a year of Direct Instruction programming in reading. Of course, modifications in the delivery of Direct Instruction lessons were required.

Additional time was needed to present lessons in order to practice pronunciation of newly presented sound combinations and words, engage in speechreading and auditory training activities related to sounds and words, to establish appropriate signs for vocabulary words, to review previously presented concepts, and provide pictorial (photographs, graphics, videos, etc.) representations of new vocabulary.

A computer-based program is currently being developed to assist in teaching the phonics elements found in the *Corrective Reading, Decoding A* to deaf students. Using Baldi (a computer generated face with transparent skin and lips), deaf students will be taught the important points of articulation for all speech sounds. This is particularly important when teaching sounds that are not visible on the lips or for those that are difficult to describe (i.e. /k/ and /g/). The computer program will also include a component that will allow a teacher to say a sound into a microphone and have the computer produce a graph of the sound. Deaf students can then monitor their own production of the sound by trying to match the teacher's graph. Finally, words presented in the *Decoding A* program are generally phonetically regular words (i.e. hen, cot, cast, mast, shed, etc.) that may be unknown to many deaf students. Preteaching the vocabulary through a pictorial glossary included in the computer based program will provide deaf students with a stronger English language base to associate meaning with words they are being taught to decode (Oregon Center for Applied Sciences, 2001).

## *Summary and Conclusions*

According to the findings of the National Reading Panel (2000), phonological skills such as phonemic awareness and phonics are essential components of effective reading instruction for hearing students. The

evidence of poor reading achievement among deaf students may be directly related to the lack of instruction focusing on these essential skills. Research indicates that skilled deaf readers have access to phonological information and are able to apply this knowledge to reading tasks. The methods deaf readers use to acquire phonological information may differ from hearing individuals, yet research findings indicate that deaf individuals can use multiple routes to gain access to critical phonological information. Although limited, studies indicate that students receiving instruction specifically designed to teach phonological skills have been successful. With proper modifications, Direct Instruction reading programs can be successfully implemented with deaf students. Future research should focus on the implementation of *Corrective Reading, Decoding* with larger numbers of students. In addition, studies should be conducted on the use of Direct Instruction reading programs with younger deaf students. **ADL**

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## Myth Versus Science in Educational Systems

Presently in education, a subsystem of our culture, we have acquired a philosophical view of human learning behavior that has a foundation based on myths. These myths have infiltrated most all western psychologies, our language, and even our very way of thinking. Of all the systems in our culture that have been most detrimentally affected by these belief systems is the foundation of the belief structures that guide the educators thinking in educating our children. Most significantly affected by these myths are the lives of those children who experience the greatest difficulty in learning. What are these myths and how have they infiltrated our thinking in the understanding of human learning behavior, especially in teacher/learning systems? And how does one discriminate between a philosophical view of learning based on myth and a scientific investigation that provides a better understanding of learning behavior?

There are three basic principles that determine logical scientific process:

1. Only observable behavior, that can be identified by anyone, is acceptable. No one has ever seen visual processing, auditory sequential processing, or any labeled processing. These are all constructs that have been imposed on real observable events possessing time and space coordinates.
2. Psychological behavior is an interaction. It should not be hard to find agreement that humans—and non-human animals as well—respond to objects and contexts around them. People might also concur that how we respond to something depends on the situation in which it occurs.

For instance, a smile in a joyous circumstance is perceived as happy, but a smile in a more tragic or painful setting would be apt to be perceived as sadistic or evil. An individual's interactive history is also an influencing factor in how an individual perceives situations. For instance, the loud voice of the sixth-grade teacher is apt to be perceived as frightening to the boy of a loud verbally abusive father, while the boy of a big and loud, but loving and benevolent, father might find the same teacher's voice reassuring and supportive. For all intents and purposes, humans interpret and understand things on the basis of interpreted "sameness" relating the new experience to previous experience.

3. Descriptive constructs are only valid and useful when they are derived from directly observed events possessing time/space coordinates. Traditionally, educators expect the process of behavioral interpretation to be a kind of mysterious exercise, where the expert interpreter (psychologist/specialist) identifies, defines, and explains behavior, usually by some diagnostic tool, and labels it by the use of some invented construct. It is an activity of connecting preestablished labels to people and their behavior, independent of any specific contextual interactive event.

