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A COMPARISON OF THE EFFECTIVENESS OF READING INSTRUCTION
IN A RESOURCE CENTER PULL-OUT PROGRAM VERSUS A
REGULAR EDUCATION PROGRAM

by
Barbara Groff

A Thesis

Submitted in partial fulfillment of the requirements
of the Master of Arts Degree in the Graduate
Division of Rowan University
5/1/98

Approved by _____
Professor

Date Approved May 4, 1998

ABSTRACT

Barbara Groff

A Comparison of the Effectiveness of Reading Instruction
in a Resource Center Pull-Out Program Versus a
Regular Education Program

1998

Dr. Stanley Urban

Learning Disabilities

The purpose of this study was to determine the effectiveness of a resource center pull-out program and a regular education program with in-class support as reading instruction placement options for students with learning disabilities.

A criterion-referenced reading inventory was administered to each subject in September to assess word recognition in isolation and reading comprehension. The assessment tool was readministered in March to obtain data in order to establish the gains made by each student.

Eighteen students participated in the study. The subjects are boys and girls between the ages of ten and twelve who attend adjacent school districts. All students have been classified perceptually impaired by the local Child Study Teams.

An analysis of the data revealed that the students who received reading instruction in the resource center pull-out program showed greater gains in word recognition

and comprehension when compared with students who were instructed in a regular education program with some in-class support.

MINI-ABSTRACT

Barbara Groff

A Comparison of the Effectiveness of Reading Instruction
in a Resource Center Pull-out Program Versus a
Regular Education Program

1998

Dr. Stanley Urban

Learning Disabilities

This study demonstrated through an analysis of data from a reading assessment that students receiving reading instruction in a resource center pull-out program made more overall gains on criterion-referenced measures than comparable students receiving reading instruction in a regular education class with in-class support.

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Chapter 1
Statement of the Problem

Introduction

The course of Special Education reform in our country has been driven by the Education for All Handicapped Children Act (P.L.94-142) enacted in 1975. This extensive law which contains important legal protections for handicapped children has been amended a number of times and has been revised and renamed the Individuals With Disabilities Act (IDEA, P.L.101-476). The drive to continue to improve special education is reflected in the most recent reauthorization of IDEA signed by President Clinton on June 4, 1997.

IDEA directly mandates states to meet minimum federal provisions in special education: (a) Every student with a disability must be assured an appropriate public education at no cost to parents or guardian; (b) the student must be educated in the least restrictive environment that is consistent with his or her educational needs and, in so far as possible, with students without disabilities; and (c) a written I.E.P. must be prepared for each student with a disability. Some of these provisions continue to be clarified by the courts and federal officials.

The regular education initiative (REI) first proposed by Assistant Secretary of Education Madeleine C. Will (1986) called for general educators to include children with special needs in their classes and become responsible for their education. Prior to Will's proposal mainstreaming had been the preferred method of placing students with disabilities in classes and schools with their nondisabled peers. For example, a student might be mainstreamed for art and music but attend a resource room for reading or math. Will(1986) questioned this approach and felt regular education should assume much more responsibility for the instruction of students with disabilities.

Subsequently, the REI evolved into the practice of inclusion. There are different interpretations of what this term means. However, full inclusion is usually interpreted as meaning that students with disabilities are placed in their neighborhood schools in general education classrooms for the entire day, and general educators have primary responsibility for those students (Laski, 1991; Stainback & Stainback 1992).

The ambiguous concept of Least Restrictive Environment has been the focus of numerous court cases as well as lively and sometimes heated discussions regarding the interpretation of the extent to which a disabled student should be educated with nondisabled peers. The former practice of mainstreaming in specific academic areas has been evolving toward the inclusion of handicapped children

into regular education programs with appropriate accommodations as their total placement option.

Although IDEA does not require that a placement maximize the potential of a child, it would seem that a substantial educational benefit would be desirable particularly for mildly handicapped students. Therefore, studying and comparing the efficacy of various placement options in a systematic manner will provide useful information in identifying best educational practices.

Purpose of the Study

The purpose of this study is to compare the progress of students with learning disabilities who are placed in regular education classes versus resource center pull-out programs for their reading instruction.

