

Rowan University

Rowan Digital Works

---

Theses and Dissertations

---

5-2-2005

## Teacher directed collaboration: effects on referrals to special education

Lindsey Harbert  
*Rowan University*

Follow this and additional works at: <https://rdw.rowan.edu/etd>



Part of the [Educational Psychology Commons](#)

---

### Recommended Citation

Harbert, Lindsey, "Teacher directed collaboration: effects on referrals to special education" (2005). *Theses and Dissertations*. 1010.

<https://rdw.rowan.edu/etd/1010>

This Thesis is brought to you for free and open access by Rowan Digital Works. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of Rowan Digital Works. For more information, please contact [graduateresearch@rowan.edu](mailto:graduateresearch@rowan.edu).

TEACHER DIRECTED COLLABORATION: EFFECTS ON REFERRALS TO  
SPECIAL EDUCATION

by  
Lindsey Harbert

A Thesis

Submitted in partial fulfillment of the requirements of the  
Master of Arts in School Psychology Degree  
of  
The Graduate School  
at  
Rowan University  
May 3, 2005

Approved by  
Professor

Date Approved 5/2/05

© 2005 Lindsey Harbert

## ABSTRACT

Lindsey Harbert

### TEACHER DIRECTED COLLABORATION: EFFECTS ON REFERRALS TO SPECIAL EDUCATION

2004/05

Dr. Roberta DiHoff/Dr. John Klanderman  
Master of Arts in School Psychology

The purposes of this experimental study were to (a) determine if teacher directed collaboration significantly reduced the number of students who were referred for special education placement and (b) if using a pre-referral process, such as consultation, increased the accuracy of teachers identifying children with a qualifying disability. One school that used teacher directed collaboration was compared to two schools that were not in a suburban Maryland community. Data was reviewed from each school on the number of children who were referred, assessed, and qualified for special educational services. Significant results were found using a Pearson Chi-Square ( $p < .01$ ) for the amount of referrals made at each school, with the school using teacher directed collaboration having a fewer amount. The results of this study support the use of teacher directed collaboration. Further research should include a larger sample size and comparisons to referral rates prior to the introduction of teacher directed collaboration.

## ACKNOWLEDGMENTS

First, to Dr. Roberta DiHoff and Dr. John Klanderman, my advisors, I sincerely appreciate your help and guidance through this entire thesis writing process and for understanding when problems and crises arose. Thank you for making the first year of graduate school a wonderful and smooth transition.

To my husband, Mr. Joe Harbert, there is not enough appreciation in the world to begin to thank you for everything that you have done for me over the past year. Your support of my goals and dreams and sacrifice of nights out so this paper could be completed mean the world to me. Someday I hope to repay you for everything you have done for me.

To my parents, Mr. Brad and Mrs. Penny Crothers, thank you for the drives to school when I was feeling bad and for the help in resolving computer malfunctions that always seemed to occur at the most inopportune moments. Your love and support over the years has been tremendous. I hope I continue to make you proud.

To Dr. Donegan, who saved my life and gave me a quality of life through the most trying times so that I was able to continue to go to school and fulfill my dreams. You may never realize the impact you have had on my life. I am so thankful for you and what you have done for my family and me.

To Mrs. Tina Wachter, an influential school psychologist and the brains behind teacher directed collaboration, you have been an inspiration to me and I cannot thank you enough for the countless hours you have put in to help ensure this thesis was a success. I hope our collaboration can continue for many years.

## TABLE OF CONTENTS

Chapter One: The Problem.....	1
Need.....	1
Purpose.....	2
Hypothesis.....	3
Background.....	4
Definitions.....	7
Assumptions.....	8
Limitations.....	9
Summary.....	9
Chapter Two: Review of the Literature.....	11
What is consultation/collaboration?.....	11
Why should consultation/collaboration be used?.....	14
Process of Teacher Directed Collaboration.....	17
Role of the School Psychologist in TDC.....	25
Role of the Teacher in TDC.....	27
Summary.....	28
Chapter Three: Design.....	29
Sample.....	29
Measures.....	29
Procedure.....	30
Design.....	31

Hypotheses.....	31
Analysis.....	31
Summary.....	32
Chapter Four: Results.....	33
Summary.....	34
Chapter Five: Discussion.....	35
Conclusions.....	35
Limitations.....	35
Suggestions for Future Research.....	36
Summary of Study.....	37
Chapter Six: List of References.....	38
Appendix A.....	44

## FIGURES

Figure One.....	33
Figure Two.....	34
Figure Three.....	34

## CHAPTER ONE

### The Problem

#### Need

Many elementary students are referred for assessment and individualized educational plan (IEP) determination each year. Those numbers are consistently increasing, as teachers are less capable of handling the many behavioral/learning issues, either due to class size, not having the information to help, etc. There are many tools that teachers can use within their own school, including the school psychologist. School psychologists are in school systems to be more than just an assessor. One major component of their job is consultation, either one-on-one with a teacher, student, or parent, or in a group setting, whether it be localized or system-wide. Whether the approaches to consultation are behavioral, mental, health, or organizational, they all stress the use of problem solving through which interventions are developed, work related issues are focused upon, and participation in the process is voluntary (Zins & Erchul, 2002).

In one school system, a specific type of consultation is being implemented by a school psychologist as a way to reduce the number of students who are being referred for IEP and special education determination. It is called Teacher Directed Collaboration (TDC) and it is a way for teachers to be able to work together to assess problems and implement behavior, learning, and teaching techniques to reduce unwanted behaviors that



are being exhibited. This model recognizes that consultees (teachers) already possess or can develop most competencies that are necessary to deal with student and/or system problems if they are given the right opportunities and the knowledge of resources that are available (Zins & Erchul, 2002). In this particular school system, the Pupil Services Team (PST) is the first step before IEP determination. The PST has an obligation, as a pre-referral to an IEP, to students suspected of having a disability. PST limits the time allotted to assisting and following up with teachers in reference to problems that can be solved in the classroom. TDC would be the step before PST, in this case, but both can be used at the same time. Students can be referred to both teams simultaneously, as both will meet different needs for the teacher and the student. In some cases, teachers may find that a referral to PST is averted with assistance from the TDC. In other cases, a referral to PST may occur after the TDC met with very little or no success.

#### Purpose

What is the point of having a collaboration team? Why should this be implemented? The grand scheme of TDC is to teach teachers to use the problem solving approach, to create a non-threatening environment in which to use problem solving (teachers helping teachers), and to create a structural process to help ensure integrity (Wachter, 2004). The PST was also found to be inefficient at solving the teachers' concerns and meeting all of their needs. Teacher surveys indicated teachers were having problems with the PST (Wachter, 2004). They wanted more preparation (clearer guidelines for what problems should be referred, etc.), more ideas for strategies, more follow-up by the PST, and the screening of new students' skills (Wachter, 2004). At times, PST is being used improperly as a behavior management tool when a teacher is

unable to handle a child's behavior. Many children who are referred to PST and later to IEP for assessment are not qualifying for special education services. Rather, they have a behavioral issue that can be resolved in the classroom with the right skills.

TDC allows for fellow teachers to have valuable input that can help as much, if not more, than the specialists on the PST do. They both can be used at the same time and as TDC develops, it may meet certain needs more effectively than the PST. TDC lays out a distinct process for problem solving and reaching success. It is a way to be able to document a teacher's attempts for future use, to see what has helped and what has not for a particular student. The TDC is being used to help build collaborative problem solving skills and an intervention catalog (Wachter, 2004). The most important aspect of TDC is that it is used to help children. Long term, the goal of TDC is to increase the span of pre-referral interventions and possibly reduce the referrals to PST, and thus IEP.

