

The Effects of Direct Instruction on Early Reading Skills of a Kindergarten Student

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The purpose of this study was to examine the effects of Direct Instruction on the early reading skills of a kindergarten student through the use of the SRA DISTAR reading program, *Teach Your Child to Read in 100 Easy Lessons* (Engelmann et al., 1983). The participant was repeating kindergarten for the second year at the time of the study. He showed delays in letter recognition, phonic acquisition, and beginning reading skills. The participant could correctly identify two sounds prior to intervention. A multiple baseline across letter sounds was used to demonstrate the increase and maintenance of phonic acquisition. A total of 13 lessons were implemented, and the outcomes indicated that Direct Instruction through the use of the DISTAR program increased the participant's knowledge of letter sounds.

Reading success must begin with proper instruction. Although there are many methods for teaching reading, there is strong research supporting instruction of letter-sound correspondence, especially for children at risk for reading failure (O'Conner, 1992). Teaching isolated letter sounds, and the sound blends, results in higher first grade achievement in word recognition and spelling (O'Conner, 1992). This method, known as phonics instruction, helps the learner understand that letters in words represent speech sounds and identify which sound corresponds with which letter (Putzi, 1993).

One teaching model that effectively utilizes the phonics method for teaching children to read is known as Direct Instruction. This model consists of a very specific sequence for teaching reading. First, beginning exercises are simple and straightforward. Single sounds are taught in isolation and in words via a modeling approach. The teacher first says a sound while pointing to the corresponding letter. Then, the child repeats this sound while looking at the letter. Second, the program carefully sequences every skill that the child is expected to use when reading. Skills, such as left to right orientation strategies for sounding out words, comprehension techniques, and problem-solving skills are all task analyzed into their component steps. Third, practice and discrimination exercises are carefully repeated to provide the highest degree of success as possible. For example, the sounds "b" and "d" are

introduced separately, so the child will not confuse them. A smooth transition from one lesson to the next is achieved by frequent review of previously learned material. New skills are introduced slowly into a context of well-rehearsed skills. Finally, the Direct Instruction program provides for clear communication between the student and teacher (Engelmann et al., 1983). This is demonstrated by the frequent modeling, feedback, and error correction drill evident in Direct Instruction. According to Engelmann, Had-dox, and Bruner (1983), teachers must examine the communication involved in early instruction to identify reading problems in students. In addition, "...to appreciate the pitfalls that are involved in clear communication, we have to put ourselves in the place of the child who is trying to learn to read" (Engelmann et al., 1983, p. 10). Direct Instruction allows teachers to provide immediate feedback and assistance through this positive communication (Gersten, 1987).

Teach Your Child to Read in 100 Easy Lessons (Engelmann et al., 1983) is one example of a Direct Instruction curriculum. This book, adapted for parents, utilizes the methods of Direct Instruction through DISTAR, a program published by the Science Research Associates (SRA). Research conducted on the effectiveness of the DISTAR program has shown it to be successful in teaching children the proper skills for reading achievement. For example, one study conducted with kindergarten through third-grade students

provided significantly positive results. This study involved 10,000 participants who were instructed in reading using the DISTAR program. These children outperformed all other children on standardized tests of reading achievement, language performance, and self-esteem who were instructed with other reading programs (Engelmann et al., 1983).

DISTAR can not only effectively teach general-education students how to read, but it is also the most widely used program by special education teachers serving children with mild handicapping conditions (O'Conner, 1992). Research supports the utility of DISTAR for low-income, minority students. One study conducted in a low-income Southeastern rural community compared the effects of the DISTAR reading program to a basal reading approach (Umbach, 1987). The results showed that 31 first-grade problem readers (19 male and 12 female, 1 white and 30 black) , who were instructed with DISTAR, scored significantly higher on the Woodcock Reading Mastery Test than a matched control group of problem readers who were instructed in the basal reading program. According to Engelmann, Haddox, and Bruner (1983), "the DISTAR program worked better than any other program in the cities, better in rural areas, better with whites, with blacks, and with brown, better with poverty children and with middle-class children (p. 10)."

The first purpose of this study was to examine the effects of Direct Instruction on the early reading skills of a kindergarten student through the use of the DISTAR reading program, *Teach Your Child to Read in 100 Easy Lessons*. Another purpose of the paper was to replicate and evaluate the findings of Stenseth and McLaughlin (1996) with an older child.

Method

Participant and Setting

The participant of the study, a 7-year-old male, was repeating kindergarten for the second year. He showed delays in letter recognition, phonic acquisition, and other beginning reading skills. He could recognize the letters in his name, on an inconsistent basis, but he was unable to identify a

majority of the alphabet letters. The participant was enrolled in a regular kindergarten class that contained 15 other students and the teacher. The first author worked with the participant two to three days a week, in an unoccupied room at the participant's school. Each session lasted a total of 20 minutes, and sessions were conducted for 6 weeks.