Need for the Study

Although studies have been conducted to compare the effectiveness of placement options, the results are often contradictory, and the samples of children in the studies are not well defined. Further studies are needed in order to find the optimum placement for a variety of populations; therefore, we need to assess and compare the effectiveness of placements on an on-going basis to assure educational appropriateness.

Value of the Study

It is hoped that this study will provide valuable information about placement options for reading instruction to the school districts involved. With this information, the most suitable placement can be offered to their students with learning disabilities who will, in turn, receive greater benefit from reading instruction.

Research Questions

Will there be a difference in the degree of progress in reading comprehension and word recognition skills when comparing special education students receiving instruction in a regular education class with in-class support to a comparable group of students instructed in a resource center pull-out program?

Definition of Terms

Least Restrictive Environment- This refers to the IDEA requirement that ensures that states provide procedures to educate children with disabilities "to the maximum extent appropriate" with their nondisabled peers in regular classes (New Jersey Administrative Code [N.J.A.C.], §28-6:28-2.10 a.1, 1994).

Resource Center Pull-out- This refers to a special education placement option which provides instruction

that replaces instruction in the regular class. Further, it is provided by a special education teacher in an approved separate resource room (N.J.A.C., §28-6:28-4.3 b.3, 1994).

Regular Education with In-class Support- The student is instructed in the regular class with the special education teacher supporting the instruction of the regular educator some of the instructional time.

Inclusion- The practice of including handicapped students in the regular class with supports and accommodations (Laski, 1991).

Learning Disabilities- The following definition of specific learning disabilities is quoted in McLoughlin and Lewis (1994).

A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural, or economic disadvantage.

[PL 94-142, §121a.5b(9)] (p.11)

Limitations- There are certain limitations which must be taken into account when generalizing the results of

this study. They are as follows:

1. Length of Treatment

September through March may not be a long enough period of time to make a judgment on student progress.

2. Examination Procedures

It was necessary to use three teachers to administer the reading test used to measure gains in achievement. Although specific written and oral directions were given to the examiners, there is a possibility that individual personalities may have influenced the responses of the students.

3. Gender

One sample group had a majority of female students, and the other had a majority of male students.

Chapter II Review of the Literature

A Legal Issue

The mandate to educate all handicapped children by providing a free and appropriate education in the least restrictive environment has been the driving force of special education since the passage of the landmark Education of All Handicapped Children's Act, P.L.94-142 passed in 1975, renamed Individuals with Disabilities Education Act (IDEA) in 1990 and subsequently amended in June 1997. All of the revisions and reauthorizations which the act has endured have not only changed the profile of special education, but for some time have also been changing regular education.

Many debates both in and out of academia have occurred as well as much litigation which have helped to refine and clarify the intent of the law. However, the answers to the following questions continue to elude broad consensual agreement. What is an appropriate education for students with disabilities, and to what extent will this environment include nondisabled students? With its reauthorization in June of 1997, the IDEA reaffirms and further clarifies its mandate to educate handicapped students to the maximum extent with their peers, and it

continues to include the continuum of placements for students as deemed appropriate. The controversial history of special education continues with purists in the inclusion movement calling for the end of special education (Zigmond, Jenkins, Fuchs, Deno, Fuchs, Baker et al., 1995; O'Neil, 1994/1995).

Proponents of Inclusion

In the years since P.L.94-142 was passed, some proponents of inclusion feel that the "good intentions" of the law have produced mixed results in that the special education system that helped to educate so many children created a school system that is inadequate for many of the same children (Shapiro, Loeb, Bowermaster, Wright, Headden, Toch, 1993, p.46). Case (1992) feels that the law has created a system of dependence on special education which has interfered with the improvement of classroom instruction for all children.

Among the problems identified in our present special education system are funding, growth, unreliable classification of students and low expectations (Shapiro et al., 1993; Wang, Walberg, Reynolds, 1992). The enormous amount of money spent on special education has been seen as displaced from regular education where it would be creating more programs to help all students (Case, 1992). The number of students classified with learning disabilities and provided with special education services

has dramatically increased since 1976 (Zigmond, Jenkins, Fuchs, Deno, Fuchs, Baker et al., 1995); for example, between 1976 and 1985 the percentage of students identified as learning disabled had increased by 127 percent (Wang et al., 1992). A less intense curriculum and frequent exemptions from standardized testing are viewed as lowering expectations for many handicapped students (Shapiro et al., 1993).

