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UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

TEACHER/STUDENT INTERACTION: A STUDY OF SUCCESSES WITH STUDENTS EXHIBITING ATTENTION DEFICIT/HYPERACTIVITY DISORDER BEHAVIORS

A Dissertation

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

By

SHERI LYNN SEDOVIC

Norman, Oklahoma

2001

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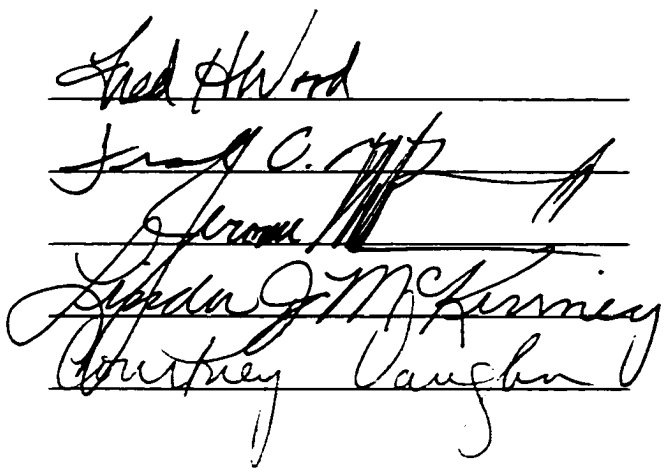
A Dissertation APPROVED FOR THE GRADUATE COLLEGE

BY



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Knowledge becomes wisdom
only after it has been put to practical use.
Author unknown

I could never have achieved this goal without help. I want to express my gratitude to God and those special people He provided to encourage and support me through this great endeavor.

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Don't let what you cannot do
interfere with what you can do.
John Wooden

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ABSTRACT

This study examined practices related to the successful teaching of students diagnosed with Attention-Deficit/Hyperactivity Disorder (AD/HD) in the United States Department of Defense Dependent School System (DoDDS) in the Kaiserslautern School District in Germany. In-depth interviews were conducted with six third through fifth grade teachers who had been identified by school administrators as successfully teaching AD/HD students. Interviews were also held with six of their AD/HD students and with one parent of each of the six children. The interviews sought to determine: (1) teacher influence on AD/HD students, (2) the extent of the teacher's awareness of the AD/HD student's learning needs, and (3) successful teaching strategies used with the AD/HD students.

The recorded interviews were analyzed to determine common themes within each group and themes common to two or three of the groups. There were a total of 22, 13, and 13 common themes for the teachers, parents, and students, respectively. Eleven themes were common to both teachers and parents, nine themes were common to both teachers and students, and six themes were common to both parents and students.

A total of five themes were found to be common to all three groups:

- Caring Relationship between Teacher and Student
- Positive Feedback
- Counseling the Student
- Good Organization
- Not Yelling

On the basis of these results it was concluded that:

1. The practices and attitudes of this sample of teachers positively influenced the success of their AD/HD students.

2. The teachers were able to identify their AD/HD students' needs related to academic and social success in school that are found in the literature.

3. Teachers in this study used a number of specific practices to promote the academic and social success of their AD/HD students. These practices included:

- Caring Relationship between Teacher and Student
- Positive Feedback
- Counseling the Student
- Good Organization
- Not Yelling
- Preventive Approach
- Clear Expectations
- Consistency and Predictability
- Many Approaches
- Explaining Clearly
- Use of Humor

CHAPTER I

Introduction

Background

In the 1990's, the occurrence of Attention-Deficit/Hyperactivity Disorder (AD/HD) among children in the United States was a major issue in education. An estimated three to five percent of children in the United States had AD/HD (Parker, 1995), with approximately two million American children afflicted with the disorder (Rief, 1993). As a result, the diagnosis of AD/HD was common in elementary school settings. An average of at least one child in a typical classroom of 20 could be expected to have AD/HD (Barkley, 1990), with boys four times as likely to be diagnosed with the disorder as girls (Bloomquist, 1996).

