The Effect Of Parent Intervention On Academic Progress Of Learning Disabled Children

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This thesis, directed and approved by the candidate's committee, has been accepted by the Graduate Committee of The University of New Mexico in partial fulfillment of the requirements for the degree of

Master of Arts

THE EFFECT OF PARENT INTERVENTION ON ACADEMIC PROGRESS OF LEARNING DISABLED CHILDREN

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THESIS
Submitted in Partial Fulfillment of the Requirements for the Degree of
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THE EFFECT OF PARENT INTERVENTION ON ACADEMIC PROGRESS
OF LEARNING DISABLED CHILDREN

BY
Carol Lee Byler

ABSTRACT OF THESIS

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THE EFFECT OF PARENT INTERVENTION ON ACADEMIC PROGRESS
OF LEARNING DISABLED CHILDREN

Carol Lee Byler, M.A.
Department of Special Education
The University of New Mexico, 1976

This thesis project was designed to investigate the implications of involving
parents of learning disabled children in an academic objective. Academic progress
was measured through the use of continuous recording procedures. The main hypothesis,
stated in null form, was: there will be no statistically significant difference in the
mean scores of six learning disabled subjects on specified academic behavior before
and after treatment involving parents as the intervention strategy.

The research results (analyzed by the mean-median/chi-square design,
P < .05) indicated significant difference in the mean scores of four of six learning
disabled subjects. Further analysis (analyzed by the Wilcoxon Sign and Rank Test,
P < .05) indicated significant growth in the group as a whole. It was concluded that
further research in a variety of settings with a variety of subjects is needed to sub-
stantiate these results and to gain further insights concerning the effects of parental
involvement in the total school process.
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1. INTRODUCTION

It is an accepted fact among professional educators that parents were a vital force in the incorporation of special education into the public school system. Unfortunately, professional educators have tended to overlook the important role parents have played in bringing about educational change. Parents are often excluded from the school experiences of their child and at times the professionals assume a condescending attitude toward parents. The professional educational community tends to possess an attitude that parents should leave the educational development of the child to the teachers, and at the same time encourages teachers to leave parenting to the parents.

Within this context, however, a recent trend toward a humanistic approach to education seems to be emerging. This approach commands a new look at the implications of involving parents in the formal educational process. Humanistic education can be defined as the development of the total person, one who is capable of dealing with all aspects of life, e.g., personal, interpersonal and vocational (Gazda, 1973). In such an approach, the teacher is understood to be one who guides and encourages the development and growth of the child in ways which contribute to sound mental health and effective living. Hence, the teacher can be called a facilitator of learning (Gazda, 1973).

If education is to become humanistically oriented and concerned with the development of the total person, parental involvement is a resource that cannot
be ignored. Cooperation with parents, leading to a better understanding of the parent relationship with the child and knowledge of the home setting, enhances the teacher's ability to be an effective facilitator. Parents can provide a great deal of insight concerning the characteristics and needs of their child which may not be seen in the school setting. The process of parent/teacher sharing and interaction is vitally important to the development of the total child (Kroth, 1975).

Such parent/teacher interaction becomes even more important in special education where the teacher deals with exceptional children with exceptional needs.

This thesis grew from a recognition of a need for more research into various ways of involving parents in the school. The main purpose of this project was to investigate the implications of involving parents of exceptional children in an academic objective. The project was designed to measure academic progress using continuous recording procedures of individuals with mild learning problems. However, implications drawn from the research go beyond measured academic progress; and thus, informal observation and speculation must also be considered in the discussion and formation of implications.

Support for this project was provided by a review of the literature dealing with parental involvement in schools. Through isolation of a specific problem, specifying procedures of intervention, and carefully recording measurable effects and observations, this study was intended to demonstrate the value of parental involvement in special education. This may also provide rationale for more extensive research.
II. LITERATURE REVIEW

It is a commonly shared opinion that the home is the most important element in the development of a child's personality and attitudes toward society (Love, 1970). However, parents have not been considered a necessity in the educational process until recently. Traditionally, parents have turned the education of their child over to the school and schools have willingly accepted this responsibility. Parents were called on only when problems developed (Kelly, 1974).

Recent studies have indicated that parental expectations influence the child's academic behavior (Warren, 1973). Many times these expectations are unrealistic and have a negative influence on the child. The use of parents in the educational setting is suggested as a means for helping parents establish more realistic attitudes and expectations (McDonald, 1971). This can positively influence the child's performance in school. In addition, as children see their parents become more involved, it is suggested that they will be encouraged to take a more active interest in school, resulting in less opportunity to play home against school and vice versa (HEW publication, 1962).

Furthermore, lack of parental involvement has resulted in public dissatisfaction with the school system and a demand for change. Parents, as taxpayers, are becoming more concerned with the fact that increased school expenditures seem not to improve the quality of their children's education. The problem is based in long public alienation from the schools caused by the discouragement of meaningful
parental involvement (Kelly, 1974). It is suggested that involving parents in the
tschools provides administrators with an opportunity to restore public confidence

In addition, a growing awareness of learning problems is causing parents
to seek ways to help their children. This creates an obligation for professionals to
provide meaningful suggestions and support for such concerns which parents can
easily utilize (DeGanaro, 1973).

A review of literature examining cross-sectional, longitudinal and inter-
vention research of parents as educators suggests that parents have great influence
on the intellectual and academic progress of the child (Schaeffer, 1972). This
indicates that parental involvement increases the child's learning efficiency. To
constructively respond to such an implication requires the teacher to seek ways for
assisting parents in devising and implementing activities to reinforce and supplement
classroom objectives (Barsch, 1969).

While a great deal has been written in support of parental involvement in
the school process, there remains much controversy concerning how parents can most
effectively be involved. Therefore, before outlining a project investigating parental
involvement, a look at this literature is in order. This review of literature supports
the need for further research in this area.

Parental Roles in Education

Professionals agree that parents are important to the well-being of the child
but some see the parent role as separate and distinct from that of a teacher, counselor,
or therapist. These persons do not encourage extensive parental involvement in the school program. Rather, they see parents as necessary participants in psychotherapy and counseling or as creators of a relaxed/non-pressured home atmosphere providing moral support for the school program.

Parents—Participants in Psychotherapy and Counseling

There are some who caution against the use of parents as "partners" in the treatment process (Levitt & Rubenstein, 1957). Rather, they advocate the provision of counseling or psychotherapy as the ultimate service professionals can provide parents (Ross, 1964). This is an outgrowth of the belief that problems of children generally stem from deep-rooted parental problems. In order to achieve positive gains with the child, the parents also need to work out their problems (Feldman, 1958; Philage & Kuna, 1975).

Blame for the child's problem is thus placed on the parents and it becomes easy for special educators to fear the involvement of parents in the school lives of their children. Parental involvement may simply result in intensifying the learning and behavioral problems (Levitt & Rubenstein, 1957). The comments of Sperling (1965) illustrate this cautious perception of the parent:

...while the parental plight is a difficult one, we must remind them that what the child is today is in most cases the result of years of faulty upbringing and the parent's inability to change even their most obvious attitudes toward the child... in fact, I have often marvelled at how many children change through treatment in spite of their parents. (p. 302)
Parents—Moral Supporters

Parents are viewed by some professionals as providers of a relaxed home atmosphere with firm, consistent, general discipline free from school pressures. Parents are discouraged from tutoring or other forms of teaching (Brown, 1969; Wollner, 1960). If parents are to be part of the "team," their role is to provide support for the school effort and school programs. They prepare the child for going to school. Parents can best help by working with the child on the needs and reasons for going to school (Adamson, 1972).

