AN ABSTRACT OF THE THESIS OF

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The purpose of this research study was to examine the impact of the consulting teacher model on referral and verification rates to special education. A population of schools which implemented the model (N = 17) was compared with a randomly selected comparison group of schools which did not (N = 30). All schools were from the Portland, Oregon, Public School District. The research was designed to cover a three school year period of time (1987 to 1990). Three different types of data were collected: the number of children who were discussed at regular education pre-referral meetings, the number of children who were referred for special education assessment and the number of children who verified as eligible for special education services.
Three primary research questions addressed (a) the impact of the consulting teacher model on the number of children in the process, (b) the longitudinal impact of the model on referral rate accuracy and (c) referral rate accuracy differences between the consulting teacher and comparison group schools.

Results from the first question indicated a difference in the numbers of children discussed at the initial regular education pre-referral step; 17 more children were discussed in the consulting teacher schools. Differences were also found between the 1987-88 school year and every other year; seven more children were in the process in the first year of the study than in the later years.

Results from the second question found that length of time on the model does have a significant effect on referral rate accuracy in the consulting teacher schools. Two differences were found in this question: an increase in referral rate accuracy between years three and four and a decrease in referral rate accuracy between years four and five.

Results from the third question indicated no differences between the type of school and school year. Referral rate accuracy remained the same in both the consulting teacher and comparison group schools throughout all three years of this study.
The Effects of Implementing the Consultation Model on Special Education Referrals in the Portland (Oregon) Public Schools from 1987-1990

by

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# TABLE OF CONTENTS

## Introduction
- Regular Education Initiative .................................................. 1
- Regular Education Pre-referral Intervention ............................... 7
- Statement of Purpose .................................................................. 8

## Literature Review
- Research on the Referral Process ............................................ 13
  - The impact of the regular classroom teacher on the referral process ................................................. 14
  - A teacher’s reasons for making a referral ....................................................................................... 14
  - Successful strategies for limiting the numbers of referrals ............................................................ 15
- Research on the Pre-referral Process ........................................ 22
  - Pre-referral as an intervention process ......................................................................................... 22
  - Regular education pre-referral research base ............................................................................... 23
  - An example of a regular education pre-referral intervention model ............................................. 27
    - Phase 1: Making Initial Contact ............................................................................................... 28
    - Phase 2: Assessing the Environment ......................................................................................... 29
    - Phase 3: Setting Objectives ..................................................................................................... 29
    - Phase 4: Planning Strategies .................................................................................................... 30
    - Phase 5: Implementing Treatment ............................................................................................ 30
    - Phase 6: Evaluation ................................................................................................................. 30
    - Phase 7: Transitioning Services ............................................................................................... 30
- Collaborative Consultation ......................................................... 30
  - A current definition of collaborative consultation ......................................................................... 30
  - Impact of collaborative consultation as a service delivery option .................................................. 32

## Collaborative Consultation as a Regular Education Pre-referral Intervention Designed to Limit Referrals to Special Education
- The use of the consulting teacher model as a regular education pre-referral intervention strategy ....... 33
Research studies using the consulting teacher model as a regular education pre-referral intervention strategy 35

Conclusion 44

Statement of the Problem 47

**Design and Methodology** 49

**Historical Perspective** 49

A Related Study 51

The Current Research Study 55

- Population of schools which implemented the consulting teacher model 55
- Training 56
- Selection procedures for the comparison group which did not implement the consulting teacher model 58

**Definitions** 61

**Research Questions** 62

**Data Collection Instruments and Procedures** 63

- Portland Public School District Forms 64
- Data Collection Form 67
- Minutes from BSC Meetings 69
- Federally Required December Census 70
- The Interview Form 72

**Summary of Findings on the B-1 Form** 73

**Data Analysis** 73

- Question #1 74
- Question #2 74
- Question #3 75

**Conclusion** 76

**Results** 77

- Question #1 77
  - The first interaction 79
  - The second interaction 81

- Question #2 85

- Question #3 88
Discussion 91

Question #1 92
  A summary of results 92
  Implications 93
  First Interaction 93
  Second Interaction 97
  Conclusion 99

Question #2 100
  A summary of results 100
  Implications 100
  Conclusion 104

Question #3 106
  A summary of results 106
  Implications 106
  Conclusion 110

Summary 111

References 112

Appendices 119

Appendix A: Major Objectives for Consulting Teacher Training 119
Appendix B: A Description of Seven Influential Variables 122
Appendix C: Portland Public School District Forms 124
Appendix D: Data Collection Form 127
Appendix E: Letter of Support from Portland Administration 129
Appendix F: Letter of Support from Portland Administration 130
Appendix G: The Interview Form 131
LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Number of Children Discussed, Assessed and Found Eligible in the Consulting Teacher and Comparison Group Schools for 1987-1990</td>
<td>80</td>
</tr>
<tr>
<td>2</td>
<td>Number of Children in the Process in Consulting Teacher Schools and Comparison Group Schools for 1987-1990</td>
<td>82</td>
</tr>
<tr>
<td>3</td>
<td>Referral Rate Accuracy in the Consulting Teacher Schools According to the Number of Years on the Model</td>
<td>87</td>
</tr>
<tr>
<td>4</td>
<td>Percent of Referral Rate Accuracy in the Consulting Teacher Schools from 1987-1990</td>
<td>90</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ANCOV Table for the Number of Children in the Process and Type of School, Team Decision Points and Year (Includes Enrollment as a Covariate)</td>
</tr>
<tr>
<td>2</td>
<td>Significant Differences Found in the Number of Children Discussed When Comparing Consulting Teacher Schools with Comparison Group Schools for 1987-1990</td>
</tr>
<tr>
<td>3</td>
<td>Significant Differences Found in the 1987-1990 School Years When Comparing the Number of Children in the Process in Consulting Teacher Schools and Comparison Group Schools</td>
</tr>
<tr>
<td>4</td>
<td>ANOVA Table for Referral Rate and Length of Time on the Model</td>
</tr>
<tr>
<td>5</td>
<td>Significant Differences Found in Referral Rate Accuracy According to Length of Time on the Model</td>
</tr>
<tr>
<td>6</td>
<td>ANOVA Table for Referral Rate by Year</td>
</tr>
<tr>
<td>7</td>
<td>Percent of Referral Rate Accuracy for the Consulting Teacher Schools and the Comparison Group Schools for Years 1987-1990</td>
</tr>
</tbody>
</table>
The Effects of Implementing the Consultation Model
on Special Education Referrals in the Portland (Oregon)
Public Schools from 1987-1990

INTRODUCTION

The education of children with disabilities has been greatly enhanced by the passage of Public Law 94-142, The Education for All Handicapped Children Act of 1975, and its subsequent amendment, Public Law 101-476, Individuals with Disabilities Education Act (IDEA). These laws, with their powerful directives and policies, were designed to bring about a change in the tragic history of educational inequities which had occurred toward children with disabilities in the public school system. The overriding theme and one of the most important policies written into these laws was the mandate to provide a free, appropriate, public education to all children with disabilities. Furthermore, this educational service to children with disabilities must take place "to the maximum extent appropriate" with their non-disabled peers. The subsequent rules and regulations to this portion of the law outlined that the education of disabled children be in the "least restrictive environment,"--a continuum described by professionals as ranging from full time placement in the regular classroom to full-time, self-contained, homogeneous placement in a
separate classroom (Deno, 1970; Reynolds, 1962).

The traditional model for providing these necessary educational services to children with disabilities has been the resource room model. The resource room, which is placed on the continuum as more restrictive than the regular classroom, became the most common place for children with disabilities to receive direct instructional assistance for a portion of the day, but also allowed them to return to the regular classroom to be a part of an environment with their non-disabled peers. The establishment of resource rooms came from a desire to meet the educational policies set forth in the Least Restrictive Environment clause of the law.

Special educators appear to be implementing both the spirit and the letter of the law by educating the disabled to the maximum extent appropriate in the least restrictive environment. Data from the U.S. Department of Education's Seventh Annual Report to Congress (1985) on the education of the disabled indicated that nearly two thirds of the school-aged children with disabilities were receiving the majority of their educational services in the regular classroom. There are several reasons associated with this movement toward a more integrated educational service.

The first reason appears to be a response to years of efficacy research
studies which examine whether the academic and social benefits to children with disabilities are greater in separate or integrated educational placements. Numerous efficacy studies and literature reviews have been conducted seeking to empirically answer this placement question (Adamson, Matthews & Schuller, 1990; Affleck, Madge, Adams & Lowenbraun, 1988; Carlberg & Kavale, 1980; Gartner & Lipsky, 1987; Hallahan, Keller, McKinney, Lloyd & Bryan, 1988; Lilly, 1986; Reynolds, 1989; Semmel, Gottlieb & Robinson, 1979; Tindal, 1985; Wang, Reynolds & Walberg, 1986; Yocom, 1980). A very thorough and critical meta-analysis of this placement question was recently conducted by Wiederholt and Chamberlain (1989) who examined 37 different efficacy research studies. In addition to the distinct-segregated versus distinct-integrated approach to educational placement, Wiederholt and Chamberlain (1989) added the effects of placement in the resource room to their examination. The overwhelming conclusion from their research reflects, at best, more inconclusive results about the efficacy of special education placement. In terms of academic and social/emotional/behavioral gains for special education children, a few of the 37 studies acknowledged the benefits of placement in a resource room model over placement in either the completely segregated or completely integrated classroom (Affleck et al., 1988; Wiederholt and Chamberlain, 1989). Other forces such as parental, legislative and litigative influences were found to support an integrated approach over
a segregated one (Adamson, Matthews & Schuller, 1990; Yocom, 1980).

A second reason often cited for supporting a more integrated educational setting for disabled children is the growing numbers of students being referred for special education. Between October 1976 and December 1980, for example, the number of students receiving special education services increased 17% (Algozzine, Christenson and Ysseldyke, 1982). Census data reported in the U.S. Department of Education's Ninth Annual Report to Congress (1987) which covered the 1986-87 school year, indicated that this upward trend was beginning to slow down. Between 1981 and 1986, the number of students receiving special education services increased only five percent.

In a report which summarizes more than five years of research on the process of identifying children for special education programs, Ysseldyke, Thurlow, Graden, Wesson, Algozzine and Deno (1983) found that (a) between 3% and 6% of the school age population were referred each year for psycho-educational evaluation; (b) once referred to special education, there was a high probability (92% nationally) the students would later be assessed; and (c) of those evaluated, 73% were declared eligible for special education services. Other research places the referral rate between 6% and 11% of the total school population in
28 large cities (Gartner & Lipsky, 1987). In these same cities, assessment to placement percentages vary within a range of 7.8% to 91.8% (Gartner & Lipsky, 1987). In either case, it seems apparent that once referred, a child will most likely receive special education services. With this rate of increase, the number of students needing services may be rising faster than available services can accommodate (Carter & Sugai, 1989).

A third reason for a more integrated educational program for children with disabilities is economic. With increased numbers of children being referred, tested and verified for special education services, many school districts will be unable to continue serving students under their current funding patterns (Graden, Casey & Christenson, 1985). While there has been a substantial increase in the amount of federal funds allocated to special education--from $100 million in fiscal year 1976 to $1.64 billion in fiscal year 1985--the promised federal contribution (40% of the average cost per pupil by 1982) has never been met (Gartner & Lipsky, 1987). Local school districts have had to take most of the burden upon themselves. Indeed, local school districts may have a tendency to verify students as eligible because they want the financial benefits and reimbursements rather than as a means for providing the best educational services (Will, 1986). The cost for referring, testing and placing a child within special education, however, has been estimated to exceed the levels of reimbursement
for educating the child (Reynolds, 1989; Shinn, Tindal & Spira, 1987; Wang, Reynolds & Walberg, 1986; Ysseldyke et al., 1983). The average reimbursement for educating a disabled student has been estimated at $2,300 per year, while the cost of the referral to placement process was estimated to be over $3,000 per child (Shinn, Tindal & Spira, 1987; Ysseldyke et al., 1983). With school district budget cuts and restricted financial resources, a substantial amount money can be redirected each year into services for children if schools combine their "special" with their "regular" educational programs (Stainback & Stainback, 1984; Wang, Reynolds & Walberg, 1986; Will, 1986).

A fourth and final reason for the current movement toward a more integrated approach in the delivery of special education services relates to the problem of identification. While the thirteen separate classifications of disabling conditions were identified and listed within the federal laws (P.L. 94-142 and P.L. 101-476), the verification procedure for each varies from state to state and often from school district to school district (Chalfant, 1985; Wang, Reynolds & Walberg, 1986; Ysseldyke, Thurlow, et al. 1983). This is particularly true with the identification of the learning disabled (Chalfant, 1985; Gartner & Lipsky, 1987; Wang, Reynolds & Walberg, 1986; Ysseldyke, Thurlow, et al. 1983). It is very difficult, for example, to distinguish the differences between children with a learning disability and children
who are simply slow-learners (Ysseldyke, Algozzine, Shinn & McGue, 1982). Problems in the identification of children with learning disabilities are a reflection of inconsistencies within the procedures for the definition, incidence, prevalence, or criteria for verification (Ysseldyke, Thurlow, et al. 1983). Compared to the 17% increase noted earlier for the identification of children with disabilities (Algozzine, Christenson & Ysseldyke, 1982), the increase for the number of identified learning disabled students during the same time period was 119% (Gartner & Lipsky, 1987). Given the problems cited in accurately identifying learning disabled children along with the tremendous increase in numbers throughout the years, it seems reasonable to support the notion of an integrated educational setting (Gartner & Lipsky, 1987; Ysseldyke, Algozzine, Richey & Graden, 1982).

**Regular Education Initiative**

The presence of these four variables—a lack of efficacy research to support a segregated over an integrated educational placement, the growing numbers of referrals to special education, the increased cost of the entire referral to placement process and the difficulty inherent in precisely identifying each disabling condition—has been recognized at a national level through the development of the Regular Education Initiative (REI). The REI was given momentum by Madeleine Will (1986) who served in the 1980s as the Assistant U.S. Secretary of
Education in charge of special education and rehabilitation. The focus of the REI was to encourage educators at all levels to work together in order to accommodate the educational needs of children with disabilities within the regular classroom. This integration would better serve and more economically serve all students.

While the REI has been oversimplified as a policy which calls for the immediate "mainstreaming" of all disabled children (Reynolds, 1989), the main point of this Initiative was to help educators focus on the original theme of P.L. 94-142--to effectively serve all children with disabilities (Will, 1986). Yet because of increases in cost, numbers of referrals and over identification, some type of unique, yet appropriate educational service delivery option needs to be offered as an alternative to the traditional resource room model. One such option addressed by Will (1986) is the need for education to be a "shared responsibility" between regular and special educators. Programs in special education must be allowed to develop through a partnership of regular and special educators.

**Regular Education Pre-referral Intervention**

One alternative to the traditional service delivery option of the Resource Room is through the use of a regular education pre-referral intervention program. Pre-referral involvement typically consists of a series of regular education intervention steps and procedures which
take place prior to the formal referral to special education services. These steps and procedures occur while the child is still in the least restrictive environment of all, the regular classroom. One of the most common regular education pre-referral intervention strategies is the collaborative problem-solving approach utilizing consultation techniques (Graden, Casey & Bonstrom, 1985; Zins, Graden & Ponti, 1988). Briefly, consultation is a process in which a consultant (e.g., a special service provider) and consultee (e.g., regular classroom teacher) work together to provide and implement a problem-solving strategy to meet the needs of the client (e.g., the child) in the regular classroom (Gutkin & Curtis, 1982; West & Idol, 1990; Zins, Graden & Ponti, 1988). Pre-referral involvement, then, is a regular education process and encourages the combined efforts of regular and special educators in the delivery of educational services to children with disabilities. Regular and special educators work collaboratively to make the best educational decisions for children. This combined effort of shared responsibility is at the center of the REI. While the regular education process of pre-referral may not necessarily be new to special educators, the term and use of pre-referral intervention as a program has recently received a great deal of attention in the literature (Graden, 1989). A more complete literature review of referral rates to special education, the regular education pre-referral process, the consulting teacher model and the use of this model as a regular education pre-referral intervention procedure will be
addressed in the next chapter.