According to the fourth edition of the American Psychiatric Association's Diagnostic and Statistical Manual (DSM IV, 1994), AD/HD could be categorized into three types. The first, Attention-Deficit/Hyperactivity Disorder, predominantly inattentive type, describes individuals who showed significant problems of inattention, but not much difficulty with impulsivity or hyperactivity. The second type, Attention-Deficit/Hyperactivity Disorder, predominantly hyperactive-impulsive type, included individuals who showed significant problems with hyperactivity and impulsivity, but only some difficulty with inattention. The third type, Attention-Deficit/Hyperactivity Disorder, combined type (AD/HD-C), described individuals who showed significant problems both with inattention and with hyperactivity and impulsivity.

Although AD/HD was once known as "The Hyper-kinetic Reaction of Childhood" (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 2000a),

the DSM IV criteria made it clear that children who were diagnosed with AD/HD were not all hyperactive and impulsive. As many as 30% of students with AD/HD suffered from the inattentive form of the disorder (Children and Adults with Attention Deficit Disorders and American Academy of Child and Adolescent Psychiatry, 1991). Children diagnosed with this form of AD/HD had long-term, serious problems in matters such as paying attention, getting started on tasks, organizing for tasks, keeping track of belongings, remembering what they were planning to do, ignoring distractions, and finishing tasks. Children with AD/HD, primarily hyperactive and impulsive type, had serious difficulty performing such behaviors as sitting and working quietly, not disturbing others, and not talking out of turn or talking excessively (American Psychological Association, 1994). These children may also impulsively engage in dangerous behavior (Fowler, 1991). Children with AD/HD-C exhibit serious behavioral problems of both kinds.

To be diagnosed with AD/HD, a child must display the symptoms before the age of seven years and for at least six months; also, the symptoms must be of a greater magnitude than in other children of the same age and must interfere with the child's functioning in more than one setting (Bloomquist, 1996; The ADD Center, 2000). Often, the behaviors exhibited by the AD/HD child were accepted as normal in the home setting. At school however, the behaviors were perceived as interfering with the learning process. As a result, many children were first identified with AD/HD when they encountered the rules and regulations of an academic setting (Barkley, 1990).

Not all behaviors that seemed to be signs of AD/HD were actually symptoms of the disorder. Symptoms that seemed to indicate its presence may develop in response to

other problems faced by students in the classroom. These could include a learning disability or simply the fact that a child was not developmentally ready to read and write when those subjects are taught. In addition, the child's schoolwork might be too difficult or too easy for him or her and leave the child frustrated or bored. The result could be behaviors that were similar to those of AD/HD students, but with the behaviors not actually being the result of AD/HD.

It is also important to realize that during certain stages of development, the majority of children at that stage tended to be inattentive, hyperactive, and/or impulsive to some extent. A certain amount of such behaviors at those stages could be considered normal and are not symptoms of AD/HD. Preschoolers, for example, could have much energy and run everywhere they go, but this does not necessarily mean they are hyperactive. In addition, many teenagers go through a phase when they are messy, disorganized, and reject authority. This behavior does not mean they have a lifelong problem controlling their impulses.

Attention-Deficit/Hyperactivity Disorder was a serious diagnosis that might require long-term treatment with combined counseling and medication. According to Barkley (1995), before classifying a child as having AD/HD it was important that a doctor first examine the child for any other problems that might cause the child to demonstrate AD/HD-like behaviors and treat the child accordingly. Most experts agreed that if a child was identified as having AD/HD, a multi-modal treatment that treats the child medically, psychologically, educationally, and behaviorally should be used (Parker, 1995). Such a treatment required coordinated efforts by health care professionals,

parents, and educators who together identify treatment goals, determine interventions and implement them, and evaluate the results (Parker, 1995).