An additional role of the parent as a "team" member is to provide information about the child. This information can serve as enrichment for the diagnosis (Orton, 1971). However, instruction, per se, should be confined to school and the "specialists" (Wollner, 1960).

Parents—A Special Education Necessity

In spite of existing apprehension towards parental involvement in the school program, a great many educational authors continue to advocate more involvement. (Barsch, 1967) conducted a seven-year experiment in group counseling with parents of brain-damaged children and reports results such as:

The parent of the brain-injured child must be considered an integral part of the organization of the child's behavior.

Parents can be taught to perceive their children differently and learn to deal with their child's problems more effectively.

Comments of the mothers consistently reflect changed response patterns in relation to problems represented
by their children; they learn to apply a technique. There is some restoration of feelings of competency and self-worth.

The mothers learn to recognize their unique responsibility in developing organized response patterns in their children. (p. 151)

These results, along with similar implications from other studies, have led to an increased awareness of parental involvement, especially in dealing with the exceptional child. Some special educators now see the role of parents as an essential force to the success of the educational program. Kroth (1975) stated:

The education of children is a full-time job. To neglect the home environment and the influential effects of parents is unprofessional. The assumption that parents do not care is unwarranted. The successful special education teacher is "special" because she uses all resources available to facilitate the educational progress of her children. (p. 417)

Parental Involvement Advocated

Parents need to be involved in the child's program. Rarely can one professional concern himself with all aspects of a child's functioning. Many learning disabled children may need someone to oversee their academic program, as well as the development of social skills, behavior organization and planning throughout their entire school career. The only people prepared to maintain an ongoing concern and supervisory role are the parents (Kronick, 1972). Through cooperation of parents and professionals, a long-term program can be developed. Pressure on the professional who has a minimum of time can be alleviated by utilizing the parental resource. The comments of Kronick (1972) seem appropriate when she states: "Next to the child,
the parents are the most valuable resource for change. If we give them the task, they will do the job” (p. 72).

Furthermore, current research supports the assumption that children, parents and teachers benefit from constructive parental involvement in the school (Kelly, 1974). Parents can assist educators in planning an improved, more relevant school program by sharing their in-depth and long-term knowledge of the child (HEW Publication, 1962). In return, educators can share and demonstrate techniques which parents can use at home to aid the child’s progress. By participating in the growth process of the child, the parent can personally learn to deal with the child’s problem while helping the child progress (Mallison, 1968). Kroth (1975) summarizes the results of cooperative parent/teacher relationships in the following statement:

Teachers and parents who recognize their roles as complementary and not supplementary, who approach their interactions enthusiastically and not apprehensively, and who view their relationships as a partnership will usually be rewarded with happy, achieving children and warm, personal feelings of mutual respect. (p. 10)

Current Supportive Research

Parental counseling or information providing projects such as described by Silver & Willis (1969) and Barsch (1967) have proven effective. Also, other projects have successfully trained parents as "therapists" for conducting "therapy" in the home (Guerney, 1969; Shah, 1969). The concern of this project, however, lies in the process of involving parents in the academic procedure of the school program and, thus, a brief review of three projects developed from this concern is in order.
The Portage Project is one example of the various pre-school programs involving parents of handicapped children. Operating as a home-based teaching program, the Portage Project directly involves parents in the educational process by teaching parents what to teach, what to reinforce and how to observe and record behavior. Weekly visits are made to the home by a professional who works with parents in establishing objectives and models new methods parents are to use in reaching that objective. Statistically significant gains were measured by both the Alpern-Boll Development Skills Age Inventory and the Stanford-Binet to indicate that parents can effectively teach their pre-school children (Shearer & Shearer, 1972). The Portage Project has become a national model for pre-school programs for the handicapped.

Another study, developed at the Austin Peay State University in Tennessee, indicated that some parents can be good remedial resources for their children’s learning disabilities. This study was designed to assess the feasibility of training parents to improve their child’s learning disabilities in the area of reading. Parents of twenty-six second graders were instructed in teaching their own children. Differences in gain scores and learning rate on reading instruments were used to test the proficiency of parental assistance. The treatment process included diagnosis, teaching the parents personality and learning theory along with reading methodology, and demonstration lessons with parents teaching their children in twelve one-hour practicums. Results were not significant enough to conclude that all parents make good teachers. However, the study did indicate that "some parents, in some situations, with some children" can significantly influence the child's academic progress.
through a training-based program. Also indicated was the need for further exploration of the parental resource potential (Murray, 1972).

Thirdly, administrators of Flint, Michigan, elementary schools developed and executed an experiment based on the theory that the child is motivated by the group in which he socializes. Therefore, a program designed to raise the achievement of a child must include the "significant others" who were assumed to be parents and teachers. The program they developed provided many ideas for the research project design of this thesis.

The Flint, Michigan, experiment involved children enrolled in kindergarten through the sixth grade primarily from low-income families. The main emphasis was placed on reading comprehension and vocabulary development. Teachers worked closely with parents. They sent books and study assignments home, called parent conferences as needed, made home visits, invited parents to the schools for discussion-information conferences and special problems, and involved parents in a reading incentives program for students in second through sixth grades. A list of suggestions which parents could use over an extended period of time was prepared. These suggestions were supplemented by booklets explaining techniques of reading aloud to children, ways parents can help their children improve study habits and ways to develop favorable attitudes toward school. All handouts were thoroughly discussed with the parents.

Two schools were used as experimental schools. Forms 1 and 2 of the Gates Revised Reading Tests were given to all children of these two schools in pre- and post-situations. The same tests were also administered simultaneously to grades two
and five in a school designated as the control school. The reading gains of the second and fifth grades in the control group were compared to the gains of the same grades in the experimental schools. A complete evaluation of the data collected indicated significant gains in reading for the experimental group over the control group. Along with the test gains, questionnaires completed by parents indicated that parents felt the program to be beneficial for both the child and themselves (Smith & Brahce, 1963).

The Need for Further Research

In reviewing a variety of new programs for exceptional children, Chafin (1975) notes that parent involvement ranges from strong, to no mention of the parents' role. Often, however, those programs reporting parental involvement lack specific information relating to the extent of involvement and the effect it had on the program. This indicates a need for scientifically designed research providing such data as: ways parents can be involved in the school process, measured results of parental involvement, and implications for involving parents in schools.

The reviewed literature provides support for the theory that constructive parental involvement is more likely to produce positive growth results than non-parental involvement. Programs have successfully utilized the parental resource and indicate that parents are a useful tool for gaining academic growth in children. However, these general observations of parental involvement remain untenable assumptions when judged by the criteria of social science research (Kelly, 1974). Further research designed to test various types of programs involving parents in a
variety of ways is mandated. This is necessary to confirm the positive effects of parental involvement as well as to establish constructive methods for involving parents.
III. METHOD

Purpose

The purpose of this project was to investigate the implications of involving parents of exceptional children in an academic objective. The main hypothesis, stated in null form, was: there will be no statistically significant difference in the mean scores of six learning disabled subjects on specified academic behavior before and after treatment involving parents as the intervention strategy.