#### Hypothesis

The researcher in this study is interested in seeing if the use of collaboration teams (TDC) in this particular school, will aid teachers by enabling them to work together to minimize unwanted behavior or to adjust teaching styles to achieve their desired outcomes. The researcher's main purpose is to see if working with TDC when a problem first arises decreases the number of referrals made to PST and also to IEP. The hypothesis is that if teachers are more informed of behavioral management techniques through the use of a collaborative problem solving team (TDC), then the referrals made to IEP for assessment determination for services will decrease. It is also hypothesized that with the use of TDC, accuracy will be increased when identifying a child who actually has a qualifying disability.

## Background

A pupil services team is intended to be a problem solving team and address academic and behavioral concerns in the classroom. It is used as a “pre-referral” process to screen students who may have disabilities before they are referred to the IEP team (Wachter, 2004). However, the focus has changed and PST is now used primarily to address the screening process and as a “gateway” to IEP. At the particular school being examined, however, the screening process is insufficient. 70% of the children referred to IEP were found to not have a disability and 40% who went from PST to IEP weren’t even assessed (Wachter, 2004)! In order to have the PST be used corrected and effectively, collaborative problem solving teams are being created in each grade level (one a year) to look at the problems constructively before referring them to PST. PST is not supposed to be used as a “way out” for teachers who cannot handle the demands of one (or many) students with whom he/she may be having problems. As stated above, its use is to screen those students who may have a specific learning, hearing, or speech, disability. PST is not the avenue one should pursue in dealing with students who are merely disruptive. Though these may be signs of a disability, TDC was created so teachers on the grade level could get together to discuss and try to resolve these issues before referring the students. Consultation provides a device through which the problem that is presented can be resolved and it also attempts to increase the skills of those involved to alter extraneous variables that elicit and maintain problematic behaviors (Zins & Erchul, 2002). The primary intent is to minimize the possibility that a more serious problem will arise.

In this particular collaborative team model, the school psychologist is the consultant and the specific grade level teachers are the consultees, thus making up the TDC. As the consultant, the school psychologist is there to provide preventive psychological and education services, from which the teachers can draw (Zins & Erchul, 2002). As alluded to in the name, teacher directed collaboration (TDC) has one member of the grade level team take the role as the lead consultant. That person will receive training and information from the school psychologist to present to the team for use in dealing with problematic behaviors (Wachter, 2004). This direct training in problem solving skills or modeling of particular behaviors has been demonstrated to enhance the effectiveness and improve the integrity of the consultation team (Zins & Erchul, 2002). The school psychologist will then play a periphery role, structuring and guiding the overall process, while the teachers will supply much of the content of discussion. The role of the school psychologist is then to help the teachers clarify needs, locate resources, and ensure opportunities are available to enable them to engage in self-sustaining behaviors to resolve problems (Zins & Erchul, 2002).

There are basic competencies which a collaboration team must have in order to function effectively. Each person, consultant and consultees (school psychologist and teachers) must possess self-awareness of their own beliefs, biases, thoughts, etc. and how those will impact the problem solving process. All must have good interpersonal and communication skills because this process relies heavily on the interpersonal influences of each other to accomplish its goals. An understanding and knowledge of schools as organizations and their functioning is necessary. Being aware of this will allow the team to know what can, and will, facilitate or impede the consultative process.

TDC is based on a combination of quite a few collaborative and problem solving approaches. The main premise is that teachers will help each other in solving the many academic and behavioral problems that are present in the classroom. TDC will give teachers a formalized way of looking for and giving assistance in reference to these problems (Wachter, 2004). TDC is designed to increase the likelihood of interventions being successful through the use of problem solving and data focused decisions.

When structuring TDC, each grade level team is also a TDC team. The core members of the TDC team are grade level general education teachers. Support and administrative staff can be invited to TDC meetings in specific cases where more input is needed. Primarily during the Problem Defining and Intervention Development stages, the core team members may find it wise to invite other members who work directly with the student. These additional members can provide more information to the team (Wachter, 2004).

One person from each team is the leader of that particular TDC team. The main function of the leader is to guide the team through the problem solving process. As mentioned above, the leader is first trained by the school psychologist (the coordinator of the TDC), who may still be present during the first meetings. When the leader is comfortable enough to guide them on his/her own, he/she will assist the team in remaining on task, thoroughly completing each stage of the problem solving process, and keeping track of the progress of individual cases (Wachter, 2004). The school psychologist is kept informed of how the TDC meetings are progressing.

TDC teams follow the problem solving model, which will be discussed later in more detail, but includes identifying the problem, implementing intervention, and

evaluation. The problem stage is divided into three substages: defining, baseline, and hypothesis. The intervention stage is also divided into three substages: goals, development, and implementation. This process is a critical aspect of a collaborative team approach and is used as a guide to evaluate thoroughly and intervene effectively in a problem. Each step in the problem solving process is important. If any one step is incomplete, the effectiveness and success of the intervention will be affected.

#### Definitions

IEP is an individualized educational plan and is defined as the outcome of special education determination. If a child is deemed eligible for special education services, then an IEP will be created specifically describing the disability, the goals for the student, how they are to be achieved, and accommodations the student may need.

TDC is teacher directed collaboration and is the topic of this study. It is a collaborative problem solving team made up of teachers and the school psychologist, for the purpose of this study. It is used to help identify problem behaviors, devise a plan to intervene, and follow-up.

PST is pupil services team and for this study, is defined as a pre-referral team to screen students who may have a disability before they are referred to the IEP team. This team often includes the teacher who referred the child for screening, the principal, the guidance counselor, the special educator, the school psychologist, the parent, and any other staff member who can provide information regarding the student (i.e. reading specialists, paraeducator, etc.).

## Assumptions

For the purpose of this study, we must assume that the sample being used (one elementary school using TDC and two who are not) is representative of the general elementary school population as a whole. We must assume that all persons partaking in TDC are effective in their position and are qualified to participate. An assumption must be made that most parents, teacher, and other school personnel, want to be involved in the problem solving process. TDC is voluntary and is not an evaluative process. Seeking assistance through the TDC does not reflect poorly on the referring teacher and is not considered in any teacher evaluations. TDC and other collaborative approaches assume that all students can and will learn. TDC allows teachers to gain insight from other teachers about what might be interfering with a child's learning and to gain assistance to combat the interference (Wachter, 2004).

Another assumption is that prevention and early intervention is advantageous for most children over the alternative, which could be special education or failure. Identifying a problem early can save the student from greater struggle later on. Another critical assumption is that change is a process, not an event. The problem behavior cannot be expected to go away immediately. Learning is a unique interaction between the student and the instructional environment (Wachter, 2004). Though many factors may influence the interaction between the student and the learning environment, this is where the learning takes place. The interfering factors may need to be made the focus of the intervention in order to make learning successful.

Finally, we must assume that all school psychological services provided to children and schools are best given through a consultative structure. There are many

people who are involved in a student's learning and they should all be included when clarifying a problem or providing interventions.

### Limitations

Generalization will be limited since such a small sample is being studied. Further studies with much larger samples will have to be done if significant results are found in order to make a statement in relation to the whole elementary school population and the collaborative problem solving team approach.

The small sample also limits the study in that it can only be compared to a limited population, that being those who are using some form of collaborative teams, such as TDC.

Since this is the introductory period, the outcomes may also be limited. The participants have just received the skills they need to change behavior and may not know how to correctly use them.

### Summary

Teachers need new tools to be able to manage their classrooms as a whole and individually when dealing with a child who has an academic or behavior problem. TDC is a way to do this, with the school psychologist providing techniques, along with teachers helping other teachers. Hopefully, this will result in better classroom management and a decrease in the number of students being referred for special education services and then found to not have a qualifying disability.