When the practitioner imposes unobservable labels on events, reality is lost in specialist interpretation. This usually victimizes the learner with created information that is unscientific, misleading, and a waste of time. For example, when Billy is distracted from his independent seat work when Arnold

Schwartznegger walks into the room, this is real. But to diagnose Billy as A.D.D. as a result of a set of diagnostic tools is not real. When we notice that Billy is a smart speller in composition writing, this is real. But to say that Billy is an intelligent boy on the basis of an IQ test or some other multiple intelligence construct test is not real. Or when Billy learns to read quickly when exposed to the whole word method in his first grade reading group, this is real. But to say that Billy is a visual learner based on some diagnostic tool is not real. Imposing these constructs on events, where it is implied that these invented labels lie somewhere inside the learner, is the common practice in attempting to solve student behavioral problems in our schools.

There is another myth that arises from the use of traditional diagnostics. That is the presumption that descriptive labels somehow imply explanation. Constructs are descriptive but do not explain. As Bertrand Russell said, "Electricity is not a thing, like Saint Paul's cathedral; it is the way things behave. When we have told how things behave when they are electrified, *and under the circumstances* they are electrified, we have told all that there is to tell" (quoted by Cole, 1983).

A child is not distractible *because* of a labeled attention deficit disorder. The term only refers to distractibility and other behaviors that sometimes cluster with it *under certain circumstances*. One of the most misleading aspects of labels is their presumed independence from context. To say that one *is* L.D., or *is* A.D.D., or that one *is* a visual learner, or *is* any other invented construct, implied to be housed in the learner, independent of a specific interactive observable event, leads to spurious thinking and serves as worthless information to the classroom teacher in search of solutions.



To begin with: What is a construct? A construction or “construct” is as the name indicates, something that is constructed rather than observed. It is an invention, an abstraction, a contrivance. This is not to say that constructs have no place in science. Quite the contrary, scientific work is mostly a matter of constructions. But this does not mean that hypothetical entities may be *arbitrarily* created. Descriptive constructs are most valid and useful when they derive directly from contact with events. The manipulation of constructs, to be scientific, can be validated only if securely connected to events.

The field of education is replete with cognitive (construct) process tests that are used to impose mythical constructs on teaching events. The moment this is done reality is all but lost, and the test serves only as worthless information to the teacher.

### What are the scientific criteria for constructs?

There are explicit standards for regulating scientific constructs. The following list from Kantor (1957, 1978, 1981) consists of standards consistent with scientific advancement:

- **Distinguish carefully between constructs of all types and the original events.**

For instance, saying that Billy is A.D.D. is a construct. But when Billy was observed independently doing six problems in single digit addition in his sixth-grade classroom, and he was distracted by the noise of the other classmates who were enthusiastically involved in a more interesting project, it was an original event.

- **Avoid all constructs derived from traditional cultural philosophical sources.**

For example, psychological constructs that start with, “The student is . . . intelligent, L.D., a visual learner,

A.D.D., E.H., etc., etc.,” are derived from prejudiced views that are philosophical and cultural overgeneralizations. These overgeneralizations are of no practical value in solving educational/learning problems, and when imposed on learning events are misleading, and usually result in victimizing the learner. These constructions also act to immobilize the classroom teacher, preventing an effective efficient teaching process, especially for those learners that need to be carefully taught.

*Learning events become of concern when the student fails to learn to a given standard.*

- **When means for obtaining critical information is lacking, keep constructs extremely tentative—and never base them on unobservables. Note that only constructs derived directly from observed events have the potential for validity.**

For instance, when the student is having difficulty keeping up with his/her classmates in first-grade math, any construction or hypothesis other than those developed from the specific observation of the original teacher/learner, math-context interactive event is of little or no value as a remedy to the student’s difficulty learning math. Traditional constructs that are imposed on events, such as spatial association deficits, auditory sequential memory problems, or a plethora of other process learning constructs only serve to mark the student as disabled without identifying the aspects of the disabling event.