The concept of mainstreaming was spurred early on by P.L.94-142 as a means to ameliorate the criticized practices aligned with segregated special education programs (Skrtic, 1991).

The Regular Education Initiative (REI), in effect, created a parallel debate for inclusion as mainstreaming came under attack as an ineffective and damaging practice. The proponents of REI fall into categories ranging from full inclusionists to those who see a very small need for separate education for only the most severely disabled (Skrtic, 1991).

Although some inclusionists view special education as an unacceptable system that, in fact, has educated some disabled students, others suggest that it has been largely unsuccessful. There appears to be agreement among inclusionists that a restructuring of the regular education system is a prerequisite for inclusion (Shinn, Powell-Smith, Good, Baker, 1997). No matter what their underlying reasons, inclusionists seem to support the

idea that "better instruction" in the regular education classes is needed as opposed to separate and different instruction (Wang et al., 1992 p.36).

Case (1992) views the problem as focused on the "system" rather than the child, therefore, she calls for changing the system through co-teaching and collaboratively solving school problems.

Sapor-Shevin, another proponent of inclusion, calls for a supportive and nurturing climate brought about by a restructuring which must include changing curriculum, pedagogy, teacher education and staff allocation. She sees the need for a continuum of services which should be provided within the context of the regular classroom as opposed to the same services being provided by means of a continuum of placements (O'Neil, 1994/1995).

Opponents of Full Inclusion

It is generally agreed that our present system of special education does not work in some places. This is, however, not reason to discontinue it, but to improve it. A common thread in the camp opposing full inclusion seems to be a call for two good systems for educating children. While we are restructuring our regular education system, let us do the same for our special education system (Case, 1992; Fuchs & Fuchs, 1995b).

The literature explores many arguments for utilizing a special education system for some students. One view

is that research does not show that all students can be taught well in regular education classes. O'Neil, in an interview with James Kauffman at the University of Virginia, stressed the importance of improving instruction in alternative settings rather than trying to put all kids into regular education classes (O'Neil, 1994/1995). Many learning disabled students have needs that differ in "amount or kind" from nondisabled students. Therefore, the placement of all students in regular education would result in an inappropriate education for some. However, if a child's needs can be met, then regular education is the desirable, as well as, mandated placement (Fuchs & Fuchs, 1995b, p.524; O'Neil, 1994/1995).

Our understanding of good teaching is now research based as opposed to intuitive as it was when P.L.94-142 was passed (Case, 1992). In their article, Fuchs and Fuchs (1995b) examine what it is that makes special education special. They point to research-based practices used to tailor instruction to the needs of individual students which have the capacity to effect better outcomes for some learners. Furthermore, many practices that have been empirically proven to work well in special education do not transfer easily to regular education classes since intensive focus on individual students would be impractical (Zigmond, Jenkins, Fuchs, Deno, Fuchs, 1995).

Many opponents of full inclusion concur with the inclusionists that academic standards in special education

should be higher and that careful identification of handicapped students must be insured, however, the opponents draw a very different conclusion. They conclude that these changes are necessary improvements in order for special education to be a successful system (Shapiro et al., 1993).

Research on the Effectiveness of Special Education

There is a wealth of research on the effectiveness of special education and regular education programs for learning disabled students. A number of problems exist which interfere with our ability to synthesize the research to develop a plan for educating these students which would be acceptable to all. These include the ambiguity of data, open interpretation of data, and the differing opinions in reference to acceptable levels of student performance.

Some inclusionists maintain that special education is inherently unequal and immoral (Shapiro et al., 1993). However, Fuchs and Fuchs (1995a) cite evidence of the effectiveness of special education programs for some students. Research studies done by Carlberg and Kavale in 1990, Sindelar and Deno in 1978 and Madden and Slavin in 1993 produce evidence that special education is superior to regular education for students who are learning disabled and for other mildly handicapped students as well.