Materials

Flash cards containing the letters from the DISTAR alphabet found in the book, *Teach Your Child to Read in 100 Easy Lessons*, were constructed. This alphabet consists of 38 letter sounds and provides an easier phonic comprehension strategy. For example, the letter "h" makes the common sound, but it also appears in the alphabet with the "s" to make the "sh" sound. The "th" and "wh" and other joined sounds are also components of this alphabet.

Response Definitions and Measurement

The dependent variable was the number of correct oral responses the participant made when shown a flashcard. A correct response was defined as the participant saying the sound that matched the letter on the flashcard within 5 seconds of the flashcards presentation. An incorrect response was defined as the participant stating any sound other than the sound on the given flashcard, saying "I don't know," or not responding within 5 seconds. All data were collected using an event-recording procedure.

Experimental Design

A multiple baseline design (Kazdin, 1982) across letter sounds was used. Nine flashcards were used during this experiment. These were divided according to the number of sounds introduced in the given lessons. Lessons 1-16 were completed during the intervention. Lessons 1-4 introduced the sounds, "s", "m", and "a". In lessons 5-10, the long "e" sound as well as the "t" and "r" sounds were introduced. Lessons 11-16 introduced the "d", "i", and "th" sounds.

Procedures

Baseline. During all baseline sessions the participant was shown all the flashcards and was

prompted to say the sound on each card. If the participant did not respond correctly, or did not respond within 5 seconds, the card was placed in a pile to the left of the experimenter. If the participant responded correctly, the card was placed to the right of the experimenter. Praise was delivered for all correct responses. During sessions 1-4, the experimenter presented 38 flashcards. However, because the participant became upset with knowing so few sounds, the number of cards was limited on all subsequent sessions. In sessions 5-10, only six flash cards ("s", "m", "a", long "e", "t", "r", "d", "i", and "th" sounds) were presented to the participant. No data are available for the sounds "d", "i", and "th", because during sessions 4-8, the participant was not tested on these sounds.

Intervention. The researcher implemented Lessons 1 through 13 found in the book *Teach Your Child to Read in 100 Easy Lessons*. The experimenter implemented one lesson per session, and each lesson lasted approximately 20 minutes. All lessons were taught sequentially, and no lessons were skipped. Each lesson contained 7 to 8 sections or "tasks." The first task introduced the sounds to be learned. The participant was shown a letter sound and then verbally prompted to say the sound after the instructor provided a verbal model. Next, the participant practiced the sounds introduced in the lesson by imitating verbal models from the teacher, while looking at the printed word. Next, the participant reviewed the specified sounds as well as any words that were introduced. Finally, the participant wrote the sounds introduced in the lesson. The instructor modeled the correct form, after which the participant traced this model and continued writing independently. This was meant not only to build upon writing skills, but to reinforce proper sound identification.

Upon completion of a lesson, the participant was shown flash cards and was told to say the sound for each card. The experimenter expected that the sounds taught in that particular day's lesson as well as previous lessons to be sounds correctly read. It was expected that other sounds would be read incorrectly. If the participant responded incorrectly or did not respond within 5 seconds, the experimenter placed this card to the left and displayed the next flash card. If the participant responded correctly, this card was placed to the right of the experimenter and the participant was

praised. At the end of the session, the number of flashcards in the correct and incorrect piles was counted and recorded.