- **Take an adequate sample of events so that the interrelationships of events may be observed.**

Learning events become of concern when the student fails to learn to a given standard. Under this circumstance the learner is observed making one of three kinds of mistakes in the context of a specifically defined event. The learner either could not do it, would not do it, or was confused. These three types of mistake events are described respectively as **performance mistakes, compliant mistakes, or discrimination mistakes.**

**There are two types of discrimination mistakes:** When the learner overgeneralizes by viewing two different but similar concepts/contexts as the same, the mistake is called a difference mistake. But when the learner undergeneralizes by viewing two concepts/contexts as different that are in fact the same the mistake is called a sameness mistake.

In example #1: If a first grader confuses the short sound symbol match “e” for “a” in decoding the word “bed” in reading group, this is described as a difference mistake. But for this to be an adequate sample of the mistake type—so that the interrelationship of the events may be observed to be consistent—the learner needs to consistently confuse the short “e” sound for the short “a” sound in a number of reading contexts.

When this interactive teacher/learner event is consistently observed throughout an adequate sample—supporting the construct **hypothesis of a difference mistake**—a remedy is accordingly implied: teaching similar but different concepts far apart, showing difference.

In example #2: If the first grader demonstrates fluency in the basal reader in reading group, but does not recognize or generalize those same sound symbol matches in other readers outside of the basal readers, this is described as a same-

ness mistake. But again for it to be an adequate sample of the interrelationship of the specific events, the learner must consistently fail to generalize from the basal reading context to other reading contexts which are both made up of the same sound symbol matches.

If this event is consistently observed, where the learner undergeneralizes, supporting the construct hypothesis of a **sameness mistake**, then a remedy is accordingly implied: placing the two contexts side by side and showing sameness. The above examples, where constructs are an outgrowth of specifically observed context; interactive events are demonstrations of a logical process of teacher/learner remediation as a scientific process.

- **Begin all investigations with observations from which constructs may be derived; avoid starting with constructs and interpreting results in terms of those constructs.**

Mythical constructs that are imposed on events lead to spurious, unscientific thinking. When the first-grade student, who exhibits reading difficulty, is referred to the school specialist for testing, it is usually done to confirm the teacher's suspicion of a specific learning disability. The course of events that typically takes place is as follows. The formal referral is made. A number of predesigned construct diagnostic tests are given by the school psychologist, which are later imposed on the teacher/learner interactive reading group event. And finally, a construct or label is assigned to the learner according to standardized scores of the tests given. Mind you, this is usually done with little or no critical observation of the teacher/learner interactive event of concern.

This kind of diagnostic activity can result only in misleading the teacher in regard to explanation; consequently, it serves as useless information resulting in victimization of the learner. The pursuit of an analysis of learning failure, as an authentic natural scientific process, must first start with the specifically observed teacher/learner interactive event occurring within unique time space coordinates, incorporating the learner's biological and learning history.

*The systems analysis process is quite different than the traditional approach to learning problems in education.*

All learner failure and the degree of failure may be defined by the type of mistake the learner makes and the degree to which (s)he makes that mistake. The frequency of mistakes defines the degree of failure. In any given teacher/learner event, if the learner is not making more than 5% to 10% error in learning, there is no failure to diagnose or analyze. Consequently, by any reasonable standard there is no learning problem. Or, to state it more constructively, by the teacher's standard of successful learning, where all are making the minimum of mistakes (within the 5% to 10% range), all are constructively learning. When learning failure is observed, the definition of that failure, the degree of the failure, and the explanation of observed failure all lie within the context of the interactive event being observed.

The sole purpose of a systems analysis of learning events is to specifically investigate mistake types according to and within the context they were made. Then, according to the mistake type

made, modify the format of the teacher/learner interactive event. It is only when the specialist develops constructions on the basis of the details of the interactive event of concern does the remedial process meet the standard of a natural scientific process.

The systems analysis process is quite different than the traditional approach to learning problems in education. Traditional procedures in education follow a standard followed by most western psychological systems (Cognitive, Humanistic, and Developmental Psychologies, to mention a few). First, a mythical, unobservable construct or a set of constructs is developed. Second, construct tests are developed, independent of real events, to measure the degree to which the construct(s) may be imposed on some designated event in which the learner is experiencing failure. And third, at the expense of the learner, an unobservable and mythical label is assigned to the learner implying cause.

