

Direct Instruction Is Developmentally Appropriate

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Direct Instruction grew out of the work of Siegfried Englemann and Carl Bereiter with disadvantaged children (Bereiter & Englemann, 1966). Over the past 30 years, it has been developed for teaching elementary through secondary language, reading, math, higher-order thinking (reasoning), writing, science, social studies, and legal concepts. The teaching methods and materials are rigorously tested in numerous experiments and field trials. Indeed, Direct Instruction offers one of the most empirically validated and effective curricula that we have **for all children**--gifted, average, at-risk, developmentally delayed, disadvantaged (Adams & Englemann, 1996).

However, there are a number of misconceptions about Direct Instruction that lead some persons to believe that Direct Instruction is not developmentally appropriate. However, Direct Instruction has always been predicated on the certainty that

one cannot and should not teach children subject matter, and should not teach children in learning environments, for which children are developmentally unprepared.

To ignore this rule means that children will struggle unnecessarily, will most likely fail to learn, will develop low self-esteem and low self-expectations, and will come to find school and subject matter aversive.

A review of recent work on developmentally appropriate instruction shows that *the features of Direct Instruction are consistent in virtually every way with what we know of developmental appropriateness.* Therefore, Direct Instruction should be seen as having a place in the range of methods that serve all of our children in a developmentally appropriate fashion. Following sections discuss Direct Instruction in light of commonly agreed upon features of developmental appropriateness. Each section is introduced by a statement from recent literature on developmentally appropriate practices.

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Features of Direct Instruction Are Aligned With Current Best Practices

"Teaching practices associated with outdated views of literacy development and/or learning theories are still prevalent in many classrooms. Such practices include **extensive whole-group instruction and intensive drill and practice on isolated skills** for groups or individuals. These practices, not particularly effective for primary-grade children, are even less suitable and effective with preschool and kindergarten children." (International Reading Association and the National Association for the Education of Young Children, 1998).

The developers of Direct Instruction curricula are aware of and use current research to tailor curricula and instruction (student-teacher interaction) to what is currently known about developmental appropriateness. For example:

1. Direct Instruction is almost always in **small groups**. This provides children with a high rate of opportunities to participate, to interact with their peers, and to receive individual attention from their teacher. In addition, these small groups typically become **learning communities** with shared group and individual goals ("We learn it all."), shared moral principles ("We help each other."), and valorized identities ("We are all smart.").
2. The **length of Direct Instruction lessons is adjusted** to be commensurate with the activity levels and attention spans of children of different ages. For example, a lesson from *Language for Learning* in pre-k or kindergarten might be only 20 minutes long; however, a reading lesson in grade 2 might be 35 minutes long.

In addition, Direct Instruction is consistent with the literature on how to design instruction so that children are able to **construct** (induce) concepts and generalizations. For example, lessons are divided into short exercises (two to four minutes) on slightly different **but related** topics. This sustains children's interest level and facilitates children's synthesizing knowledge from different exercises into a larger whole. For example, a language lesson might begin with an exercise on new vocabulary words. Next, children might learn about subjects and verbs. Finally, children would learn about making deductions. "If a dog is black, it will run. So, if you know that a dog is black, what else do you know about the dog?..." This last exercise enables students to **synthesize** all of the learnings in the lesson.

Carefully Planned Instruction

"The reality of developmentally appropriate practice is that if programs are to be individually appropriate, teachers must assess children's needs, develop specific goals for individuals, and plan programs that address the unique goals and objectives of the children within the class." (Carta, 1995)

"But the ability to read and write does not develop naturally, without careful planning and instruction." (International Reading Association and the National Association for the Education of Young Children, 1998).

"Excellent instruction builds on what children already know and can do, and provides knowledge, skills, and dispositions for lifelong learning."

(International Reading Association and the National Association for the Education of Young Children, 1998).

Careful planning is one of the major features of Direct Instruction. Each curriculum provides: (1) a carefully crafted sequences of tasks and learnings; (2) logical formats embedded in teacher-student communication, that facilitate students' inductive constructions of concepts and relationships; and (3) a careful arrangement of practice and ongoing assessments of learning. However, this planning is invisible to the children. What children actually experience is interaction with teacher and peers, and mastery of each task. Following are some aspects of planning and organization in Direct Instruction.