Two research studies investigating effects of

integration of students with learning disabilities into regular education programs produced disappointing results. Fuchs reports that although students who were chosen by their teachers to be integrated possessed characteristics which would make them likely to succeed in the mainstream, only 41% were successful enough to remain in the regular class. The steady rate of academic growth made by these students in their special education program was not sustainable in the mainstream (Fuchs, Roberts, Fuchs, Bowers, 1996).

Zigmond's three research projects involved intensive restructuring of the regular education classes to accommodate the learning disabled students. Only 37% of the students showed average or better gains; and 40% not only failed to make average gains, but were falling behind. These results were unacceptable and undesirable to the researchers (Zigmond, Jenkins, Fuchs, Deno, Fuchs, Baker et al., 1995). In contrast, McLeskey and Waldron (1995) are at odds with Zigmond's interpretation of the study's results. They interpret the same data as being "very encouraging and strongly supportive" of the effectiveness of regular education settings for students with learning disabilities (p.300).

Zigmond responds to McLeskey and Waldron's criticism of their research by reinforcing the idea that evaluating the effectiveness of a program relies on whether it improves the students' academic performance. In addition,

it is stressed that the data establishes the need for a continuum of services for learning disabled students since there is no basis on which to conclude that regular education can bring about satisfactory outcomes for all students (Zigmond, Jenkins, Fuchs, Deno, Fuchs, 1995). It seems that perhaps some inclusionists are more willing to lower their standard of acceptable growth than they are to accept alternative programs (Zigmond, Jenkins, Fuchs, Deno, Fuchs, 1995).

The results of another interesting study speak to the illusive issue of satisfactory growth. One such study examined the effects of reintegrating mildly disabled students from resource room programs into regular education classes for reading instruction. Their reading progress was compared to low-reading peers in the regular classroom. This twelve week study showed basically equal growth between the low readers and the learning disabled students. The authors reported that these were positive results, however, the parents of the learning disabled children were not highly satisfied. They expressed a preference for achievement to be at levels commensurate with their children's ability (Shinn et al., 1997).

A three year study compared the effectiveness of integrated programs with conventional resource pull-out programs for mildly handicapped students. As in most other studies, the regular classrooms were modified to enhance the education of the students with disabilities. The

results in both programs were similar in terms of achievement. The special education students did relatively poorly when compared to their low-achieving peers. The conclusion drawn from these disappointing results was that there is no evidence to warrant removal of students from regular education classes for remedial instruction (Deno, Maruyama, Espin, Cohen, 1990).

We can likely agree that each student should have access to an educational program that is meaningfully beneficial (Zigmond, Jenkins, Fuchs, Deno, Fuchs, 1995). However, the contradictory nature of the literature seems to make it difficult to draw a satisfactory conclusion as to the most appropriate education and environment for students with learning disabilities.

Chapter III Design of the Study

Population

The eighteen students included in this study are special education students who attend two public school districts situated within five miles of each other in a rural area of southern New Jersey. The subjects represent a convenience sample chosen by the author due to proximity.

One group consists of nine fifth grade students who receive reading instruction in a regular education class. A special education teacher provides in-class support during part of each reading period five days a week. Seven students are male and two are female.

The other group is composed of nine fifth and sixth grade students who receive reading instruction in resource center pull-out programs. In this group, there are five female and four male students.

Each student from the regular education group has been matched as closely as possible with a student in the resource center group based on Full Scale, Verbal and Performance I.Q. scores.

Instruction of Subjects

Teachers were asked to respond to a short

questionnaire to note the manner in which reading instruction is provided to the subjects included in the study.

The students in the regular education program are usually instructed in a large group with the same curriculum and materials as the regular education students. These subjects are rarely given individual instruction, but are provided with some modifications as stated in their I.E.P.s. Such modifications include having tests read to them, allowing for oral response, decreasing the length of assignments, and increased time for completing some classwork and tests. A classroom aide is sometimes available during reading instruction when the special education teacher is not present.

As anticipated, reading instruction is provided differently in the resource center pull-out programs. The curriculum is modified for the students based on their individual needs. A variety of instructional material is utilized which is not available in the regular education classes. Included are tradebooks on appropriate levels, supplemental materials for specific skills and high interest/low level readability novels. Instruction is always presented in small groups and often individually, and an instructional classroom aide is sometimes present during instruction.