- **Keep interpretive constructs consistent with the events observed; do not base them on other constructs.**

When the learner confuses two similar but different concepts in reading group, where the short "e" sound is decoded as the short "a" sound, a **difference mistake** has been made. When the learner confuses two similar but different concepts in reading group, by decoding the word "then" as "the," a **difference mistake** has been made again. But while the two mistakes that the learner made are the same, the two reading events are different, separate, independent, and have no necessary relationship. This is particularly important information for the reading specialist. The general outline of the remedy: the modification of the contextual teacher/learner interaction (separating the two con-

cepts in teaching and showing difference) is the same, but the details of the two events, that determine the specifics of the modification are different. At no time are the details of one event helpful in resolving the learning confusion of a different context interactive event.

- **Anchor all constructs—such as intelligence, motivation, and attitudes—in observed referents and avoid giving them independent existence as things or causes.**

John is an *intelligent* writer. Jane demonstrated an excellent *attitude* about how it is not about winning and losing, but how you play the game, when in the game last night after losing by only one point, she went over and congratulated the opposing team. After a long days work, Bill was tired and not *motivated* to finish painting his room.

In the above examples, three constructs, based on apparent observation, were used to describe real context-interactive events. But to state that John is an intelligent person, that Jane has an excellent attitude, or that Bill is not a motivated person, is giving constructs an independent existence, usually implying cause.

When statements are made like, “Joe has been diagnosed as learning disabled due to whatever process or brain dysfunction,” they are made on the basis of three false assumptions:

1. That psychological behavior is organocentric (the view that behavior is housed in the subject/organism). In reality psychological behavior is noncentric. It is a contextual interaction between things.
2. That the label L.D. is a reified construct (that it exists as a real live thing). Labels like learning disabled, attention deficit disorder, and emotionally disturbed are not

real live things like appendicitis, they are abstract notions.

3. That an unobservable, abstract construct can logically and scientifically pass for an explanation or cause. Constructs, even in the most reasonable circumstances, do not serve as explanation, they can only describe.

When invented labels are created and imposed on learning events of concern, reality is lost and all activity becomes a practice of scientifically irresponsible, jargonistic nonsense.

*Constructs, even in the most reasonable circumstances, do not serve as explanation, they can only describe.*

- **Use only constructs which are corrigible.**

Constructs used appropriately are descriptions of circumstantial inter-behavior; they describe the organisms/subjects response to concepts/contexts under a specific set of circumstances. If relevant interactive factors of the circumstance change, in all probability, the subjects interactive response will change. With remedial events, if the interaction is effectively corrected or modified, the response/construct will be corrected.

Mythical constructs such as “low intelligence,” “attention deficit disorder,” and “learning disability,” to mention a few, are treated in conventional diagnostics as if they were incorrigible realities. But in natural scientific systems these constructs are inventions that are not real, and therefore can not be fixed entities. For instance, there is much evidence to show that with early educational intervention, IQ scores can improve as much as 30 to 40 points. In another

instance, it is clearly recognized by most professionals that children who have been diagnosed with an attention deficit disorder are only distractible under specific circumstances. In school building circumstances where children have been diagnosed as emotionally disturbed, the label is frequently known as the six-hour syndrome. And in respect to the construct described as learning disability, the label would be more accurately described as a learning disabling situation. It has frequently been shown in education that if you effectively correct or modify the instructional interactional event, you will correct the labeled disability.

- **Avoid turning participating conditions, or those that may be necessary for the event, into determining conditions.** If the brain causes human actions, what causes brain actions? Is the brain a patriarch, itself uncaused, issuing commands, determinant of perceiving? We have no evidence that anything in the universe is self-caused.

*Brain as a Necessary but Not a Sufficient Condition.* Much of the attribution of behavior to brain is a confusion of necessary and sufficient conditions. That is, the brain is necessary for all organismic events, but it does not carry out the action alone. It is not sufficient. In other words, the brain participates in all actions but does not determine them. It is only one part of a complex of events that together make up causation.

