DOCUMENT RESUME

ED 402 553 CS 012 664

AUTHOR Mosley, Allen M.
TITLE The Effectiveness of "Direct Instruction" on Reading Achievement.
PUB DATE [97]
NOTE 11p.; For a related study, see ED 396 268.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Comparative Analysis; Grade 6; *Instructional Effectiveness; Intermediate Grades; *Reading Achievement; *Reading Instruction; Reading Research
IDENTIFIERS Chicago Public Schools IL; *Direct Instruction; Distar; Iowa Tests of Basic Skills

ABSTRACT

A study determined the effectiveness of the "Direct Instruction" program on the reading achievement of sixth-grade students. "Direct Instruction," known as "Distar" in the 1960s, is a phonic-based method that uses scripted lesson plans engaging students to learn by memory and classroom responses. Subjects were 30 sixth-grade students randomly selected from a pool of 72 students who attended Arna W. Bontemps Public School located in the predominantly low socioeconomic neighborhood in Chicago, Illinois' Greater Englewood area. Subjects' scores on the reading portion of the Iowa Tests of Basic Skills were compared. Results indicated that students taught using Direct Instruction as opposed to students taught in the regular classroom had no statistically significant difference on reading scores. Findings of an earlier study suggest that students have to be taught Direct Instruction for 2 years before a significant difference appears. (Contains 13 references and 1 table of data.) (RS)

The effectiveness of *Direct Instruction* on reading achievement.

Allen M. Mosley

Direct Instruction is a very well planned and extremely effective method of instructions. It is fully capable of erasing America's basic skills crisis reading, writing and mathematics, according to Englemann and Carnine (1982). Based on systematic methods and extensive research, *Direct Instruction* is perhaps the most fully validated teaching tool ever implemented in schools. At this point, very few educators or policy-makers are aware of the method or the effectiveness. Those, however, who do know about the method may never go back to or change from this method.

Direct Instruction has been around since the mid-1960's. At that time the program was known as *Distar*. The program was used primarily for primary grades to increase their reading and math scores. The score to be increased will assure that the student will continue to read or do math at grade level according to the research of Englemann (1970).

There are those who believe that direct instruction is a basic skill needed for improving the reading scores of students at the elementary and secondary level of education according to Lindsley (1984).

Although educators, school policy makers, business leaders, and the general public have become increasingly concerned about the three basics, reading, writing, and arithmetic in american schools, research-based solutions have existed for over two decades in the form of some type of measurably superiors teaching methodologies, teaching and *direct instruction.*

Direct Instruction differs from other behavioral education approaches in degree of emphasis on the antecedent stimuli, the precise nature of teacher wording, examples, how teachers present new materials to students. Englemann and Carnine (1982) see instruction in the same light as the problems of experimental control environmental variables must be controlled leaving only one variable, the learner. Environmental variables are controlled through "faultless communication." (Englemann & Carnine, 1982); instructional materials and teachers' delivery must be clear and unambiguous for faultless communication to take place.

Direct Instruction is defined as a phonic-based method that uses a scripted lesson plans engaging students to learn by memory and classroom responses. Since the comeback of *Direct Instruction* formally known as *Distar*, student scores have increased dramatically.

There is much controversy over the *Direct Instruction.* There are many who believe that the *Direct Instruction* is very successful, such as Bereiter and Englemann (1966). They believe that the program is the reason for so much success in some schools. Secondly, *Direct Instruction* is taught in a way in which a student is guaranteed success. For example, they, the student, learn through rate, they repeat responses to the teacher. The student is engaged in about ninety minutes of verbal and written responses. Finally, *Direct Instruction* use a method in which students must participate fully and as a result, they remember more. Many educators, parents and significant others believe that this is why this method *Direct Instruction* is so successful.

However, there are some, such as Janet Spector (1995), & Kenneth Morgan (1995) that indicate in one way or another that feel that *Direct Instruction* is no better than any other method of teaching. Many of the educators feel that the program is a waste of time and students will be bored with it after a while. They feel that *Direct Instruction* is geared for primary grades, and students in the intermediate and upper grades should have mastered the method then. Many of the

teachers who have been teaching for a while are not in favor of *Direct Instruction* because they are set in a style of teaching, and it's very difficult for them to change.

While there is much controversy over *Direct Instruction*, failure to learn to read, write or do math will have a great impact on the future society. Impacts such as an illiterate society, high unemployment, a poor educational system in America, etc. Therefore, many researchers, as Gersten (1982), believe that one should teach the best way possible using whatever method possible to make sure the society of tomorrow is able to read, write, and do math.

Although *Direct Instruction* is fairly new, there has been much research on the topic. The research on the topic by researchers, such as Englemann, Watkins, Lindsley, and others did much research to find out the effectiveness of direct instruction. This research tested and related programs to see which one would be the most effective for reading and math achievement.