An extensive review of the research on collaborative action teams and the problem solving model will be discussed next. Then, the specific study in question will be examined, with analyses run on the data collected to see if the hypothesis can be



proven. Finally, a discussion of the findings will be presented and questions or suggestions for future research will be offered.

## CHAPTER TWO

### Review of the Literature

What is consultation/collaboration?

There has been a significant amount of research done in the school psychology field in relation to consultative/collaborative teams (Kratochwill, Elliott & Callan-Stoiber, 2002; Kovaleski, 2002; Allen & Graden, 2002, etc.) Much has also been discussed in detail in books such as those by Bergan and Kratochwill (1990), Conoley and Conoley (1982), and Idol, Paolucci-Whitcomb, and Nevin (1986). An extensive amount of this research has focused on describing what consultation is and what its purpose is. There is a very specific structure and process used in consultation, particularly in the schools, that ensures its effectiveness. An examination of the literature will help to elaborate on this structure and process, in helping to explain the exact uses of school based consultation/collaboration.

There are three major models of consultation that are being used most frequently, and they include mental health, organizational development, and behavioral consultation, but many more have been identified (see Zins, Kratochwill, & Elliott, 1993).

Consultation is seen by many as the foundation for a range of alternative services designed to enhance general educational experiences (Cole & Siegel, 1990; Curtis & Meyers, 1988; Phillips & McCullough, 1990). In school systems, behavioral consultation is the preferred model choice and will be what is referenced here.

School consultation is defined as *a method of providing preventively oriented*

*psychological and educational services in which consultants and consultees form cooperative partnerships and engage in a reciprocal, systematic problem-solving process guided by ecobehavioral principles. The goal is to enhance and empower consultee systems, thereby promoting a student's well-being and performance (Zins and Erchul, 2002).*

Consultation teams are most often used as a pre-referral intervention, such as the TDC is used in this study. The trend of using a consultation team for this purpose began in the 1980's, when they were proposed as a way to increase teacher effectiveness and provide support for those students who displayed difficulties in the classroom (Graden, Casey, & Christianson, 1985). This was fueled by an increasing rate in the numbers of students identified for special education, particularly in the learning disabilities category. The popularity of school-based teams increased as educators looked for methods to cut back the perceived over-identification of students with disabilities (Kovaleski, 2002). This is an effective and efficient way of providing services because it aims to help more students, focus on solving problems in direct ways, involve relevant individuals in the intervention planning, and ultimately enhance classroom and school success for students.

Consultation has a double focus. It provides a mechanism through which the presenting problem is remediated, and it also attempts to increase consultees' (teachers') skills and change environmental factors and setting events that elicit and maintain problem behaviors (Zins & Erchul, 2002, Rosenfield, 2002). These procedures are intended to prevent problems from becoming more severe and to keep additional ones from occurring.

The primary focus of the consultative process is on the two basic elements of the

term “collaborative problem solving.” *Collaborative* refers to the working relationship between the participants in problem solving-- the teacher(s), parent(s), student, and school psychologist-- who are active, meaningfully involved participants in all phases of planning and decision making (Allen & Graden, 2002). *Problem solving* refers to the systematic approach used to conceive a problem situation and identify needs, analyze factors, design strategies, and implementation and evaluation (Allen & Graden, 2002).

Consultation is best received when given through an indirect service method (Zins & Erchul, 2002; Kratochwill, Elliott, & Callan-Stoiber, 2002; Elliott & Sheridan, 1992). Services are delivered from a consultant (school psychologist) to a consultee (teacher) who, in turn, provides services to a child in his/her classroom. This method of delivery is regarded as a distinct advantage of consultation, since it allows the psychologist to affect many more children than could be served by the direct service approach of psycho-educational assessment or counseling. Consultation requires that changes be brought about on more than just the individual student level. Child-related difficulties often result, at least in part, from inadequate instructional or classroom management strategies or from other external-to-the-child causes (Zins & Erchul, 2002). It appears clear that actively engaging students and teachers in the classroom is critical if interventions are to extend beyond their initial development.

Teacher directed collaboration (TDC) is a modified form of consultation. It is based on a combination of several collaborative problem solving approaches. The premise behind it is that teachers will assist each other in solving academic and behavioral problems in the classroom (Wachter, 2004). The long-term goals of TDC include increasing the breadth and success of pre-referral interventions and possibly

reducing the referrals to special education. The TDC will allow teachers to seek and give assistance in reference to academic and behavioral problems. TDC is formulated to increase the likelihood of interventions being successful through the use of a problem solving model and data driven decisions (Wachter, 2004).

Why should consultation/collaboration be used?

Today's teachers are encountering increasing numbers of students who have problems with academic performance, behavior, or both (Rathvon, 1999). Teachers need help to improve the capacity of these students so they can be successful in school. As teachers are facing an increasing number of difficult-to-teach students, a compiling body of research is questioning the effectiveness of the special education programs that were designed to help them (Carlberg & Kavale, 1980; Gartner & Lipsky, 1987; Gerber & Semmel, 1984; Kavale, 1990; Madden & Slavin, 1983; Reynolds, et al., 1987). The criticisms of traditional special education systems have focused on five major problems: 1- a long, expensive, and unreliable referral, diagnosis, and placement process, 2- the overidentification and misidentification of students, 3- limited positive outcomes for students, 4- lack of quality assistance for teachers; and 5-an internal deficit approach to student problems (Rathvon, 1999). Valuable material and human resources are being devoted to identifying and classifying children rather than to developing interventions to solve the referral problem (Curtis, Zins, & Graden, 1987; Wachter, 2004; Allen & Graden, 2002).

After the implementation of Public Law 94-142 in the 1970s, which allowed for funding based on specific handicapping categories, teachers were encouraged to identify students as disabled, so these students could receive additional educational services.

Thus, teachers were being reinforced for referring students to special education and were then expecting that a referral would result in placement (Ysseldyke, Thurlow, et al., 1983; Zins, Curtis, Graden, & Ponti, 1988). As a result of this, children who could have been accommodated in the mainstream classroom have been placed in pull-out programs, and resources that could have been used to help teachers work more effectively with students in the regular classroom have been depleted by the costly referral process and the creation of a second, separate educational system. As long as teachers attribute student problems to factors outside their control, they are likely to keep referring problematic students at high rates rather than attempt to put into place instructional and/or behavioral management interventions prior to referral (Rathvon, 1999).

This is one reason for the important use of consultation services as a pre-referral process, to help eliminate the mis- and over-diagnosis of special education students. Many children are working at a high frustration level in the classroom due to instructional or behavioral issues. If steps were taken first to try and change the problem in the classroom, then teachers would not use the special education referral services as a way to get problem children out of the classroom. Consultation services provide the first step for teachers to be able to present a difficult-to-teach student in hopes that behavior modification will work and special education services will not be needed. Many children are found not to be eligible for services when tested, and since no classroom interventions are implemented, the problems that prompted the referral in the first place are likely to remain unaddressed (Rathvon, 1999). With the advent of consultation as a major school psychological component, many school districts have begun to place a heavier emphasis on including students with disabilities in the regular classroom and providing services to

students who did not receive a “categorical label.”