1. **Brief (5 minute) placement tests** are given for each curriculum to ensure that each child begins with lessons for which he or she is prepared. This means that children are immediately able to learn very quickly what the teacher is teaching, and therefore children learn more in less time.
2. **Instruction is organized in a logical-developmental sequence.** All of the concepts, rules, and strategies that students need in any lesson have already been taught. In addition, what children learn in any lesson is used in later lessons. There is no inert knowledge.
3. **Each lesson consists of short exercises from different strands.** For example, an early lesson from the *Reading Mastery* curriculum might have three minutes on pronouncing new sounds; another three minutes on reading new sounds; another five minutes on reading words "the slow way"--sounding out; another five minutes on reading old words "the fast way"--blending; and five minutes of review. Later lessons work on many of the same strands--adding more concepts or addressing harder problems or examples. *This organization holds children's attention and helps children to retain knowledge from one day, week, and month to the next.*
4. Gradually, instruction moves in a planful way from a more teacher-guided to a more **student-guided** format. This is called **mediated scaffolding**.
5. **Short proficiency tests** are used about every ten lessons to ensure that all students have mastered the material and to determine which skills need firming. Frequent evaluation sustains the quality of instruction and students' education; it prevents the drift towards mediocrity or failure.

Teaching With a Variety of Methods

"Rather, good teachers bring into play a variety of teaching strategies that can encompass the great diversity of children in schools." (International Reading Association and the National Association for the Education of Young Children, 1998).

"Children acquire a working knowledge of the alphabetic system not only through reading but also through writing." (International Reading Association and the National Association for the Education of Young Children, 1998).

Lessons in Direct Instruction address all individual and cultural learning styles: visual (e.g., seeing words), auditory (hearing words), oral (saying words), kinaesthetic (writing words). This ensures that all children have their best chance

of being understood and of becoming proficient. It also means that each child's knowledge is broader. Indeed, the main reading curriculum, *Reading Mastery*, combines instruction on decoding and comprehension, story reading, spelling, and writing.

In addition, a school does not use Direct Instruction all day. Rather, Direct Instruction would most likely be used at the beginning of some class periods, to review previous learnings and to give students instruction on new concepts that build on previous learning. The rest of a class period would be individual or small group work on generalizing or adapting what was learned to new material or problems.

Social Competence

"Individuals concerned with the early education of young children with and without disabilities support the importance of the development of social competence (Hartup, 1983; Odom, McConnell, & McEvoy, 1992). A large body of literature substantiates that typically developing young children advance their language, cognitive, and social skills through their increasingly complex interaction **with peers** (Gottman, 1983; Murray, 1972)" (Carta, 1995).

"Early childhood educators have also begun to develop **intervention techniques** to promote social competence in light of 'compelling evidence that if teachers or other adults do not intervene to support the social development of socially isolated young children, these children will likely continue to be rejected or neglected by their peers and will have difficulty adjusting in later life.'" (Carta, 1995).

In addition to teaching specific and general skills in reading, language, arithmetic, writing, and other knowledge systems, ***Direct Instruction pays careful attention to the environment of instruction.*** It is understood that the social organization of instruction is a social form that teaches feelings, cognitions, and skills that enable persons to participate competently in the instruction. Specifically, Direct Instruction is in small groups of 6 to 10 children. Lessons are characterized by brisk interaction between teacher and children and between children. In this social context, children learn:

1. The elementary "rules" of social discourse, such as paying attention to a speaker; waiting and taking your turn; tailoring communication to the understanding of an "audience."
2. Moral rules such as the importance of helping your peers (e.g., by moving over so that a peer can see the story book the teacher is holding up), of not laughing at mistakes (empathy), and taking care of materials.

The stated objectives of the Direct Instruction curriculum, *Language for Learning*, echo Carta's statement, above, that "if teachers or other adults do not intervene to support the social development of socially isolated young children, these children will likely continue to be rejected or neglected by their peers and will have difficulty adjusting in later life." For example, the Teacher's Guide to *Language for Learning* states:

In time, some of these children ("who don't have a solid language foundation")...will not pick up a sufficient number of essential language concepts in their experiences at home and school. It is these children who, when they get to third and fourth grade, have trouble comprehending what they read...For such children, the teaching of the language of learning and instruction can mean the difference between success and failure in learning to read, as well as other academic subjects..." (Engelmann & Osborn, 1999).