**Statement of Purpose**

The purpose of this study is to examine the impact of the collaborative consultation model on referral rates to special education. More specifically, this research is designed to examine the referral and verification rates to special education services in schools which implement a consulting teacher model as a regular education pre-referral intervention strategy. The special education referral and verification rates from the population of schools (N = 17) which implemented a consulting teacher model will be compared to the special education referral and verification rates in a randomly selected comparison group of schools which does not implement the consulting teacher model (N = 30). All schools (N = 47) are from the Portland, Oregon, Public School District, the largest metropolitan school district in Oregon. There are three hypotheses:

1. there will be fewer referrals to special education in the population of schools with the consulting teacher model,

2. the longer a school employs the consulting teacher model, the more accurate the referrals will be, and

3. there will be a higher referral rate accuracy for those children determined to need special education services in the population of schools with the consulting teacher model.
Portland Public School District began to look at the consulting teacher model in the early 1980s as a response to both local and national concerns about the over-identification of children with learning disabilities. The high costs of assessment, increases in the number of children referred and inconclusive results from decades of efficacy research which examines whether the academic and social benefits to children with disabilities are greater in separate or integrated educational placements are all additional reasons this urban school district sought out the consulting teacher model. Portland looked to implement this model as both a regular education pre-referral intervention strategy and a service delivery option for its children with disabilities.

This proposed study represents new research on one of the emerging best practices in special education service. The primary impact and contribution that this research will have on the field of special education is that it will add to the very limited empirical knowledge base available on the use of the consulting teacher model as a service delivery option for children with disabilities. Previous research and professionals in the field (L. Idol, personal communication, January 11, 1990) have pointed out the need for further research in this area. Nevin and Thousand (1986) and Zins, Graden and Ponti (1988), for example, have pointed out the need for an examination of the long term outcomes of using the consulting teacher model as a regular
education pre-referral intervention strategy. Lloyd, Crowley, Kohler and Strain (1988) have also raised issues which question what the impact of this regular education pre-referral intervention strategy would be if the research were designed to compare similar results from a control or comparison group. This research study has been planned to address both these and other design questions.

This research will be the first examination of referral and verification rates in a large urban school district which implements the consulting teacher model. From this research, it will be shown whether this consulting teacher model had an impact on referral and verification rates to special education services. Furthermore, the results of this research will indicate whether this consulting teacher model reduced inappropriate referrals to special education assessment.
The present study sought to identify the impact of the consulting teacher model as a regular education pre-referral intervention strategy on the number of children who were referred and subsequently verified for special education services. There were four components to the research question which will be addressed in this chapter. The first portion of this literature review will focus on research which addresses the referral process. Those studies which look at the impact of the regular classroom teacher on the referral process, a teacher's reasons for making a referral and several successful strategies being implemented in the public schools for limiting the numbers of referrals will be presented.

The second portion of this literature review will define pre-referral as an intervention process, will describe the research base for its use within regular education and will offer an example of an effective regular education pre-referral model which utilizes the concepts of collaborative consultation. The next portion will review the current definition and impact of the consulting teacher model as a service delivery option to children with special needs, while the fourth and last portion of this chapter will review the few empirical research
studies which examine the use of consulting teacher models as a regular education pre-referral intervention strategy designed to limit referrals to special education.

Research on the Referral Process

The impact of the regular classroom teacher on the referral process.

The process of identifying and providing educational services to children with disabilities typically begins with the regular classroom teacher (Justice, 1981; Pugach, 1985; Riffle, 1985; Tymitz, 1984). The classroom teacher is in a unique position to observe both the academic and behavioral performance of all students in the classroom, making a significant impact on the selection of students to be referred to special education.

Algozzine, Christenson and Ysseldyke (1982) and Foster, Ysseldyke, Casey and Thurlow (1984) have shown, for example, that 4% to 6% of the national public school population are referred for evaluation each year, that 92% of those referred are tested and that 73% of those tested are placed in special education.

It might be reasonably argued that these referral to placement rates indicate a high teacher tendency to identify children with significant learning problems. Algozzine et al. (1982), however, suggested that the decision to assess and place children in programs with special
services comes more from a decision to "rubber stamp" the original referral; a child referred for special services will almost certainly be found eligible for those services (Foster et al., 1984; Harrington & Gibson, 1986; Shinn, Tindal & Spira, 1987). The initial decision to refer, then, may be the most important decision in this referral to placement process.

A teacher's reasons for making a referral. Children are referred for special education services for a variety of reasons. Several research studies have been conducted which seek to identify factors that influence a teacher's decision to refer a child--the least of which may be the academic or emotional needs of the child. Much of the research on the referral process by regular classroom teachers cites factors within the student or the student's home situation (Ysseldyke & Thurlow, 1984) as the overwhelming reason why students are referred for special education assessment.

In a study which looked at the characteristics of the referring teacher, Riffle (1985) outlined several ethnic, demographic and attitudinal traits which are related to the referral process initiated by the regular classroom teacher. While the results of Riffle's study are limited by several factors (e.g., the composition of the sample, the amount of variance in the dependent variable, and the "host of other, unknown factors that apparently affected teacher referral practices" p. 71), the
outcome suggests that teacher attendance at workshops and inservices, the teacher's ethnic background and teacher age were all identified as a source of variance in the decision to refer. Other background variables such as the number of mainstreamed students in the class and the age of the student were also found to have some relationship to teacher referral practices.

In a second comprehensive study of the regular classroom teacher's decision to refer, Pugach (1985) found that a teacher's reason for referral was primarily subjective in nature and that the real reason for referral was not reflected on the referral form. In fact, the documented reason for referral matched what teachers said guided their decision for referral in only 2 of 28 referrals.

In a third study which more specifically addresses this reason for referral question, Shinn, Tindal and Spira (1987) looked at reading outcome data for elementary age school children with mild disabilities who were referred for special education services. Teacher accuracy in the referral process (measured by the width of variance in reading performance levels of referred students to a normative sample) and teacher bias (measured by documentation of the proportions of referred students as a function of gender and ethnicity) were identified and defined as the dependent measures. In reference to the first dependent measure, teacher accuracy, results indicated that
regular classroom teachers were consistent and precise in their decisions to refer a child for reading assistance. In reference to the second dependent measure, teacher bias, teachers were found to refer children based on reactions to student behavior which were sometimes unrelated to the reason for referral (reading achievement). In addition, differences also appeared for the variables of gender and ethnicity in the number of students referred. These combined findings led the authors to conclude that teachers are both accurate and biased in their decision to refer children with mild disabilities for services in regard to reading ability. While teachers may take variables into account which have nothing directly to do with the reading needs of the student (e.g., gender and ethnicity), teachers were shown to be accurate in their selection of children to be referred.

In the final study to be addressed here, the referral practices of regular classroom teachers were examined by Christenson, Ysseldyke and Algozzine (1982) who looked at teacher's perceptions of the external constraints influencing their decision to refer. A survey was sent to teachers asking them to list both the barriers to and factors for facilitating the referral process in their school district. Five institutional constraints (organizational factors, availability of services, "hassle," teacher variables and attitudinal factors) and four external pressures (external agency influences, federal and state guidelines, parental pressure and socio-political climate) were identified by the
teachers. From the data received, the authors concluded that their study highlighted the importance of reorganizing the referral process so that it expands this referral to placement process to a recognition of the need to refer and intervene prior to evaluating and placing in special education services. Interventions implemented prior to the referral may improve instructional planning for students. (See also: Algozzine, Christenson & Ysseldyke, 1982; Foster et al., 1984.) Following the decision by the regular classroom teacher to refer a student, some type of intervention must occur prior to the referral for formal evaluation which meets the needs of the student in the regular classroom.

**Successful strategies for limiting the numbers of referrals.** In an attempt to short-circuit this referral to placement process in the identification of children with disabilities, several strategies for strengthening the mainstream have been offered through the literature. These strategies appear to be most effective when they are implemented in the regular classroom prior to the decision to refer (Tymitz, 1984). While there are a number of intervention strategies which could be implemented prior to referral for special education, three strategies which provide empirical data on limiting referral rates will be highlighted. The first intervention strategy which has been shown to limit the number of referrals to special education is to provide staff inservices and workshops for regular classroom teachers
as part of the district's staff development plan (Nevin & Thousand, 1986). Ysseldyke and Thurlow (1984) report that prior to making formal referrals, inservice training on topics such as increasing a student's academically engaged time have provided positive preliminary results. In addition, the work of Gennari (1982) and Gennari and Wang (1983) (both cited in Nevin & Thousand, 1986), demonstrated that following staff development inservice training sessions on adapting the learning environment to individual needs, 138 teachers were able to implement effective changes in their classrooms. These studies clearly suggest that as teachers participate in specific inservice training and are supported in serving students with special needs in the regular classroom, there will be a reduction in referrals to special education (Nevin & Thousand, 1986).

A second strategy for limiting the number of referrals to special education is through the use of Peer Mediated Interventions (Lloyd et al., 1988). Peer mediated interventions are interventions implemented in the regular classroom by the peers of children with disabilities; children helping children. Lloyd et al. (1988) offer a fairly extensive review of the literature on this type of intervention. Along with citations offered by Nevin and Thousand (1986), there is a strong data base to support peer mediated interventions, also called peer tutoring, as an effective means for showing growth in students needing special education in regular elementary and high school settings.
Increased skill levels have been shown in academic, social and behavioral performance through the use of peer tutoring and peer intervention. While neither of these studies provide a direct link to limiting referrals to special education, both conclude with the possibility of such an impact.

Empirical evidence linking peer tutoring to a lower referral rate has been reported by the North Carolina Department of Public Instruction (1990). Children in several North Carolina schools were randomly assigned to one of four treatment groups, including peer tutoring. Although teachers in the peer tutoring treatment group requested assistance for interventions more often than the other models, the peer tutoring model had the lowest referral rate of all four intervention strategies.

A third strategy for limiting the number of referrals to special education is through the use of Teacher Assistance Teams (TAT) (Chalfant & Pysh, 1989; Chalfant, Pysh & Moultrie, 1979; Hayek, 1987). Broadly defined, a TAT is a building level group of people who facilitate the generation of intervention strategies prior to the special education referral; the TAT serves as a support system to regular classroom teachers who, in turn, serve the students in the regular classroom. While this support team has received several other names in the literature (e.g., student study teams, pre-referral committee,
problem-solving teams, building screening committees, etc.), the process and the purpose of the team was to facilitate the exchange of ideas, methods, problem-solving techniques and activities which are directed at keeping children in the least restrictive environment--the regular classroom (Chalfant & Pysh, 1989; Chalfant, Pysh & Moultrie, 1979; Hayek, 1987).

In a study designed to examine the impact of the TAT on referrals to special education, Chalfant, Pysh and Moultrie (1979) recorded the number of children who were brought before the TAT. The percent of children who were helped through the suggestions of the TAT were compared with the percent of children who were subsequently referred to special education services. Of the 203 children referred to the TAT, nearly two thirds (63.5%) were assisted within the regular classroom environment and did not need to be referred for special education assessment. The authors concluded that the number of potential teacher referrals to special education was not only limited but greatly reduced. In a later reference which was written to summarize TAT research from five separate research studies, Chalfant and Pysh (1989) reported on the results gathered from examining 96 different school-based teams. One of the conclusions drawn from this extensive review was that the TAT does work to reduce referrals to special education assessment. This process of providing a cooperative process for implementing intervention strategies prior to a formal
referral will be more thoroughly addressed in a later section.

**Research on the Pre-referral Process**

**Pre-referral as an intervention process.** Given the high probability that a child who is referred for special education services will most likely be placed in special education, a great deal of the recent literature in special education has been directed at interrupting this process. Instead of automatically moving a child from referral to placement, intervention strategies which serve to assist the child in the regular classroom prior to the referral are now becoming recognized as a promising practice within the field (Algozzine, Christenson & Ysseldyke, 1982; Carter & Sugai, 1989; Graden, 1989; Pugach & Johnson, 1989). Such interventions are typically called regular education pre-referral interventions. While these regular education pre-referral interventions may represent a variety of strategies, their common bond is that they are usually implemented within the regular classroom and always before the formal referral to special education. The term regular education pre-referral, then, will be used throughout this document to reflect a regular classroom process and not a special education process used to identify children as needing special education services.

While regular education pre-referral intervention strategies have found
increasing support in the literature, little is known about actual practices. In an effort to determine the nation wide use of regular education pre-referral strategies, Carter and Sugai (1989) developed a six item survey which was sent to administrators in state departments of education (including the District of Columbia). The survey essentially addressed two issues: whether the state applied a regular education pre-referral procedure and how those procedures were characterized. Twenty-three states reported that they had an established and required regular education pre-referral process, 11 states responded that regular education pre-referrals were recommended and 10 states responded that a regular education pre-referral process was not required. Seven states did not respond to the survey. The authors noted that in spite of the lack of an overwhelming amount of empirical evidence to support regular education pre-referral interventions as an effective means for maintaining students in the regular classroom, 34 states either required or recommended them.

**Regular education pre-referral research base.** Regular education pre-referral techniques and strategies have received some support from research studies. Three research studies will be outlined which examined the attitude of the referring teacher, the regular education pre-referral interventions of elementary classroom teachers prior to psychoeducational assessment and regular education pre-referral
interventions (both proposed and actual) for students with behavior problems. In the first study, Harrington and Gibson (1986) examined the attitudes of 41 teachers who had experience with preassessment procedures for students with learning disabilities in Kansas. These teachers, after analyzing the instructional or behavioral interventions already attempted by the regular classroom teacher, would strive to implement other, more effective measures to keep the child from the formal referral process. The primary benefit from this preassessment procedure was primarily to maintain the child in the least restrictive environment—the regular classroom. Twenty-five questions designed to assess teacher attitude toward this process were written into a Likert scale questionnaire. The results indicated that while the teachers were pleased with the preassessment team members, they did not agree that the team's interventions were successful in correcting the problem.

In a second study, the regular education pre-referral interventions of 105 elementary classroom teachers were examined. Ysseldyke, Pianta, Christenson, Wang and Algozzine (1983) looked at the interventions that regular classroom teachers used prior to psychoeducational assessment. More specifically, Ysseldyke, Pianta et al. (1983) sought to document (a) types, combinations and durations of the regular education pre-referral interventions, (b) the individuals involved in implementing those interventions and (c) the nature of the
relationship between the interventions used and the reason for referral. Regular education pre-referral data were collected on actual referrals, and teachers were asked to remember the intervention strategies they had implemented. Results suggested that regular classroom teachers saw themselves as the ones responsible for implementing a wide variety of intervention strategies. The three top ranking regular education pre-referral intervention strategies were teacher directed actions; teachers sought intervention strategies which called for modifications in their teaching technique, a behavioral management approach or an amount of structure provided in the classroom to the child. The authors concluded that most of these interventions could be influenced by a consultant to the regular classroom teacher.