A successful program of consultation can be expected to reduce the rate of referral (Sindelar, Griffin, et al., 1992). Hartman and Fay (1996) reported that 85% of students served by consultation teams did not need further evaluation for special education. Part of the paradigm shift from test-and-place procedures to consultation is a move away from the search of pathology toward a focus on the examination and manipulation of instructional variables. It should result in improved academic performance and classroom conduct, and perhaps altered teacher expectations. Consultation is designed to solve problems before they require a more intrusive and restrictive intervention. In-class interventions need to be thoroughly implemented before special education eligibility can be considered (Kovaleski, 2002). Since regular classroom teachers are usually the first to recognize when general academic and behavioral programs fail to accommodate students, it becomes their professional responsibility to adapt programs to promote the success of difficult-to-teach and difficult-to-manage students. Consultation/collaboration teams allow teachers to seek help and advice from other teachers and the school psychologist as to how to do this. Teachers get frustrated themselves when they feel that they have done everything they can imagine to help a student. When they have the resources made available to them through consultation, the process doesn't have to seem so intolerable.

A substantial amount of empirical support exists for consultation (Gresham & Kendell, 1987; Medway, 1979). Unfortunately, few consultation researchers have done long-term follow-ups to assess the maintenance of behavior changed in teachers or students. With regard to outcomes of consultation, the following findings seem robust

(Elliott & Sheridan, 1992): teachers who used consultation services believe that their professional skills had improved, referral rates for special education services dropped significantly after four or five years use of consultation services, and underachieving children whose teacher received consultation services during fourth, fifth, and sixth grades performed significantly better on several academic measures at the time of school graduation than a matched control group of underachievers.

#### Process of Teacher Directed Collaboration

For TDC to be effective, it must strictly adhere to and thoroughly follow through the problem solving model format laid out in the consultation practice research (Upah & Tilley, 2002; Iverson, 2002). In TDC, each grade level team serves as a TDC team (Wachter, 2004). Though the school psychologist is usually in the consultant role and the teachers in the consultee role, one teacher is chosen to be the leader of the group. This particular person will receive specific and ongoing training from the school psychologist as to how to lead a group through the steps of the problem solving model. Thus, the leader will take more of the consultant role after training, and the school psychologist will serve in more of an adjunct role.

Zins & Erchul (2002) set up the problem solving model for school based consultation, though many others have expanded or introduced very similar models for use (Kratochwill, Elliott & Callan-Stoiber, 2002; Sprick, Borgmeier, & Nolet, 2002; Ikeda, Grimes, et al., 2002; Wesson, 1990).

Problem solving is essential to consultation and TDC. It includes a number of stages from relationship development to identifying the problem; developing and putting into place an intervention plan; evaluating goal and plan effectiveness, and ending with



future use, maintenance and follow-up (Bergan & Kratochwill, 1990).

The first stage involves identifying the problem. Upah and Tilley (2002) identified three questions that should be identified during the first stage.

1. *What is the behavior of concern and/or the desired behavior?*  
*(behavioral definition)*
2. *What is the student's current level of performance in the target behavior? (baseline data)*
3. *How does the student's behavior compare to peers' behavior or environmental expectations? (problem validation)*

The first step is to define the presenting problem(s) in clear, concise, complete, and measurable terms. If the problem is not clearly defined, it is impossible for the rest of the process to go smoothly (Wachter, 2004; Alberto & Troutman, 1986). The goal of this stage is to come up with a working definition of the problem and to be able to gather as much information as possible about what influences the problem.

Establishing the student's current level of functioning provides a baseline that is useful in evaluating the existence of the problem behavior, the effectiveness of the intervention, and how much progress the student does or does not make. Sulzer-Azaroff & Mayer (1991) created a useful acronym (FLITAD) to use when trying to remember the dimensions of behavior that may be problematic when collecting baseline data.

Frequency, the number of times a particular behavior occurs; Latency, the time between presentation of stimulus and the behavior; Intensity, strength with which a behavior is exhibited; Topography, form or shape a behavior takes on; Accuracy, to which behavior meets expectations or is correct; and Duration, the amount of time that passes from onset

to offset of the behavior.

The last part of the first stage is problem validation. This is the process of determining the depth of the problem by looking at the discrepancy between a student's current level of performance and the expectations of the situation (Howell & Nolet, 2000). The usual expectation or standard to which to compare is that of peer performance, which is to observe another student on the same task to find a range of typical performance.

After the problem has been identified, the next stage is problem analysis. This step is used to conduct further assessment for the purpose of designing, implementing, and evaluating effective interventions (Upah & Tilley, 2002). This will help to determine what is known about the problem and what information still needs to be collected in order to evaluate the underlying causes of the problem. Problem analysis is a critical step in the process because it provides the critical link between the assessment information and the intervention procedures. This step is also perhaps the most complex and critical to the choice of appropriate interventions. The major question to be asked here is *Why is the problem occurring?* The information gathered during this stage should be the result of a very specific, question driven assessment process (Upah & Tilley, 2002). There are five steps to this stage: a) identify relevant known information, b) identify relevant unknown information, c) make a hypothesis or prediction, d) validate the hypothesis or prediction, and e) connect the assessment information to the intervention design (See Upah & Tilley, 2002 for expansion). The final step is the most integral part of the problem analysis phase because it is where matching the known factors of the identified problems is directly applied in the consideration of meaningful and effective

interventions. It is what makes the difference between knowing where to find interventions and finding interventions that will have the highest likelihood of being successful for the particular student being examined.

Plan implementation is the next part of this process, and this has to do with development and implementation of an intervention plan to resolve the problem(s). Upah and Tilley (2002) again have identified questions that must be answered during this stage.

- 1. What is our desired outcome of the intervention? (goal setting)*
- 2. What are we going to do to achieve that outcome? (intervention plan development)*
- 3. How are we going to know if the plan is working? (measurement strategy).*
- 4. What do we do if the plan works or doesn't work? (decision-making plan)*

Each of these four processes is pertinent to ensuring the intervention has the best overall effects for both the student and the teacher. Without a clearly defined goal, the effectiveness of the intervention can become obscured. If we don't know in what direction to go, then we won't know when we get there. Clearly written, obtainable goals and the steps for attaining them are key factors to successful intervention programs (Cobb, 1995; Fuchs, 1995). Fuchs (1995) identified three essential purposes for developing goals: a) the teaching and intervention are directed, b) the plan is focused on student outcomes, and c) the methods for assessment and evaluation are structured.

Every goal should be written in perceptible, measurable terms and should include at least the four major components of time frame, condition, behavior, and criteria (Upah

& Tilley, 2002). The time frame is when the progress can be expected to be accomplished. The condition is the specific situations under which the behavior is to occur. This is usually taken from the information gained during the problem identification and analysis stages. The behavior is the specific behavioral description of the task to be performed, whether that is the observed behavior or a behavior that is to replace the problematic one. The criterion is how well we expect the behavior to be performed.

The intervention plan should address the questions related to solving the problem, and should include who will do what, when they will do it, where the intervention is going to be put into place, how it will be completed, and with whom it will be done (Macmann, et al., 1996; Tilly & Flugum, 1995; Howell & Nolet, 2000). The plan should ensure that all those involved share the same concept of the procedures that will be used, and it also serves as a guide through the process. The plan should be very distinct and clear so that others could replicate it and produce the same results (Baer, et al., 1968).

In the area of measurement strategy, the major parts should already be developed from the time of taking the baseline data. What data will be collected during the intervention, how the data is collected, what tools are going to be used, the setting, the person responsible for collecting the data, and when the data will be collected are all parts of making this part of the consultation process run smoothly.

The final part of the plan implementation stage is the decision-making plan and this determines how decisions will be made by describing the steps that will be used for collecting, summarizing, and evaluating the data (Ross, 1995). Tilly and Flugum (1995) distinguished four issues that should be highlighted and addressed at this step in the

consultation process: frequency of data collection, strategies to be used to summarize data for evaluation, how much time should pass before data is analyzed, and creation of a decision rule or a guideline that will tell one what to do with patterns that may occur in the data.