Subjects

Six children with mild learning problems were selected from a resource room in a Public Elementary School in Albuquerque, New Mexico. The teacher of this resource room made the subject selection at random. All subjects continued to receive services from the resource room during the entire time of this project.

Diagnostic procedures to determine qualification for special education services were carried out before enrollment in the resource room (according to the New Mexico State Standards, 1975) and thus, no specific diagnosis was required for this project. This diagnostic process demonstrated that the child's needs did not require basic modification of the regular curriculum, but rather required intensive support outside the regular classroom. This support was maintained through intervention by the resource teacher. Thirty to sixty minutes of instruction per day, either individually or in a small group, was provided for each child.
Subject A

Sex: Female
Chronological age: Eleven years
Grade enrolled: Six

Academic Test Results:

Wide Range Achievement Test – 1/23/76

Reading 3.6
Spelling 4.2
Arithmetic 5.6

Sucher-Allred Reading Placement Inventory – 1/29/76

Instructional level 4-5
Frustrational level 6

Background:

Subject A is an only child with no apparent physical problems. She was scheduled to receive services from the resource room in the Fall of 1975 after transferring from an out-of-town school. She had a history of reading problems all through her elementary years. Her parents, extremely concerned, had at one time provided a private tutor for her. She was placed in the Monterey Reading Program upon entering the resource room, and she also received individualized reading instruction from her classroom teacher.

Subject B

Sex: Male
Chronological Age: Ten years
Grade enrolled: Four
Academic Test Results:

Wide Range Achievement Test - 11/25/75

Reading  3.5
Spelling  2.7
Arithmetic  3.2

Sucher-Allred Reading Placement Inventory - 2/3/76

Instructional level   $2^1-2^2$
Frustration level   $3^1$

Background:

Subject B, the oldest of two children, lives with his mother who had recently been divorced. He was scheduled for resource room treatment during his second year of school and had been receiving treatment since that time. There were no major health problems indicated, but he was highly distractable both auditorily and visually. He was enrolled in the Monterey Reading and Math Programs. He received specialized reading in his classroom and was also enrolled in the Title I Reading Program.

Subject C

Sex: Male
Chronological Age: Nine years
Grade enrolled: Two

Academic Test Results:

Wide Range Achievement Test - 12/11/75

Reading  1.9
Spelling  2.0
Arithmetic  1.9
Frostig Development Test of Visual Perception. Subject C scored an age equivalent of 4-9 on the subtest for eye/hand coordination.

Background:

Subject C is the youngest in a family of six. He was referred to the resource room at the end of his second year in grade one due to lack of progress in reading. He must wear thick lensed glasses to correct a severe visual problem. He is small for his age and displays immature physical coordination. In addition, poor eye-hand coordination creates writing problems for him. The Illinois Test of Psycholinguistic Abilities (ITPA) scores indicated visual/sequential memory to be his weakest processing area, but problems of auditory processing were also indicated. Resource room procedures included exercises in auditory attention, tracing exercises along with visual and other kinesthetic procedures. He received specialized reading from his regular classroom and from the Title I Reading Program.

Subject D

Sex: Male
Chronological Age: Eight years
Grade enrolled: Two

Academic Test Results:

Wide Range Achievement Test – 10/22/75

<table>
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<th>Reading</th>
<th>Spelling</th>
<th>Arithmetic</th>
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<tr>
<td></td>
<td>1.7</td>
<td>1.6</td>
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Background:

Subject D is the oldest of two sons. He learned to talk at a later age than most children. When he began to talk, he exhibited speech impediments which caused his parents to seek the aid of a speech therapist. He scored very high on a Reading Readiness Test upon entering first grade. However, he failed to make significant gains in reading and fell from the highest to the lowest reading group. The Weschler Intelligence Scale for Children (WISC) scores showed a discrepancy between the verbal and performance scores, the verbal score being the lower of the two. The ITPA indicated deficits in the auditory perceptual area, the weakest area was auditory sequential memory. This was confirmed by the Goldman-Fristoe-Woodcock Auditory Memory Test. Subject D was scheduled to receive the services of the resource room in February, 1976. At the same time, he continued to receive specialized reading from the regular reading program and from the Title I Reading Program.

Subject E

Sex: Male
Chronological Age: Eleven years
Grade enrolled: Five

Academic Test Results:

Wide Range Achievement Test – 1/5/76

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<tr>
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<tr>
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<td>2.7</td>
</tr>
<tr>
<td>Arithmetic</td>
<td>4.7</td>
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Background:

Subject E is the second youngest of six children, but now lives with only one older sister, a younger brother, and his mother. He displayed poor motor coordination along with dizzy spells and signs of possible hearing loss. He was referred to the resource room by his fifth grade teacher who was concerned about his handwriting and his spelling. The WISC showed the performance scores to be significantly lower than the verbal scores. In January, 1976, he was scheduled into the resource room where he received specialized assistance in spelling and handwriting.

Subject F

Sex: Female
Chronological Age: Ten years
Grade enrolled: Four

Academic Test Results:

Wide Range Achievement Test - 12/2/75

Reading 2.5
Spelling 2.7
Arithmetic 3.6

Sucher-Allred Reading Placement Inventory - 2/2/76

Instructional level 2
Frustration level 2

Background:

Subject F is the youngest of two girls and lives with her mother and stepfather. She has had no special health problems, and vision and hearing screenings are normal. She was a transfer student in the middle of her fourth year in school.
She showed difficulties in the language arts and was retained in the fourth grade to receive more experience in that area. Subject F entered the resource room in the fall of 1976 as she started her second year in grade four. She was scheduled to receive tutoring in the Monterey Reading and Math Programs and to receive visual memory training. The auditory-visual-kinesthetic approach was used for spelling words.

**General Procedures**

Academic objectives for specific goal areas were established for each child. Once the objectives were set, daily recording procedures were started. Recordings of percentage correct for a specified task per child were noted on a daily chart (Appendix A). Tasks measured were based on the individual academic objective.

When baseline stabilized, an individual conference was arranged with the parents at the school. The project was explained and the parents were given the option to participate. All parents agreed to participate and a contract was signed by the parent(s) and the teacher (Appendix B).

A list of general suggestions (Appendix C) for improving the home study atmosphere was given to each parent. The purpose for this was to help parents establish an atmosphere of learning in the home. Kelly (1974) suggests that parents can jeopardize a child's instructional growth by discouraging learning or showing little interest in it. On the other hand, if learning is valued and encouraged in the home, parents help develop in the child an appreciation for learning. He states that, therefore, it is necessary to include a discussion of encouragement principles
and suggestions parents can apply which display high value for learning.

The pre-determined academic objective and the child's progress were discussed with the parents. Several procedures designed to improve skills related to the child's academic objective and which parents could easily initiate in the home were provided (Appendices D - G). Suggestions were taken from *Deal Me In, Workjobs, "What Do You Say When A Parent Asks, 'How Can I Help My Child?'* and other available idea sources. The parents were free to add further suggestions and choose those which they felt best able to implement.

Opportunity for parental involvement in procedure design was included because of the belief that parents should be involved in the planning process of the child's treatment program (Auerbach, 1971). As the purpose of this project was to measure and compare results of academic growth before and after parental involvement, academic objectives were pre-determined, so that parental participation in establishing academic objectives would not influence baseline recordings. However, parents were invited to participate in planning when they became involved in the project. They had the opportunity to offer further suggestions and ideas. All parents found the suggested activities satisfactory and had no further suggestions.