The third research study to be outlined in this section examined the regular education pre-referral intervention strategies for students with behavior problems. Sevcik and Ysseldyke (1986) designed a study to investigate two research questions; the first question looked at what regular education pre-referral interventions teachers indicated they would take when presented with a written example of a child with behavior problems while the second study examined what regular education pre-referral interventions teachers actually did attempt in their classrooms with their students who exhibited similar behaviors. Results from the first study showed the highest rankings of preferred
interventions to be activities where teachers could collect further information about this student through consultation or assessment (obtain knowledge of modality strength, meet with specialists for teaching ideas and obtain achievement test scores). There appeared to be a strong dependence on "specialists" who could provide information or services. Teachers most often selected strategies which could be called teacher-directed (measure progress to plan interventions, provide feedback regarding classroom expectations and plan contingency management programs) rather than any of the other strategies offered (consultative actions, external placement actions or teacher non-directed actions).

In response to the second question, the researchers found that it was these teacher-directed behaviors which appeared most often in the actual activities of teachers within their regular classroom settings. While teachers may be in favor of the teacher-directed actions they selected, the authors reported that these strategies were not successful; the children in this study were referred for special education evaluation. More effective strategies are needed prior to the referral. Teachers need to know how to carry out reasonable and effective measures for meeting the needs of children in the regular classroom setting. The authors suggested consultation and the use of the consultant role to meet this need. For even though consultation was selected and offered (in the first study) as the top ranking
intervention, teachers did not appear to be using it in their actual teaching practice.

**An example of a regular education pre-referral intervention model.**

Regular education pre-referral interventions appear to be effective in establishing interventions within the regular classroom prior to the formal referral for assessment within the special education process which is so well documented within the special education literature. Several of the regular education pre-referral research studies offer consultation as one of the more effective methods of intervention. One model for a regular education pre-referral intervention strategy was developed by Stephens (1977) as a systems model for consulting with school personnel. Briefly defined, the consulting process consists of problem solving techniques and intervention assistance through the combined efforts of the regular classroom teacher and the consultant. In this model, the consultant could either be a person (e.g., teacher, psychologist, social worker) or a group of people (e.g., student study teams, regular education pre-referral committee, problem solving teams, building screening committees). In either case, the purpose of the model is to provide a systematic method for implementing appropriate interventions prior to the formal referral for special education. One goal of this regular education pre-referral model is to reduce inappropriate referrals thereby reducing inappropriate placements in special education. There are five phases to Stephen's
model: assessment, specification of objectives, planning, implementing treatment and evaluation. Staebler and Young added two additional phases, making initial contact (added as phase one) and transitioning services (added as phase seven) to Stephen's model (B.L. Staebler and B.J. Young, personal communication, January 12, 1987). Together, these seven stages served as the training model for regular education pre-referral intervention strategies within this current research study.

**Phase 1: Making Initial Contact.** This model of the regular education pre-referral process begins with initial contacts between teacher and consultant. This phase can also include establishing interpersonal relationships with everyone involved--other teachers, the student, the student's parents or other support personnel.

**Phase 2: Assessing the Environment.** During the assessment stage, the consultant works to informally observe and describe the student's environment. Observing the student's behavior, academic level and learning environment all serve to facilitate defining the problem or selecting the target behavior. Baseline data and observations are collected on target behaviors, including any antecedent and consequent conditions which might play a role in the planned intervention.
Phase 3: Setting Objectives. During this phase of setting objectives, the problem areas or target behaviors are defined, specified and rank ordered. The top ranking behavior is selected, modified and operationally defined. While several problem behaviors may exist, only one behavior is targeted at a time.

Phase 4: Planning Strategies. Within the planning phase, strategies are established to meet the objectives outlined in the previous phase. One of the goals of this phase is to plan effective strategies which match the student's learning style as well as the teacher's style of instruction or management. Student practice materials, daily assignments and lessons are also designed and planned during this phase.

Phase 5: Implementing Treatment. The fifth phase, implementing the treatment, is the phase where the strategies are actually put into practice. The program is closely monitored by both the teacher and the consultant, who work together to collect data about the effectiveness of the program. Several examples of strategies for this implementation stage are: the consultant might model a teaching strategy, the teacher could select alternative materials for instruction or both the teacher and the consultant might team teach a lesson.

Phase 6: Evaluation. At this stage of the consultation process, data are
analyzed across both the baseline and treatment phases. Decisions about the effectiveness of the treatment are made by both the regular classroom teacher and the consultant. If the planned treatment did not have the desired effect, the process returns to the assessment phase where more diagnostic procedures may be conducted. If the planned treatment is effective, the program is modified (if needed) and the next objective is begun.

Phase 7: Transitioning Services. This last stage provides a teamwork approach for phasing a student out of these additional services and into the next step. Several examples of this transitioning stage might include mainstreaming a disabled learner back into the regular classroom, seeking additional support services from within the school building, referring a student to additional support services outside of the school, or assisting the transition from high school to an adult, vocational program. Transition services are implemented whenever the student leaves one environment for another.

Collaborative Consultation

A current definition of collaborative consultation. With the increasing number of children with disabilities who receive some or all of their educational program in the regular classroom, it becomes essential that an effective support system be developed between regular
education and special education programs. Regular classroom teachers and special education teachers need to work together to provide the best educational program for the child with disabilities in the regular classroom. Collaborative consultation encourages exactly this kind of combined effort. Collaborative consultation uses one teacher as a consultant or consulting teacher to provide indirect services to the child with special needs through the regular educator in the regular classroom environment, before the child is referred for formal special education assessment. The consulting teacher model used for this research study has its foundation in collaborative consultation, therefore the two terms will be used interchangeably.

Several definitions of consultation and the consulting teacher model have been offered in the literature covering various disciplines. Five of these include an expert model, a medical model, a mental health model, an educational and behavioral model and an advocacy model. Despite their differences in theory and procedure, the goals of consultation are the same: (a) to provide remedial problem-solving services and (b) to increase consultees' skills so they can prevent and/or respond more effectively to similar problems in the future (Gutkin & Curtis, 1982; Raymond, McIntosh & Moore, 1986; West & Idol, 1987).
Impact of collaborative consultation as a service delivery option.

Within the field of special education, most definitions of consultation mention collaborative relationships; that is, the equal partnership of the consulting teacher and the classroom teacher in all steps of the consultation process: identifying the problem, recommending interventions, implementing interventions and evaluating or modifying the intervention (Raymond, McIntosh & Moore, 1986; Polsgrove & McNeil, 1989; Reisberg & Wolf, 1986; West, 1985). This model of collaborative consultation is further defined as a triadic model of service delivery. The consulting teacher works directly with the regular classroom teacher to provide services to the target, who could be an individual child, a small group, or an entire class. Through this indirect method, the consulting teacher enables a child to achieve within the regular classroom environment.

Collaborative consultation is beginning to appear more and more in the special education literature. With the advent of the Regular Education Initiative (REI) (Will, 1986) and its emphasis on the need for education to be a "shared responsibility" between regular and special educators, the presence of consultation as an effective service delivery option for students was an appropriate one (Friend, 1988; Johnson, Pugach & Hammitte, 1988; Reisberg & Wolf, 1988; West & Idol, 1990; Ysseldyke, Thurlow et al., 1983). While both the Deno (1970) and the Reynolds (1962) Cascade of Service Delivery options for
children with disabilities included consultation as an option (Idol, 1988; Idol, 1989), the implementation of collaborative consultation as a regular education pre-referral intervention strategy seems to be a fairly new concept in the field. Although the term seems new, most of the regular education pre-referral systems cited above utilize some level or type of consultation process in their regular education pre-referral intervention strategies, thereby reflecting the support of many years of consultation research (Cancelli & Lange, 1990). Whether new or old, the goals of the regular education pre-referral process are similar to the goals of consultation: both seek to improve the student's learning while remaining in the regular classroom and both seek to increase the regular classroom teacher's skills in learning how to modify the environment in order to better serve this student and future students (Heron & Kimball, 1988).

**Collaborative Consultation as a Regular Education Pre-referral Intervention Designed to Limit Referrals to Special Education.**

**The use of the consulting teacher model as a regular education pre-referral intervention strategy.** While the role of the consultant teacher (Curtis & Zins, 1981; Friend, 1984; Idol-Maestas, 1983; Lilly & Givens-Ogle, 1981; Paolucci-Whitcomb & Nevin, 1985; Reisberg & Wolf, 1986) and the role of the regular education pre-referral process (Fox, 1985; Harrington & Gibson, 1986; Riffle, 1985) have received
support in special education literature, the empirical research base for examining the impact of the consultant teacher role on referral rates to special education is limited. Following a brief introduction which includes several definitions, six research studies will be presented. These studies represent the current literature which examines the impact of collaborative consultation, or the consulting teacher model, as a regular education pre-referral intervention strategy on the number of children who are referred and subsequently verified for special education services.

Collaborative consultation as a regular education pre-referral strategy consists of a series of procedures and activities for problem solving. As a collaborative approach, these procedures and activities are generated, designed, implemented and evaluated through a teamwork approach at the point of initial problem identification (Graden, Casey & Bonstrom, 1985; West & Idol, 1990; Zins & Ponti, 1987; Zins, Graden & Ponti, 1988). The regular classroom teacher, who typically identifies the problem, seeks out the consultant or consultation team for assistance. The team consists of at least the regular classroom teacher and the consultant, but may also include others, such as school psychologist, guidance counselor, school nurse, administrator, or other classroom teachers. Together these team members provide an indirect method of service delivery to the student. As a regular education pre-referral approach, these procedures and activities are
generated, designed, implemented and evaluated prior to the formal referral to special education assessment. Zins, Graden and Ponti (1988) believed that using collaborative consultation as a regular education pre-referral intervention strategy and process serves two primary purposes: (a) by meeting the individual needs of students in the regular classroom, the probability that the student will enter that referral to placement process is reduced, and (b) by meeting the individual needs of the classroom teacher, regular classroom teachers can extend their skills and knowledge to a larger number of children.

**Research studies using the consulting teacher model as a regular education pre-referral intervention strategy.** Ritter (1978) provided the first descriptive analysis of the effects of a school consultation program on the referral patterns of elementary teachers over a seven year period of time. Ritter hypothesized that the presence of consultation services offered through the local mental health service would help public school teachers develop and refine their coping skills in dealing with student behavior problems. This, in turn, would result in a decrease of referrals for consultation. A school psychologist served as a consultant in eight elementary schools throughout the seven years of implementation. Referral rate data for both academic and behavioral referrals were graphed on frequency polygons and a visual image of decreased referrals was presented. The number of referrals to special education were averaged in two very broad blocks
of time: the average number of referrals for the first 4 years was 109 compared with 57 referrals for the remaining 3 years. While no mention was made of when the consultation took place--prior, during, or after the referral--Ritter concluded that "(t)he consultation model of school psychological services was found to result in a decrease in the number of children referred by teachers over time" (p. 242).

Graden, Casey and Bonstrom (1985), in the second of a two part article, provided an empirical data base for consultation services on the referral, testing and placement of special education students. A regular education pre-referral intervention model which consisted of six steps (Graden, Casey & Christenson, 1985) was implemented in six schools in a large suburban school district. In the first three schools, the intervention model was implemented by the special education teacher who served as the consulting teacher.

School One, an elementary school, enrolled about 781 students; approximately 8% received LD (learning disabled) services. One of the four LD teachers worked part time (approximately one hour per day) as a consulting teacher. School Two, also an elementary school, enrolled 559 students; about 5.5% received LD services. One of the two full time LD teachers consulted 25% of the time. School Three, a junior high school, enrolled 1,308 students; approximately 6% received LD services. The primary responsibility (80% consulting,
20% direct instruction) of one of the four LD teachers was to serve as a consulting teacher.

In the second set of schools, the implementation of the regular education pre-referral intervention system was done by a school psychologist who was assigned to all three schools. School Four, an elementary school, enrolled approximately 700 students; 7% received LD services. The school psychologist spent one day a week at this elementary school. School Five, also an elementary school, enrolled 500 students; 3% received LD services. The psychologist spent a second day per week at this school. School Six, a junior high, enrolled 1,400 students in a setting which included an LD program and an EMH (Educable Mentally Handicapped) program. The school psychologist spent three days per week at this junior high school implementing the regular education pre-referral intervention model.

The special education teachers in Schools One, Two and Three were given three days inservice training by the school psychologist who served as the consulting teacher for Schools Four, Five and Six. Training focused on enhancing the teachers' skills in consultation, observation and intervention. Data were collected in all six schools over a three year period of time: one year prior, one year during and one year after the implementation of the regular education pre-referral intervention model. It was expected that (a) consultation use
would increase, (b) referrals for special education services would decrease, (c) the numbers of students tested for verification would decrease and (d) the numbers of students placed in special education would decrease.

Results from this study present a mixed picture of the potential impact of a regular education pre-referral system on the use of consultation services for the referral, testing and placement of special education students. Overall, the authors noted positive results in Schools Three, Four, Five and Six. Consultation use increased and there were significant decreases in testing and placement in these four schools. Referrals to special education assessment were also reduced, although no specific data were offered. Reasons why Schools One and Two did not show the expected results were offered as constraints to the model on both a system-level and a building-level. These constraints were noted as differences which included differences in administrative support for the model, differences in the provision of adequate resources (e.g., allocation of personnel and time for consultation) and differences in the initial training of the consultants.

In a third related research study, Ponti, Zins and Graden (1988) described a systems-level model for the successful implementation of a regular education pre-referral delivery program. The approach was
designed to assist in the provision of services prior to the referral for students exhibiting mild behavioral and learning problems. Through this consultation process, teachers, parents and administrators worked collaboratively to develop strategies for classroom implementation; the psychological referral served as the last step in the model. The research presented illustrated a detailed case description of this model which was implemented in one elementary school serving approximately 500 children. Data were collected over a five year period of time. The consultant, a school psychologist, worked within the school and implemented the intervention model during the last two years of the study. Referral rate data from these two years were compared with the previous three years of referral rate data when no regular education pre-referral intervention model existed. Results of this study indicated that referrals for psychoeducational assessments were reduced by 40% while referrals for consultative assistance increased dramatically. The authors suggested that regular education "pre-referral consultation is a viable means for providing more immediate assistance and preventing problems, helping more students and teachers and for contributing positively, to organizational effectiveness" (p. 99).

In a fourth research study, Chalfant and Pysh (1989) took the referral rate data one step further. Between 1979 and 1988, five program development studies were conducted on 96 first year Teacher
Assistance Teams (TAT) in seven states. TAT teams had been established in these 96 schools to serve as collaborative consultation teams prior to the referral to special education. After one full year in operation, data from these schools were collected and examined under a variety of conditions.

One of the questions examined by Chalfant and Pysh (1989) was what impact these TAT teams had on the referral and identification process for special education. The TAT is a building level team of people who facilitate the generation of intervention strategies prior to the special education referral. Approximately half (N = 42) of the TAT teams, representing 386 students, collected data on this referral to placement process. While all 386 students were discussed at TAT team meetings, only 21% (N = 82) were referred for special education assessment; 79% (N = 304) of the students were helped through the suggestions of the TAT and were not referred at all. Of those referred, 93% (N = 76) were verified for special education services, 7% (N = 6) were not.

In a similar study, Talley (1988) (cited in Chalfant and Pysh, 1989) compared referral and verification rates to special education for four years prior and one year after the implementation of the TAT in nine Kentucky schools. An average of 22 students per year were referred and were found to verify for special education in the four years prior to
the TAT. After the implementation of the TAT, the referral and verification rates were reduced to a total of eight students. This represents a 64% drop in the number of referrals to formal assessment. The authors concluded that these two studies clearly indicated the effectiveness of implementing a collaborative regular education pre-referral strategy for reducing referrals.