The last stage in designing, implementing and evaluating a high quality consultation/TDC process is program evaluation. Everything has been addressed and the intervention has been put into place. Now it is time to see if it has worked and review areas of improvement or maintenance issues. Again, Upah and Tilley (2002) have three questions that must be answered at this stage to insure the success of the consultation process.

1. *Is the intervention working? (progress monitoring and formative evaluation)*
2. *Is the intervention being used as planned? (treatment integrity)*
3. *Did the intervention work? (summative evaluation)*

Progress monitoring is perhaps one of the most integral parts of the consultative process and this is because continuous evaluation should be occurring so that interventions can be modified if they are not producing expected results in the student's performance. Carter and Sugai (1989) proposed that this could be done through frequent and repeated monitoring of the behavior that is being targeted. Another highly recognized way to gather this data is through curriculum based assessment. The only thing to remember is that no matter which way one chooses to monitor the progress, one must be consistent in how he/she does it. This is to ensure the changes one sees in the problematic behavior are resulting from changes in the student and not changes in

measurement procedures. Data needs to be used as a part of the consultation process as a way to determine if the intervention is actually working. Without the collection of data, one may assume that the behavior is changing when it may not be. Consistent, reliable collection of data gives us something to refer to when assessing the quality and effectiveness of the intervention.

Formative evaluation, the second part of the last stage of this process, addresses the issue of whether or not the plan is working. It actually occurs in an ongoing fashion throughout the whole process of the intervention. The aim of this step is to be able to determine the success of an intervention so that it can be changed to increase the chances of obtaining the results we seek. The performance data that is collected should be compared to the baseline data collected in the beginning to look for differences in the mean, level, trend, and latency of change in the problematic behavior.

If the intervention is not carried out as planned, then it is difficult to determine if it were effective. Treatment integrity is used to look at whether or not this is taking place. When interventions are not instilled as intended, then the whole process of consultation is threatened. Without at least minimal treatment integrity checks, the school psychologist and teachers cannot be sure that the intervention is being applied as designed (DuPaul & Stoner, 1994). If it is found that the consultative plan is being threatened, then progress cannot be attributed to the intervention. Often this step is negatively connected to the complexity and time required to implement the interventions.

Finally, the last step in the process of quality consultation is summative evaluation. This process actually happens after the intervention and reviews the entire process. It is the answer to *Did this plan work?* The purpose is to decide if the

intervention did what it was supposed to do and if the outcomes were successful and positive for the student. After reviewing the data between baseline and post-intervention performance and the decision rule, it is recommended that data continue to be collected occasionally to see whether progress is maintained when the intervention is ceased (Casey, et al., 1988). If the outcomes of the intervention were favorable for the student, then it can be deemed that the problem was resolved and a plan should be formulated for maintenance and generalization to other situations. If the outcomes were not successful, then the TDC will want to consider changes to the intervention by reanalyzing the problem and then repeating the above mentioned steps. (See Appendix A for a copy of the intervention process flow chart, Upah & Tilley, 2002).

As overwhelming as this whole process may seem, research has found (Telzrow, et al., 2000) that the majority of students are not getting *quality* interventions. The consultative problem-solving model provides a useful framework for working to improve a child's problematic behaviors and/or increase social competencies. It is critical to understand that a thorough identification and definition of the actual problem will lead to a better implementation of the consultative process. While some stages/steps may be quickly worked through and others may be lengthy, it is important to note that each must be purposefully and specifically recognized and carried out for the process of consultation to work. If one step is skipped or not completed, this may impinge upon the intervention that is created and implemented for the child. Making sure TDC is developed and used correctly relies on the expert role of the school psychologist and the understanding and cooperation of the teachers who are on the team. Their roles in the process of consultation and TDC will be explained further.

## Role of the School Psychologist in TDC

During the consultative process, the school psychologist generally takes on the consultant role, which is seen as the facilitator of the problem solving process. School psychologists are in a functional role to serve as a resource to teachers to intervene with discipline-related problems before a referral for special education services becomes necessary. To be the most effective, the school psychologist must cultivate a relationship with teachers so that he/she is viewed as a nonthreatening resource person rather than a gatekeeper whose only role is to facilitate the removal of problem students from the classroom (Sprick & Garrison, 1993). One of the most fundamental aspects of the role of the school psychologist in consultation is to establish his/her credibility as someone who has skills and expertise to offer teachers in classroom interventions. During the process, the school psychologist's role is to create a description of the problem, help in analyzing the problem, assist with constructing a plan for intervention, and to monitor the program once it is implemented. In school-based consultation, Erchul and Myers (1996) found that the directive approach of consultation is better; and that when the school psychologist directs the process of consultation, teacher ratings of the effectiveness of the consultant increase. Though the school psychologist might find it effective to acknowledge that he/she may possess knowledge of a wide variety of behavioral management techniques that could solve the problem, the best solution is ultimately one that can and will be implemented correctly, and one that the teacher understands and can follow.



School psychologists must have prior training and basic skills in school-based consultation in order for it to be successful. These skills include being able to establish a relationship with the consultative team and to be able to conduct the stages of the problem-solving model. The school psychologist should also be perceived as authentic and trustworthy, with strong interpersonal skills and effective communication strategies (Rosenfield, 2002). School psychologists must understand the learning that is needed by the consultee and must facilitate this learning. This allows the relationship to develop so that it enhances the consultee's professional competence.

A study done by Schiappa, Beaulieu, Wilczenski, and Bontrager (2000) examined consultation from the teacher's perspective and the findings were interesting and informative with regard to what consultation was really like and how to improve it. Consultees' (teachers') comments were centered on the practicality of classroom interventions. They reported that the interventions were unrealistic to obtain, too time consuming, and didn't meet the needs of the students. School psychologists were viewed to be experts and rather than help with learning the necessary tools to intervene with problem behaviors, they would take over and teachers would feel lost and uninformed as to what was going on.

The design of consultative teams varies from situation to situation, but with teacher-directed collaboration, the school psychologist's role shifts from consultant to coordinator. The school psychologist comes to the collaboration team as the expert in the problem-solving model. He/she works with the grade level team to coordinate the problem solving process. One teacher is chosen as the group leader and the school psychologist works very closely with that person to teach him/her the problem

solving/consultative skills they need to take back to the TDC team. The school psychologist meets with the team leaders on a regular basis to provide further training, support, feedback, and to see how the meetings and interventions are progressing (Wachter, 2004). The school psychologist is also a resource for behavior management techniques and behavioral interventions that can be used in the classroom.

#### Role of the Teacher in TDC

The teacher's role in consultation is often that of consultee. Consultation is set up to benefit teachers who indicate a need for assistance with, not just information about, difficult-to-teach and difficult-to-manage children. Teachers seek help through the consultative process in hopes of correcting the behavior before it escalates or leads to a special education referral. The teacher directed collaboration model refers to teachers assisting other teachers in a team format, which allows for brainstorming of strategies to address the problems presented. Many teachers have different techniques for dealing with behaviors and allowing them to come together in a team format, allows for others to learn those techniques or to build upon techniques they already use. Wynn and Guditus (1984) found that teachers prefer to be involved in decisions that directly relate to their work in classrooms. Participating in the collaborative/consultative group process is related to satisfaction with decisions and commitment to implementing them.

Specifically in teacher-directed collaboration, the teachers make up the entire team, with one teacher being designated the leader. When a problem is identified in one teacher's classroom and consultative services are sought, the entire grade level works together through the problem-solving process assist that particular teacher in intervening with the problem behavior. TDC is a voluntary process and does not reflect poorly on the

teacher. Rather, TDC is an outlet for teachers to use when everything else they have tried has failed and they are at a loss as to what to do. TDC is a pre-referral team, meaning that hopefully the behavior can be changed before the child is referred for special education services. The TDC is intended to utilize the expertise of the teaching staff (Wachter, 2004). The leader of the team assists the team in thoroughly completing each stage of the problem solving process, in remaining on task, and in keeping track of the progress of the cases at hand.