The brain is better understood not as an autonomous and self-caused Boss, but as a complex coordinating organ, one condition that enables and participates in the occurrence of such psychological events as attending, perceiving, generalizing, and so on.

The proponents of a scientific context-interactive view of the brain give full accord to the participation

of biology. But it is only one participating condition. Full accord is also given to personal history, social influences, the situation, and other observed participants. Cause of the entire event is not attributed to any *one* of these factors. In such a view, a psychological event is not something in the head, in the mind, in neurons, in process centers, in DNA molecules; it is comprised of the total interactional complex. Only that total complex = causality = sufficient conditions = the psychological event.

- **Recognize the different levels of organization of things and events and keep explanatory constructs consistent with this recognition.**

An important educational tool is the teaching of any concept by a set of examples. The organization of those examples is a crucial aspect of the effective and efficient success of teaching of that concept. Poorly organized presentation of these examples can accordingly result in a particular mistake type.

The following are examples of the kinds of mistakes that some learners will make due to poor organization; that is, the juxtaposition, or the absence of presented positive and negative examples in teaching formats.

1. In teaching a number of concepts over a period of time, if the teacher attempts to teach similar but different concepts close together, some learners will become confused and will overgeneralize by making difference mistakes.

This is a common confusion especially of the naive learner. An example of this is when the sounds of short vowels that have similar sounds are taught too close together.

2. In teaching any concept, if the examples of the concept, or the contexts in which the concept is being taught is not broad enough to cover the full range of the concept, some learners will undergeneralize by making sameness mistakes. An example of this is when learners do well on spelling tests on Fridays, but spell poorly in the context of composition writing.

*An important educational tool is the teaching of any concept by a set of examples.*

3. In teaching any concept, learners need varied practice in achieving mastery. Some learners may need little or no practice, while there may be some that need 7 to 1,400 repetitions. If learners do not receive enough uninterrupted practice they will make performance mistakes by failing to demonstrate mastery.
4. In teaching any concept, learners need varied feedback in the form of organized, meaningful reinforcement to remain motivated. The general rule for teachers is three parts positive feedback to every one part organized corrective feedback in order to be sufficiently reinforced. If learners do not receive sufficient amounts of organized reinforcement in learning a concept, some learners will make compliant mistakes, by demonstrating in one form or another that they don't want to do or participate in the task.

- **Distinguish between the knower and the thing known and avoid merging them.**

Psychology would be of little interest if it did not attempt to advance knowledge. In educational systems this translates to the advancement of the understanding of teaching/learner systems and to creating more effective and efficient teaching for all children.

Presently, modern education is heavily indoctrinated with an organocentric notion which sees behavior housed within the organism. This view, which has played a major role in cognitive psychology, emphasizes innate organizing capacities for knowledge. It contends that there is no outside, impartial viewpoint capable of analyzing individual knowledge independent of the individual exhibiting this knowledge. . . knowing, consciousness, constructing, and all other aspects of the human experience are seen from the point of view of the experiencing subject. We can perceive the reality in which we live only from within our perceiving order.

Gergen (1994) has attacked this position for implying that if we respond to our perceptions of the world instead of to the world itself, we have no way to begin hypothesis testing or other methods of inquiry. The field of Ontology asks if an external world exists and, if so, how we can know what it is like and whether scientific findings of regularity and laws in nature are creations of humans rather than reflections of nature. These questions address cultural constructs rather than observable events. Kantor (1962) takes a no-nonsense approach to such questions:

Such problems however, can never arise from the study of the scientist's work which plainly reveals that knowledge depends upon things, not things upon knowledge. To achieve knowledge and attain exact descriptions and explanation we must improve our

contact with events. . . . The spurious problems of “reality” and the existence of an external world arise from the simple **confusion** of things with reactions to them. When observations are difficult, when contexts are ambiguous, when observers are deficient (color blind), when relations between things observed and observers vary, those who are dominated by philosophic tradition conclude that observations contribute to the existence of things. (pp. 17–18)

The domination of philosophic tradition has also been apparently responsible for the conventional diagnostic notion that presumes that the knower or the constructivist invents reality according to the constructivist’s inner world view. Constructivist’s notions have infiltrated educational thinking through diagnostic practices in special education systems. Accordingly, constructs are created. Tests are constructed to specifically measure the constructivist’s invention, and to the degree a given subject has been stricken with the invented disease. This confusion between a kind of created “reality” of labels of the knower and true reality of the known is a major deterrent to education’s progress in becoming a legitimate science.