The activities and procedures outlined for the parents were thoroughly explained, and modeled when necessary. The amount of time parents spent per day was not specified but it was suggested that the time be kept at a maximum of thirty minutes. However, each parent was given a chart and asked to record the amount of time spent per day (Appendix H). Calling or visiting the classroom for a discussion when problems arose was highly encouraged.
Following three weeks of baseline recording, the intervention procedures were initiated independently, determined by the ease and ability of scheduling a conference with the parents. Throughout the intervention period, recording procedures used for establishing baseline were continued. Teaching techniques in the classroom remained the same throughout.

Regular school parent/teacher conferences were held soon after all intervention procedures were initiated. This conference time was utilized to inform parents of any recorded progress, to discuss possible problems the parents encountered, and to provide reinforcement and encouragement. Although only one father was able to attend the conferences, there was much interest in the child's progress expressed by both parents and it was always encouraged that both participate in the home procedures.

A home visit was made at the completion of the project. This visit was arranged for the purpose of collecting the time recording charts and allowed the researcher to visit with the parents in the home setting. In addition, all parents and the children were invited to the resource room at the conclusion of the project for coffee and doughnuts. The purpose of this gathering was to allow parents to meet each other in an informal setting and to award certificates of participation in appreciation of their cooperation.

It should be noted that no specific reliability checks were carried out during the data collection of this project. However, the testing used was such that reliability was built in; that is, direct measurement of a permanent product was used for testing.
Data Analysis

Data for this study were analyzed in two ways. A single subject (N = 1) design was used to measure the effects of treatment for each subject. Continuous recording was used for each subject. This design allowed for the comparison of data obtained during the intervention phase with data obtained during the baseline phase. Further subject analysis was conducted by the mean-median/chi-square design.

To analyze the effects of intervention on the group as a whole, the Wilcoxon Signed-Rank Test was used (Seigel, 1956). For the purpose of this analysis, each subject was used as his own control. The mean performance was determined for each subject during baseline and during intervention. The effects of intervention were determined as significant or not significant using the .05 level criterion.
IV. RESEARCH RESULTS

The purpose of this thesis was to investigate the implications of involving parents of exceptional children in an academic objective.

The findings of this study will be reported in two ways. The first section will consist of the presentation of individual data for each of the six subjects along with a graphic display of the data. The individual data were analyzed by the mean-median/chi-square design. The second section will present the data on the group as a whole. The pre- and post-intervention means will be presented. The group data were analyzed using the Wilcoxon Signed-Rank Test (Siegel, 1956). The specific hypothesis tested was: there will be no statistically significant difference in the mean scores of six learning disabled subjects on specified academic behavior before and after treatment involving parents as the intervention strategy.

**Individual Results**

**Subject A**

**Objective:** Subject A’s expected reading level was grade six. Considering this, as well as test result indications of her rate of progress, it was decided that she should be able to read aloud from a sixth grade level book, correctly pronouncing an average of 95% or better of 100 words by the completion of this project.

**Criteria of measurement:** Each day Subject A was asked to read 100 consecutive words from a sixth grade reading book (Scott-Foresman), in a time span of
two minutes. The number of words read incorrectly was noted and the percentage of words read correctly was recorded on a daily chart. Two pronunciation attempts were allowed before a word was considered incorrect. However, the second pronunciation had to be given spontaneously, no clues or help were given during the measurement.

**Baseline mean:** During baseline recording, her scores ranged from 84% to 95% with an average of 89%.

**Intervention:** Following fourteen days of baseline, a conference was held with both parents. The project was discussed and they agreed to participate. A list of general suggestions (Appendix C), along with a list of suggestions specific to the subject's objective (Appendix D), and a time recording chart (Appendix H) were presented to them.

**Intervention mean:** The third day after the parent conference her score rose to 96%. From that time on her scores ranged from 94% to 100%. Her average for the intervention period was 97%.

**Analysis of time spent working with child:** The time spent at home each day in the area of reading ranged from 15 to 45 minutes. Even though 30 minutes was recommended as the maximum time to spend, the subject's enthusiasm led to longer amounts of time on several occasions.

**Statistical analysis:** The mean-median/$x^2$ analysis of the data resulted in the $x^2$ value of 19.55, indicating significant change at the .05 level. (Figure 1)
FIGURE 1. Subject A
Subject B

Objective: The objective stated for Subject B was that he should read aloud from a 3^{2} grade level book correctly pronouncing an average of 90% or better of 100 words. This objective would not bring him to his expected grade level, but would bring him one step above his frustrational level as measured by the Sucher-Allred Inventory. Considering the subject's high distractibility, a 90% proficiency pronunciation was considered a reasonable objective.

Criteria of measurement: Each day Subject B was asked to read 100 consecutive words from a 3^{2} grade level book (SRA) in a time span of two minutes. The number of words read incorrectly was noted and the percentage of words read correctly was recorded on a daily chart. Two pronunciation attempts were allowed before a word was considered incorrect. However, the second pronunciation had to be given spontaneously, no clues or help were given during the measurement. Subject B was unable, at times, to read within the two minute time allotment. A percentage was then derived according to the number of words read within the two minutes.

Baseline mean: During the baseline recording, Subject B's scores ranged from 70% to 89%, with an average of 80%.

Intervention: Following eighteen days of baseline recordings, a conference was held with the subject's mother. The project was discussed and she agreed to participate. A list of general suggestions (Appendix C), along with a list of suggestions specific to the subject's objective (Appendix D), and a time recording chart (Appendix H) were presented to her.
Intervention mean: Subject B's scores began to stabilize on the fourth day after the conference. From that time on, his scores ranged from 80% to 94%. His average for the intervention period was 88%.

Analysis of time spent working with child: His mother spent an average of three days a week working with him. The amount of time spent per day ranged from ten to forty-five minutes. Subject B's mother also encouraged him to read independently on the days she was unable to work with him.

Statistical analysis: The mean-median/\(x^2\) analysis of the data resulted in a \(x^2\) value of 10.83, indicating significant change at the .05 level. (Figure 2)

Subject C

Objective: One goal established by the resource room was to improve Subject C's visual memory and his eye/hand coordination. Thus, the specific objective established for him was that he should be able to write from memory, and in proper sequence, a group of four unrelated letters at a proficiency of 90%.

Criteria of measurement: Letters were shown with a tachistoscope for maximum exposure (approximately five seconds). Subject C was asked to write all the letters he saw, in the same order, as soon as the picture moved out of focus. Each day he was shown five unique sets of letters. An attempt at reproduction was recorded as correct only when all four letters were recorded in the same sequential order as shown by the tachistoscope. The percentage, derived from the number correct out of five tries, was recorded daily.

Baseline mean: During baseline, Subject C ranged from zero to one attempt
FIGURE 2. Subject B
correct, with an average of 10%. The number of days with zero correct exactly equalled the number of days with one correct.

**Intervention:** Following twenty days of baseline recording, a conference was held with the subject’s mother. The project was discussed and she agreed to participate. A list of general suggestions (Appendix C), along with a list of suggestions specific to his objective (Appendix E), and a time recording chart (Appendix H) were presented to her.