Ultimately, TDC is teachers teaching teachers. Though some teachers are reluctant to seek consultation services due to unfamiliarity with the school psychologist, time constraints, lack of knowledge of the consultative process, etc; those who do report that benefits were gained and support was received from their colleagues (Kovaleski, 2002). Consultation is also beneficial to teachers in that it advances the development of a knowledge base to prevent more serious behavioral problems (Kratochwill, et. al., 2002).

### Summary

This chapter has discussed the nature of collaboration/consultation is and why it should be used, particularly in school based settings. The process of Teacher Directed Collaboration was discussed at length, specifically the outline of the problem solving process and the complexities and goals of each stage and phase. Finally, the role of the school psychologist and the role of the teacher in TDC were elaborated upon. In the next chapter, the methods of this particular study will be discussed.

## CHAPTER THREE

### Design

#### Sample

Three groups were used in TDC, pulled from a population of 29 teachers. TDC was used by the first, second, and fifth grade teams, which consisted of 14 teachers total. The teachers were convenience sampled from a suburban elementary school in Maryland, approximately 25 miles north of Baltimore. The school's population of students fluctuates because of a nearby army base, but holds steady at around 670 children. These groups were compared to two other elementary schools within an eight-mile radius that are not using TDC. The schools that were compared have populations of 506 and 509 children, respectively. They are all equal in terms of ethnicity, education of the teachers, and student's socioeconomic status. Children's names remained anonymous through the whole procedure, but the children ranged in age from five to 12 years in age, grades first, second, and fifth.

#### Measures

Records of special education referrals from the years 2003-2004 and 2004-2005 were compared among the schools. The researcher was attempting to determine if the number of referrals decreased at the school using TDC compared to those who did not use the intervention process. The researcher also wanted to determine if the referrals made at the school using TDC were more accurate in their identification of children who truly do have special needs. This assumption could be made given that problem

behaviors which did not change after TDC and behavior management interventions, may indicate an underlying problem that could not be changed solely by the classroom teacher.

#### Procedure

After the leader of each grade level participating in TDC (1<sup>st</sup>, 2<sup>nd</sup>, and 5<sup>th</sup>) was properly trained by the school psychologist in the problem-solving model used in Teacher Directed Collaboration, the groups would meet at least once a month. During their meetings, a teacher could identify a child he/she was having problems with in the classroom. The group then began to go through the problem solving process together, beginning with problem identification, then problem analysis, onto plan implementation, and finally program evaluation.

The teacher in charge of the team kept everyone on topic, focused, and properly on task, completing each stage and phase completely. The school psychologist was on hand to make sure the meeting went smoothly and to answer questions if they arose.

After the team had gone through the problem solving process and an intervention had been designed and discussed for the problematic behavior, the referring teacher then took the intervention(s) back to the classroom to implement. At least one more meeting would be held a month after the first meeting to determine if the intervention were working or if it needed to be changed to become effective. If after one month there had been no change in behavior, then the team would plan for another intervention. If after the second round of interventions, the behavior was still not improving, then the child could be referred to the Pupil Services Team (PST) to determine if IEP evaluation and special education assessments needed to be made. All of the data and results of TDC

were maintained throughout the intervention process and could be used at a later date to describe what had already been tried with that particular child.

### Design

This was an experimentally designed study with the independent variable being whether or not TDC was used. The dependent variable was the number of referrals made to special education. The independent variable was being used at one school with two schools serving as controls. The number of referrals made to special education would be reviewed after the school year to see if the number of referrals changed due to the use of Teacher Directed Collaboration.

### Hypotheses

The null hypothesis was that using TDC will not cause the number of referrals to IEP assessment for services to decrease.

The alternate hypothesis was that if teachers are more informed of behavioral management techniques through the use of a collaborative problem solving team (TDC), then the referrals made to IEP for assessment for services would decrease.

The final null hypothesis was that the accuracy of identifying a child who actually has a qualifying disability would not increase as a result of the use of TDC.

The alternate hypothesis was that with the use of TDC, accuracy would be increased when identifying a child who actually had a qualifying disability.

### Analysis

The researcher plans to use the Pearson Chi-Square and the Lambda Directional Measure tests to look for significance between the intervention and non-intervention groups.

## Summary

This chapter has discussed the design of the study and the sample that was used. The procedure and hypothesis were also identified. In Chapter four, the results of this archival review will be summarized.

## CHAPTER FOUR

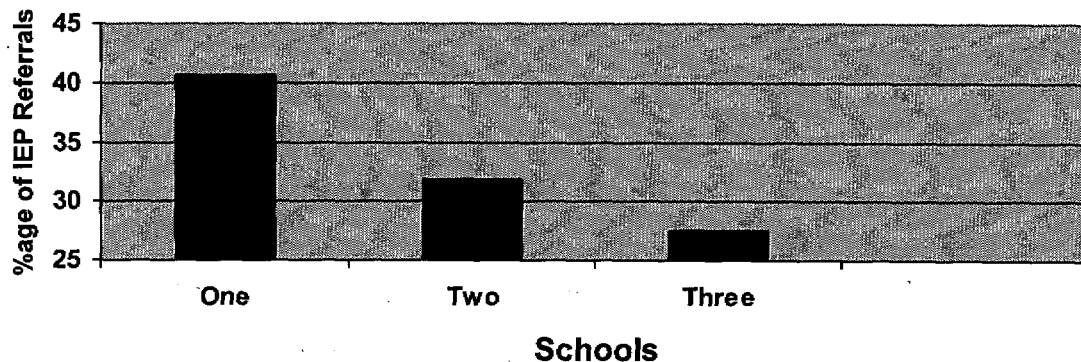
### Results

This study reviewed the effects of teacher directed collaboration on the number of referrals made for IEP determination.

The first hypothesis made was that TDC would decrease the number of referrals made to IEP. Using a Pearson's Chi-Square, significant results were found to support this hypothesis, with a significance level of .001,  $p < .01$ . These results can be seen in Figure One, with school three being the school that used the process of TDC and school one and two as the controls.

Figure One

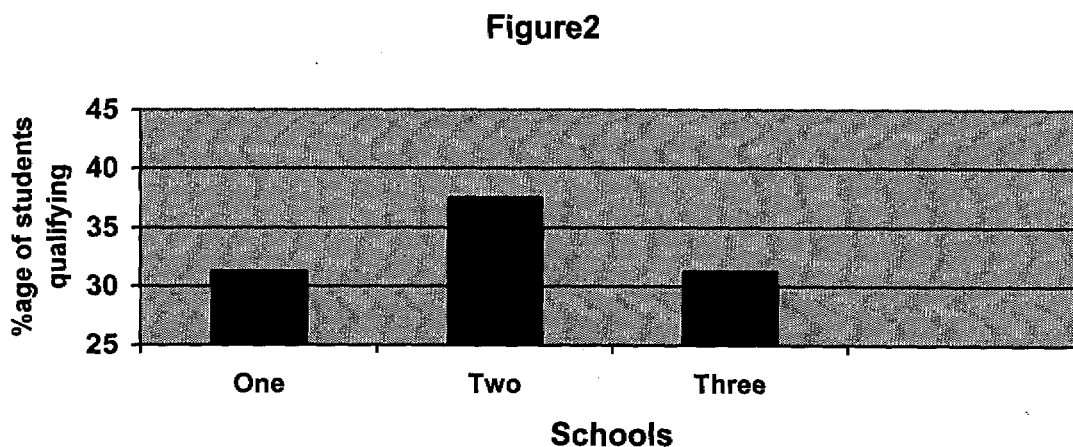
Figure 1



The second hypothesis made was that the accuracy of identifying children with a qualifying disability would increase due to using TDC. The results of this were insignificant. These results are displayed in Figure Two.