It is imperative, for the progress of teaching as a responsible profession, that the knower-specialists, with all their bags of construct tests and invented labels, are unveiled for what they are. We must replace this voodoo exercise with an authentic natural scientific process of analyzing events with time and space coordinates. Description and explanation of student learning must be attained through the observations of teacher/learner interactional context events.

- **Derive postulates from observation.**

1. **Behavior is event interdependent.** It is not minds, or information processing, or other constructs that psychology studies scientifically, but the concrete events of organisms interacting with objects, events, or other organisms. These interbehavioral fields in teacher/learner situations range from the learner perceiving sameness of any concept across a broad range of contexts to the mastery of doing any performance act, to subtle reasoning in problem solving.

*This confusion between a kind of created “reality” of labels of the knower and true reality of the known is a major deterrent to education’s progress in becoming a legitimate science.*

2. **All events encompass a media of contact interactional history, and setting.** In addition to organisms and objects, psychological fields include media of contact (sound waves for hearing and light for seeing), interactional history, and setting conditions (i.e. the student comes to school with a cold).
3. **Psychological behavior involves the performance of entire organisms, not special organs or tissues.** The multiplex field precludes confining the activity to the brain or the entire organism as the sole cause of the event. The locus of the psychological event is in the field rather than in the organism.
4. **Explanation for behavior is in the situativity.** Psychological behavior is noncentric. Explanation for psychological

behavior has no center.

Contextual events occur without any internal or external determinants. Naturalistic descriptions of observable field events replace all constructed internal events, such as consciousness, mental states, drives, instincts, brain powers, and information processing, as well as external events such as environment.

5. **Psychological events are ontogenic.** Psychological events are historical or developmental. The action of an individual is not isolated. Every action influences other actions, and these successions of mutual influences develop into organized patterned ways of performing that form a unity. That unity is personality.
  6. **Constructs are not real live events with time space coordinates.** Scientific constructs are developed on the basis of the unique observed event. But the construction itself is not real.
  7. **Learning is the process of generalizing sameness on the basis of the familiar.** All learners generalize sameness on the basis of the familiar. They interpolate, stipulate, and extrapolate in accord with presented positive and negative examples.
- **Use only those constructs that are observable at least in principle, for it is only through observation that science is possible.**

The scientist as a serious investigator must be able to first distinguish between what is observable and what is not observable. And second, the scientist must investigate and construct hypotheses only on the basis of the observable. No one has ever seen minimal brain dysfunction, high or low intelligence, auditory or visual sequential memory, or other internal processes like the

brain seeking sameness, mind, consciousness, and self.

In some contexts “self,” a particularly prominent expression in humanistic psychology, has become a term for “mind.”

Unobservables become more concrete, at least in principle, when referring to psychological events as participles or verbals: sensing rather than sensation, knowing rather than knowledge, thinking rather than thought. Mind is a cultural construct, an abstraction possessing no internal power. The brain is a necessary coordinating organ, but is not an internal determinant or ruler implying cause. When participles/verbals are used it helps avoid reification (making abstractions into real live things). But the action (i.e. sensing, thinking, imagining, etc.) still fails to indicate that the action is an interaction; that is when we think, we think about *something*. Along the same lines, consider the following: Do “people experience visual images” (Kosslyn, 1995, p. 6), or do people imagine? Does the brain seek sameness or do people seek sameness? Does it take a keen mind to solve complex problems, or does it take a bright person. Does Ann use her imagination, or does she imagine *something*? Does Tom’s personality cause problems, or is his behavior inappropriate? In the examples shown, the first refers to constructs and the second to events. In short, do we give the person credit or do we invoke an impersonal construct to carry out the action?