Language for Learning is a curriculum that teaches (generally at-risk, developmentally delayed, and disadvantaged children) basic vocabulary, common knowledge, syntactical forms (sentences, question/answer), and a variety of higher-order reasoning skills (classification, comparison and contrast, description, statement inference, deduction, detecting absurdities). *In the absence of focused instruction such as this, many disadvantaged children quickly fall behind--both socially and academically--and never catch up.*

Meaningful Learning Experiences

"Young children especially need to be engaged in experiences that make academic content meaningful and build on prior learning." (International Reading Association and the National Association for the Education of Young Children, 1998).

"Children need to read a wide variety of interesting, comprehensible materials, which they can read orally with about 90 to 95% accuracy (Durrell & Catterson, 1980)." (International Reading Association and the National Association for the Education of Young Children, 1998).

All Direct Instruction teaching is done in children's zone of proximal development--the area of difficulty and novelty that is within each child's reach but fosters a slight "stretch." This is ensured because: (1) Direct Instruction curricula are a developmental-logical progression of learnings; (2) children are always prepared (in previous lessons) for the new learnings in current lessons; and (3) next lessons always teach children to use what they have recently learned. There is no inert knowledge; whatever children learn is relevant to their current and future activities.

In addition, the *Reading Mastery* curriculum contains entertaining stories (fiction) geared to the developmental interests of children. It also includes a wide variety of literary forms and contents, including history, geography, oceanography, classic literature, and plays.

Higher-order Thinking

"Children need to learn not only the technical skills of reading and writing but also **how to use these tools** to better their thinking and reasoning (Neuman, in press). (International Reading Association and the National Association for the Education of Young Children, 1998).

There is a minimum of rote learning or memorization in Direct Instruction curricula--only what is required by the simple conventions of reading and

arithmetic systems (e.g., letters, number names). Virtually everything else in Direct Instruction is cognitive learning: of concepts (classes), propositions (classification, cause effect), and cognitive strategies (e.g., for sounding out unfamiliar words, for solving arithmetic problems, for writing stories).

Indeed, higher-order thinking, or reasoning, is taught explicitly in all curricula. In addition, as children progress through a curriculum, and as the teacher removes scaffolding (instructions, prompts), students learn to use these cognitive strategies on their own. For example, in the remedial reading curriculum called *Corrective Reading*, students are first explicitly taught statement inference and the logic of text analysis and deduction. However, by the end of the curriculum, students are analyzing complex texts to discover and state the authors' reasoning processes, and students do this with little teacher direction.

Sometimes, Children Need More (and Sometimes Less) Teacher-Directed Instruction

"The reality about developmentally appropriate practice is that teachers should employ a **continuum of teaching practices that vary in directiveness** depending on individual children's and specific classroom needs." (International Reading Association and the National Association for the Education of Young Children, 1998).

"Although research has clearly established that no one method is superior for all children (Bond & Dykstra, 1967; Snow, Burns, & Griffin, 1998), approaches that **favor some type of systematic code instruction** along with meaningful connected reading report children's superior progress in reading. Instruction should aim to teach the important letter-sound relationships, which once learned are **practiced through having many opportunities to read.**" (International Reading Association and the National Association for the Education of Young Children, 1998).

"In the course of reading stories, teachers may **demonstrate these features** by pointing to individual words, directing children's attention to where to begin reading, and helping children to recognize letter shapes and sounds." (International Reading Association and the National Association for the Education of Young Children, 1998).

"The learning of vocabulary, however, is not necessarily simply a by-product of reading stories (Leung & Pikulski, 1990). Some **explanation of vocabulary words** prior to listening to a story is related significantly to children's learning of new words (Elley, 1989). Dickinson and Smith (1994), for example, found that **asking predictive and analytic questions** before and after the readings produced positive effects on vocabulary and comprehension." (International Reading Association and the National Association for the Education of Young Children, 1998).

"As children's capabilities develop and become more fluent, instruction will turn from a central focus on helping children learn to read and write to helping them read and write to learn. Increasingly the emphasis for

teachers will be on encouraging children to become independent and productive readers, helping them to extend their reasoning and comprehension abilities in learning about their world." (International Reading Association and the National Association for the Education of Young Children, 1998).

