DOCUMENT RESUME

ED 459 563 EC 308 751

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TITLE Upgrading Preparatory Work To Augment Reading Development: UPWARD for Students with Disabilities. Final Report.
INSTITUTION Vanderbilt Univ., Nashville, TN.
SPONS AGENCY Special Education Programs (ED/OSERS), Washington, DC.
PUB DATE 2001-08-31
NOTE 9p.
CONTRACT H023C70230
PUB TYPE Reports - Descriptive (141)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Beginning Reading; Cooperative Learning; *Decoding (Reading); *Disabilities; Elementary Education; *Inclusive Schools; Kindergarten; Kindergarten Children; *Peer Teaching; Phoneme Grapheme Correspondence; Phonology; Primary Education; *Reading Instruction

ABSTRACT

This final report, covering the period September 1, 1997 to August 31, 2001, discusses the development, activities, and outcomes of Upgrading Preparatory Work To Augment Reading Development: UPWARD for Students with Disabilities, a multi-faceted program for providing children with disabilities intensive, phonological awareness and other early literacy instruction within general kindergarten classrooms. To develop and evaluate the program, experimental studies were run investigating the effects of a highly structured, class-wide peer-tutoring program. The effects of the programs that emphasized phonological awareness versus beginning word analysis were examined, along with the effects on the development of phonological awareness and other emergent literacy skills of kindergarten children with disabilities, and the incidental benefits for other students in these classrooms. The children were followed though first grade to examine effects on reading development. Results of the project indicate that: (1) peer-mediation was a productive format for delivering reading readiness programs to children as young as 5 years old; (2) the nature of peer-mediated programs should focus on decoding activities rather than on phonological awareness activities; (3) effects for students with and without disabilities were similar in nature; (4) effects were similar in high-poverty and middle-class schools; and (5) the kindergarten teachers were enthusiastic about their participation in Peer-Assisted Learning Strategies. (CR)

FINAL REPORT

UPGRADING PREPARATORY WORK TO AUGMENT READING DEVELOPMENT: UPWARD FOR STUDENTS WITH DISABILITIES

Grant #H023C70230

September 1, 1997 to August 31, 2001

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FINAL REPORT

UPGRADING PREPARATORY WORK TO AUGMENT READING DEVELOPMENT: UPWARD FOR STUDENTS WITH DISABILITIES

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PURPOSE AND CONTEXT

Literacy is necessary to earn a high-school diploma and for success in postsecondary education or work. Nevertheless, many children with disabilities never learn to read. Their failure begins early -- in kindergarten where they fail to develop phonological awareness and other emergent literacy skills.

In the past decade, innovative treatments have been developed to strengthen children's phonological awareness and emergent literacy skills. Unfortunately, these programs do not help about 30% of young children -- a subgroup into which most children with disabilities fall. Moreover, many of these programs have been implemented by research staff, rather than by teachers, and therefore have yet to demonstrate feasibility for classroom use; some are costly; and most rely on a pullout model that, for many teachers and parents of young children, is undesirable. The challenge is to create a more intensive and broadly effective program, which (a) promotes inclusion in normalized settings, (b) encourages meaningful family participation, (c) is feasible for use by classroom teachers, and (d) is relatively inexpensive. We believe we can meet this challenge through the combined use of teacher-led activity and peer-mediated instruction.

The purpose of **U**pgrading **P**reparatory **W**ork to **A**ugment **R**eading **D**evelpment: **UPWARD for Students with Disabilities** is to develop an effective and efficient multi-faceted program for providing children with disabilities intensive, phonological awareness and other early literacy instruction within general kindergarten classrooms. To accomplish this, we ran experimental studies investigating the effects of a highly structured, classwide peer-tutoring program. We examined effects of programs that emphasized phonological awareness versus beginning word analysis; we investigated effects on the development of phonological awareness and other emergent literacy skills of kindergarten children with disabilities; we examined incidental benefits on other students in these classrooms; and we followed children through first grade to examine effects on reading development.

PROJECT ACTIVITIES

In implementing Project UPWARD, we accomplished the following activities.

Year 1

Unidentified staff were recruited and secured. Other project staff were assigned.

Weekly staff meetings occurred. At these meetings, timely and quality completion of activities has been monitored.

We recruited and identified participants, and obtained informed consent from teachers and parents. Participants were 33 teachers, 11 in each of three treatment conditions (Ladders-to-Literacy; Ladders-to-Literacy + Peer-Assisted Learning Strategies [PALS]; control). In each of 8 schools, we recruited teachers who agreed to be randomly assigned to any of the three treatment conditions. We randomly assigned teachers so that we had each treatment represented in each school.

We finalized the kindergarten PALS materials/manual and, with input from Rollanda O'Connor, we identified 12 key Ladders-to-Literacy activities that every teacher in the Ladders-to-Literacy and Ladders + PALS treatments would implement at specified weeks. We also developed measures to be used in assessing fidelity of implementation for Ladders and for decoding PALS.