**Intervention mean:** During intervention Subject C’s scores of one correct outnumbered the scores of zeroes. The range of scores was from zero to three correct or 0% to 60%. The average score was 19%.

**Analysis of time spent working with child:** Subject C received twenty to thirty minutes of help at home each day during the intervention period.

**Statistical analysis:** The mean-median/$x^2$ analysis of the data resulted in a $x^2$ value of 0.91, indicating no significant change at the .05 level. While no statistically significant change was indicated, educational growth, relevant to the academic objective, was observed. (Figure 3)

**Subject D**

**Objective:** One treatment procedure recommended for Subject D was to provide auditory processing experiences. Thus, the specific objective established for this project was that he would be able to repeat, from memory, a group of five unrelated words, in the same sequence, at a 90% proficiency.

**Criteria of measurement:** Each day ten words from the Dolch word list were
FIGURE 3. Subject C
used to make five groups of five words. A group of five words was presented at a rate of one second per word. Subject D was given an opportunity to repeat the five words. A group was considered correct if he could repeat, on first attempt, the five words in the same sequence as presented to him.

**Baseline mean:** During baseline Subject D ranged from zero to four groups correct. His average during this time was 20%, or one out of five groups correct.

**Intervention:** Subject D was absent during the first week of baseline recordings, and therefore, there were only sixteen days of baseline scores. The conference with his mother was the fourth conference held despite this fact. The project was discussed with her and she agreed to participate. A list of general suggestions (Appendix C), along with a list of suggestions specific to the subject’s objective (Appendix F), and a time recording chart (Appendix H) were presented to her.

After several weeks of intervention, Subject D showed minimal progress as analyzed by his graphed recordings. A conference was held with his mother to discuss this minimal progress. It was suggested that she withdraw the formal procedures and work with the subject on an informal basis.

**Intervention mean:** During the period of intervention, Subject D received scores ranging from 0% to 80%. His average was 14% correct. During the period of intervention, he received scores ranging from 20% to 80%, with an average of 46%.

**Analysis of time spent working with child:** Subject D received help at home on an average of three days a week. The time spent per day ranged from ten to forty minutes.
FIGURE 4. Subject D
Statistical analysis: The mean-median/$x^2$ analysis of the data resulted in a $x^2$ value of 7.10, indicating significant change at the .05 level. (Figure 4)

Subject E

Objective: Subject E needed specific assistance from the resource room in the area of spelling. Therefore, the objective was that he be able to correctly spell words from a third grade speller with an 80% proficiency on first attempt.

Measurement criteria: Each day a list of ten words was dictated from a third grade speller. The words were varied from day to day. Subject E was asked to use cursive handwriting, but because home activity emphasized spelling rather than handwriting, words were counted correct if all letters were present and recognizable even though they were not correctly formed. A daily recording of percentage correct was made.

Baseline mean: During baseline recording, Subject E's scores ranged from 30% to 80%, with an average of 51%.

Intervention: After baseline procedures had been in effect for twenty-three days, a conference was held with the subject's mother. The project was discussed and she agreed to participate. However, she stated that her work hours would not allow her to work with her son regularly, but she would have her daughter help him. She agreed to work with him when possible. A list of general suggestions (Appendix C), along with a list of suggestions specific to the subject's objective (Appendix G), and a time recording chart (Appendix H) were presented to her.
**Intervention mean:** Scores ranged from 20% to 100% with an average of 59%.

**Analysis of time spent working with child:** Subject E's mother reported that his sister worked with him when possible. However, the recording chart was lost and thus, there is no record of how much time was actually spent working with him at home.

**Statistical analysis:** The mean-median/$x^2$ analysis of the data resulted in a $x^2$ value of .0714, indicating no significant change at the .05 level. (Figure 5)

**Subject F**

**Objective:** The objective set for Subject F was that she be able to read aloud from a $3^{1}$ grade level book, correctly pronouncing 95% of 100 words in a time span of two minutes. The grade level to be achieved was one level above her frustrational level indicated by the Sucher-Allred Inventory. Because the purpose was to measure oral reading ability without a comprehension factor, this objective was considered to be realistic.

**Criteria of measurement:** Subject F was asked to read from a $3^{1}$ grade level book (Houghton-Mifflin) every day. The number of words read incorrectly was noted and the percentage of words read correctly was recorded on a daily chart. Two pronunciation attempts were allowed before a word was considered incorrect. However, the second pronunciation had to be given spontaneously, no clues or help were given during the measurements.

**Baseline mean:** Subject F's scores ranged from 81% to 94% during baseline, with an average of 87%.
**Intervention:** Thirty-two days of baseline recordings took place before arrangements could be made to meet with the subject's mother. The project was discussed and she agreed to participate. A list of general suggestions (Appendix C), along with a list of suggestions specific to the subject's objective (Appendix D), and a time recording chart (Appendix H) were presented to her.

**Intervention mean:** During the intervention period Subject F's scores ranged from 83% to 93%, with an average score of 89%.

**Analysis of time spent working with child:** A phone call to the subject's mother was made to arrange for a home visit. At this time she reported that she had been unable to carry out any procedures with Subject F due to an unexpected mishap in the family.

**Statistical analysis:** The mean-median/$\chi^2$ analysis of the data resulted in a $\chi^2$ value of 5.86, indicating significant change at the .05 level. However, observable educational improvement relative to the specific academic task was not observed. (Figure 1)

**Group Analysis**

Results of group analysis indicated that all subjects made positive gains in their assigned academic objective. The Wilcoxon Signed-Rank Test was utilized to test the hypothesis that no statistically significant difference would occur in the mean scores of six learning disabled subjects on specified academic behavior before and after treatment involving parents as the intervention strategy. Results of the analysis indicated that there was significant difference in the academic performance of the group. Table 1 indicates these results.
FIGURE 6. Subject F
### TABLE I

WILCOXON SIGNED-RANK TEST

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<thead>
<tr>
<th>Subject</th>
<th>Baseline</th>
<th>Intervention</th>
<th>Intervention $^1$</th>
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<td>A</td>
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<td>B</td>
<td>80%</td>
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<tr>
<td>F</td>
<td>87%</td>
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</tbody>
</table>

$^1$ Indicates significance

$P < .05$
V. DISCUSSION AND CONCLUSIONS

Discussion

This project was designed to investigate the implications of involving parents of exceptional children in an academic objective. An investigation of these implications must incorporate a discussion of each subject individually, as well as a comparative discussion of the individuals. Therefore, this section will first look at the effects of parental involvement on each individual subject.

Individual Discussion

Subject A. Subject A showed a statistically significant change in mean scores before and after intervention. She showed a gain of eight points in her averaged scores, plus a decrease in variance among scores. It can thus be implied that parental involvement in her reading instruction had significant positive influence on her oral reading ability. Relevant to these gains is the fact that Subject A was reading at a higher grade level for this project than the instructional level of her reading program.

Subject A is a highly self-motivated person and when she was offered the possibility of continuing her reading program at home, she responded with great enthusiasm. She insisted on working at home every day and when an event evolved on a particular day that did not allow time for her parents to work with her, she insisted on making up the lost time another day. This high self-motivation may have resulted from the strong family support she has always received.
Subject A's parents expressed concern about her progress all through her years in school. They stated that they were frustrated because she had not improved for so long, but enthused about the prospect of helping her. School appeared to be highly valued by her parents as displayed by their actions. They expressed pleasure with her progress thus far during the year, and seemed anxious to do anything to help maintain and continue that progress.