Figure Two



There were no grade level effects on referrals for an IEP found. These results were also insignificant. The data can be found in Figure Three below.

Figure Three

		Grade			Total
		1.00	2.00	5.00	
IEPREF 1.00	Count	25	33	11	69
	% within IEPREF	36.2%	47.8%	15.9%	100.0%
	% within GRADE	52.1%	57.9%	61.1%	56.1%
	% of Total	20.3%	26.8%	8.9%	56.1%
2.0	Count	23	24	7	54
	% within IEPREF	42.6%	44.4%	13.0%	100.0%
	% within GRADE	47.9%	42.1%	38.9%	43.9%
	% of Total	18.7%	19.5%	5.7%	43.9%
Total	Count	48	57	18	123
	% within IEPREF	39.0%	46.3%	14.6%	100.0%
	% within GRADE	100.0%	100.0%	100.0%	100.0%
	% of Total	39.0%	46.3%	14.6%	100.0%

### Summary

The results presented here will be further discussed in the next chapter, along with implications for future research and limitations.

## CHAPTER FIVE

### Discussion

#### Conclusions

As noted in the previous chapter, the results were found to be significant for the number of referrals made to IEP. Assuming everything else was held constant, we have evidence for the support of TDC and for the first hypothesis. The school using TDC had a significantly lower number of children being referred for IEP, and though we cannot say that it significantly improved our “hit rate” or accuracy, we can see the effects of TDC already starting to impact the referral process. Our findings support Sindelar, Griffin, et.al. (2002) who stated that successful program of consultation can be expected to reduce the rate of referral. Hartman and Fay (1996) also reported that 85% of those students who were served by consultation teams did not need further evaluation for special education. Our findings are very encouraging in that with continued use of TDC, especially as it expands in this particular school to all the grade levels, IEP referral rates will continue to be reduced.

#### Limitations

Though our findings were significant and we can say with some confidence that TDC seems to be an effective tool to use, there are some limitations to our study. As stated before, we have to be careful when generalizing this to all elementary school populations and consultative teams. This was a small population and TDC is a very

specific technique being used at one elementary school. It is with caution that we say that all consultation teams will yield these same outcomes.

The IEP referral rates among these three schools were not examined prior to the start of TDC. This presents a confounding variable since we do not know if the rate of the school using TDC was significantly lower than the other two schools before the use of TDC. If the rate were significantly different in the first place, then we cannot assume that TDC alone caused the reduction in IEP referrals.

#### Suggestions for Future Research

In order to hopefully eliminate the limitations, it is suggested that these changes are made for future research.

A bigger population should be used to look at the effects of TDC. It has been suggested that possibly branching out into other schools by implementing TDC in more schools would provide a larger database from which to draw. A larger population would also increase the generalizability of our findings.

Pre-test data should be collected in order to accurately determine that TDC reduced the rate of referrals. It is with hesitation that we conclude from this current study that TDC had the main effect of reducing IEP referrals since the data was not examined before TDC was introduced.

Future research should also include a longitudinal examination of TDC. It would be interesting to know if TDC, when used at all grade levels, will make a significant impact on IEP referrals and the special education system as a whole. For this particular study, the school used will continue to be followed to see if this happens over the next five to ten years.

Though some research has already been done on the experiences of the teachers on consultation teams (Erchul & Myers, 1996; Schiappa, Beaulieu, et.al., 2000), future research is suggested on the interests and feelings of the effectiveness of consultation teams from the point of view of teachers. Teachers play the most crucial role in the effectiveness of TDC. If the teachers are not proactive and do not implement the intervention(s) suggested in their classrooms, then the entire process of TDC is ruined.

#### Summary of Study

This study has examined the use and effectiveness of a consultation process called TDC on the number of students referred for special education determination. There is an abundant amount of research (Zins & Erchul, 2002; Upah & Tilly, 2002; Elliott & Sheridan, 1992, etc.) supporting the use of consultation and defining it as one of the most important and valuable roles of a school psychologist.

Though TDC was found to be significant in lowering the number of IEP referrals in the school using it, further research should be done to evaluate its effectiveness over time and on a larger population of users.

Consultation provides a resource to help our most problematic students and the teachers who teach them. If used correctly, it can help to eradicate academic and behavior problems by providing teachers with the classroom management and behavior modification techniques they may lack. The school psychologist's role is pivotal in developing and maintaining a successful consultative process in his/her schools. Teacher directed collaboration provides psychologists and teachers with a practical way to address behavior and learning problems.

## CHAPTER SIX

### List of References

- Alberto, P. A., & Troutman, A. C. (1986). *Applied behavior analysis for teachers*. Columbus, OH: Merrill.
- Allen, S. J., & Graden J. L. (2002). Best practices in collaborative problem solving for intervention design. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (4<sup>th</sup> ed.; 565-580). Bethesda, MD: National Association of School Psychologists.
- Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some current dimensions of applied behavioral analysis. *Journal of Applied Behavior Analysis*, 1, 91-97.
- Bergan, J. R., & Kratochwill, T. R. (1990). *Behavioral consultation in applied settings*. New York: Plenum.
- Carlberg, C., & Kavale, K. (1980). The efficacy of special versus regular class placement for exceptional children: A meta-analysis. *The Journal of Special Education*, 14(3), 295-308.
- Carter, J., & Sugai, G. (1989). Survey on pre-referral practices: Responses from state departments of education. *Exceptional Children*, 55, 298-302.
- Casey, A., Skiba, R., & Algozzine, B. (1988). Developing effective behavioral interventions. In J. L. Graden, J. E. Zins, & M. J. Curtis (Eds.), *Alternative educational delivery systems: Enhancing instructional options for all students* (413-430). Washington, DC: National Association of School Psychologists.
- Cobb, C. T. (1995). Best practices in defining, implementing, and evaluating educational outcomes. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (3<sup>rd</sup> ed.; 325-336). Washington, DC: National Association of School Psychologists.
- Cole, E., & Siegel, J. A. (Eds.). (1990). *Effective consultation in school psychology*. Lewiston, NY: Hogrefe & Huber.
- Conoley, J. C., & Conoley, C. W. (1982). *School consultation: A guide to practice and training*. Elmsford, NY: Pergamon.