A common misconception of Direct Instruction is that it is all teacher directed; that teachers are always highly explicit (direct) about what is being taught; and that instruction is always highly focused in specific learning objectives. ***In fact, the amount of "directness" in Direct Instruction varies as a function of the extent to which children need (or would greatly benefit from) teacher directedness.*** For example, certain exercises in initial reading (e.g., *Reading Mastery I*) would involve the teacher showing students exactly how to pronounce sounds and words; what sound "goes with" what letters; and how to decode new words. In addition, to teach children how to comprehend a story, the teacher would ask children descriptive and analytic questions after every few lines. This way, children learn to internalize a comprehension strategy. However, these same lessons would **also** involve independent activity in which students write the letters of the alphabet and write stories. Moreover, as children advance developmentally, **instruction moves from more explicit (teacher directed) to more implicit (discovery) learning formats.** This is possible (and desirable) because children (by *Reading Mastery II*) have mastered cognitive strategies involved in, for example, reading a story and constructing the plot and the moral from the separate events they have read. In other words, a basic principle in Direct Instruction is to **provide only as much teacher structuring as children need.**

Choral Reading

"Engaging children in choral readings of rhymes and rhythms allows them to associate the symbols with the sounds they hear in these words." (International Reading Association and the National Association for the Education of Young Children, 1998).

Choral reading is one feature of Direct Instruction. A technical reason for this is that: (1) each child is able to learn from both hearing and speaking; (2) each child has more opportunities to experience the material; and (3) the teacher can more easily monitor the proficiency of each child. However, choral reading has an important social function. Each child learns about how individual achievement contributes to group achievement. And proficient choral reading comes to be a symbol for the cohesion of the group itself. "We all got it!"

Practice is Necessary for Fluency, Internalization, and Independence

"Children also need opportunity to practice what they've learned about print with their peers and on their own." (International Reading Association and the National Association for the Education of Young Children, 1998).

"Repeated readings appear to further reinforce the language of the text as well as to familiarize children with the way different genres are structured (Eller, Pappas, & Brown, 1988; Morrow, 1988). Understanding the forms of

informational and narrative texts seems to distinguish those children who have been well read to from those who have not (Pappas, 1991). In one study, for example, Pappas found that with multiple exposures to a story (three readings), children's retelling became increasingly rich, integrating what they knew about the world, the language of the book, and the message of the author. Thus, considering the benefits for vocabulary development and comprehension, **the case is strong for interactive storybook reading** (Anderson, 1995)... Some authorities have found the practice of repeated rereadings in which children reread **short selections significantly enhances their confidence, fluency, and comprehension in reading** (Moyer, 1982; Samuels, 1979)." (International Reading Association and the National Association for the Education of Young Children, 1998).

Interactive reading, and rereading, are major features of Direct Instruction. This feature is carefully planned, however, and it **never rises to the level of drill**. For example, in *Reading Mastery I*, children might read their first story book (about three short pages) to get a feel for the plot and the words. Then they reread it, to increase fluency and to enable them to analyze the action, plot, and characters in more detail.

In general, practice is distributed (not massed) on a schedule that ensures retention and independence. For example, there is a very short practice at the end of an exercise; e.g., rereading the words just learned. There is another short practice of a sample of what was learned during the whole lesson. After the lesson, children do independent work that gives practice in a different medium; e.g., written. And every ten or so lessons there is cumulative review.

Specific Features of Reading Instruction

"It is vital for all children to have literacy experiences in schools and early childhood programs. Such access is even more critical for children with limited home experiences in literacy. However, these school experiences must teach the **broad range of language and literacy knowledge and skills** to provide the solid foundation on which high levels of reading and writing ultimately depend." (International Reading Association and the National Association for the Education of Young Children, 1998).

"A fundamental insight developed in children's early years through instruction is the alphabetic principle, the understanding that there is a **systematic relationship between letters and sounds** (Adams, 1990)... Teachers will often involve children in comparing letter shapes, helping them to differentiate a number of letters visually. Alphabet books and alphabet puzzles in which children can see and compare letters may be a key to efficient and easy learning." (International Reading Association and the National Association for the Education of Young Children, 1998).

"Some research suggests that the roots of phonemic awareness, a powerful predictor of later reading success, are found in traditional **rhyming, skipping, and word games** (Bryant, MacLean, Bradley, & Crossland, 1990). In one study, for example (MacLean, Bryant, & Bradley, 1987), researchers found that 3-year-old children's knowledge of nursery

rhymes specifically related to their more abstract phonological knowledge later on." (International Reading Association and the National Association for the Education of Young Children, 1998).