In sum, Subject A's high self-motivation and willingness to work at home, along with her parents' willingness to help and support her, seemed to significantly influence the academic growth she showed during this project. In this case, parental involvement appeared to fit the needs of both the child and the parents and resulted in measured success.

Subject B. Subject B, like Subject A, showed a statistically significant change in mean scores. He showed an eight point gain in mean score along with a greater consistency in scores. Parental involvement seemed to positively influence Subject B's oral reading ability.

An important gain for Subject B was the achievement of greater stability in scores. He had been receiving specialized help in school for two and a half years. While some gains were seen in his academic development, he remained highly distractible and scores fluctuated randomly. His mother's irregular schedule did not allow her the time to work with him on a regular basis; however, the time she did spend with him seemed to influence his scores' stability for the assigned task.

Along with more stable scores, gains were observed in mean scores. This would seem to be the result of increased stability within Subject B, combined with
the extra reading practice at home. However, further research is needed to determine the relationship of these two factors, that is, was it the stability factor which effected his reading progress, the extra practice, or the combination of the two.

Parental involvement seemed to influence Subject B's oral reading ability. However, according to his regular teacher, this influence was not carried over into other areas of academic work. This implies a need for further research exploring more ways for utilizing parental involvement, and would demand close cooperation and open communication between the parents and the regular teacher.

Subject C. Subject C showed a nine point gain in averaged scores during intervention. This gain was not indicated as significant by the data analysis. However, valuable educational progress, resulting from parental involvement, were observed in the pattern of progress he made. Subject C began with an ability to remember and record two letters out of four. Soon after intervention started, he was able to remember and record three letters, and later he was able to record all four letters with only two letters out of sequence. A careful study of his graph shows some degree of progress even if it does not indicate statistical significance. That is, the occurrence of zero percentage scores decreased during intervention, and scores higher than 20 percent were first achieved during intervention.

Subject C appeared to be receptive to the additional help provided at home and his parents appeared willing and capable of working with him on the assigned task. This seems to have influenced his academic progress in school. It can be implied that this progress was specifically related to parental influence since during this time, no other instruction was provided in relation to the objective established
for him. Thus, for Subject C parental involvement appears to have produced important gains even though these gains did not appear significant according to the data analysis used for this project.

**Subject D.** Subject D showed significant gains in auditory sequential memory as a result of this project. During intervention, Subject D’s mean score dropped by six points, but during intervention\(^1\) his mean score increased by twenty-six points. Intervention\(^1\) indicated significant change in mean scores as indicated by the statistical analysis.

Subject D has always been very self-conscious about his inability to read and was well aware that his younger brother was a more advanced reader. His parents had insisted on working with him at home since he first entered school. However, he did not seem receptive to the idea, and it seemed to make him only more aware of his weaknesses. This seemed to negatively effect his behavior. For example, observations indicated that he disliked taking chances and tried to avoid situations where he might make a mistake.

Subject D’s lack of progress during intervention and these observations concerning his behavior were discussed with his mother. It was suggested that perhaps working on academics at home on a regular, formal basis did not meet the needs of Subject D at this time. Therefore, intervention\(^1\) was implemented and his mother discontinued the specified procedures but continued to take advantage of informal opportunities for instruction, e.g., while driving in the car, while at the dinner table, or after reading a story to the subject and his brother. Recording procedures continued after this with six recordings noted within a two week time period. These
recordings of Subject D's scores show a tendency to improve, and result in an indication of significant gains.

It appears that his parents were capable and willing to help him improve in the assigned task area. However, Subject D was not receptive to the idea, and thus, it can be implied that the initially suggested procedures for parental involvement did not meet his needs at this particular time. By working closely with the parents, however, they were able to see the ambiguous effects of their involvement and were able to find other ways to meet their need for involvement in their son's academic growth. Therefore, an implication which can be drawn from the case of Subject D is that through parental involvement, parents can learn to change ways of meeting their own needs and at the same time better meet the needs of their child. Parental involvement in education can be a process through which parents and child can grow alike.

Subject E. Subject E gained eight points in averaged spelling scores. However, this gain was not indicated as significant due to an increase in variance of scores.

This greater variance in scores might be related to emotional factors. During the intervention period, Subject E underwent an extensive hearing exam. This exam indicated a minor loss of hearing in both ears. The doctor, thinking there might be possible damage to the brain stem, referred him to a neurologist. However, the neurologist found no signs of damage. During this time, Subject E was under great emotional stress because he was seeking a reason for his poor physical coordination. The anxiety of waiting, along with the disappointment in finding no answers, could have been a cause for decrease in performance.
Subject E's mother, divorced and sole supporter of her family, had to work an evening shift and so was unable to work with him. However, his sister agreed to work with him. According to his mother, her daughter worked with Subject E whenever he would cooperate and allow her to help him. Unfortunately, the exact amount of time spent with him is unknown because the time recording chart was lost. This could also have influenced the no significant gain.

It is important to note that many factors which can lead to confusion in a child and sometimes result in behavioral problems were present in Subject E's life. Some of these factors include: the fact that Subject E had no male personality to model himself by and to seek advice from; the fact that Subject E was very conscious of his own physical abilities and felt unaccepted by his peers; and the fact that he was confused by his poor memory and spelling abilities. Even though his mother expressed a growing awareness of his problems, she also expressed that she did not know how to respond to them. During the home visit, it was observed that his mother needed specific help in knowing how to deal with her son. It seemed clear that this help was needed before she would be capable of working with him on the assigned academic task with the designated procedures.

This situation implies that generalized procedures do not necessarily fit every case. Rather, each situation involving parents must be considered unique. This suggests that each family situation must be carefully assessed and procedures recommended according to that assessment. The recommended procedures should be such that they meet the parents' needs, as well as provide for those of the child.
Subject F. Subject F showed a gain of two points in averaged scores. This gain was indicated as statistically significant; however, it was not considered a true educational gain. The fact that her parents were unable to spend time working with her would seem to have been a contributing factor in this minimal educational gain.

From information derived from Subject F’s classroom teacher, throughout the year her parents expressed a concern for her limited progress, but also exhibited an inability to follow through with suggestions. This same problem was encountered in this project. This is another example of a situation where the needs of the parents must be assessed and procedures recommended according to that assessment. In this particular case, the parental characteristics should have been considered to determine procedures which would effect follow-through from the parents. The true effect of parental involvement on Subject F’s academic progress will only be evident after such procedures can be implemented.

Comparative Discussion

When comparing the results and the implications of all six subjects, two major implications seemed to evolve. One is that if parental involvement in the child’s academic growth was appropriate to the needs of both the child and the parents, then success resulted from that involvement. This implication negated the original hypothesis of this research project. The second implication is if that involvement was not appropriate to the needs of either the child or the parents, then less success occurred. This implication demonstrated important qualifications of the original hypothesis that were not foreseen.
The first implication was supported by Subjects A, B and C. In the cases of each of these children, the parents were capable of working on the assigned task. They seemed concerned about their child's progress and seemed willing to find time to work with the child. At the same time, each child responded positively and seemed to enjoy working with his parents.