- Curtis, M. J., & Meyers, J. (1988). Consultation: A foundation for alternative services in the schools. In J. L. Graden, J. E. Zins, & M. J. Curtis (Eds.), *Alternative educational delivery systems: Enhancing instructional options for all students* (35-48). Washington, DC: National Association of School Psychologists.
- Curtis, M. J., Zins, J. E. & Graden, J. E. (1987). Prereferral intervention programs: Enhancing student performance in regular education settings. In C. A. Maher & J. E. Zins (Eds.), *Psychoeducational interventions in the schools* (7-25). New York: Pergamon.
- DuPaul, G. J., & Stoner, G. (1994). *ADHD in the schools: Assessment and intervention strategies*. New York: Guilford.
- Elliott, S. N., & Sheridan, S. M. (1992). Consultation and teaming: Problem solving among educators, parents, and support personnel. *The Elementary School Journal*, 92(3), 315-338.
- Erchul, W. P., & Myers, L. W. (1996). *Some misguided assumptions underlying the practice of school consultation*. Paper presented at the annual convention of National Association of School Psychologists, Atlanta.
- Fuchs, L. S. (1995). Best practices in defining student goals and outcomes. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (3<sup>rd</sup> ed.; 539-546). Washington, DC: National Association of School Psychologists.
- Gartner, A., & Lipsky, D. K. (1987). Beyond special education: Toward a quality system for all students. *Harvard Educational Review*, 57, 367-395.
- Gerber, M. M., & Semmel, M. I. (1984). Teacher as imperfect test: Reconceptualizing the referral process. *Educational Psychologist*, 19, 137-148.
- Graden, J.L., Zins, J. E., & Curtis, M. J. (Eds.). (1988). *Alternative educational delivery systems: Enhancing instructional options for all students*. Washington, DC: National Association of School Psychologists.
- Graden, J. L., Casey, A., & Christenson, S. L. (1985). Implementing a pre-referral intervention system: Part I: The model. *Exceptional Children*, 51, 377-387.
- Gresham, F. M., & Kendell, G. K. (1987). School consultation research: Methodological critique and future research directions. *School Psychology Review*, 16, 306-316.
- Hartman, W. T., & Fay, T. A. (1996). Cost-effectiveness of instructional support teams in Pennsylvania. *Journal of Education Finance*, 21, 555-580.

- Howell, K., & Nolet, V. (2000). *Curriculum-based evaluation: Teaching and decision making*. Belmont, CA: Wadsworth/Thomason Learning.
- Idol, L., Paolucci-Whitcomb, P., & Nevin, A. (1986). *Collaborative consultation*. Rockville, MD: Aspen.
- Ikeda, M. J., Grimes, J., Tilly, W. D., III, Allison, R., Kurns, S., & Stumme, J. (2002). Implementing an intervention-based approach to service delivery: A case example. In M. R. Shinn, H. M. Walker, & G. Stoner (Eds.), *Interventions for academic and behavior problems II: Preventive and remedial approaches* (53-68). Bethesda, MD: National Association of School Psychologists.
- Iverson, A. M. (2002). Best practices in problem solving team structure and process. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (4<sup>th</sup> ed.; 657-669). Bethesda, MD: National Association of School Psychologists.
- Kavale, K. (1990). The effectiveness of special education. In T. B. Gutkin & C. R. Reynolds (Eds.), *The handbook of school psychology* (2<sup>nd</sup> ed.; 868-898). New York: Wiley.
- Kovaleski, J. F. (2002). Best practices in operating pre-referral intervention teams. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (4<sup>th</sup> ed.; 645-655). Bethesda, MD: National Association of School Psychologists.
- Kratochwill, T. R., Elliott, S. N., & Callan-Stoiber, K. (2002). Best practices in school-based problem-solving consultation. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (4<sup>th</sup> ed.; 583-608). Bethesda, MD: National Association of School Psychologists.
- Macmann, G. M., Barnett, D. W., Allen, S.J., Bramlett, R. K., Hall, J. D., & Ehrhardt, K. E. (1996). Problem solving and intervention design: Guidelines for the evaluation of technical adequacy. *School Psychology Quarterly*, 11, 137-148.
- Madden, N. A., & Slavin, R. E. (1983). Mainstreaming students with mild handicaps: Academic and social outcomes. *Review of Educational Research*, 53, 519-569.
- Maher, C. A., & Zins, J. E. (Eds.). *Psychoeducational interventions in the schools*. New York: Pergamon.
- Medway, F. J. (1979). How effective is school consultation? A review of recent research. *Journal of School Psychology*, 17, 275-282.
- Phillips, V., & McCullough, L. (1990). Consultation-based programming: Instituting the collaborative ethic in schools. *Exceptional children*, 56, 291-304.

- Rathvon, N. (2003). *Effective school interventions: Strategies for enhancing academic achievement and social competence*. New York, NY: Guilford.
- Reynolds, M. C. Wang, M. C., & Walberg, H. J. (1987). The necessary restructuring of special and regular education. *Exceptional Children*, 53, 391-398.
- Rosenfield, S. (2002). Best practices in instructional consultation. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (4<sup>th</sup> ed.; 609-623). Bethesda, MD: National Association of School Psychologists.
- Ross, R. P. (1995). Best practices in implementing intervention assistance teams. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (3<sup>rd</sup> ed.; 227-237). Washington, DC: National Association of School Psychologists.
- Schiappa, D., Beaulieu, S., Wilczenski, F., & Bontrager, T. (2000). *School psychology consultation from the consultee's perspective*. Paper presented at the annual convention of the National Association of School Psychologists, New Orleans.
- Shinn, M. A., Walker, H. M., & Stoner, G. (Eds.). (2002). *Interventions for academic and behavior problems II: Preventive and remedial approaches*. Bethesda, MD: National Association of School Psychologists.
- Sindelar, P. T., Griffin, C. C., Smith, S. W., & Watanabe, A. K. (1992). Prereferral intervention: Encouraging notes on preliminary findings. *The Elementary School Journal*, 92(3), 245-259.
- Sprick, R. S., Borgmeier, C., & Nolet, V. (2002). Prevention and management of behavior problems in secondary schools. In M. R. Shinn, H. M. Walker, & G. Stoner (Eds.), *Interventions for academic and behavior problems II: Preventive and remedial approaches* (373-398). Bethesda, MD: National Association of School Psychologists.
- Sprick, R., & Garrison, M. (1993). *Interventions: Collaborative planning for high risk students*. Longmont, CO: Sopris West.
- Sulzer-Azaroff, B., & Mayer, G. R. (1991). *Behavior analysis for lasting change*. Chicago, IL: Holt, Rinehart, & Winston.
- Telzrow, C. F., McNamara, K., & Hollinger, C. L. (2000). Fidelity of problem-solving interventions and relationship to student performance. *School Psychology Review*, 29(3), 443-461.
- Thomas, A., & Grimes, J. (Eds.). (2002). *Best practices in school psychology IV*. Bethesda, MD: National Association of School Psychologists.



- Thomas, A., & Grimes, J. (Eds.). (1995). *Best practices in school psychology III*. Washington, DC: National Association of School Psychologists.
- Tilly, W. D., III, & Flugum, K. R. (1995). Best practices in ensuring quality interventions. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (3<sup>rd</sup> ed.; 485-500). Washington, DC: National Association of School Psychologists.
- Upah, K. R. F., & Tilly, W. D., III. (2002). Best practices in designing, implementing, and evaluating quality interventions. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (4<sup>th</sup> ed.; 483-501). Bethesda, MD: National Association of School Psychologists.
- Wachter, Tina. (2004). *Personal communication*. Elementary school psychologist, Havre de Grace, Maryland.
- Wesson, C. L. (1990). Curriculum-based measurement and two models of follow-up consultation. *Exceptional Children*, 57(3), 246-257.
- Wynn, R., & Guditus, C. (1984). *Team management: Leadership by consensus*. Columbus, OH: Merrill.
- Ysseldyke, J. E., Thurlow, M., Graden, J., Wesson, C., Algozzine, B., & Deno, S. (1983). Generalizations from five years of research on assessment and decision making: The University of Minnesota Institute. *Exceptional Education Quarterly*, 4, 75-93.
- Zins, J. E., & Erchul, W. P. (2002). Best practices in school consultation. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology* (4<sup>th</sup> ed.; 625-642). Bethesda, MD: National Association of School Psychologists.
- Zins, J. E., Kratochwill, T. R., & Elliott, S. N. (Eds.). (1993). *Handbook of consultation services for children*. San Francisco, CA: Jossey-Bass.
- Zins, J. E., Curtis, M. J., Graden, J. L., & Ponti, C. R. (1988). *Helping students succeed in the regular classroom*. San Francisco, CA: Jossey-Bass.

## APPENDIX

# Appendix A