Citing sharp increases in national and state numbers, expanding costs and unanswered questions about the effectiveness of current service delivery options for its special education population, the California legislature mandated a study to examine alternative district and school level programs and strategies for serving the "problem learners" of California (Shields, Jay, Parrish & Padilla, 1989). In the fifth study to be outlined here, two research questions pertinent to this literature review are summarized: (a) how effective is the Student Study Team (SST) as a regular education pre-referral activity and (b) how is the consultation model used in these schools. Data were collected from 55 schools in 20 school districts from November 1987 to March 1988. Citing the SST and all regular education pre-referral activities as a regular classroom responsibility and reflecting a mixture of both "hard data" and best guess estimates, this study reported that SSTs reduced the percentage of students referred for assessment by 52%.

One school district which kept precise data for one school year
(1986-87) separated those referrals for academic assistance from other referral assistance: 689 students were referred to the SST for assistance (67% of these referrals were for academic assistance), only 7% (N = 48) were referred by the SST for formal assessment in special education. A second school district offered data from one school building, also during the 1986-87 school year: 32 students were referred to the SST, only 22% (N = 7) were formally referred for further assessment. From the evidence offered by all 55 school districts, the authors concluded that in most schools the SST was successful in reducing the numbers of referrals to special education.

The sixth and last research study on the impact of collaborative consultation as a regular education pre-referral strategy to reduce referral rates to special education was offered by Saver and Downes (1990). As a response to a student population of greater diversity and need, the Wisconsin Hills Elementary School began a Peer Intervention Team (PIT Crew) in January, 1988. The PIT Crew serves as a regular education collaborative team approach to promote learning environments which facilitate growth in all students. The PIT Crew consists of four members from a combination of the following: school psychologist, program support teacher, classroom teachers, and specialists (music, art, reading resource, etc.). All members of the team, including the principal, have received training in collaborative consultation. Following a series of strategy steps offered through their
training--objective statement of the problem, brainstorming solutions, possible consequences, prioritization, action plan, monitoring and evaluation, and follow-up--the PIT Crew, then, is teachers working in a collaborative effort to develop strategies which assist children in the regular classroom. One of the outcomes from the three years of PIT Crew intervention has been a noted reduction in referral and verification rates to special education. More specifically, as the number of PIT Crew referrals increased, the number of referrals to special education assessment decreased. For example, in the 1987-88 school year, there were two referrals to the PIT Crew, 12 referrals for special education assessment, and five (42%) subsequent verifications to special education placement. By the 1989-90 school year, referrals to the PIT Crew had increased to 15, referrals for special education assessment had decreased to one, and that one student (100%) subsequently verified for special education placement. Not only did the percent of referrals to special education decrease with the increased use of the PIT Crew, those referrals were apparently more accurate as well. The authors concluded that while the use of the PIT Crew should not discourage appropriate special education referrals, its use appears to have provided teachers with the support they needed in meeting the needs of Wisconsin Elementary School's diverse population of children.
Conclusion

The research presented thus far has provided a foundation upon which to build this current research study. The first section of the literature review focused on current research available on referrals to special education assessment. Referrals to special education are typically made by the regular classroom teacher who is in a unique position to see a variety of behaviors within the regular classroom setting. Unfortunately, too many children are referred for reasons not even associated with their learning or behavioral problem and end up being placed in special education. Several strategies for interrupting this referral to placement process were then offered, including the use of a regular education pre-referral intervention process or regular education pre-referral intervention team. A working definition, supportive research and a model for the use of regular education pre-referral intervention teams was offered in the next section. While a majority of State Departments of Education require or recommend their use, little is known about their effectiveness in limiting referrals to special education.

In the third section of this literature review, research on collaborative consultation was presented to establish another working strategy for regular education pre-referral interventions. In the fourth and final section, empirical data were provided showing the impact of collaborative consultation, or the consulting teacher model, as a
regular education pre-referral intervention strategy on referral rates to special education. In the research cited, referral rates were reduced as perhaps one of the consequences of implementing a collaborative consultation regular education pre-referral intervention strategy. Since the research appears to support the use of a consulting teacher model as an effective regular education pre-referral intervention strategy (Graden, Casey & Bonstrom, 1985; Zins, Graden & Ponti, 1988), school districts will most likely be looking at this process for their own programs. The successful implementation of this regular education pre-referral intervention will require careful planning, administrative support, increased collaboration between regular and special education teachers as well as extensive training for consultants and consultation team members (Cancelli & Lange, 1990; Graden, Casey & Bonstrom, 1985; Reynolds, 1989; Zins, Graden & Ponti, 1988).

While the literature provided here supports the use of the consulting teacher model as a regular education pre-referral intervention strategy for reducing referrals, this study sought to build on that empirical foundation. Through the collaborative efforts of special educators, regular educators, administration and parents, regular education pre-referral strategies may indeed make a difference in the number and accuracy of special education referrals (Zins & Ponti, 1987). Four follow-up questions and suggestions for further research have been
raised from the literature already cited; these questions and suggestions have helped shape the research question addressed in this study. First, there is a need for the examination of the long term outcomes of the consulting teacher model as a regular education pre-referral intervention strategy (Nevin & Thousand, 1986; Zins, Graden & Ponti, 1988; Zins & Ponti, 1990). Second, in order to provide the most consistent data, questions raised by the cited research suggests that referral and verification rate data come from within a single school district (Graden, Casey & Bonstrom, 1985; Zins, Graden & Ponti, 1988). Third, research by Lloyd, Crowley, Kohler & Strain (1988) asks what the impact of this regular education pre-referral intervention would be if the research were designed to compare similar results from a control group. Finally, the fourth and fifth recommendations from the research suggests that consistent training of consultants (Cancelli & Lange, 1990; Zins & Ponti, 1990) and voluntary administrative support (Zins, Graden & Ponti, 1988; Zins & Ponti, 1990) are both critical factors which will serve to reduce referral rates to special education through the implementation of the consulting teacher model as a regular education pre-referral intervention.
Statement of the Problem

The current research is designed to examine the impact of the consulting teacher model on referral and verification rates in special education. Using the model as a regular education pre-referral intervention strategy, this research sought to compare the number of referrals for assessment in special education from schools which implemented the collaborative consultation model with comparable numbers of referrals for assessment from schools which did not implement the model. A similar comparison of subsequent verifications for special education placement will also be made. There are five features which make this research unique. These features match the five questions and suggestions for further research which were gathered from previous studies and listed above. First, the consulting teacher model has been implemented in the Portland Public School District since the 1985-86 school year, providing five years for examining the long term impact of the model. Second, several additional schools have been added throughout this five year period of time, offering a way to examine the impact of the model from within one school district. Third, there are a sufficient number of schools within the Portland Public School District (N = 89) to collect referral and verification rate data from the population of schools which uses the model (N = 17), and from a randomly selected comparison group of schools which does not use the model (N = 30). Since both the population and the comparison group come from the
same school district, comparing the data from the population with data from a sample will offer a control or comparison group as part of the research design. Fourth, the consultants were trained by two professors from the Division of Special Education at Western Oregon State College in Monmouth, Oregon. Drs. Staebler and Young provided the consultant training over four years of this research study. Fifth, and finally, the schools which participated in the building-level implementation of this model had the support of the building administrator; the decision to participate was a voluntary one made by the principal of each school. All of these unique features address the questions and suggestions offered from previous research. Designing a study which included these questions served to provide original research in the field of special education.
DESIGN AND METHODOLOGY

This chapter outlines the design of the present study. Following an introductory paragraph designed to provide an historical background for the current research, a brief discussion of a related study will be outlined. This related study was conducted to determine whether any differences existed between the academic achievement gains of school children from schools with the consulting teacher model and school children from schools without the model. A detailed description of the present study will then follow. Descriptions of the population of schools which implemented the consulting teacher model, the selection procedures for the randomly selected comparison group which did not implement the model and the data collection instruments and procedures will be offered next. The chapter concludes with a description of the data analysis procedures.

Historical Perspective

The traditional service model for educating children with disabilities has been the resource room setting. This model, implemented in the Portland Public School District, has long provided a way for children to receive the educational services they need as well as a way for them to remain in the regular classroom; thus meeting federal and state
directives to provide children with an appropriate education in the least restrictive environment. On federal, state and local school district levels, however, school administrators and educational researchers have been searching for alternatives to this traditional model for a number of reasons: a lack of efficacy research to support a resource room model over other service delivery models, the growing numbers of referrals to special education, the increased cost of the entire referral to placement process and the difficulty inherent in precisely identifying each disabling condition.

In order to address these four concerns, administrators in the Portland Public School District first implemented a model for providing interventions in the regular classroom for regular classroom students. This model included training regular educators and special educators in the process of Collaborative Consultation. These consultants worked with classroom teachers to implement interventions in the regular classroom. Later, the training was expanded to include interventions for children with disabilities who were able to be served in the regular classroom. The training these consultants received included skills in curricular modifications, effective teaching strategies and instructional adaptations.

Portland Public School District called this model a regular education intervention process since it began within regular education and took
place either prior to a formal referral for special education services or
after the identification of a student with disabilities. Although the
consulting teacher model had been receiving some empirical support
in the special education literature, it was not known whether it
worked in the Portland Public Schools. One of the questions raised by
Portland special education administrators was whether the consulting
teacher model made a difference in the academic gains of children.
The following related study emerged from that question.

**A Related Study**

A brief related study was conducted, in January, 1989, to quickly
examine whether any differences existed between the academic test
scores of children in schools which implement the consulting teacher
model and the academic test scores of children in schools without the
model. Specifically, the purpose of the related study was to contrast
school wide achievement test scores with the projected outcome to
indicate a greater increase in achievement scores for the schools
which implement the consulting teacher model.

Fourteen schools which had implemented the consulting teacher
model were matched with fourteen schools which had not
implemented the model. All schools were from Portland Public
School District (N = 89). These schools were specifically matched on
the basis of five variables: level of school (elementary or middle
school), Low Income Allocation percentage, Stability Index and whether the school had Project Read and/or Chapter I. Matching the schools on the presence of these five variables was thought to provide a similar background description of all the schools selected.

The school wide achievement scores in reading, math and language were collected for each of the 28 schools for the years 1985-86, 1986-87 and 1987-88. The school year 1980-81 was also used as a baseline measure since none of the schools had implemented the model during that year. Mean scores in achievement for each grade (third through eighth) for each school were examined. The mean scores from fall testing were subtracted from the mean scores from spring testing in the academic areas of reading, math and language usage. Differences between the means were then calculated between matched schools. No apparent differences were found to favor the academic growth of children in the consulting teacher model schools.

While the results from this related study were limited by several factors (e.g., academic gains were measured by school rather than by individual, the limited implementation of the consulting teacher model and the general nature of the achievement test data), these results did confirm the findings of Miller and Sabatino (1978) who found no significant differences between the academic gains of children taught in a resource room setting and those taught through a
consulting teacher model. Miller and Sabatino (1978) noted, however, that gains were made within the self-reported attitudes and the numbers of positive interactions made by the regular classroom teachers toward the children with disabilities in their classrooms.

Differences in the academic gains of children who receive direct services (resource room) and children who receive indirect services (consultant) have been found to favor the consultant model in two other research studies. Wixson (1980), compared the academic differences in children with learning disabilities who had been given either direct or indirect services. Wixson found that the number of successful individual programs was higher for indirect services than for direct services. Cochrane and Ballard (1986) also found results favoring indirect services. Cochrane, a school psychologist, worked as a consultant to provide collaborative assistance to the regular classroom teacher for five children in an Australian public school. The children gained an average of 6.4 reading recovery levels (books) and demonstrated an accelerated gain in reading ability noticed by both their teachers and their parents. While the authors concluded that a consulting teacher model served to increase academic gains in reading, the costs of such a program were very demanding. Consultant training, extensive follow-up meetings, support from administrators and adequate funding were all variables which must be considered before implementing such a program as the consulting teacher model
(Cochrane & Ballard, 1986).

Through the process of examining the literature and data for this related project, it became apparent that a relationship between the numbers of referrals to special educational services and the number of years each consulting teacher school participated on the model might exist. It seemed, in several of the schools, that the longer the school participated on the consulting teacher model, the fewer referrals there were to special education. The focus of this present research study emerged from these initial observations.
The Current Research Study

This research study emerged from the initial combined efforts of regular educators, special educators and higher educators. The first step was to meet with key special education administrators from Portland who were interested in the study. These administrators helped to identify other key groups of people to discuss, support and focus the research question. Other meetings were held with special education supervisors, school psychologists, special education research staff and consulting teachers. These meetings were structured to further refine the research question and to obtain final approval for implementing the study in the Portland Public School District.

Population of schools which implemented the consulting teacher model. The first step in the design of the current research study was to collect relevant information about the population of consulting teacher schools in the Portland Public School District. Beginning with the 1985-86 school year, special education school district administration began to look at the consulting teacher model as both a regular education pre-referral intervention strategy and as a service delivery option for its children with disabilities. Principals from six schools (four elementary, one middle and one high school) volunteered to begin this model in their schools during the 1985-86 school year. Special education school district administration provided
5.0 Full Time Equivalence (FTE) personnel for the consulting teacher positions; 4.50 FTE personnel were hired for building implementation and one person was hired for a half time (0.50 FTE) program chair position to administrate the implementation of the model at a district level. The 4.50 FTE was divided among the six original schools. Individual principals could choose to supplement that FTE out of their own building budget if they determined that more was needed. For the second year of implementation (1986-87), four more schools were added (one elementary, two middle and one high school), although no more FTE was provided by the special education district administration. The initial selection process for the second year was the same as the first--building principal interest, support and available FTE. The remaining schools were added to the population of consulting teacher schools in a similar manner: the third year of implementation (1987-88) added six more schools (three elementary and three middle schools) and the fourth year of implementation (1988-89) added one new middle school, for a total population of 17 schools (eight elementary, seven middle and two high schools) receiving training on the consulting teacher model.

Training. One teacher from each of the six original consulting teacher schools attended an initial half day workshop in the fall of 1985. The focus of this workshop was to introduce the consulting teachers to the concept of collaboration and how it fit into the special education
service delivery options offered by the school district. Additional workshops and inservices were provided throughout the year on a variety of topics. (A complete list of the major objectives is recorded in Appendix A). At the conclusion of these workshops, the participants were able to:

1. define the collaborative model of consultation and contrast it with the expert model and the advocacy model.
2. discuss the research and theoretical base for collaborative consultation.
3. list the major advantages of and concerns about the consultant model of service delivery.
4. describe and identify the process of change and stages of emotional reaction to change within a group.
5. determine their communication and leadership styles and the communication and leadership styles of others.
6. discuss how the learning characteristics of adults differ from children.
7. integrate knowledge about communication and leadership styles, adult learning characteristics and the change and consulting processes.
8. identify the steps in the problem solving process.
9. identify the major components of the coping process and differentiate between coping and changing.
10. differentiate the six types of individuals who are difficult; identify and apply the appropriate coping strategy.

11. develop a building data collection plan and needs assessment survey.

12. introduce the collaborative model of consultation to building staff.

13. identify appropriate data collection procedures to document growth in teacher and student skills and changes in both building-level and systems-level efforts toward collaboration.

14. identify and provide for needs for follow-up workshops, inservices and technical assistance.

Some of the workshops were designed just for consulting teachers, other workshops were designed for the school building team. The training for these six initial schools was conducted for four years by two college professors from the Division of Special Education at Western Oregon State College in Monmouth, Oregon. Subsequent training, beginning with the 1989-90 school year, was continued by the 0.50 FTE program chair.