Instrumentation

The Jerry Johns Basic Reading Inventory, sixth edition was chosen as the instrument to assess reading skills for this study. It is an informal reading inventory which is individually administered and composed of graded word lists and graded passages. Johns (1994) discusses the thorough procedures for selecting and revising the word lists at each grade level. "Familiarity percentage" and each word's frequency of usage are criteria used to include words in the graded word lists (p.103). Field testing at the various levels aided in the revision and selection process as well. Modifications and revisions of the graded passages are based on input from a variety of sources including users of the inventory in educational and clinical settings, research studies relating to informal reading inventories, college and university professionals, and the author's use of this inventory with a variety of students.

Portions of the inventory were administered individually to each child in September as a means of assessing levels of word recognition in isolation and comprehension.

The word lists were administered to each child and the number of words read correctly on each grade level list was recorded. A ceiling was obtained when seven words, in any order, were read incorrectly on a given list.

Subsequently, each student read graded passages

orally. The number of correctly answered comprehension questions was recorded for each passage. The test ended when a frustration level was reached or five questions were answered incorrectly. The inventory was readministered in March to assess each subject's growth.

Collection of Data

After the initial baseline testing was completed in September 1997, the author collected the data from each teacher. The data was collected in the same manner when final testing was completed in March 1998.

Research Design

This study utilized a matched pairs design with equivalent treatment and experimental samples. The two samples will be determined equal by using a matched pairs t-test (Glass & Stanley, 1970, p. 298).

The raw data indicating the actual number of words read in isolation and the number of comprehension questions answered correctly during pre and post testing was used to compute each student's gains in both reading skill areas. The gains of the regular class and resource center groups were arranged in tabular form in order to compare growth in matched pairs, average growth of the two groups, and growth based on Verbal and Performance I.Q. scores.

Chapter 4 Analysis of the Data

The purpose of this study is to determine the instructional effectiveness of two reading placement options for learning disabled students. The two options are resource center where instruction is provided by a special education teacher and regular classroom where a regular education teacher provides instruction with some support from a special education teacher. This study examined progress of word recognition in isolation and comprehension of passages read orally by the students.

Subjects

In order to assess the differential effects of class placement on achievement, students were matched on the basis of the WISC III Verbal and Performance scores. Each subject's scores are presented in Table 1 along with average WISC III Full Scale, Verbal and Performance scores.

Results

The gains in word recognition and comprehension made by each student in the study are displayed in Table 2. The resource center students showed an average gain in word recognition of +5.7 words correctly identified and in comprehension gains were +2.3 more questions answered correctly. Respectively, the regular classroom students' gains in word recognition were +1.4 and +1 in

Table 1

I.Q. Scores of Matched Pairs in Terms of Full Scale (FS),
Verbal (V), and Performance (P)

Student Number	<u>Resource Center</u>			Student Number	<u>Regular Education</u>		
	FS	V	P		FS	V	P
±1	96	98	95	1	87	90	86
±2	91	81	104	±2	99	91	108
3	80	80	83	3	90	85	96
4	99	97	102	4	90	89	93
±5	111	102	119	5	110	102	117
6	99	104	95	6	90	88	94
±7	99	95	103	±7	94	91	99
8	87	94	82	8	89	92	87
±9	89	82	99	9	85	79	95
Mean	*94.5	92.5	98		*92.6	89.6	97.2
S ²	80.53				58.50		
SD	8.97				7.65		

Note: ± denotes female subject

*Not significantly different, 8° freedom, 2 tailed P value
.457

comprehension.

The data can be analyzed further to gain a more complete picture of the results. Table 3 contains the percentages of students who 1) made gains, 2) made no gains, and 3) regressed. These gains can be compared between the two types of service delivery.

Table 2

Resource Center (RC) and Regular Education (RE) Students'
Gains in Word Recognition and Comprehension

Pairs of Students	<u>Word Recognition</u>		<u>Comprehension</u>	
	RC	RE	RC	RE
1	+2	+3	+3	+3
2	no data	+1	no data	+4
3	+11	+6	0	+2
4	+2	+2	+2	0
5	+4	+1	+5	-2
6	0	+1	-2	-1
7	+8	+2	0	-3
8	+6	-2	+5	-1
9	+10	-1	+6	+7
Total gains	+46	+13	+19	+9
Average gains	+5.7	+1.4	+2.3	+1.