According to Engelman (1970) *Direct Instruction* has a great effect on the reading and math achievement of school age children. He also stated that students being taught using *Direct Instruction* tend to do better than those taught using other methods.

Due to the need of more students being able to read, write and do mathematics, Bereiter and Englemann (1970) and associates were given federal funds to participate in *Project Follow Through* which was a program to identify effective teaching programs for students who are at risk for failure. The approach to instruction developed by Bereiter-Englemann combined with principles of *Direct Instruction* proceed to be successful, and most effective in a study done by Bereiter and Englemann in 1966.

Perhaps the most compelling evidence for the effectiveness of *Direct Instruction* comes from critiques from House, Glass, McLean & Walker (1978), it was generally acknowledged that the *Direct Instruction* model was clearly the most effective of all programs on measures of basic skills

achievement. House, Glass, McLean & Walker (1978) tested children after being instructed using *direct instruction* and found the scores to be somewhat higher than those taught in regular programs.

Some researchers have tried to assess the stability of the effects of the *Direct Instruction* model with scores from achievement test such as IOWA, CAT, etc. For example, Becher and Gersten (1982) compared the scores of fifth and sixth grade students who had participated in *Direct Instruction.* Scores were significantly higher on measures of reading and math according to the research of Becher and Gersten (1982).

According to Watkins (1988) the procedures for teaching *Direct Instruction* features certain practices which are distinguished from more traditional approaches. Some of the features are described as follow, scripted presentation, small groups, unison responding, signals, pacing, correction procedures and oral reading. These features are virtually guaranteeing success among students, according to the research of Watkins (1988).

The schools that are not using *Direct Instruction* were compared to Johnson (1989) and it was found that the schools using Direct Instruction usually had higher achievement scores.

Literature on the effectiveness of *Direct Instruction* is coming of age. Many researchers indicate in one way or another that *Direct Instruction* is one of the most if not the most effective method of teaching. This method has been proven by researcher to be the most effective way to increase achievement scores among students.

In contrast, some researchers disagree with the *Direct Instruction* method. They feel that students will learn anything in a given amount of time regardless as to the type of program used. According to Johnson (1989), *Direct Instruction* is the best known method of increasing reading and/or math scores.

Based on research by Spector (1995), she feels that direct instruction isn't as effective as many research say. She argues that learning how to read in alphabetic system requires children to understand the complex relationship between print and speech. She also suggests that pre-reading and beginning reading instruction should be designed to facilitate the acquisition of phonemic awareness. She also recommends specific practices for reading instructions will increase a student's reading score.

Therefore, the purpose of the study is to determine the effect of the *Direct Instruction* program on the reading achievement of sixth grade students.

Procedures

Population

The population for this study will include 72 sixth grade students. The students attend Arna W. Bontemps Public School, which is located in a predominantly low socioeconomic neighborhood in Chicago's Greater Englewood area. The population is comprised of 100% minority students.

Sample

From the 72 sixth grade students, the school record showed that 30 received the Direct Instruction reading program while 42 did not receive the program. Thirty students were randomly selected from each of these sub-populations.

Each spring the Iowa Tests of Basic Skills (ITBS) are administered to each student in Chicago's Public Elementary Schools. Two samples were identified from the school records of those students who had received the *Direct Instruction* reading program and those students who had not received the program. The reading results of the ITBS administered during the spring of 1996 school year will be used in this study. The post-test control group design will be employed.

The instrument used for this study will be the IOWA Test of Basic Skills, 1996 edition; Level 12 Form A. The test was administered to the groups comprising each class and was timed, lasting 40 minutes in two segments. The test measured achievement in the area of reading comprehension, and vocabulary.

Treatment of Data:

The findings will be tabulated in terms of means and standard deviations. The *t* test will be employed at the .05 level of confidence to determine if there is any statistically significant difference between the mean scores.

The samples for the study included sixth grade students of Arna W. Bontemps School. Each spring students take the Iowa Test of Basic Skills (ITBS). From these sixth grade students, two groups were randomly selected. Students in one group were taught using the Direct Instruction program while students in the other group were taught using the regular reading program. Results from the 1996 ITBS reading test were used as the post-test.

The findings of this study has been proven through the method of data collection and analysis of the data that students taught using direct instruction as opposed to students taught in the regular classroom had no significant difference on the reading scores of sixth grade students.

The findings were based on analysis of the data as mentioned before. The findings were also based on level of the two groups and the size of the two groups selected randomly students.

In conclusion, in order for the direct instruction program to make a significant difference on achievement scores, whether they are reading or math scores, the student would have to be taught in the program for at least two years according to Englemann.

A *t* test ($p<.05$) for the sample was done on the test scores to determine if there was a statistically significant change in reading achievement after being taught using the *Direct Instruction* program.