We conducted a 1-day workshop for teachers on Ladders-to-Literacy. Rollanda O'Connor conducted this workshop. During her visit to Nashville, she also consulted with UPWARD staff about outcome measurement.

We conducted a follow-up half-day workshop, approximately 1 month later, on decoding PALS.

We pretested all students and collected demographic data on teachers and children.

In October, teachers began to implement Ladders-to-Literacy. In December, teachers began to implement decoding PALS. Project staff provided on-site technical assistance, with weekly visits to classrooms.

Fidelity data were collected.

Posttesting occurred.

We scored and reduced the data. In addition, data were entered into an electronic data base.

We analyzed the data.

Results were as follows.

> Treatment groups were comparable on all teacher and student demographic variables.
>
> Students with disabilities developed stronger reading readiness with PALS + Ladders, as revealed by statistically significant effects on rapid sound naming and on the Woodcock Reading Mastery Test – Work Attack subtest. No other effects were statistically significant. Effect sizes on the remaining measures did, however, favor students in the PALS + Ladders condition.
>
> Across the entire data base, which includes Title I and non-Title I schools as well as low-,

middle-, and high-achieving students, effects were as follows. On the phonological measures (i.e., segmenting and blending), both the Ladders and the PALS + Ladders groups performance significantly better than did control. However, on the more direct measures of reading (i.e., rapid sound naming, the Woodcock Reading Mastery Test Word Attack and Word Identification, and WIAT Spelling Test), only students in PALS + Ladders outperformed control.

We presented this study at the annual meetings of the Pacific Coast Research Conference, American Educational Research Association, Council for Exceptional Children, and Learning Disabilities Association of America.

We held focus groups meetings with teachers to determine how to refine kindergarten PALS for Year 2 implementation.

We conducted a teacher get-together at which we shared results with teachers.

We held meetings with central office administrators in Metro/Nashville to share Year 1 results.

We wrote a research report, which was published in the Journal of Educational Psychology.

We wrote a research report specifically on the subgroup of children with disabilities. This paper is in press with Exceptional Children.

We wrote a description of K-PALS which was published in Teaching Exceptional Children.

We developed a videotape illustrating kindergarten PALS. This videotape is used for dissemination, communication with other researchers, and recruitment of research participants.

Year 2

Weekly staff meetings occurred. At these meetings, timely and quality completion of activities was monitored.

To follow-up Year 1 participants, we located more than 300 of the 406 Year 1 students in classrooms where we could conduct Year 2 research. We obtained consent from teachers and parents for participation. Each student's teacher was assigned randomly to one of three first-grade treatments: first-grade decoding PALS with story sharing, first-grade decoding PALS with first-grade strategic reading comprehension PALS, and control. We completed fall testing on each of first-grade students and followed these students through the end of first grade, with a final testing at the end of that year.

In the second-year kindergarten study, we examined the effectiveness of PALS alone, without Ladders. The question of PALS effectiveness, in the absence of Ladders, is important for two reasons. First, PALS focuses directly on early reading skills, in contrast to Ladders' focus on phonological awareness. The second-year questions about PALS effectiveness, therefore, concerns whether instruction on phonological awareness is necessary or can be circumvented with direct

reading instruction in kindergarten. Second, PALS alone, with Ladders, is easier for kindergarten teachers to implement.

For this second year study, we recruited and identified participants, and obtained informed consent from teachers and parents. Participants are 33 teachers, 11 in each of three treatment conditions (Ladders-to-Literacy + PALS; PALS alone; control). In each school, we recruited teachers who agreed to be randomly assigned to any of the three treatment conditions. We randomly assigned teachers so that we have each treatment represented in each school.

We revised the kindergarten PALS materials/manual and refined the measures to be used in assessing fidelity of implementation to reflect the revisions in the PALS materials/manual.

We conducted a 1-day workshop for teachers on Ladders-to-Literacy + kindergarten PALS.

We conducted a 1-day workshop for teachers on kindergarten PALS.

We pretested all students and collected demographic data on teachers and children.

In October, teachers began to implement treatments. Project staff provided on-site technical assistance, with weekly visits to classrooms.

Fidelity data were collected.

Posttesting occurred.

We scored and reduced the data. In addition, data were entered into an electronic data base.

We analyzed the data.

Results were as follows.

> Treatment groups were comparable on all teacher and student demographic variables.
>
> Students with disabilities developed stronger reading readiness with PALS and with PALS + Ladders compared to the control group, as revealed by statistically significant effects on rapid sound naming and on the Woodcock Reading Mastery Test – Work Attack subtest. No other effects were statistically significant.
>
> Across the entire data base, which includes Title I and non-Title I schools as well as low-, middle-, and high-achieving students, effects were as follows. On the phonological measures (i.e., segmenting and blending), both the PALS and the PALS + Ladders groups performed significantly better than did control. However, on the more direct measures of reading (i.e., rapid sound naming, the Woodcock Reading Mastery Test Word Attack and Word Identification, and WIAT Spelling Test), only students in PALS outperformed control. There was some suggestion that Title 1 school status might mediate effects, but interactions between treatment and Title 1 status were not statistically significant when

teacher was used as the unit of analysis.