**Selection procedures for the comparison group which did not implement the consulting teacher model.** After the population of consulting teacher schools had been identified, a randomly selected comparison group of 30 schools without the consulting teacher model was selected from the 72 remaining schools within the same school
district \((N = 89)\). These schools were selected in the fall of 1990 using a table of random numbers which made a total of 47 schools participating in this study. It was then determined that the presence of those same five variables addressed in the related study--level of school (elementary, middle, or high school), Low Income Allocation (a brief description of each of these variables is offered in Appendix B), Stability Index, Project Read and Chapter I--offered a sensible description of all schools within the district. Two additional variables, the presence of an ESL/Bilingual Program and/or an Alternative Education Program were added at this time to further describe the schools selected. Several different statistical tests were conducted to determine whether or not the comparison group schools were similar to the population of consulting teacher schools:

1. A Chi Square Goodness of Fit for Multinomial Distribution was conducted to determine if the distribution of level of school (elementary, middle, or high school) in the comparison group was equal to the distribution of age in the known consulting teacher population. No differences were found \((X^2 = 2.476, \text{ with } 2 \text{ df and corresponding } p > 0.700)\).

2. A one sample t-test was done to determine if the mean of the comparison group was the same as that of the population of consulting teacher schools with respect to Low Income Allocation
and Stability Index. No differences were found (Low Income Allocation: comparison group $\bar{X} = 29.27$, population $\bar{X} = 34.00$, comparison group sd = 15.03, population sd = 15.04; $t = -0.017$, with 29 df and corresponding $p = 0.987$ and Stability Index: comparison group $\bar{X} = 77.30$, population $\bar{X} = 76.22$, comparison group sd = 9.95, population sd = 9.62; $t = 0.006$, with 29 df and corresponding $p = 0.995$).

3. A u-test for testing the Mean of a Binominal Population was conducted on each of the remaining variables to determine whether any differences existed between the comparison group and the population of consulting teacher schools with respect to the presence of Project Read, Chapter I, an ESL/Bilingual Program and/or an Alternative Education Program. No differences were found (Project Read $u = 0.897$ with corresponding $p > 0.368$, Chapter I $u = 0.575$ with corresponding $p = 0.547$, ESL/Bilingual $u = 1.000$ with corresponding $p > 0.317$ and Alternative Program $u = -0.143$ with corresponding $p > 0.841$).

Following the completion of these tests, it was determined that with respect to these seven variables there was no difference between the comparison group and the population of consulting teacher schools. These statistical tests suggest that any differences in referral and verification rates between the comparison group and the population of
consulting teacher schools are due to factors other than these seven variables. One of the possible factors might be the implementation of the consulting teacher model.

**Definitions.** Several terms and phrases will be consistently used to describe the research design and research questions in the current study. Four of those phrases will be defined in this section.

The dependent variable for this study was the number of children in the process. This phrase, children in the process, referred to children in both the consulting teacher schools and the comparison group schools who were either in the discussion stage, the regular education pre-referral intervention stage (B-1), the assessment stage (B-3) or the verification stage (B-5). A more complete description of these four stages is found in the Data Collection Instruments and Procedures section of this chapter.

The impact of the dependent variable was measured against three factors. Those three factors were:

1. Team Decision Points. Team Decision Points referred to one or all of the stages in the process outlined above. A building level team of people made decisions about whether to move a child from the discussion stage to the regular education pre-referral intervention stage (B-1) to the assessment stage (B-3) and to the verification stage
(B-5). The Team Decision Points served as one of three factors in this study.

2. Type of School. The type of school referred to whether or not a school implemented the consulting teacher model. Schools which implemented the model were called consulting teacher schools. Schools which did not implement the model were called comparison group schools. The type of school served as the second of three factors in this study.

3. Year. The year referred to which year the data were collected from the consulting teacher schools and the comparison group schools. The years in this study were school years which began with 1987-88, 1988-89 and 1989-90. The year served as the third of three factors in this study.

**Research Questions.** The purpose of this study was to examine the referral and verification rates to special education in schools which implemented a consulting teacher model. The data were collected from the population of schools which implemented the model (N = 17) and compared with similar data from a comparison group of schools which did not implement the model (N = 30). All schools were from the Portland Public School District. It was hypothesized that while the schools with the consulting teacher model will have fewer referrals to special education, the percentage of those referrals verifying as eligible for service will increase. Specifically, three
questions were addressed in the data analysis. They were as follows:

1. a) Would there be a difference between the consulting teacher and comparison group schools with respect to the number of children in the process?
   
   b) Would there be a difference among the three years with respect to the number of children in the process?
   
   c) Would there be a difference among the three Team Decision Points with respect to the number of children in the process?

2. Within the consulting teacher schools, would there be a difference between the referral rate accuracy and the length of time on the model?

3. When referral rate accuracy is examined by year, would there be a difference between the consulting teacher and comparison group schools?

Data Collection Instruments and Procedures. Throughout this research study, five different data collection instruments and procedures were used: (a) the Portland Public School District forms, (b) a Data Collection Form designed specifically for this research,
(c) the written minutes from the Building Screening Committee meetings, (d) the annual federally required December census which reports children who verified for special education services and (e) an interview form, also designed specifically for this research. In the following section, each instrument will be described and the procedures for employing it will be outlined. While all five data collection instruments were available, not every procedure was implemented in every school; some schools did not require each form. How and when each instrument and procedure was used will also be described in the next section. The final paragraph of this section summarizes an important finding from the Data Collection Form in regard to the use of Portland's regular education pre-referral intervention form (B-1).

Portland Public School District Forms. The process of referring a child for potential special education services in Portland began within the regular education system. Each school had a team of people, called the Building Screening Committee (BSC), who met several times each month to discuss children. Certified school personnel or a parent who had a concern about a child could refer that child to the BSC. This concern could be academic or career/vocational as well as an articulation or behavior problem. Members of the BSC varied from school to school, but generally consisted of the school psychologist, a social worker, a diagnostic specialist, the speech pathologist, an
administrator from regular education, classroom teachers and, occasionally, the student's parents. At some point a decision was made by the BSC or the classroom teacher to complete the first form, a regular education pre-referral form called the B-1. The BSC would then determine the next best step in the process, making one of four recommendations:

1. refer to special education for formal assessment,
2. complete a B-3 (Prior Notice and Parent Consent for Evaluation),
3. continue in current placement and implement other interventions or
4. refer to ESL/Bilingual for formal assessment.

If the BSC made either of the first two recommendations, the student was referred for formal special educational assessment by way of the second form, the B-3. The B-3, Prior Notice and Parent Consent for Evaluation, must be completed by the parent when the first recommendation was selected. Parents who attended the BSC meeting and agreed to formal special education assessment signed the B-3 at that time (recommendation #2). Children who continued in the current placement (recommendation #3) were considered to remain at the B-1 level for the time being and were not referred for special education assessment. These children could be referred at a later time or possibly never referred at all. Children who were referred for ESL/Bilingual assessment (recommendation #4) were referred to the
appropriate specialist; ESL/Bilingual children are not covered under the same federal or state guidelines which serve children with disabilities.

The third school district form which was essential to this research was the B-5, The Eligibility Statement. Only those children who were referred and tested had this form completed. This form noted, following formal assessment, if the child was verified as eligible for special educational services. There was also a place on the B-5 to note those children who were tested but did not verify as eligible for special education services. In most of the schools, the decision to verify a student as needing special education services was made by the BSC. In several schools, however, the decision to verify was made by a different team of people, the Multidisciplinary Team (MDT). This MDT typically consisted of a building administrator, regular classroom teacher(s), the counselor, the appropriate specialist(s) and the person who administered the eligibility assessment battery. In a few cases, the BSC and the MDT consisted of the same people; they simply served in a different role.

The BSC made several decisions on each individual child. Those decisions covered whether it was appropriate to move from the initial discussion stage to the regular education pre-referral process (B-1) to the formal assessment process (B-3) to the verification process (B-5).
These decisions were referred to as Team Decision Points. (All Portland B-forms are reproduced in Appendix C.) Frequency counts for each of these Team Decision Points were collected on a Data Collection Form from every school.

Data Collection Form. A Data Collection Form was developed with the approval and input of the consulting teacher administrator and other key administrators in the Portland schools. The form was sent in mid-December, 1990, to the Chair of each BSC in the 47 schools participating in the study (Appendix D). The Data Collection Form was accompanied by a cover letter which described the research and provided a description of the district's approval for the research study to be conducted (Appendices E and F).

The Data Collection Form, designed specifically for this research, asked for frequency counts of referral and verification rate data over a three year period of time (1987-88, 1988-89, 1989-90). These four questions were designed to follow the steps for special instruction services outlined by school district personnel. The procedure for obtaining these special instruction services begins within the regular education process and concludes, following the BSC and parental decision for formal special education assessment, within the special education process. The Data Collection Form for this study was designed to follow the process of children from regular education pre-
referral to eligibility.

The first group of data collection questions (#1-6) were designed to describe the use of the B-1. The next group of questions were designed to collect frequency counts for the B-1, B-3 and B-5 process over the three selected school years: question #7 asked how many different children were discussed at the BSC meetings; question #8 asked how many of those children discussed at BSC meetings had a B-1 form completed; question #9 asked how many of the children with B-1s were determined to need testing and therefore had a B-3 completed; and finally, question #10 asked how many of those tested children eventually were verified as eligible for special education services. These frequency counts were collected from each school for the selected school years of 1987-88, 1988-89 and 1989-90.

In mid-January, 1990, a follow-up telephone call was made to each of the BSC Chairs. This call was made to ensure that each BSC Chair received the Data Collection Form, understood its purpose and to ask if they had any questions about it. In some schools, the Data Collection Form had been passed on to another person. That person was then also contacted by phone. During most of these follow-up phone calls, the BSC Chair reported that the Data Collection Form had been completed by the Chair or by the BSC during one of their meetings. The Chair then either returned the completed form by mail or
reported the requested numbers over the telephone.

In the other schools, however, several additional telephone calls were needed to complete the collection of data. In a few of these schools, the completed Data Collection Form was mailed and returned. In other cases, the BSC Chair requested assistance for collecting the data. When assistance for collecting the data was requested, the next data collection instrument and procedure was implemented.

Minutes from BSC Meetings. During each building BSC meeting, one person on the committee (usually the Chair) developed an agenda and took written minutes or notes of the meeting. These minutes consisted of all decisions made by the BSC as well as the names of any children who were discussed at each team meeting. The team discussions included noting in the minutes which children were in the process of assessment (B-3) and which children had verified for special education services (B-5).

When the BSC Chair requested assistance in the data collection, the minutes from these meetings were examined and names of children copied down. Notations were made on whether these children were simply discussed at these meetings or whether they had continued on through the regular education pre-referral stage (B-1), the assessment stage (B-3) or the verification stage (B-5). Minutes from each meeting
were usually collected in a notebook and labeled with the school year; notebooks from the 1987-88, 1988-89 and 1989-90 school year were examined.

In most cases, the names of children were fairly easy to track through this process (discussion to B-1 to B-3 to B-5). If a child's name appeared within the minutes showing that the process had been completed within one year, the child was added to the original Data Collection Form for that year. If the process had not been completed within one year, the child was counted for whatever part of the process had been completed. For example, if a child had been discussed and recommended by the BSC for a regular education pre-referral intervention (B-1) during the 1987-88 school year, that child would be counted for those first two steps in the process. If that same child was referred for assessment (B-3) and verification (B-5) during the next year, the 1988-89 school year, the last two steps would be counted during that next year. The names of children who were not able to be tracked throughout the entire process were noted and tracked on the next data collection instrument and procedure.

Federally Required December Census. In the few schools which asked for assistance with the collection of data, a separate procedure was used to gather the requested numbers. This fourth procedure for collecting the data began with noting the names of children who were
discussed at building level BSC meetings. When a child's name could be carried through the discussion stage, the regular education pre-referral stage (B-1), the assessment stage (B-3) and the verification stage (B-5), the child was counted on the original Data Collection Form. If the child's name could not be followed through this process, the federally required December census was used to verify the names.

Each year, in December, the federal government requires that a complete count of the numbers of children receiving special education services be sent to the U. S. Office of Special Education and Rehabilitative Services (OSERS) in Washington, D. C. While the names of the children are not sent directly to the federal government, the names are collected by the Portland Public School District in order to provide an accurate count to OSERS. These lists of names are collected yearly and are held at the District Administration Offices. The Portland Public School District census of all children who received special education services in the 1987-88, 1988-89 and 1989-90 school years were examined for this fourth data collection instrument and procedure.

When a child's name could not be tracked through the entire process, the first step was to ask classroom and special education teacher(s) if they knew or remembered how much of the process had been completed. Most of the tracking process was completed in this
manner. The other children's names were cross-referenced with the December census count at the school district administration offices.

If, for example, a child was mentioned in the BSC minutes as having been discussed and a regular education pre-referral form (B-1) completed, but could not be tracked any further, the child's name was searched within the December census count records. If the child's name appeared within the census records, the child was counted under both the assessment (B-3) category and the verification (B-5) category. Federal laws governing the due process rights of disabled children require that a parent must provide written permission for eligibility assessments; therefore, if a child verified (B-5) for services, the child would already have been assessed (B-3). If the child's name was not in the December census, the child was recorded for whatever steps could be documented.

The Interview Form. The last data collection form was sent to only those schools with the collaborative consultation model (N = 17) (Appendix G). The purpose of this second form was to provide a more accurate picture of how the consulting teacher schools were implementing the model: question #1 asked for a listing and ranking of who the consultant consults with; question #2 asked for a weekly average of the number of children consulted about; question #3 asked how many hours in a day was spent consulting; question #4 asked for
the level of administrative support for the consulting teacher model; and question #5 asked for the number of people on the BSC and whether those team members had received the training offered by the school district for the consulting teacher model.

**Summary of Findings on the B-1 Form.** During this data collection process, it was apparent from the first set of questions (#1 through #6) in the Data Collection Form and from follow-up telephone conversations, that the B-1 form was used in an inconsistent manner across the schools. Because of this inconsistency, it was determined that the B-1 would not be included in the data analysis. The most accurate data analysis would come from the data collected on the numbers of children discussed, the numbers of referrals for formal assessment (B-3) and the numbers of children found eligible for special education services (B-5).

**Data Analysis.** After the data were collected, the statistical analysis was broken down into three sections which addressed the three questions asked. Data were analyzed through a repeated measures Analysis of Variance (ANOVA) or Analysis of Covariance (ANCOV). The ANOVA analysis was selected because it would determine whether or not the variances from this repeated measure analysis were the same (Winer, 1971). If significant differences were found within the ANOVA or ANCOV, then a test of multiple comparison would be employed. The
Newman-Keuls test of multiple comparison was selected for this purpose since it is conservative and powerful enough to protect against false claims of significance at the 0.05 level (Winer, 1971). If significant differences were found following the Newman-Keuls, then a linear contrast test would be used to examine the more complex comparisons among the means (Winer, 1971).

**Question #1.** This first question required the analysis of descriptive data gathered on schools with the consultation model and the comparison group of schools without the model. This data offered average numbers (means) of children discussed, children who were formally assessed (B-3) and children who verified (B-5) for special education services. The three parts of this question addressed the simple effects of the three factors: (a) consulting teacher or comparison group schools, (b) year and (c) Team Decision Points. The combined effects of these three factors were examined in the form of three two-way interactions and one three-way interaction. These interactions compared the patterns of the dependent variable for all levels of one factor, at each level of the remaining factors. Statistically significant simple and combined effects will be presented in bar or line graph form.

**Question #2.** The second section of statistical analysis required the comparison which was made within the consulting teacher schools. A
repeated measures Analysis of Variance (ANOVA) was conducted to examine the relationship between referral rate accuracy and length of time that each consulting teacher school participated in the consulting teacher model. The mean percent of referral rate accuracy in these consulting teacher schools was plotted against the number of years the schools were on the model. This graph indicates any changes over time in the impact of the consulting teacher model on referral rate accuracy in the population of schools with the consulting teacher model.