Results and Discussion

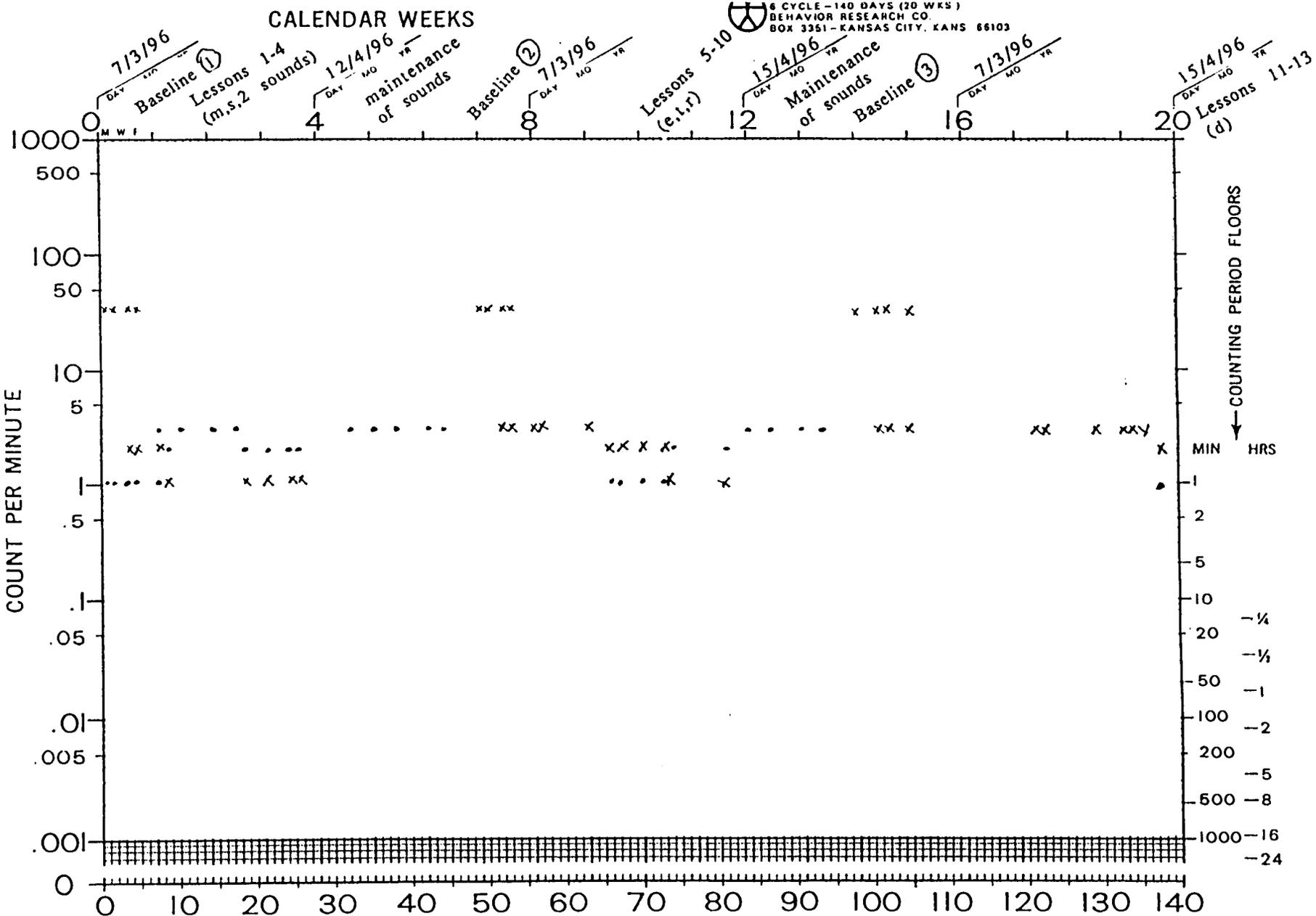
The results are shown in Chart 1. Baseline data show that the participant correctly pronounced two sounds. These were the "s" and "t" sounds. With the implementation of Direct Instruction, the number of sounds pronounced correctly increased. After the implementation of Lessons 1-4, the participant correctly identified an average of 2 sounds (range 1-3). After completing Lessons 5-10, which taught the sounds "e", "t", and "r", the participant was able to correctly say these sounds, as well as maintaining 2 of the 3 sounds from Lessons 1-4. After completing Lessons 11-13, which taught the sounds d, i, m, and th, the participant was able to correctly 1 of these 3 sounds, while maintaining all of the sounds taught in Lessons 1-4 and all of the sounds from Lessons 5-10. At the conclusion of the study, the participant was able to say correctly a total of seven sounds. Of these seven sounds, five were sounds that the participant did not know at the beginning of the study.

The results of the study showed a functional relationship between the Direct Instruction program and the acquisition of letter sounds. The participant increased his letter sound correspondence and progressed in early reading skills. Frequently, the participant was unable to correctly identify the letter sounds from the flashcards the same day that the sound was taught. Often it was not until the next lesson, the review lesson, or even after several maintenance lessons that the participant was able to consistently identify some sounds. These results demonstrate the importance of providing repeated practice for students experiencing difficulty in learning to read.

The present outcomes extend and replicate those of Stenseth and McLaughlin (1996) with a child who was experiencing difficulty in school. Teachers who have children who did not know letter sound correspondence, should implement DISTAR materials to teach such an important skill.

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McLaughlin	Angela	Edmonson	SUCCESSIVE CALENDAR DAYS		Scott	7	NO	Say Sounds
SUPERVISOR	ADVISER	MANAGER	Angela	Angela	BEHAVER	AGE	LABEL	COUNTED
Angela	Gonzaga University				Angela			
DEPOSITOR	AGENCY		TIMER	COUNTER	CHARTER			

Although at first glance, the outcomes may not appear to be socially significant (i. e., because the participant can only read a total of seven sounds), the rate at which the participant learned these new sounds represents a marked improvement over previous instruction. After one and a half years of kindergarten instruction, the participant had learned only two letter sounds, both of which were in his name. Using the DISTAR program, the participant learned five new sounds in fifteen 20-minute sessions. Given the results achieved thus far, it is conceivable that the participant could learn all 38 sounds in just 85 more lessons, which could be completed in less than one school year.

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