We presented this study at the annual meetings of the American Educational Research Association, Society for the Scientific Study of Reading, Pacific Coast Research Conference, and Council for Exceptional Children.

We held focus groups meetings with teachers to determine how to refine kindergarten PALS for Year 2 implementation.

We conducted a teacher get-together at which we shared results with teachers.

We held meetings with central office administrators in Metro/Nashville to share Year 2 results.

We wrote a research report, which has been submitted for publication.

Year 3

Weekly staff meetings occurred. At these meetings, timely and quality completion of activities was monitored.

In the third-year kindergarten study, we examined the effectiveness of two forms of PALS: decoding PALS vs. phonological awareness (without letters) PALS. The question of the appropriate focus for kindergarten reading readiness, decoding vs. phonological awareness, is timely because phonological awareness has received much attention in recent years. Phonological awareness is a good predictor of literacy development. The question is whether direct work on reading, when mediated by peers, accomplishes as much as or more than work on the underlying process of phonological awareness. Also, it seemed possible that the appropriate focus might differ as a function of student status (disabled or not; high vs. average vs. low; Title 1 vs. non-Title 1).

We used a 2-factor designed: decoding PALS (yes vs. no) and phonological awareness PALS (yes vs. no) to produce four study conditions: control; phonological awareness PALS; decoding PALS; phonological awareness PALS + decoding PALS. In all four study conditions, teachers conducted 5-minute teacher-led lessons. In the other three conditions, teachers led 20-minute peer-mediated sessions. In Title 1 schools, sessions were conducted 4 times per week; in non-Title 1 schools, 3 times per week.

We developed a PALS program focused on phonological awareness, with 70 lessons.

We develop the 70 teacher-directed lessons.

We revised the decoding PALS materials/manual.

We refined the measures to be used in assessing fidelity of implementation to reflect all four study conditions.

We recruited and identified participants, and obtained informed consent from teachers and parents.

Participants are 32 teachers, 8 in each of four study conditions. In each school, we recruited teachers who agreed to be randomly assigned to any of the four treatment conditions. We randomly assigned teachers so that we have each treatment represented in each school.

We conducted a 1-day workshop for teachers in each condition.

We pretested all students and collected demographic data on teachers and children.

In October, teachers began to implement treatments. Project staff provided on-site technical assistance, with weekly visits to classrooms.

Fidelity data were collected.

Posttesting occurred.

We scored and reduced the data. In addition, data were entered into an electronic data base.

We analyzed the data.

Results were as follows.

> Treatment groups were comparable on all teacher and student demographic variables.
>
> Students with disabilities developed strongest reading readiness with decoding PALS, as revealed by statistically significant effects on rapid sound naming and on the Woodcock Reading Mastery Test – Work Attack subtest. No other effects were statistically significant.
>
> Across the entire data base, which includes Title I and non-Title I schools as well as low-, middle-, and high-achieving students, effects were as follows. On the phonological measures (i.e., segmenting and blending), the main effect for phonological awareness PALS was statistically significant, favoring the performance of students who had phonological awareness PALS. However, on the more direct measures of reading (i.e., rapid sound naming, the Woodcock Reading Mastery Test Word Attack and Word Identification, WIAT Spelling Test, and fluency), the main effect for decoding PALS was statistically significant, favoring the performance of students who had decoding PALS. Effect sizes for the decoding PALS effect exceeded those associated with the phonological awareness PALS effect. Interactions between treatments and Title 1 status were not statistically significant when teacher was used as the unit of analysis.

We presented this study at the annual meetings of the American Educational Research Association, Society for the Scientific Study of Reading, Pacific Coast Research Conference, and Council for Exceptional Children.

We conducted a teacher get-together at which we shared results with teachers.

We held meetings with central office administrators in Metro/Nashville to share Year 3 results.

We are writing a research report, which will be submitted for publication.

We refined our videotape, incorporating tape from all three years and highlighting case studies featuring children with disabilities.

CONCLUSIONS

On the basis of this sytematic, programmatic research program on peer-mediated reading readiness for kindergarten students with and without disabilities, we offer the following conclusions.

1. Peer-mediation is a productive format for delivering reading readiness programs to children as young as five years old.

2. The nature of that peer-mediated program should focus on decoding activities rather than on phonological awareness activities (that do not incorporate letters).

3. Effects for students with and without disabilities are similar in nature. The percentage of students who may be considered "treatment nonresponders" is, however, higher for students with disabilities. This indicates the need to monitor student progress so that nonresponders may be identified as early as possible and targeted for remediation.

4. Effects are similar in high-poverty and middle-class schools. However, the pattern of findings suggests that effects may be more tenuous in Title 1 schools. So, again, the need to monitor student progress in high-poverty schools is suggested.

5. Kindergarten teachers are enthusiastic about their participation in PALS. However, technical assistance in implementing PALS is required. Within school districts, this may be provided by central administration training staff or onsite teachers who have some percentage of their effort dedicated to professional development.

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