**Question #3.** The third part of the analysis involved examining the accuracy of referral and verification percentages in both the consulting teacher schools and the comparison group schools across the school years. A repeated measures Analysis of Variance (ANOVA) was conducted to determine if there were any significant differences between the consulting teacher and comparison group schools with respect to the referral rate accuracy across the school years. The mean percent of referral rate accuracy in both the consulting teacher schools and the comparison group schools were plotted against the school years. The graph for this question indicates any significant differences over the school years in the impact of the consulting teacher model on referral rate accuracy.
Conclusion

Through the collection and analysis of referral and verification rate data over a three year period of time in both the population of schools with the consulting teacher model and the comparison group of schools without the model in the Portland Public School District, patterns of referral and verification rate would presumably emerge. It was projected that the referral rate data in the population of schools which implement the consultation model would decrease over the number of years on the model, while verification rate data would increase. The referral and verification rates for the sample of schools which did not implement the consultation model would, it was hypothesized, stay the same over this same time period. Several preliminary statistical analyses were conducted on these two independent groups of schools, indicating no significant differences existed between them across seven influential variables.
RESULTS

This chapter outlines the results from the present study. Each of the three research questions will be stated, followed by a description of the data analysis used and results found. Summary statements, discussion and interpretations of the data will be addressed in the next chapter.

**Question #1**

a) Would there be a difference between the consulting teacher and comparison group schools with respect to the number of children in the process?

b) Would there be a difference among the three years with respect to the number of children in the process?

c) Would there be a difference among the three Team Decision Points with respect to the number of children in the process?

A repeated measures Analysis of Covariance (ANCOV) was conducted on the data (Table 1). In all schools, yearly enrollment was included in the model as a covariate to adjust for any possible effect these
Table 1

**ANCOV Table for the Number of Children in the Process and Type of School, Team Decision Points and Year (Includes Enrollment as a Covariate)**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Squares</th>
<th>F</th>
<th>Significance of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of School</td>
<td>1</td>
<td>13.86136</td>
<td>0.01</td>
<td>0.9389</td>
</tr>
<tr>
<td>Enrollment</td>
<td>1</td>
<td>4667.92580</td>
<td>2.00</td>
<td>0.1645</td>
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<tr>
<td>Error</td>
<td>42</td>
<td>2331.59931</td>
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<td></td>
</tr>
<tr>
<td>Team Decision Points</td>
<td>2</td>
<td>28205.24471</td>
<td>43.41</td>
<td>0.0001</td>
</tr>
<tr>
<td>Team Decision Points X Type of School</td>
<td>2</td>
<td>2660.75089</td>
<td>4.10</td>
<td>0.0200*</td>
</tr>
<tr>
<td>Error</td>
<td>86</td>
<td>649.72362</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>2</td>
<td>854.47590</td>
<td>4.70</td>
<td>0.0116</td>
</tr>
<tr>
<td>Year X Type of School</td>
<td>2</td>
<td>907.11402</td>
<td>4.98</td>
<td>0.0090*</td>
</tr>
<tr>
<td>Enrollment</td>
<td>1</td>
<td>370.58032</td>
<td>2.04</td>
<td>0.1572</td>
</tr>
<tr>
<td>Error</td>
<td>85</td>
<td>181.64209</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team Decision Points X Year</td>
<td>4</td>
<td>50.55902</td>
<td>0.55</td>
<td>0.6969</td>
</tr>
<tr>
<td>Team Decision Points X Year X Type of School</td>
<td>4</td>
<td>160.79112</td>
<td>1.76</td>
<td>0.1392</td>
</tr>
<tr>
<td>Error</td>
<td>172</td>
<td>91.39202</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>404</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* * p < 0.05
** p < 0.01

Factors may have had on the dependent variable. There were three parts to this first research question, each focusing on a simple effect of one of three factors. These factors were (a) consulting teacher or comparison group school, (b) year and (c) the Team Decision Points.
The dependent variable was the number of children in the process. Significant effects were found for the simple effects of Team Decision Points and year. These two simple effects will be further examined since each is involved in a statistically significant interaction.

Several combined effects were also examined; three two-way interactions and one three-way interaction. Two two-way interactions were found to be statistically significant.

**The first interaction.** The first significant effect involved the interaction between Team Decision Points and the type of school (consulting teacher school or comparison group school), with \( p = 0.0200 \). The differences among the Team Decision Points for the consulting teacher schools were not the same as the differences among Team Decision Points for the comparison group schools. This interaction is displayed in the following bar graph (Figure 1).

A Newman-Keuls test of multiple comparisons was conducted to further examine the means for differences (Table 2). The number of children discussed in the consulting teacher schools (approximately 47 children) was statistically greater than the number of children involved in the process at any other Team Decision Point--for either the consulting teacher schools or the comparison group schools. The number of children discussed in the comparison group schools
Figure 1. The Number of Children Discussed, Assessed and Found Eligible in the Consulting Teacher and Comparison Group Schools for 1987-1990.

(approximately 36 children) was also greater than the number of children assessed (B-3) and verified (B-5) at either the consulting teacher schools or comparison group schools. No other statistical differences were found.

A linear contrast analysis was conducted to further examine the decrease between the number of children discussed and the number assessed (B-3) in the consulting teacher schools and the decrease between the number of children discussed and the number assessed (B-3) in the comparison group schools. This decrease was found to be
Table 2

**Significant Differences Found in the Number of Children Discussed**

**When Comparing Consulting Teacher Schools with Comparison Group Schools for 1987-1990.**

<table>
<thead>
<tr>
<th>Team Decision Points</th>
<th>Mean</th>
<th>Number of schools</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consulting Teacher Schools</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussed</td>
<td>47.12</td>
<td>17</td>
</tr>
<tr>
<td>Assessed (B-3)</td>
<td>15.73</td>
<td>a 17</td>
</tr>
<tr>
<td>Verified (B-5)</td>
<td>11.78</td>
<td>a 17</td>
</tr>
<tr>
<td><strong>Comparison Group Schools</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussed</td>
<td>36.02</td>
<td>30</td>
</tr>
<tr>
<td>Assessed (B-3)</td>
<td>21.51</td>
<td>a 30</td>
</tr>
<tr>
<td>Verified (B-5)</td>
<td>15.73</td>
<td>a 30</td>
</tr>
</tbody>
</table>

Column Means followed by the same letter are not statistically different, $p \leq 0.05$, Newman-Keuls Multiple Comparison Test.

statistically significant, $p = 0.0300$. Within the consulting teacher schools, the difference between the number of children discussed (47) and the number assessed (16) was statistically greater than the number of children discussed (36) and the number assessed (22) in the comparison group schools. An estimate of this difference between discussed and assessed in the consulting teacher (47 - 16 = 31) and comparison group (36 - 22 = 14) schools was a decrease of 17 children (31 - 14 = 17). Seventeen fewer children were assessed in the consulting teacher schools than the comparison group schools.

**The second interaction.** The second combined effect or interaction
was found between the school year and the type of school (consulting teacher or comparison group). The differences found between the school years for the consulting teacher schools were not the same as the differences among the years for the comparison group schools. This interaction is graphically displayed in the bar graph (Figure 2).

Figure 2. Number of Children in the Process in Consulting Teacher Schools and Comparison Group Schools for 1987-1990.

A Newman-Keuls test of multiple comparisons was conducted to further examine the means for differences (Table 3). The 1987-88 school year in the consulting teacher schools was found to be statistically greater than the 1989-90 school year for both the comparison group and consulting teacher schools.
Table 3

**Significant Differences Found in the 1987-1990 School Years When Comparing the Number of Children in the Process in Consulting Teacher Schools and Comparison Group Schools.**

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consulting Teacher Schools</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1987-88</td>
<td>30.18</td>
<td>a</td>
</tr>
<tr>
<td>1988-89</td>
<td>25.29</td>
<td>a b</td>
</tr>
<tr>
<td>1989-90</td>
<td>19.16</td>
<td>b</td>
</tr>
<tr>
<td><strong>Comparison Group Schools</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1987-88</td>
<td>23.89</td>
<td>a b</td>
</tr>
<tr>
<td>1988-89</td>
<td>25.81</td>
<td>a b</td>
</tr>
<tr>
<td>1989-90</td>
<td>23.74</td>
<td>b</td>
</tr>
</tbody>
</table>

Column Means followed by the same letter are not statistically different, p ≤ 0.05, Newman-Keuls Multiple Comparison Test.

To further examine the differences in the patterns of consulting teacher and comparison group schools, a linear contrast analysis was conducted between the school years. Differences between the 1987-88, 1988-89 and 1989-90 school years were examined. A statistical difference in the consulting teacher schools was found for the 1987-88 school year, p = 0.0239. Within the consulting teacher schools, the difference between the 1987-88 and 1988-89 school years (30.18 - 25.29 = 4.89) was approximately five children. Within the comparison groups schools, the difference between the 1987-88 and 1988-89 school years (23.89 - 25.81 = -1.92) was approximately
two children. An estimate of the difference between the consulting teacher and comparison group schools for the 1987-88 school year was seven children. Seven more children were in the process in between the 1987-88 and 1988-89 school years in the consulting teacher schools over the comparison group schools.
**Question #2**

Within the consulting teacher schools, would there be a difference between the referral rate accuracy and the length of time on the model?

A repeated measures Analysis of Variance (ANOVA) was performed on the consulting teacher school data (Table 4). Initially, yearly enrollment was included in the model as a covariate to adjust for any possible effect this factor may have on referral rate. Enrollment was found to have no effect on referral rate, so it was not included as a covariate.

**Table 4**

**ANOVA Table for Referral Rate and Length of Time on the Model**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Squares</th>
<th>F</th>
<th>Significance of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of time on model</td>
<td>5</td>
<td>170.933</td>
<td>3.089</td>
<td>0.0230*</td>
</tr>
<tr>
<td>Consulting Teacher Schools</td>
<td>16</td>
<td>1425.102</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>29</td>
<td>55.336</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>553.246</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Referral rate accuracy was obtained by calculating a percentage of
those children who were found eligible to those who were assessed (B-5/B-3). These percentages are displayed graphically on a graph (Figure 3).

The consulting teacher schools are included in the analysis only for the number of years they participated on the model. For example, one of the high schools began the consulting teacher model in 1985, therefore the referral rate accuracy data from this school would appear as part of the averages across all five years. One of the elementary schools, however, began the consulting teacher model in 1987, so the referral rate accuracy data from this school would appear as part of the averages for years one, two and three only.

Length of time on the model was found to have a significant effect on referral rate accuracy, $p = 0.0230$. The means were further examined, using a test of multiple comparison, to determine where differences among the five years existed. A statistically significant increase in referral rate accuracy was found between years three and four and a statistically significant decrease in referral rate accuracy was found between years four and five (Table 5).
Figure 3. Referral Rate Accuracy in the Consulting Teacher Schools
According to the Number of Years on the Model.

Table 5

Significant Differences Found in Referral Rate Accuracy According to
Length of Time on the Model.

<table>
<thead>
<tr>
<th>Length of time on the Model</th>
<th>Mean</th>
<th>Number of Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year</td>
<td>60.98</td>
<td>a</td>
</tr>
<tr>
<td>2 years</td>
<td>64.93</td>
<td>a, b</td>
</tr>
<tr>
<td>3 years</td>
<td>69.29</td>
<td>a, b</td>
</tr>
<tr>
<td>4 years</td>
<td>83.23</td>
<td>c</td>
</tr>
<tr>
<td>5 years</td>
<td>72.73</td>
<td>b</td>
</tr>
</tbody>
</table>

Column Means followed by the same letter are not statistically different, p = 0.05, Newman-Keuls Multiple Comparison Test.


**Question #3**

When referral rate accuracy is examined by year, would there be a difference between the consulting teacher and comparison group schools?

A repeated measures Analysis of Variance (ANOVA) was conducted on the data (Table 5). Initially, yearly enrollment was included in the model as a covariate to adjust for any effect this factor may have had on referral rate accuracy. Enrollment was found to have no effect on referral rate, so it was not included as a covariate.

### Table 6

**ANOVA Table for Referral Rate by Year**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>df</th>
<th>Mean Squares</th>
<th>F</th>
<th>Significance of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of School</td>
<td>1</td>
<td>274.64577</td>
<td>0.19</td>
<td>0.6656</td>
</tr>
<tr>
<td></td>
<td>43</td>
<td>1450.37834</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>2</td>
<td>276.02552</td>
<td>1.31</td>
<td>0.2761</td>
</tr>
<tr>
<td>School X Year</td>
<td>2</td>
<td>639.26464</td>
<td>3.03</td>
<td>0.0537</td>
</tr>
<tr>
<td>Error</td>
<td>86</td>
<td>211.25352</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>134</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < 0.05

**p < 0.01
Referral rate accuracy was obtained by calculating a percentage of those children who were found eligible to those who were assessed (B-5/B-3). Percent of referral rate accuracy for both consulting teacher and comparison group schools, for all three years, are presented in a both a chart (Table 7) and a graph (Figure 4). No significant interactions were found between the type of school and the school year.

Table 7

Percent of Referral Rate Accuracy for the Consulting Teacher Schools and the Comparison Group Schools for Years 1987-1990.

<table>
<thead>
<tr>
<th></th>
<th>1987-88</th>
<th>1988-89</th>
<th>1989-90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consulting Teacher Schools</td>
<td>68.76</td>
<td>72.76</td>
<td>68.11</td>
</tr>
<tr>
<td>Comparison Group Schools</td>
<td>63.09</td>
<td>63.78</td>
<td>73.94</td>
</tr>
</tbody>
</table>
Figure 4. Percent of Referral Rate Accuracy in the Consulting Teacher Schools from 1987-1990.
DISCUSSION

The purpose of this study was to examine the impact of a collaborative consultation model on referral and verification rates to special education. The data were collected over a three year period of time from the population of schools which implemented the model and compared with similar data from a comparison group of schools which did not implement the model. All schools were from the Portland, Oregon, Public School District. More specifically, three research questions were addressed in the design and data analysis. These questions examined (a) the impact of the collaborative consultation model on the number of children in the process, (b) the longitudinal impact of the collaborative consultation model on referral rate accuracy and (c) the referral rate accuracy differences between collaborative consultation model schools and comparison group schools.

This final chapter outlines each specific research question, describes and summarizes the results, discusses the implications of those results and concludes with suggestions for further research in the application of collaborative consultation as a regular education pre-referral intervention.
Question #1

A summary of the results. The first research question had three parts, each focusing on a simple effect between the dependent variable and one of three factors. The dependent variable was the number of children in the process; the three factors were (a) consulting teacher school or comparison group school, (b) year and (c) Team Decision Points. Statistically significant differences were found for the simple effects of Team Decision Points and year. These two simple effects were examined more closely through several statistical analyses.

The first significant effect involved the interaction between the Team Decision Points and the type of school. A statistically greater number of children were discussed in the consulting teacher schools than in the comparison group schools. The number of children discussed in the comparison group schools was also greater than the number of children assessed and verified at either the consulting teacher or comparison group schools. An estimate of the difference between the number of children discussed and the number of children assessed was a decrease of 17. From the number of children discussed, 17 fewer children were assessed in the consulting teacher schools than the comparison group schools.

The second significant effect involved the interaction between school year and type of school (consulting teacher or comparison group
school). The number of children in the process in the consulting teacher schools was found to be statistically greater in the 1987-88 school year than the number of children in the process for the 1989-90 school year for both comparison group and consulting teacher schools. An estimate of the difference between the 1987-88 and 1988-89 school years was an increase of seven children in the consulting teacher over the comparison group schools. No statistical differences were found between the 1988-89 and 1989-90 school year.