These factors seemed important to the amount of progress made by each child. Subject A was able to pass the goal set as her objective, but while Subject B and Subject C did not quite reach their goals, after intervention had been started, it became apparent that their objectives had been set too high. This is especially relevant to the case of Subject C in that in the stated objective and the established recording procedure, his true progress did not show up on the graph and did not prove statistically significant. However, with gains made in averaged scores, before and after intervention, and with the inclusion of informal observations, all three children seem to have made important educational gains as the result of parental involvement.

Subjects D, E and F seem to support the second implication. It appears that the type of parental involvement proposed in this project did not fit the needs of Subject D at this time, and did not fit the parental needs in the cases of Subject E and Subject F.

The same factors that appeared in the parents of Subjects A, B, and C also appeared in Subject D's parents. However, Subject D, himself, was not open to the idea of being helped at home in a formal manner. He openly rejected the idea. This seems to be the factor that kept Subject D from progressing at a faster rate. Intervention², however, brought about significant gains which indicate that by changing
the type of parental involvement, the needs of Subject D could be met.

On the other hand, the parents of Subject E and Subject F were willing and concerned about their child, but they seemed unable to provide the help and support needed. In the case of Subject F, one can only hypothesize what might have happened if the parents had been able to work with her. But if that hypothesis is based on characteristics Subject F displayed in school, on other implications seen in this study, and on the theories and research of others, then it would predict greater significant growth accompanied by valuable educational gains through the involvement of her parents.

In the case of Subject E, some gains in mean scores were seen which could have resulted from help received from his sister. However, very similar help was being provided in the resource room, so greater gains were expected. The comments from his mother concerning his behavioral pattern at home, along with first hand observations, implied that he needed direct support and help from his mother. But, his mother, for a variety of reasons, was unable to meet that need.

These two cases indicated a need for more specific research investigating the meeting of parents' needs through the process of parental involvement in education. Some areas of needed research would include the following: intensive teacher training on how to help parents help their children; parent training programs designed to train parents how to work with their child; and specific counseling approaches which could be provided by the school.

This study implied that parental involvement can influence a child's academic growth. However, the amount of academic growth seemed to depend on the child's
willingness to accept help from his parents and on the parent's capability of providing
the needed support and assistance.

These implications should hold particular relevance to persons preparing to
teach. They clearly imply that if one is concerned about the growth of the total
child, parental involvement cannot be ignored. At the same time, they demonstrate
that procedures for involving parents can not be rigidly designed to fit all cases.

Conclusions

This research has investigated the implications of involving parents of
exceptional children in an academic objective. The research results indicated
significant difference in the mean scores of four of six learning disabled subjects on
specified academic behavior before and after treatment involving parents in the
intervention strategy. Further analysis indicated significant growth in the group as
a whole.

It is important to note that this project raises additional questions which
indicate the need for further research. Such questions include the following: Could
anyone, such as a non-family tutor, have produced the same or better results? Was
it the academic reinforcement or the extra practice provided at home that effected
results, or, was it the added attention provided by the parent? If it was added
attention that effected results, could similar results have been seen by simply en-
couraging parents to give more time and attention to their child? If no positive
effects were observed, did that indicate parental inability to participate in the
academic development of their child, and if so, is parent training necessitated?
In sum, this study should be seen as a preliminary study investigating the implications of involving parents in an academic objective. The results implied that such involvement resulted in significant gains, but further research, in a variety of settings with a variety of subjects, is necessitated to substantiate these results and to gain more complete data concerning the effects of parental involvement in the total school process.
APPENDICES
APPENDIX A

DAILY RECORDING CHART
APPENDIX A

DAILY RECORDING CHART

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% correct per math, reading, or spelling task each day
APPENDIX B

CONTRACT

This project, which is part of the educational progress, has been satisfactorily completed. I agree to comply with the rules and regulations as that work must be chosen at most appropriate.
APPENDIX B

CONTRACT

I, as author of this project, have verbally explained this project to the satisfaction of the below-signed. I agree to provide assistance and direction whenever necessary. Child progress reports will be shared with parents and the regular resource room teacher. All records will be kept in the strictest confidence and only first names will be used in the final reporting of this project.

Carol Byler

This project, designed to examine the assumption that parental involvement in the educational process of the child will improve the child’s academic progress, has been satisfactorily explained to me. I the parent of __________________________

have chosen, of my own free will, to participate in this project. I agree to spend time each day working with my child in the area determined as that area most needing help. I agree to use the techniques discussed and chosen as most appropriate for home use.

Parent: __________________________

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APPENDIX C

GENERAL SUGGESTIONS FOR PARENTS
APPENDIX C

GENERAL SUGGESTIONS FOR PARENTS

Your child needs to know that you are interested in school learning because your attitudes and values greatly influence your child. The following are suggestions you can use to help encourage your child to learn.

Read regularly to your child. If it is not possible for you to read, have an older brother or sister read to your child.

Read regularly in the presence of your child.

Listen to your child read or have an older brother or sister listen when you are unable to find the time.

Make available books which are at the child's reading level; use your local library and the school library; encourage your child to bring books home from school.

Enjoy every small amount of your child's progress; try to avoid unnecessary nagging or criticism.

Pay special attention to completed work brought home.

Show interest in your child's work by asking questions and by listening with sincerity.

Encourage contribution to family discussions; listen with sincerity to your child's suggestions. Respect his/her opinion.

Offer suggestions or assistance wherever necessary; give praise when deserved and encouragement when needed.

Provide a quiet period each day for reading and studying, preferably at a regular time each day so it becomes part of the family routine.

Provide pencils, paper, and a dictionary, if possible, for home study.
Get your child to bed at a regular time each night so he gets the proper sleep and rest; allow time for discussing the good events of the day.

Get your child up each morning with adequate time for a good breakfast; begin the day positively and cheerfully.

The above suggestions were taken from Parent-Teacher Interaction by E. J. Kelly and School and Home Program—Flint, Michigan, a report reprinted by U.S. Department of Health, Education and Welfare, Office of Education.
APPENDIX D

SPECIFIC INSTRUCTIONS GIVEN TO PARENTS
OF SUBJECTS A, B, AND F
APPENDIX D

SPECIFIC INSTRUCTIONS GIVEN TO PARENTS
OF SUBJECTS A, B, AND F

Listen to your child read.
Write down the words your child has a lot of trouble with. Have your child begin an alphabetical filing system. He/She should write the word and a sentence using the word. Each day review the words by reading over the words in the file.

Steps to be gone through by your child for studying difficult words entered in the file:

1. Look at the word
   - only one word at a time
   - think about its shape and how it begins and ends

2. Say the word
   - say it softly
   - think about how it sounds

3. Tell what it means
   - in your own words
   - if in doubt, use a dictionary

4. Try to use it in a sentence
   - should be a sentence that makes sense

5. Check the word
   - double check to see you have given the correct meaning and used it correctly in a sentence

For the Parent:
Work patiently and not hurriedly.
Sit close to your child so you can see what the child is doing.
See that the child pronounces the word correctly.
Help the child check his words so that he does not learn the wrong meaning for it. If this happens, encourage him to go through the study steps again until he:
   a. can say it correctly
   b. can say the meaning in his own words
   c. can use it in a sentence

Use books from the library - school and local public libraries.
Use the newspaper
Have your child read from the newspaper. Words your child does not know can be pronounced by you and reading just continues. For larger words, have the child pronounce the parts of the word he recognizes while you pronounce those parts he does not know. Have your child pick out words within words.