In medicine, for many centuries blood-letting (a process of applying leeches to the human body) was considered a tried-and-true remedy for certain conditions. It was recommended for fevers, inflammations, a variety of disease conditions, and (ironically) for hemorrhage. Although it fell in and out of favor, it persisted into the 20th cen-

tury and was recommended by Sir William Osler in the 1923 edition of *Principles and Practice of Medicine*. Today such practices are for the most part viewed, within the medical field and throughout our culture, as totally unacceptable nonscientific witchcraft. The field of medicine, as of the mid 20th century, has become a legitimate field of science.

*One of the major shortcomings of our training institutions and school systems regards taking responsibility for teaching all children to a given standard.*

Education now stands somewhat in the same position, as a science, as did medicine close to 100 years ago. One hundred years ago people bled to death due to ignorance. Today, in education, innocent children’s lives are being destroyed, also by ignorance. Disturbingly, the present circumstance in education seems more callous and lethal. This seems so because of the way we in education choose to hang onto ineffective, inefficient, unscientific teaching practices that have been instituted by the politically correct to maintain, for thousands of children, an educationally abusive irresponsible system. There is a trend regarding myths in education: old hoaxes never die, they just get a new life cycle. This is not to say that teachers generally are not dedicated. Many, and maybe even most, teachers are dedicated people. But to be dedicated does not mean that the teacher is necessarily responsible. To be dedicated is a choice, but to be responsible requires in-depth training in the *science* of teaching/learning events.

One of the major shortcomings of our training institutions and school systems regards taking responsibility for teaching all children to a given standard. Consequently, few teachers are equipped to accept the responsibility for student learning failure. Total acceptance of this responsibility equates to the saying, *if the student did not learn it the teacher did not teach it*. In order for training institutions to impart this level of responsibility to their student teachers, the field of education must first teach the student teacher to recognize the difference between philosophy and science. And second, it must become a system whose practices are embedded in a natural scientific viewpoint. Not until these two steps are taken can all children be effectively, efficiently, and responsibly taught to a given standard. **ADI**

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## *Register with ADI as a Referenced Consultant —*

There is a great deal of interest in Direct Instruction programs today, and along with that interest there is a high demand for *qualified* consultants. We are quite certain that there are many great DI trainers out there that we do not know about. To help gather and disseminate this information, ADI is establishing a database of Direct Instruction program consultants (trainers). This data will be distributed via an ADI-published directory, the ADI web site, and used for any telephone referrals calls that come to ADI.

In order to have some quality control, we have devised the following requirements to be listed as a Referenced DI Consultant:

1. You must have a current membership with ADI.
2. You must provide us with three letters of reference or recommendation. These letters can be from school personnel, SRA personnel, etc.
3. You must complete the survey below and on the back of this page.
4. Send ADI a \$25.00 fee to cover the costs of building and maintaining the database.

If you have any questions about this program, please contact Bryan Wickman at 1-800-995-2464.

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### **ADI Direct Instruction Consultant/Coach Information Survey**

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State/Province \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Home Phone \_\_\_\_\_ Work Phone \_\_\_\_\_

Email Address \_\_\_\_\_

Pager \_\_\_\_\_ FAX \_\_\_\_\_

Please check the appropriate boxes.

#### **Reading Mastery I-III (And Fast Cycle)**

- Information Presentation (e.g., one-hour presentation to adoption committee)
- Coaching (do demonstration lessons in classrooms, watch teachers, and give feedback)
- Training (stand-up training groups of people to use programs)

*continued on next page*

## *Everyone likes getting mail...*

ADI maintains a listserv discussion group called DI. This free service allows you to send a message out to all subscribers to the list just by sending one message. By subscribing to the DI list, you will be able to participate in discussions of topics of interest to DI users around the world. There are currently 500+ subscribers. You will automatically receive in your email box all messages that are sent to the list. This is a great place to ask for technical assistance, opinions on curricula, and hear about successes and pitfalls related to DI.

### **To subscribe to the list, send the following message from your email account:**

To: majordomo@lists.uoregon.edu

In the message portion of the email simply type:

subscribe di

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

### **You send your news and views out to the list subscribers, like this:**

To: di@lists.uoregon.edu

Subject: *Whatever describes your topic.*

Message: *Whatever you want to say.*

The list is retro-moderated, which means that some messages may not be posted if they are inappropriate. For the most part inappropriate messages are ones that contain offensive language or are off-topic solicitations.