**Implications.** This first research question analyzed each factor (consulting teacher or comparison group school, year and Team Decision Points) against the dependent variable (the number of children in the process). This question searched for simple effects within a very global research question—would differences be found between the dependent variable and each factor? While differences were not found within the direct interaction of each factor and the dependent variable, differences were found within the interactions and components of this global question.

**First Interaction.** The first interaction found statistically significant differences between the Team Decision Points and the type of school. More specifically, differences were found for both types of schools (consulting teacher and comparison group) in the Team Decision
Point of discussion. Significantly more children were discussed within the regular education process in both types of schools. Schools with the collaborative consultation model, however, discussed an average of 17 more children than schools without the model.

The implications of this first finding are tremendous in terms of addressing the purpose of implementing a regular education pre-referral process. The primary purpose for establishing this regular education process is to provide a means for regular classroom teachers to identify, problem solve and implement strategies for keeping children in the regular classroom; this process encourages the communication and interaction of educators. Portland Public School District started the BSC in order to meet this exact goal. This first finding provided empirical support to the purpose and concept of a regular education pre-referral process. Through the implementation of the BSC in Portland, teachers worked within a process to discuss, share ideas and provide alternative interventions for the children in their classrooms. This process, in both the consulting teacher and comparison group schools, worked. A significantly greater number of children were discussed than were assessed or verified. This regular education pre-referral process may keep children from being misidentified; the process may indeed keep them in the least restrictive environment, the regular classroom.
While there was a statistically significant difference between the number of children discussed and the number of children at any other Team Decision Point (assessed or verified) at both schools, there was also a significant difference between the number of children discussed at consulting teacher schools when compared to comparison group schools. An estimated difference of 17 more children were discussed at schools which implemented the collaborative consultation model. This finding is important to note in that teachers and members of BSCs in consulting teacher schools received training which included communication styles, discussion techniques, coping strategies for dealing with difficult people and strategies for modifying regular education curriculum which comparison group schools did not receive.

These findings have many implications for school districts and teacher training institutions. The employment of the BSC (or some other type of regular education pre-referral process, e.g., student study teams, problem-solving teams, etc.) encouraged discussion among educators prior to the special education process. School districts may wish to employ a regular education pre-referral process in their schools in order to encourage this same interaction. Many questions, however, remain about the effectiveness of implementing a regular education pre-referral process. For example, are there differences regarding team membership—would the effectiveness of a team differ if a special
educator were always part of the regular education pre-referral process? Would there be differences in attitudes of teachers toward each other or toward children with disabilities after serving on such a team? Do schools which employ a regular education pre-referral process have a higher referral rate accuracy than schools which do not?

The employment of a regular education pre-referral process also has research implications for teacher training institutions. More children were discussed in schools which implemented the collaborative consultation model than in schools without the model. The primary difference between these two types of schools was the training that the consulting teacher received. Where in the training of teachers, regular or special education, would this collaborative consultation be most effective? At Western Oregon State College, for example, the collaborative consultation course is offered at different times for different teacher training programs. Students in the teacher training program for teachers of children with severe disabilities, hearing impairments and speech/language disabilities take the collaborative consultation course in their initial training program. Students in the teacher training program for teachers of children with mild disabilities usually take the collaborative consultation course after they have been in the field for at least a year. Are there differences between the training they receive? Would there be differences in the
effectiveness of these teachers in regard to their participation on a regular education pre-referral team? Would this training be more effective as preservice or inservice training? Would preservice or inservice training make a difference in the number of children referred, assessed and verified?

**Second Interaction.** The second interaction found statistically significant differences between year and type of school. More specifically, differences were found between the number of children in the process for the 1987-88 school year and each other year. Approximately seven more children were in the process during the 1987-88 school year in the consulting teacher schools than in the 1988-89 school year.

Several implications emerge from this finding. If one of the main points of implementing a regular education pre-referral process was to reduce the number of children who inappropriately move into the special education assessment process, then strategies which meet this objective can be called effective. Implementing collaborative consultation strategies as a pre-referral intervention process was effective in the Portland schools. A downward trend which represented the number of children in the process can be observed in the consulting teacher schools. Looking more closely at this downward pattern, a slow, steady, possibly predictive change in the
number of children in the process was apparent. As BSC team members implemented the collaborative consultation model, fewer children were put into the process. This same trend over time was more erratic in the comparison group schools.

Suggestions for further research from these results primarily include studies which examine the impact of change. Change takes time and is often a very difficult and lengthy process. When the collaborative consultation model was implemented in the Portland schools, it represented a change in service to children. There were, however, no complaints from parents, teachers, administrators or children when this model was introduced in the schools. In fact, the opposite occurred; school administrators and personnel who were employed in both comparison group schools and schools not involved in the study wanted to incorporate the model into their building program. The difficulty, from a research point of view, was keeping the change within the consulting teacher schools. Research which controlled the impact of change would be interesting to follow. Would there be, for example, differences in the number of children in the process if two separate school districts were examined? As the model is implemented over time, how will administrators allocate the use of time saved by a reduced number of children in the process? Most importantly, what will happen in the Portland schools to the number of children in the process during the 1990-91 school year; will the
downward trend continue?

**Conclusion.** This first research question addressed the impact of several different factors on the number of children in the process. With the implementation of the collaborative consultation model as a regular education pre-referral intervention strategy, differences were found in the number of children discussed and in the employment of the model over time. The main point of implementing a regular education pre-referral intervention strategy is to reduce the number of children who enter the special education process inappropriately. Collaborative consultation worked as a strategy to increase the number of children discussed and to decrease the number of children in the process. The letter and the spirit of the least restrictive environment portion of the law is supported by the implementation of collaborative consultation as a regular education pre-referral intervention strategy.
**Question #2**

A summary of the results. The second research question addressed the impact of the collaborative consultation model over time. Referral rate accuracy within the consulting teacher schools was examined according to the length of time each school participated on the collaborative consultation model. The consulting teacher schools were included in the analysis only for the number of years they participated on the model. Results indicated that length of time on the model does have a significant effect on referral rate accuracy in the consulting teacher schools. A statistically significant increase in referral rate accuracy was found between years three and four and a statistically significant decrease in referral rate accuracy was found between years four and five.

Implications. The training received by the consulting teacher schools covered a variety of topics over four years. This training covered major content areas such as learning about the process of change, communication and leadership styles and coping with difficult people as well as data collection and data based decision making. It was during the fourth year of training that significant differences emerged within referral rate accuracy for the consulting teacher schools. Once the teams had completed the training, the differences were significant.
Looking more closely at the focus of training for each year and referral rate accuracy results in the consulting teacher schools, several direct implications emerge. During the first six months of the first year of training, the focus was on learning definitions, identification of communication styles and developing a knowledge base about the process of consulting. For the remainder of the first year and throughout the second year, the focus of training was based on developing one-to-one relationships between consulting teacher and classroom teacher. The focus of this relationship was problem solving. Classroom teachers identified one child or one group of problem behaviors. The consultant was then requested, by the teacher, to provide assistance for the identified problem. At this point in the training, the consulting teacher relationship essentially involved one consultant, one teacher and one identified problem.

During the third year of training, the focus shifted away from building consultant and teacher relationships and moved toward establishing project-based relationships. Consultant teachers provided classroom teachers with a system to network with other teachers with similar problems, design staff development ideas and provide inservice topics. While consulting teachers continued to provide curricular support and instructional modifications for the classroom, classroom teachers began to work with more than one student and more than one target behavior. This was called the multiplier effect since one consultant
and one teacher worked to meet the needs of many children.

Following the third and into the fourth year of training, this multiplier effect may provide an explanation for the increased referral rate accuracy results.

The significant increase in referral rate accuracy which did not appear until year four also supports the premise that change takes time. With the implementation of the collaborative consultation model as a regular education pre-referral process, the change in referral rate accuracy was slow; it took well into the fourth year for the model to have an impact on referral rate.

During the fifth year of the model, several factors occurred in the consulting teacher schools which may have directly influenced the statistically significant decrease observed in referral rate accuracy. The first factor was the number of personnel changes which occurred in the consulting teacher schools over the five years. There were six schools participating on the model for five years; these six schools began the training in the 1984-85 school year. By the fifth year, only one of the originally trained consultant teachers remained in the same role with the same FTE and in the same building. The other five either transferred to another school within the district, took a position as a middle school vice principal, took a position as the Staff Development Director for Portland's Mentor Teacher Program,
opened a private business or retired. So while it appears that six schools received the consultant teacher training for five years, there was actually only one school which remained on the original model.

The second factor which may have influenced the noted decrease in referral rate accuracy was a change in the training. The fifth year on the model for the original six schools was the same year in which the professors from Western Oregon State College no longer provided the training. Training continued, beginning with the 1989-90 school year, with the consulting teacher chairperson providing the training. While the content of the training remained somewhat the same, there was a difference in what the trainers emphasized. The professors from Western Oregon State College emphasized a research-oriented approach, with data collection and data based decision making at the center. The consulting teacher chairperson provided a different emphasis, focusing more on effective instructional strategies for curricular modifications, such as cooperative learning and peer tutoring. Between these two approaches toward training, the model changed. While the collaborative consultation model began as a combined effort between regular education, special education and higher education, it changed when higher education no longer provided the training.

The implication of this finding centers on the impact of change in the
collaborative consultation model. The model, as it originally was designed, changed in personnel and in the provision of training over the five years. These changes alone provide some direct implications for teacher training programs and institutions. When trained personnel leave to take other positions, it only makes sense that each new person begin the training at the beginning. In Portland, any newly hired consulting teachers did begin the training at the beginning, but the school was still regarded as a consulting teacher school from its initial participation date. Further research could be conducted which examines referral rate accuracy from only those schools which have consistent personnel from year to year. Would there be a difference in referral rate accuracy with consistent personnel? Would there be a difference in referral rate accuracy with consistent trainers? Would there be a difference if the length of time on the model was a reflection of the number of years the consultant teacher had been trained, not the number of years the school had been identified as a consulting teacher school?

**Conclusion.** This second research question addressed the impact of the collaborative consultation model on referral rate accuracy over time. Length of time on the model was found to have a significant effect on referral rate accuracy. Referral rate accuracy increased between year three and year four and decreased between year four and year five. The effects of four years of training allowed for what was
called the multiplier effect to take place. This multiplier effect combined the resources of one consultant teacher working with one classroom teacher to meet the educational needs of many students. Changes in personnel and changes in the provision of the collaborative consultation training were identified as factors which may have influenced the noted decrease in referral rate accuracy.
Question #3

A summary of the results. The third research question addressed the interaction between the type of school (consulting teacher or comparison group school) and the school year. This interaction was examined in reference to referral rate accuracy in both the consulting teacher schools and the comparison group schools. No significant interactions were found between the type of school and the school year. Referral rate accuracy remained the same between all years of the study for both the consulting teacher schools and the comparison group schools.

Implications. There are an unlimited number of variables which would serve to impact the findings of this last research question. Four of these hypotheses will be noted. The first two affected only the consulting teacher schools and have already been mentioned in the previous question: changes in personnel and changes in the provision of the consulting teacher model training. The first premise, changes in personnel, occurred at five of the original six schools. Only one of the originally trained consulting teachers remained at the same consulting teacher school. With such a high turnover in personnel, it was difficult to maintain a consistent measure of the model's impact. The second premise, changes in the provision of the consulting teacher model training, occurred across all consulting teacher schools. The training for the first five years was given by two college professors.
from Western Oregon State College. During the 1989-90 school year (the fifth year of the model), the training of the consulting teachers was continued by the consulting teacher chairperson from the district. Although the content of the training remained somewhat the same, the provision of the training changed. Higher education was no longer a part of the model as it was originally designed. What differences would be noted when consultant teacher personnel remained consistent in the schools with the model? How would referral rate accuracy be affected by training which consistently focused on data collection and based decision making?

The next two hypotheses which may have taken a part in the outcome of this third research question, affected the BSC process in only the comparison group schools. Both of these factors raise threats to the external validity of the results. The first hypothesis concerned the definition of which schools were designated as consulting teacher schools. For the purpose of this research study, the definition of the consulting teacher schools was the 17 schools which specifically received the consulting teacher training. Three BSC chairpersons who completed the Data Collection Form for the comparison group schools identified their school as a consulting teacher school for the 1989-90 school year. During the 1989-90 school year, these three BSC chairpersons received at least one year of the consulting teacher training from the college professors at Western Oregon State College.
The second hypothesis which may have influenced the results of this third research question was how diffused the training had become. During the 1989-90 school year, for example, school psychologists and teachers from Chapter I and Project Read throughout the district, received consulting teacher training. It is impossible to tell how much this training may have affected the referral rate accuracy results in the comparison group schools.

The consulting teacher model was so well received in the Portland schools that many of the other programs sought to participate in the training. Perhaps the most difficult variable to control in this research study was keeping the consulting teacher training program within the consulting teacher schools. The results from this third question must be considered confounded since some of the training actually occurred outside the population of consulting teacher schools. Suggestions for further research include designing research studies which more tightly control who receives the training. Other questions, such as whether there would be a difference in referral rate accuracy when school psychologists receive the training, need to be asked. Would there be a difference if school administrators allocated FTE specifically for the consulting teacher role? Would there be a difference in referral rate accuracy when the amount of FTE allocation varied from school to school?
One last variable which must be considered when examining the results of this third research question is the influence of collaborative consultation as a respected service delivery option for all children in the public schools. The role of service provider, in both regular and special education, has expanded to include the role of consulting teacher. Professional journals and organizations have been established with the consulting teacher as their focus. National, state and local conferences which highlight the emerging role of the consulting teacher can be found throughout the nation. Oregon, in particular, has several conferences each year which pinpoint the consulting teacher role. There is a yearly conference held in early May specifically for consulting teachers throughout the state of Oregon. This conference, The Oregon Consulting Teacher Conference, has doubled each year in attendance since it began in 1989. This conference is now supported by a professional organization, newsletter and published monograph from each Oregon Consulting Teacher Conference. The influence of these conferences, journals and professional organizations also serve to confound the results from this final research question.
Conclusion. This third research question addressed the referral rate accuracy for differences between the consulting teacher schools and the comparison group schools. Referral rate accuracy patterns were the same for the consulting teacher schools as they were for the comparison group schools across the three years of the study. Four hypotheses were offered to describe this consistent pattern: (a) changes in personnel, (b) changes in the provision of training, (c) changes in the identification of comparison group schools for the 1989-90 school year and (d) changes in which schools received the training. The influence and emerging acceptance of the role of consulting teacher was also identified as an influential variable which may have affected the results.
Summary
Implementing the consulting teacher model as a regular education pre-referral intervention strategy has a very limited research base. This study was designed to provide original research in order to strengthen that foundation. This study was the first research project on the employment of collaborative consultation as a regular education pre-referral intervention strategy which employed a control group in a large metropolitan school district. Other features which made this study unique were a longitudinal approach, consistent training during the three years of the study and complete support of the model, its implementation and this research study from Portland Public School District administration. While there are still many unanswered questions about the impact of the consulting teacher model as a regular education pre-referral intervention strategy, the results from this original research will serve to empirically broaden the field of collaborative consultation and, ultimately, improve the educational service delivery to all children.
REFERENCES


West, J. F. (1985). Regular and Special Educators’ Preferences for School-Based Consultation Models: A Statewide Study. Austin, TX: The University of Texas at Austin. (ERIC Document Reproduction Service ED # 276 230.)