Play games with your child.

Pick A Slip Game

Materials: Print single words or phrases on slips of paper. Write a numerical value from 1 to 3 in the upper right hand corner of each slip.

Procedure: Two or more people may play. The slips are placed face down on the table. The players take turns selecting a slip and reading it. If the player can read the slip correctly, he replaces the slip face down on the table and the next player takes his turn. The winner is the person who, after all the slips have been picked up, has the highest score by adding the numbers on all the slips.

Use words from the child's difficult word file.

Slap Jack

Materials: Word cards

Procedure: Make up a deck of cards which cause difficulty such as those, through, these, thing, threw, thought, tough, your, you're, think. Make four cards for each word. Before dealing out cards, choose one of the words as the slap card. Cards are dealt and kept face down. Each player lays down a card in turn and pronounces the word on the card. When a card with the slap word is turned up, each player tries to be the first one to put his hand over the cards in the pool and says, "slap [word]", example: slap word is through, person would have to say "slap through." The cards in the pool are then added to his pack. When a player's supply of cards are gone, he is automatically out of the game. The person who has all of the cards is the winner.
APPENDIX E

SPECIFIC INSTRUCTIONS GIVEN TO PARENTS OF SUBJECT C
APPENDIX E

SPECIFIC INSTRUCTIONS GIVEN TO PARENTS
OF SUBJECT C

1. Make a set of cards with four letters on each card. Show one card at a time for approximately 3 seconds. Immediately after removing card, have child write in the proper order the letters he saw.

2. Show child a picture (any picture from a magazine). Have him draw the picture to see how many of the details in the picture he remembers. Choose pictures that aren’t too complicated.

   Variations: Vary the amount of time he has to look at the picture.
   Start with about 30 seconds and work towards less time.

   Have child name the objects he sees rather than draw them.
   For this show the picture no more than 10 seconds.

3. Materials: One piece of wood at least 1-1/2 inches thick.
   A drill for drilling holes into the wood.
   Epoxy glue to glue the nuts over the holes in the wood.
   15 stove bolts with matching nuts.
   A short-handled screwdriver.
   Container for screws and screwdriver

   Note: The nuts can be hammered flush with the wood so they will stay firmly in place.

   Make from 8 to 10 holes with nuts over top of the holes. Put 4 to 7 screws in any of the holes. Have child unscrew all of them and then rescrew them in the same order as previously placed. Vary the number of screws used and the order in which they are placed.

   Variations: Give child a certain time limit to finish. As he gets more adept, decrease the amount of time.

4. Play concentration. Use only the red or the black cards of a regular deck of cards. Increase or decrease the number of cards used as necessary.
5. When driving in the car on a trip, play games such as finding all of the letters of the alphabet in the proper order by watching the signs along the road.

Variation for number 1: Have child look at the card until he thinks he knows it. He turns the card over and then writes the letters he remembers. This should be used only as a break from the #1 as described above.
APPENDIX F

SPECIFIC INSTRUCTIONS GIVEN TO PARENTS OF SUBJECT D
APPENDIX F

SPECIFIC INSTRUCTIONS GIVEN TO PARENTS
OF SUBJECT D

A. Provide practice in auditory memory games such as having the child repeat
digits, names of letters, words, sounds of letters or even combinations (e.g.,
say "4-7-3-5-9," etc., or say "1-N-7-house-door"). As with other activities,
it is important to determine the appropriate starting point (that point at which
the child can experience success but not without effort) and proceed slowly, in
small increments, to make the task harder or more complex. Complexity or
difficulty can be varied by 1) varying the number of units of information the
child must remember and repeat; 2) varying the speed at which the information
is presented; 3) varying the time interval between the teacher saying the digits
or letters and when the child is permitted to repeat them (e.g., it is much
easier to repeat digits immediately after they are spoken by the teacher than to
have to remember them for five or ten seconds before repeating them); 4) having
the child repeat the series backwards; or even by 5) introducing distractions after
presenting the information to be remembered and repeated.

B. The game of "I went to the country" may be useful. One person says "I went
to the country and I took my shoes." The next person must repeat the entire
sentence and add another item, e.g., "I went to the country and I took my
shoes and toothbrush." The game continues until one person cannot continue
the sequence.

Variation: Use letters of the alphabet and start with "I went to the store and
bought "A" - apple." The next person must repeat - "I went to the store and
bought A-apple, B-banana." Keep going each time repeating all the previous
letters of the alphabet along with what was bought and adding a new letter.

C. Using the Dolch Word List, make word cards. Have cards face up on the table.
Read off a series of 4 or 5 words. Have child pick up the 5 words and place in
front of him in the proper sequence.

D. Have the child reproduce a series of nonverbal auditory sounds according to
increasingly complex presented rhythms, e.g., a series of taps with a stick or
pencil, a series of claps, use a drum, triangle, bells, blocks, etc.

E. Have the child indicate whether a target sound (for example, "s") comes in the
beginning, middle or end of a word. Use longer and more complex words.
F. Read to your child, a story or a chapter at a time. Upon finishing, have child recap the story in the proper sequence. Next day before beginning to read, have him recall the story from the previous day.

G. Name 4 or 5 parts of the body. Child must point to those parts on his body in the same sequential order.
APPENDIX G

SPECIFIC INSTRUCTIONS GIVEN TO PARENTS
OF SUBJECT E
APPENDIX G

SPECIFIC INSTRUCTIONS GIVEN TO PARENTS
OF SUBJECT E

A. Encourage child to play memory games with himself; examples: try to memorize license plates while going to and from school; have child recall details of a movie or TV show he saw a couple of days before; have him recall the number of houses he passes as he walks to school; have him recall (in the evening) what various persons were wearing that day; have him recall the things he saw on his walk home from school.

B. Show child a picture allowing him to look at it for a period of approximately 15 minutes. Remove the picture and have child draw what he saw. When he is finished, compare the two to see how many details he was able to remember.

For variety, ask child to name the things he saw before he draws them. Or, have a number of pictures and using one at a time have child tell you about what he saw instead of drawing what he saw.

Use pictures from old calendars, magazines, books, etc.

C. Spelling - Have child bring his spelling book home. Use the following steps to help him study:

1. Write the word on a card or a piece of paper.
2. Have child look at the word and say it out loud.
3. Child should write the word on the table using his finger while saying out loud each letter as he writes it. Then he should say the word again.
4. Repeat steps 2 and 3 three times. The third time he should try writing with his finger without looking at the paper.
5. Child says the word, and traces the written word (he traces over the word you have written) with a pencil. Each letter should still be said out loud. He should do this three times.
6. Covering up the word, child now should spell the word orally.
7. After spelling it, he again says the word and spells it while writing it on a piece of paper.
8. He then says aloud the word he has just spelled.

D. Play concentration. This is a game child is already familiar with and enjoys. It can be enjoyed by all ages. Use a regular deck of cards, using only the
blacks or the reds. For variety, have child make word cards using his spelling words and use them to play concentration.

E. Jacks would be a good game for child to play by himself. This game could help develop his eye/hand coordination. Playing catch is another good game for developing eye-hand coordination.
APPENDIX H

TIME SPENT WORKING WITH CHILD
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<td>Week 4 Date:</td>
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