A study determined the initial success of the Compacted Approach to Reading (CAR) program as measured at the end of the program's pilot year. Subjects were 21 first graders and 7 second graders in Tennessee identified and recommended by their first and second grade classroom teacher. The CAR program was developed based on concepts observed in the highly successful, but expensive, Reading Recovery Program. The program uses a small group setting for instruction, intensive instruction, direct instruction emphasizing reading strategies to get beginning readers involved with books and language, intervene before reading difficulties become self-esteem problems, bring students' reading performance up to the average range for their classroom settings, and prevent the early labeling of children and the stigma attached to the labeling process. Students' pre- and posttest data were used in the analysis. Results indicated that the program was effective at the first grade but not the second grade level. The early intervention program was implemented again the following year for first grade students. (Contains nine references, 2 tables, and 4 figures of data.) (RS)
COMPACTED APPROACH TO READING (CAR): AN INTERVENTION PROGRAM FOR AT-RISK BEGINNING READERS

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Introduction

The term early intervention is used in a variety of ways in the professional literature and often refers to programs designed for preschool children. In a recent review of the literature Pikulski (1994) strongly suggests that early intervention programs play a critical role in the effort to eradicate reading and school failure, while little evidence could be found that suggested success for programs designed to correct reading problems beyond the second grade.

Background to the Problem

During the summer of 1993, during careful analysis of the T-CAP test scores at one elementary school in southeastern Tennessee, 10% of its population were identified as failing to learn to read by the end of second grade. Deep concern for the success of all students lead to indepth discussions about these findings and research articles on "intervention" became selected readings for a "Principal's Inclusion Program". Traditionally, students who haven't learned to read by the end of first grade are recommended for additional testing and possible placement in special education programs.

These discussions led to a search for an alternative solution to this problem and an attempt to identify an early intervention program for use at this school. This search was spearheaded by an innovative principal and two special education teachers. They began by seeking approval and support from the Superintendent, the Early Childhood Director, and the Elementary and Special Education
Directors at Central Office. Because of the high cost factor involved in early intervention programs, this approval and support soon led to the identification of a need for a locally designed program which would meet their needs at an affordable price in an urban school setting.

Following an observational visit to a neighboring school district's successful, but expensive Reading Recovery Program and meetings with the supporting staff from the Chattanooga Public Schools Central Office, a university professor was invited to join this group and assist in the development of a local intervention program. The long range objective of this group was to develop an early intervention program which would provide at-risk students with opportunities to experience success, overcome reading difficulties and build their self-esteem so that they could become life-long learners and not Special Education statistics.

Program Development Personnel

The Compacted Approach to Reading (CAR) Program, an innovative, short term, early intervention program was developed by Kathleen Conner, Principal, Kim Anderson and Theresa Crabtree, Special Education teachers at East Brainerd Elementary School in Chattanooga, Tennessee, Susan Swanson, Elementary Supervisor and Cynthia Gettys, University of Tennessee at Chattanooga, UC Foundation Assistant Professor of Reading and Language Arts. This team was supported by Dr. Harry Reynolds, Superintendent; Mr. Ray Swoffard, Area Director; Dr. Beverly Tyner, Early Childhood Director; and Mr. Bill Myers, Special Education Director,
Chattanooga Public Schools. The CAR Program was developed during the fall of 1993, to meet East Brainerd Elementary School's specifically identified needs. Pilot program implementation took place during the remainder of the 1993-1994 school year.

Student Selection

All students selected to participate in this program were initially identified and recommended by their first and second grade classroom teachers. Second grade students were selected because of their low test scores which had identified the need for intervention to begin with. The basis for teacher identification of students was classroom demonstration of behaviors classically associated with failure in learning to read.

A pre-test was designed which incorporated: 1). a letter recognition test, 2). Marie Clay's Concepts of Print Test used with Happy Birthday Moon by Frank Ash, 3). The Dolch Sight Word List, and 4). Form A of the Pre-primer, Primer, and First Grade Levels of the Listening Comprehension portion of the Burns & Roe Informal Reading Inventory (1992). Following Pre-Testing procedures final selection for CAR Program participation was made by a committee of four: the principal, the two special education teachers, and the university faculty member, based on pre-test results.

CAR Program Description

The idea for this innovative, early intervention program for at-risk students is based on concepts observed in the highly successful, but expensive Reading Recovery Program which provides
one-to-one tutoring to students performing below the class average in first grade. The strategies and techniques used in the Reading Recovery Program have been replicated in a manner which is cost effective by serving students in small group settings.

The teaching techniques specific to CAR include:
- Early intervention with an at-risk population.
- A small group setting for instruction.
- Intensive, compacted instruction.
- Building on students' strengths.
- Direct instruction which emphasizes reading strategies.
- Development of a student's independence and self-esteem.
- Acceleration of instruction.

The instructional objectives of the CAR program include:
- Getting beginning readers involved with books and language.
- Intervening before reading difficulties become self-esteem falls.
- Bringing students reading performance up to the average range for their classroom settings.
- Helping children promote their own reading habits which will enable them to become life-long learners.
- Preventing the early labeling of children and the stigma's attached to the labeling process.