A review of Table 3 shows that in terms of word recognition 87% of the resource center students made gains, 12% made no gains, and none regressed. Respectively, 77% of the students placed in regular education made gains, none remained static, and 22% regressed.

Table 3

Analysis of Student Gains Based on Percentages

	<u>Resource Center n=8</u>		<u>Regular Education n=9</u>	
	<u># of students</u>	<u>% of students</u>	<u># of students</u>	<u>% of students</u>
Gains in word recognition	7	87%	7	77%
Gains in comprehension	5	62%	4	44%
No gains in word recognition	1	12%	0	0
No gains in comprehension	2	25%	1	11%
Regression in word recognition	0	0	2	22%
Regression in comprehension	1	12%	4	44%

Table 3 also highlights gains in terms of comprehension. Sixty-two percent of the resource center students made gains, 25% made no gains, and 12% regressed. In contrast, 44% of the students in regular education made gains in comprehension, 11% made no gains, and 44% regressed.

The data was further examined to determine if the students with high verbal or performance I.Q. scores would fair better in one placement option over the other. Average gains based on I.Q. strengths are displayed in Table 4. An inspection of Table 4 reveals that resource center students with higher verbal scores averaged gains of +2.6 in word recognition and +2 in comprehension. Comparable students in regular education gained an average of +.5 in word recognition and +1 in comprehension.

Students in the resource center whose performance I.Q. scores were higher averaged a gain of +7 in word recognition and +2.6 in comprehension with their counterparts in regular education averaging +1.5 in word recognition and +1 in comprehension gains.

In terms of matched pairs, 16.6% of the time a regular education student made greater gains, 16.6% of the time equal gains were made, and 66.6% of the time resource center students made greater gains. Overall, students placed in the resource center for reading instruction made greater gains than students in the regular education program.

Table 4

Average Gains in Word Recognition (WR) and Comprehension
(Comp) Based on I.Q. Strengths

	Resource Center n=8	Regular Education n=9
	High Verbal n=3	High Verbal n=2
WR	+2.6	+0.5
Comp	+2.	+1.
	High Performance n=5	High Performance n=7
WR	+7.	+1.5
Comp	+2.6	+1.

Chapter 5
Summary, Conclusions, and Discussion

Summary

The purpose of this study was to determine the effectiveness of a resource center pull-out program and a regular education program with in-class support as reading instruction placement options for learning disabled students.

A criterion-referenced reading inventory was administered to each subject in September to assess word recognition in isolation and reading comprehension. The assessment tool was readministered in March to obtain data in order to establish the gains made by each student.

Eighteen students participated in the study, however, one moved. The subjects are boys and girls between the ages of ten and twelve who attend adjacent school districts. All students have been classified perceptually impaired by the local Child Study Teams.

An analysis of the data revealed that the students who received reading instruction in the resource center pull-out program showed greater gains in word recognition and comprehension when compared with students who were instructed in a regular education program with some in-class support.

Conclusion

This research project revealed that learning disabled students receiving reading instruction in a resource center pull-out program taught solely by a special education teacher made greater gains than comparable students who received their reading instruction in a regular education program taught by a regular education teacher with some in-class support provided by a special education teacher.

In each instance where average gains of the two groups were compared, the resource center group's averages were favorable. These favorable gains include whole group gains in word recognition and comprehension. When the group's gains were compared based on verbal or performance I.Q. strengths, again the resource center group consistently showed greater average gains. Finally, when examining percentages of each group in terms of making gains and regressing, the resource center students' percentages were once more favorable.

Discussion

There are a number of variables and factors that should be taken into account when formulating conclusions regarding the outcomes of this project. The number of students who participated in this study was quite small, therefore, one would be cautioned about generalizing the results to a large population of learning disabled students.

The length of the study was rather short. The amount

of growth that would be anticipated in a six month span of time is limited. Optimally, two or more full school years would allow for more growth and would likely provide statistically significant data.