Table 1 summarizes the statistical analysis.

Table 1

Means, Standard Deviations, and *t* Tests for the Experimental Group and Control Group for Reading Achievement Scores.

Reading

Test	**Direct Instruction**	**Regular Instruction**	
	N=30	N=42	*t* = 2.00 Calt = 1.03
Post-Test			
M	7	5	
SD	1.06	0.64	

* *Sig > calt at .05 level*

BIBLIOGRAPHY

Becker, W.C., & Carnine, D.W. (1980). ***Direct Instruction: An effective approach to education intervention with the disadvantaged and low performers.*** B.B. Lahey & A.K. Kazdin (Eds.), Advances in Clinical and Child Psychology. New York: Plenum

Bereiter, C., & Englemann, S. (1966). ***Teaching disadvantaged children in the pre-school.*** Englewood Cliffs, N.J.: Prentice-Hall.

Binder, C., & Watkins, C.L. (1989). ***Promoting effective instructional methods: Solutions to America's educational crisis.*** Future Choices, 1(3), 33-39.

Englemann, S. (1970). ***The effectiveness of Direct Instruction on I.Q. performance and achievement in reading and arithmetic.*** In J. Hellmuth (Ed.), Disadvantaged Child. Vol. 3, Compensatory education: A national debate. New York: Brunner/Mazel.

Gersten, R.M. (1982). *High school followup of DI Follow Through.* Direct Instruction News, 2,3.

Johnson, K. (1989). *Executive Summary.* Seattle, WA: Morningside Corporation. Seattle, WA.

Lindsley, O.R. (1972). From Skinner to Precision Teaching. In J.B. Jordan and L.S. Robbins (Eds.), ***Let's try doing something else kind of thing (pp. 1-12).*** Arlington, VA: Council on Exceptional Children.

Lochery, M., & Maggs, A. (1982). *Direct Instruction research in Australia: A ten year analysis.* Educational Psychology, 2, 263-288.

Morgan, Kenneth B. (1995). *Creative Phonics: A Meaning - Oriented Reading Program*. Intervention in School and Clinic, V30 n5, p. 287-291.

Neufeld, K.A. & Lindsley, O.R. (1980). ***Charting to compare children's learning at four different reading performance levels***. Journal of Precision Teaching, 1(1), 9-17.

Sherman, J.G., Rushin, G., & Semb, G.B. (Eds.) (1982). ***The Personalized System of Instruction: 48 Seminal Papers***. Lawrence, KS.

Spector, Janet E. (1995). *Phonemic Awareness Training: Application of Principles of Direct Instruction Reading and Writing Quarterly: Overcoming Learning Difficulties*: VII n1, p. 37-51, January-March 1995.

Watkins, C.L. (1988). *Project Follow Through: A story of the identification and neglect of effective instruction*. Youth Policy, 10(7), 7-11.

CS012664

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: Effectiveness of Direct Instruction on Reading Achievement.

Author(s): Allen M. Mosley

Corporate Source:

Publication Date:

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic/optical media, and sold through the ERIC Document Reproduction Service (EDRS) or other ERIC vendors. Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following two options and sign at the bottom of the page.

☑

Check here
For Level 1 Release:
Permitting reproduction in microfiche (4" x 6" film) or other ERIC archival media (e.g., electronic or optical) ***and*** paper copy.

The sample sticker shown below will be affixed to all **Level 1** documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Level 1

The sample sticker shown below will be affixed to all **Level 2** documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Level 2

☐

Check here
For Level 2 Release:
Permitting reproduction in microfiche (4" x 6" film) or other ERIC archival media (e.g., electronic or optical), but ***not*** in paper copy.

Documents will be processed as indicated provided reproduction quality permits. If permission to reproduce is granted, but neither box is checked, documents will be processed at **Level 1**.

"I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic/optical media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries."

Sign here→ please

Signature: Allen M. Mosley

Printed Name/Position/Title: Allen M. Mosley
M.A. Educational Administration

Organization/Address:
Bontemps Elementary School
1241 W. 58th Street
Chicago, Ill 60636

Telephone: (773) 778-8182

FAX: (773) 535-9569

E-Mail Address:

Date: 1/23/97

(over)

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

Requisitions

ERIC/REC
2805 E. Tenth Street
Smith Research Center, 150
Indiana University
Bloomington, IN 47408

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

~~ERIC Processing and Reference Facility~~
~~1100 West Street, 2d Floor~~
~~Laurel, Maryland 20707-3598~~

~~Telephone: 301-497-4080~~
~~Toll Free: 800-799-3742~~
~~FAX: 301-953-0263~~
~~e-mail: ericfac@inet.ed.gov~~
~~WWW: http://ericfac.piccard.csc.com~~