This first and second-grade intervention program was implemented at East Brainerd Elementary School with students representing both middle and lower socioeconomic levels. It was conducted by the two special education teachers in addition to the regular reading instruction provided by the classroom teacher. These special education teachers worked daily with small groups of
3-5 students for an additional 20 minutes of reading instruction. The small group instruction focused on the repeated reading of picture books or teacher/student written books emphasizing all aspects of the language arts: listening, speaking, writing and reading, the Dolch Basic Sight Word List, developing students' phonemic segmentation, blending abilities, and other word recognition skills. Students also worked individually or in pairs for an additional 10 minutes with a parent/school volunteer reinforcing skills, reviewing lessons, rereading materials and words from their small group instruction sessions.

Purpose of Study

The purpose of the study was to determine the initial success of the CAR Program as measured at the end of the program's pilot year (1993-94) implementation. Twenty-one first graders and 7 second graders were included in the study.

Findings of the Study

CAR, an early intervention reading program was designed for use with small groups of students and has proven to be a successful program for the first grade level at one school in Chattanooga, Tennessee. Initial findings show a greater significance of effect at the first grade level, with little or no significance at the second grade level.

The CAR Program was designed to reflect Marie Clay's very successful Reading Recovery Model in a small group setting. The results of initial data analysis performed on individual student gain scores from the pilot program demonstrate statistical
The number of students served in the pilot program was small. Each student's progress was compared with his or her own progress following full implementation of the program. Pre-test and post-test data were used in the analysis. Students who transferred to other schools during the pilot project were excluded from the reported data as no post tests were administered.

Nineteen first graders (90%) that had pre and post test scores were served an average number of 21 weeks, slightly more than one semester. Two first grade students (10%) with only pre-test scores were served shorter times, before transferring to other schools. Fourteen first grade students (66%) transferred back to the regular first grade classroom, performing at grade level. Three first grade students (15%) were recommended for additional testing, with 2 of them (10%) being placed in Special Education and the other 1 (5%) remaining in process of placement into the Special Education program.

See Table 1 and Figures 1 and 2 for graph representation of the first grade results.
Table 1
Compacted Approach to Reading
Results - Grade 1

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<tr>
<th>Student</th>
<th>Pre DW</th>
<th>Level</th>
<th>Post DW</th>
<th>Level</th>
<th>Pre LC (%)</th>
<th>Level</th>
<th>Post LC (%)</th>
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Figure 1
Dolch Sight Word Scores
Grade 1

Scores

Student

PRE DW
POST DW
Figure 2
Listening Comprehension
Grade 1

Post
Pre

Score

Student

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

0 100 200 300
Seven second grade students were served. Six second grade students (86%) were referred for testing and placement in Special Education. One (14%) was tested resulting in no code, 1 referral (14%) is in process, 2 (28%) were placed in Special Education, and 2 (28%) still remain referred, but not yet placed in Special Education. One second grade student (14%) was returned to the second grade classroom with Independent Listening Comprehension Scores at the first grade level, and a Dolch Sight Word Vocabulary above the third grade level.

See Table 2 and Figures 3 and 4 for graph representation of the second grade results.
Table 2
Compacted Approach to Reading
Results - Grade 2

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<th>Post DW</th>
<th>Level</th>
<th>Pre LC (%)</th>
<th>Level</th>
<th>Post LC (%)</th>
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<td>P</td>
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Figure 3
Dolch Sight Word Scores
Grade 2
Figure 4
Listening Comprehension
Grade 2

Student

Score

Pre

Post

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Initial Recommendations of the Study

The initial findings of the CAR Pilot Program resulted in the program being implemented again during the 1994-1995 school year. Based on the initial findings of the pilot year program, early intervention is only being provided for first grade students during the 1994-95 school year. Further research is recommended to validate the individual components of the CAR Program before the program is ready to be replicated in other school settings.

Recommendations for Further Study

Several questions arising from the study to date which would require additional research are:

1). If regularly certified elementary education classroom teachers would replicate the CAR Program, would they achieve the same or similar success results when working in small groups with at-risk students, or does the intervention need to be provided by teachers with special education certification?

2). By the end of the third grade are the students who took part in the CAR Program still performing at grade level?

3). Would intervention at the kindergarten level be as successful as intervention at the first grade level?

Summary

Prevention of reading problems appears expensive, but it may actually be very cost effective when compared against the costs involved in remedial efforts; in retaining students for 1 or more years of schooling; or in placement in expensive, special education programs (Pikulski, 1994; Dyer, 1992; Slavin, 1989; Slavin, Madden, Karweit, Dolan and Wasik, 1991; Smith & Strain, 1988).

Slavin, Madden, Karweit, Dolan, and Wasik (1991) summarized that enormous amounts are spent annually in efforts to remediate
reading problems, or so-called "learning disabilities," while a fraction of that funding is expended on preventing those problems.

CAR was designed to prevent rather than remediate reading problems. While CAR has been found to be a successful early intervention reading program, it may not be the best program for all schools. Locating the best early intervention program for each school will depend on the circumstances of individual schools or school districts. For example, schools that have a high percentage of at-risk students might consider total school intervention programs like Success for All (Slavin, et al., 1992) or the Winston-Salem Project (Pikulski, 1994). Another program to consider would be Early Interventions in Reading (Taylor, B.M., Short, R.A., Frye, B.J., & Shearer, B.A., 1992) which was designed for use with small groups of students working with the classroom teacher and can serve a larger number of students than Reading Recovery, which requires one-to-one tutoring. However, some children may require the intense one-to-one support of Reading Recovery. It might also be more effective to provide some children with one form of early intervention and other children with a different form even within the same school.
Bibliography