## *Summer 2002 Direct Instruction Training Opportunities*

The Association for Direct Instruction is pleased to announce the following intensive DI training conferences. These events will provide comprehensive training presented by some of the most skilled trainers in education. Plan now to attend one of these professional development conferences.

### **The 5th Southeast DI Conference & Institutes**

June 18–21  
Orlando, Florida

### **The 9th Mountain States DI Conference**

July 8–10  
Colorado Springs, Colorado

### **28th National DI Conference & Institutes at Eugene**

July 21–25  
Eugene, Oregon

### **The Mid-Atlantic Conference & Institutes**

July 31–August 2  
Durham, North Carolina

### **The 7th Midwest DI Conference**

August 7–9  
Chicago, Illinois





# 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.

<i>Reading Mastery I</i> (10 Videotapes) . . . . .	\$150.00
<i>Reading Mastery II</i> (5 Videotapes) . . . . .	\$75.00
<i>Reading Mastery III</i> (1 Videotape) . . . . .	\$25.00
Combined package ( <i>Reading Mastery I-III</i> ) . . . . .	\$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.

### 27th National Direct Instruction Keynotes

**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 Wheelchel 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

**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 Kucic, 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

**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

**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

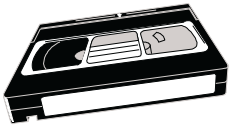
**Moving from Better to the Best**—20 minutes. Closing keynote from the National DI Conference. Classic Zig Engelmann doing one of the many things he does well... motivating teaching professionals to go out into the field and work with kids in a sensible and sensitive manner, paying attention to the 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

**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

**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

*continued on next page*



## Videotapes on the Direct Instruction Model...continued

**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

**An Evening of Tribute to Siegfried Engelmann**—2.5 hours. On July 26, 1995, 400 of Zig Engelmann’s friends, admirers, colleagues, and protégés assembled to pay tribute to the “Father of Direct Instruction.” The Tribute tape features Carl Bereiter, Wes Becker, Barbara Bateman, Cookie Bruner, Doug Carnine, and Jean Osborn—the pioneers of Direct Instruction—and many other program authors, paying tribute to Zig. Price: \$25.00

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

# Corrective Reading Sounds Practice Tape



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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# Association for Direct Instruction

PO Box 10252, Eugene, Oregon 97440 • 541.485.1293 (voice) • 541.683.7543 (fax)

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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.

## Membership Options

- \$40.00 **Regular Membership** (includes one year subscription to ADI publications, a 20% discount on ADI sponsored events and on materials sold by ADI).
- \$30.00 **Student Membership** (includes one year subscription to ADI publications, and a 40% discount on ADI sponsored events and a 20% discount on materials sold by ADI).
- \$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).
- \$30.00 **Subscription** 4 issues (1 year) of ADI publications.

- ✓ Canadian addresses add \$5.00 US to above prices.
- ✓ For surface delivery overseas, add \$10.00 US; for airmail delivery overseas, add \$20.00 US to the above prices.
- ✓ Contributions and dues to ADI are tax deductible to the fullest extent of the law.
- ✓ Please make checks payable to ADI.

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# 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																		
<b>Preventing Failure in the Primary Grades</b> (1969 & 1997) Siegfried Engelmann	\$19.95	\$24.95																				
<b>Theory of Instruction</b> (1991) Siegfried Engelmann & Douglas Carnine	\$32.00	\$40.00																				
<b>Teach Your Child to Read in 100 Easy Lessons</b> (1983) Siegfried Engelmann, Phyllis Haddox, & Elaine Bruner	\$16.00	\$20.00																				
<b>Structuring Classrooms for Academic Success</b> (1983) S. Paine, J. Radicchi, L. Rosellini, L. Deutchman, & C. Darch	\$11.00	\$14.00																				
<b>War Against the Schools' Academic Child Abuse</b> (1992) Siegfried Engelmann	\$14.95	\$17.95																				
<b>Research on Direct Instruction</b> (1996) Gary Adams & Siegfried Engelmann	\$19.95	\$24.95																				
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