APPENDICES
Appendix A
Major Objectives for Consulting Teacher Training

At the conclusion of the workshops, the participants should be able to:

1. define the collaborative model of consultation and contrast it with the expert model and the advocacy model.
2. discuss the research and theoretical base for the collaborative model of consultation.
3. describe the steps in the consultant process in interacting with another teacher.
4. list the major advantages of the consultant model service delivery.
5. list the major concerns about the consultant model service delivery.
6. describe the change process in individuals and in the emotional tone of groups.
7. identify the level of concern in the change process in others.
8. identify the stage of emotional reaction to change in a group.
9. determine their own communication styles in normal and stress situations.
10. determine the communication style of others.
11. apply communication style information to the consulting process.
12. identify their own leadership style.
13. identify the leadership styles of others.
14. identify in individual and group settings their leadership style the consultant should use.
15. discuss how the learning characteristics of adults differ from children.
16. apply the knowledge about adult learning to the consulting process.

17. integrate the knowledge about adult learning characteristics, the change process, communication styles, leadership styles and the consulting process.

18. identify the steps in the problem solving process.

19. select strategies that are helpful in each step in problem solving.

20. list strategies that consultants can suggest to other classroom teachers that are useful in the regular classroom for dealing with typical problems.

21. identify the major components of the coping process.

22. differentiate between the changing and the coping process.

23. outline the steps in coping with the hostile aggressive trio.

24. outline the steps in coping with the passive aggressive trio.

25. differentiate between six types of individuals that are difficult and require coping strategies.

26. apply strategies to take charge of your consulting time.

27. outline the components of a building plan.

28. develop a building specific data collection plan.

29. administer a building needs assessment survey.

30. introduce the collaborative model of consultation in a building faculty meeting or department meeting.

31. respond to specific needs as determined by the building assessment survey.

32. identify appropriate data collection procedures to document growth in teacher's skills.

33. identify appropriate data collection procedures to document growth in student's skills.

34. identify appropriate data collection procedures to document changes in the school system as a result of collaborative efforts.
35. implement data collection procedures when given situations describing teacher change, student change and system change.

36. identify needs for follow-up workshops and/or technical assistance that fit with the collaborative model of consultation.

37. implement the collaborative model of consultation as part of a school restructuring project
Appendix B
A Description of Seven Influential Variables

1. **Level of school (elementary/middle/high)**
   Schools in the Portland Public School District (PPSD) are generally separated into elementary, middle and high school. Within this research study, elementary schools were Kindergarten or Pre-Kindergarten to grade 5, middle schools were grades 6 to 8 and high schools were grades 9 to 12.

2. **Low Income Allocation**
   The numbers of "low income" students and subsequent allocation to the Portland Public School District (PPSD) are based on Aid to Families with Dependent Children (ADFC) and free and reduced lunch figures. These figures are calculated numbers and do not represent an actual school-by-school head count of students. These figures are calculated by the Office of Grants Managements. Low income data is also reported in the State Department of Education's Fall Report which is compiled by Management Information Services.

3. **Stability Index**
   This figure is the percentage of students enrolled at a school by October 1 who are still enrolled at the same school in June. The average stability index for schools in the PPSD is 78.8%. The technical formula includes students enrolled in the PPSD adjusted by the numbers of students who transfer and move--both within and out of Portland--and students who withdraw for any reason.

4. **Project Read**
   Project Read is an alternative way of teaching reading and writing strategies to children. Developed in 1969 by two professionals in Bloomington, Minnesota, Project Read is a multisensory, systematic and direct instructional approach for teaching the language arts. It was designed to be delivered in the regular classroom by a specially trained classroom teacher. Several Portland teachers received the training in 1985 and Project Read is now implemented in 24 Portland Public School District schools.
5. **Chapter I**

Chapter I provides financial assistance to state and local educational agencies to meet the special needs of educationally deprived children. Funds are allocated to local districts according to a low income formula prescribed in the federal Education Consolidation and Improvement Act of 1981 (ECIA). Chapter I provides supplemental classes in reading and math.

6. **ESL/Bilingual Program**

The English as a Second Language/Bilingual (ESL/Bilingual) program is for students who do not speak English as their first language or students who need additional cultural or linguistic support in order to be successful in regular school programs. Service is provided in areas of intensive English instruction, bilingual classes and tutoring, sheltered English classes, cultural advocacy and support, pre-referral screening for students before referral to special education, initial assessment of all students from a home where a language other than English is spoken and liaison with parents and the community.

7. **Alternative Education Program**

Seven schools in Portland house an Alternative Educational Program. Schools housing alternative programs have taken the initiative in developing programs which meet the needs of their student populations. All programs are open to Portland Public School students on a district wide basis, providing space is available. General reasons for having alternative programs include the following: retaining the number of students who may drop out of school by providing flexible curricula, environments and teaching styles that promote positive feelings of self-worth and positive attitudes toward learning.
## Appendix C

### Portland Public School District Forms

#### PORTLAND PUBLIC SCHOOLS
Building Screening Committee
Referral and Recommendations

<table>
<thead>
<tr>
<th>Student</th>
<th>Birthdate</th>
<th>Grade</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>Phone</td>
<td>Parent/Guardian (circle)</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>Age</td>
<td>Ethnic</td>
<td></td>
</tr>
<tr>
<td>Home Language</td>
<td>English Proficient</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Screened by ESL/Bilingual</td>
<td>yes</td>
<td>no</td>
<td></td>
</tr>
</tbody>
</table>

This referral and the function of the Building Screening Committee have been discussed with the parents: yes | no

Is attendance a concern? yes | no

School attended: __________

Hearing screening date: __________

Vision screening date: __________

P-scores date: __________

P-scores results:

rdg. | math | lang. | yes | no |
|------|------|------|-----|-----|

Prior Special Education: yes | H.C. | no | If H.C., date |

### AREAS OF CONCERN — ADDITIONAL INFORMATION MAY BE ATTACHED

<table>
<thead>
<tr>
<th>CONCERN</th>
<th>REASONS</th>
<th>SPEECH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>Articulation</td>
<td></td>
</tr>
<tr>
<td>Hearing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Care/Hygiene</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emo/Behay/Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Ability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sentence Structure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Communication</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONCERN</th>
<th>REASONS</th>
<th>SPEECH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calculation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reasoning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handwriting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auditory Perception</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual Perception</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fine Motor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Motor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attendance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Major areas of concern and assessment questions:

Documented interventions already used in attempt to resolve problem at building level:

Referral source: __________

BSC member responsible to inform parents: __________

Date: __________

TO BE COMPLETED BY BUILDING SCREENING COMMITTEE

Date of BSC Meeting: __________

Building Screening Committee participants:

<table>
<thead>
<tr>
<th>Name/Position</th>
<th>Name/Position</th>
</tr>
</thead>
</table>

Building Screening Committee Recommendation:

Refer to Special Education for formal assessment.

Refer to ESL/Bilingual for formal assessment.

Describe procedures to be used in the classroom/home while the referral is processed:

BSC member responsible to inform parents of recommendations:

<table>
<thead>
<tr>
<th>Name/Position</th>
<th>Phone</th>
</tr>
</thead>
</table>
PORTLAND PUBLIC SCHOOLS
Special Education
Prior Notice and Parent Consent for (Re)Evaluation

Check One
1. Initial Evaluation
2. 3 Yr/Periodic Re-Evaluation
3. Move-in Re-Evaluation

To the parent, guardian, or surrogate parent of

Birthday: ____________ School: ____________ Teacher: ____________ Grade: ____________ Sex: ____________

We would like to inform you that your child is being referred for the following reasons:

__________________________________________________________________________

The following options for dealing with the above concerns were considered and rejected for the reasons specified:

__________________________________________________________________________

Following is a description of other factors (if any) which are relevant to the proposed testing:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Testing results will help us in determining your child's educational needs and in planning the most appropriate program. The evaluation procedures and/or tests may include the following: (please check the areas to be tested)

☐ individual intelligence (e.g. Wechsler Intelligence Scales, Kaufman ABC, Stanford Binet)
☐ vision efficiency

☐ personality/emotional/behavior (e.g. Piers-Harris, Sentence Completion, Walker, Developmental Therapy Scale, social history)
☐ audiological

☐ academic achievement (e.g. Kaufman TEA, Woodcock Reading, Woodcock Johnson, Test of Written Language)
☐ physical therapy/occupational therapy/adaptive physical education

☐ vocational interest/aptitude (e.g. Valpar, Brigance Basic Skills)
☐ speech/language (e.g. PPVT-R, TOLD, CELF)

Oregon law (OAR 581-15-039 and OAR 581-21-030) requires your written consent before we conduct initial evaluation, intelligence, psychological, or personality testing. If it is indicated that your child will be receiving this kind of evaluation, please sign below.

☐ Permission is given to conduct an evaluation. ☐ Permission is denied to conduct an evaluation.

Parent/Guardian/Surrogate (circle) Signature: __________________________ Date: ____________ Work: ____________ Home: ____________ Telephone Number(s): __________________________

Print Parent/Guardian/Surrogate Name: __________________________ Address: __________________________

If you have any questions, please feel free to contact me:

Name: __________________________ Case Manager/Title: __________________________ Telephone Number: __________________________
Student's Name ___________________________ Student I.D. # ___________________________

School ___________________________ Birthdate ___________________________

I. ELIGIBILITY CRITERIA MET (List): (As described in OAR 581-15-051 Minimum Eligibility Criteria)

Handicapping Condition/s:  

1) ___________________________ (Primary)  

2) ___________________________ (Secondary)  

3) ___________________________ (Secondary)  

4) ___________________________ (Secondary)  

II. INTERDISCIPLINARY ASSESSMENT PARTICIPANTS.

LD Agreement Signature Position Date

☐ ___________________________ ___________________________ ___________________________ ___________________________

☐ ___________________________ ___________________________ ___________________________ ___________________________

☐ ___________________________ ___________________________ ___________________________ ___________________________

☐ ___________________________ ___________________________ ___________________________ ___________________________

☐ ___________________________ ___________________________ ___________________________ ___________________________

☐ ___________________________ ___________________________ ___________________________ ___________________________

If the primary handicapping condition is determined to be a learning disability, the participants in the interdisciplinary educational team should check the box next to his/her signature to indicate their agreement with the conclusion. If a member does not check the box he/she must submit a separate statement presenting his/her conclusions. Statutory Authority OAR 581-15-072.

(Note: See Form B 5A, Specific Learning Disabilities Eligibility)

See attached report(s)
Appendix D

Data Collection Form

The Effects of Implementing the Consultation Model on Special Education Referrals in the Portland (Oregon) Public Schools from 1987-1990.

Research Project Data Collection Form
D. J. Yocom -- Western Oregon State College

School: ___________________________ Date: ___________________________
Principal: ___________________________ School Phone: ___________________________
BSC Chair: ___________________________ BSC Chair Title: ___________________________

1. How often does your BSC Team meet?
   Weekly __________  Every other week __________
   Monthly __________  Other: ___________________________

2. Do you complete a B-1 on every child discussed at your BSC meetings?
   YES______  NO______

3. Do you complete a B-1 on children who need three-year evaluations?
   YES______  NO______

4. Do you complete a B-1 on children who move into your school with an already established IEP?
   YES______  NO______

5. Do you complete a B-1 on children for whom you wish to later add needed services (for example, if a child is on an IEP for Speech, will a B-1 be completed if academic services are later discovered to be needed)?
   YES______  NO______

(Over, please)
6. Please describe the pre-referral process used in your school.

7. How many different children were discussed at your BSC meetings for the following years?

   1987-88 ________  1988-89 ________  1989-90 ________

8. How many B-1s were developed from the children listed above?

   1987-88 ________  1988-89 ________  1989-90 ________

9. How many B-3s were completed from the children listed above?

   1987-88 ________  1988-89 ________  1989-90 ________

10. How many of the children listed in #9 eventually qualified (B-5) for Special Education services?

    1987-88 ________  1988-89 ________  1989-90 ________

Thank you again for your help!!
Appendix E

Letter of Support from Portland Administration

TO: BSC Chairpersons
FROM: Mary Anne Stowell
Assistant Director of Special Education
DATE: December 11, 1990
RE: Research Project

The Special Education Department is interested in collecting data to examine the impact of the Consulting Teacher Program. Your school has been selected to participate as one of the control schools in the study. Data from your school will be compared with data collected from the schools with the Collaborative Consultation Model. This information will assist us in making improved educational and program decisions for Special Education students in the Portland Public Schools.

Dorothy Jean (D.J.) Yocom, a doctoral candidate in Special Education from Western Oregon State College, has agreed to conduct this research as part of her doctoral program. Her project has the support of the district's Department of Research and Evaluation.

We are now ready to begin collecting data from your school and we need your help. Enclosed is a data collection form entitled Research Project Data Collection Form. This form asks for information from your BSC Meeting records over the past three years. Please take some time to fill out this form as accurately as possible. If you were not in your school for years requested, perhaps you could provide the name of a possible contact person who might be able to complete the form.

D.J. Yocom will be contacting you by telephone soon, to gather the data you have collected. She will also be available to assist you in the data collection if needed. If you have any questions, please call Kathy Jaffe or Zandra O'Neal at 280-5840 ext. 320. D.J. is also available to you if you would like more information. She can be reached at Western Oregon State College at 838-8756.

Your assistance in this research project is invaluable and greatly appreciated. We will be more than happy to share the outcome of the research project with you when it is completed.

Thank you again for your help.

cc: Principals
Appendix F
Letter of Support from Portland Administration

TO: BSC Chairpersons
FROM: Kathy Jaffe Consulting Teacher Chairperson
DATE: December 11, 1990
RE: Research Project

The Special Education Department is interested in collecting data to examine the impact of the Consulting Teacher Program. This information will assist us in making improved educational and program decisions for Special Education students in the Portland Public Schools.

Dorothy Jean (D.J.) Yocom, a doctoral candidate in Special Education from Western Oregon State College, has agreed to conduct this research as part of her doctoral program. Her project has the support of the district’s Department of Research and Evaluation.

We are now ready to begin collecting data from your school and we need your help. There are two data collection forms: the first, entitled Research Project Data Collection Form asks for information from your BSC Meetings over the past three years. The second form, labeled Part II: The Interview asks for information specific to your school and the use of the Collaborative Consultation Model. Please take some time to fill out these forms as accurately as possible. If you were not in your school for years requested, perhaps you could provide the name of a possible contact person who might be able to complete the forms.

D.J. Yocom will be contacting you by telephone in a few weeks to gather the data you have collected. She will also be available to assist you in the data collection if needed. Please feel free to call either of us if you have any questions. D.J. is also available to you if you would like more information. She can be reached at Western Oregon State College at 838-8756.

Your assistance in this research project is invaluable and greatly appreciated. We will be more than happy to share the outcome of the research project with you when it is completed.

Thank you again for your help.
Appendix G

The Interview Form

The Effects of Implementing the Consultation Model on Special Education Referrals in the Portland (Oregon) Public Schools from 1987-1990.

Research Project Data Collection Form
D.J. Yocom -- Western Oregon State College

Part II: Interview

1. On a weekly basis, do you consult with:

   parents?  YES  NO  _____
   other teachers in your building?  YES  NO  _____
   children?  YES  NO  _____
   specialists outside your building?  YES  NO  _____
   other agencies?  YES  NO  _____

Please rank the YES responses in terms of the amount of time you spend with each group (rank the most time as #1).

2. On an average, how many children do you consult about in one week?  ___________

3. How many hours each day do you spend consulting?  ___________

4. What is the level of administrative support in your building for the Collaborative Consultation Model?

   Non Supportive  |  Somewhat Supportive  |  Supportive  |  Very Supportive

5. How many people are on your BSC Team?  ___________

   How many on the BSC team have had the training in Collaborative Consultation given by Bonnie Staebler and Bonnie Young?  ___________