"Many children enter kindergarten with at least some perfunctory knowledge of the alphabet letters. An important goal for the kindergarten teacher is to reinforce this skill by ensuring that children can **recognize and discriminate these letter shapes with increasing ease** and fluency (Mason, 1980; Snow, Burns, & Griffin, 1998)." (International Reading Association and the National Association for the Education of Young Children, 1998).

"Further, as teachers engage children in shared writing, they can **pause before writing a word, say it slowly, and stretch out the sounds** as they write it." (International Reading Association and the National Association for the Education of Young Children, 1998).

All of the above guidelines for developmentally appropriate and effective reading instruction--namely, a broad range of literary skills, teaching phonemic awareness, letter and sound discrimination, the use of rhyming and pronunciation formats for drawing attention to the segments of words--**are common features of Direct Instruction reading curricula**. Following are examples from the *Reading Mastery* curriculum (Engelmann & Bruner, 1995).

1. **On teaching a broad range of language and literacy knowledge and skills.** *Decoding instruction* in *Reading Mastery* addresses: pronouncing individual sounds; sequencing from left to right; blending sounds orally; identifying rhyming sounds; reading (short vowels, long vowels, voiced consonants, unvoiced consonants, sound combinations); identifying (vowel names, consonant names, alphabetical order); reading (regularly spelled words, irregularly spelled words); recognizing (rhyming words, inflected endings, compound words); reading word lists for accuracy; spelling difficult words; reading (aloud, silently, aloud for rate and accuracy); identifying pronunciation marks.

Comprehension instruction in *Reading Mastery* addresses: oral directions; answering questions about pictures; associating pictures with words; drawing pictures based on a story; repeating sentences; identifying the meaning of common words; writing the names of pictured objects; comprehending vocabulary definitions; using vocabulary words in context; identifying homonymns and homographs; comprehending contractions; using context to predict word meaning; answering literal questions about a text; identifying literal cause and effect; recalling details and events; following written directions; memorizing facts and rules; sequencing narrative events; predicting narrative outcomes; relating titles to story content; inferring causes and effects; inferring story details and events; making comparisons; inferring details relevant to a main idea; inferring the main idea; outlining; inferring story morals; using rules to classify objects; completing written deductions; drawing conclusions; using rules to predict outcomes; evaluating problems

and solutions; identifying relevant evidence; identifying contradictions; identifying inferential questions; identifying logical fallacies.

Literary skills instruction in *Reading Mastery* addresses: interpreting a character's feelings; pretending to be a character; interpreting a character's motives; inferring a character's point of view; predicting a character's actions; identifying features of a setting; identifying a character's traits; interpreting figurative speech; interpreting extended dialogues; interpreting substitute words; interpreting shortened sentences; interpreting combined sentences; interpreting literary irony; reading realistic fiction; reading fantasy; reading factual articles; distinguishing between realism and fantasy; distinguishing between fact and fiction; reading biographies; reading poetry; reading drama.

2. **Systematic relationship between letters and sounds, rhyming, stretching out words.**

Following are samples from *Reading Mastery I*. [Instructions to the teacher are in brackets.]

a. Lesson 15.

"See if you can say all these sounds without making a mistake." [Touch the first ball of the arrow for **m**] "Get ready." [Move quickly to the second ball. Hold.]

b. Lesson 18.

[Touch the first ball of the arrow for **ma**.]

"My turn. I'll show you how to say these sounds without stopping between the sounds." [Move under each sound. Hold.]

"Say, **mmaaa**."

"Your turn. Say the sounds as I touch under them. Don't stop between the sounds. Get ready." [Move under each sound. Hold]

c. Lesson 40.

[Point to **eed**, **seed**, **feed**.] "These words rhyme."

[Touch the first ball of the arrow for **eed**. Pause.]

"Sound it out. Get ready." [Move quickly under each sound. *eed*.]

"Say it fast..." *eed*.

[Touch the first ball of the arrow for **seed**.]

"The red part of this word is (pause) *eed*."

So, what does this word rhyme with?" *eed*.

"What word?" *seed*

d. Lesson 160.

"Get ready to read these words the fast way."

[Touch the ball for **bent**. [Pause.] "Get ready." *bent*

[Repeat with **cry**, **room**, **why**.]

A Sample of Literature Reviewed

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