Another concern was the assessment tool used to provide the data on reading gains. The examiners who were less experienced in the use of the reading inventory criticized the excessive administration time. Furthermore, it was not possible to control individual differences in each teacher's administration of the inventory. Perhaps a more objective tool would have proven more useful.

The results of this study can best be used to make judgments in terms of instruction for the students involved in the project. However limited in their use, the results of the study are not unexpected. Much of the literature reveals large scale research studies that have drawn similar conclusions. One would also anticipate that the kind of instruction that is provided in a resource center which would include small class size, a variety of materials, and instruction based on individual needs would result in greater student gains.

The implications of this study are significant for the school districts involved. One is that an array of placement options should be available to ensure that individual students can be instructed in effective programs tailored to their needs. Another is that some experimentation needs to be done in terms of increasing

and improving in-class support services for students in the regular education classes to explore the kinds of "special" services which might be provided to guarantee a more effective program.

In addition to continued longitudinal studies similar in nature to this study, it is essential to further study the effectiveness of other types of placement options for students with learning disabilities in all academic areas.

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Appendix A

Letters to Examiners

September 10, 1997

Dear

Thank you so much for participating in this project. Please administer the enclosed Jerry John's Basic Reading Inventory individually to each participating child during the week of September 15.

There are two sections to administer. First, the word list and then the oral reading section.

Begin on a word list at which you think the child can read all twenty words correctly. Have the child continue until he misses at least seven words on one list. Put a line through each word the child misses. Do not help in any way. Do not tell the child any word. No more than 5 seconds should be allowed per word. If the child corrects himself, count the word correct. Write the number correct at the bottom of each list.

Begin the oral reading at the highest level at which the student pronounces 19 or 20 words correctly. Have the child read the story orally. You may want to note miscues for your information. Do not tell any words except the title. Ask each question and note a correct (+) or incorrect (-) response on the line. If you feel the answer is partially correct, give $\frac{1}{2}$ credit and note the answer. Continue oral reading until he is unable to answer half of the questions or makes so many miscues that he is frustrated.

You are being supplied one student booklet which contains word lists and stories for the student to read and a teacher booklet for each student. The teacher booklets have the student number (which is my identifying information). So, please make sure to match the correct student with each booklet. On this booklet, you will indicate the student's scores on the two sections of the inventory.

When all of your participating students have been tested, please put the booklets in the envelope and return it to Irene Jones.

If you have any questions, you can reach me at school or at home.

Thanks again for your help.

Sincerely,

Barbara Groff

March 2, 1998

Dear

As I look at my calendar, I see it is time to post test the students involved in the study. Once the post tests are completed, I will be able to chart their growth and complete my thesis which is due very soon.

The procedure will be the same as the pretest. If you recall there were two sections. The word lists will again be read by the students. You will mark all words read incorrectly with a minus. If the student corrects herself, count the word correct. No more than five seconds should be allowed for any word. Stop testing when the student makes seven or more errors on one list. The only difference is that I placed a * at the top of the list where you will start for each student.

The passages are not the same as those read in September. The student will begin at the highest level at which 19 or 20 words were pronounced correctly on the word lists. Have the child read the story orally. Do not tell any words except the title. Ask each question and note a correct (+) or incorrect (-) response on the line. If you feel the answer is partially correct, give $\frac{1}{2}$ credit and note the answer. Continue the oral reading until the student is unable to answer half of the questions or makes so many miscues that she is frustrated.

I will come to pick up the booklets on March 16th. If you have any questions you can reach me at home or at school. Thanks again.

Sincerely,

Barbara Groff

Appendix B

Survey of Instructional Format

Please circle the answer that best represents the reading program you provide for the students involved in this study.

To what extent do you:

1. follow the same reading curriculum as the regular classes in your school?

always often sometimes rarely never

2. use the same materials to teach reading (text, workbooks, etc)?

always often sometimes rarely never

If different materials are used, please briefly describe.

3. work with students in small groups (approximately 12 or less)?

always often sometimes rarely never

4. work individually with students?

always often sometimes rarely never

5. utilize a classroom aide during instruction?

always often sometimes rarely never

If there is any other information you feel would be valuable to clarify your program, please explain below.

Name of respondent

Please return this survey in the enclosed stamped envelope as soon as possible
Thanks again for your time!