One element of a multi-modal treatment plan was medication. The most commonly used medications for AD/HD were psycho stimulants such as Ritalin, which had been shown to have significantly positive effects on attention, hyperactivity, visual motor skills, and aggression in 70% or more of children with AD/HD. However, sometimes antidepressants or other medications that had been shown to be effective were prescribed (Parker, 1995).

All three forms of AD/HD could present serious problems for students in academic and social settings. In school, the child's impulsiveness and inattentiveness might lead him or her to be very disorganized, to forget materials and assignments, and to have difficulty following sequences of directions of more than three steps (Fowler, 1991). The child's disorganization, not following directions, not completing tasks, and not handing assignments in on time could lead to poor performance in school (Fowler, 1991). Without intervention, AD/HD could have serious consequences for students and result in school failure and drop out, depression, conduct disorders, failed relationships, and substance abuse (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 1993a).

Attention-Deficit/Hyperactivity Disorder might have a negative effect not only on the academic success of the child who has it, but also on the classroom learning of his or her classmates. This was because if the child was hyperactive and impulsive, his or her behavior might disrupt order and discipline in the classroom and in that way negatively impact on learning. An annual Gallup Poll, The Public's Attitudes Toward the Public

School, has identified lack of discipline as the most serious problem facing the nation's educational system (Cotton & Reed Wikelund, 1990). According to the results of this survey, respondents believed that there was a need to improve discipline in the classroom in order to improve the learning environment. According to Cotton (1990), approximately one half of all classroom time was taken up with activities other than instruction, and discipline problems were responsible for a significant portion of this lost instructional time. These findings suggested that it was of benefit to the entire class that the AD/HD student be taught to manage behaviors so that they did not disrupt the class.

Medicating the AD/HD student might be considered by some as a way to help control behaviors that interfere with the learning process in the classroom; however, it was generally agreed that medication alone was not enough. If medication was used for the child, it should be only one part of a multi-modal treatment that included strategies for teaching the student with AD/HD and for helping the student to control his or her behaviors (Bloomquist, 1996).

Need for the Study

Barkley (1990) estimated that there have been over 4,000 articles in the literature on the subject of student attention problems. There have been numerous studies that have identified characteristics of parents of AD/HD children, and considerable literature available that was prescriptive in nature and directed toward the parents of AD/HD students. However, there was a lack of information provided to help teachers understand the most appropriate and effective interventions that can be employed in the classroom to improve the social and academic progress of AD/HD students (Copeland & Love, 1990; Braswell, Bloomquist, & Pederson, 1991).

A search of the literature since 1980, revealed that there has been very little systematic investigation of the interaction of teachers with AD/HD students. Over the past decade there has been some literature published advocating specific classroom and curriculum modifications and strategies for teaching AD/HD students, but these publications present prescriptive techniques for teachers, and few reviewed by this researcher provided research findings to support their approaches for working with AD/HD. Due to the seriousness of the problem of effectively teaching AD/HD students, and the lack of research on the subject, it was important to investigate the effectiveness of particular teaching strategies and practices that can be used to teach children with AD/HD. This study, by interviewing successful teachers of AD/HD children, students of those teachers, and parents of the students, was a step toward providing this needed research.

The second reason this study was needed was that the United States Department of Defense Dependent School System (DoDDS), Kaiserslautern School District, in Germany, did not recognize AD/HD as a handicapping condition. Thus all students diagnosed with AD/HD did not qualify for special assistance under the Civil Rights Rehabilitation Act of 1973 (Federal Register, 1977). They were for the most part, placed in the regular education classroom for full instruction. The following paragraph presents a brief outline of the United States Department of Education and the DoDDS positions on the education of students identified with AD/HD.

Since 1991, the United States Department of Education's position has been that children with AD/HD could receive special education services in one of three ways. First, students with both AD/HD and another disability qualified for special education

under one of the existing disabilities categories defined in Part B of the Individuals with Disabilities Education Act (IDEA) of 1990. Second, special education eligibility for AD/HD students could be identified under the "Other Health Impaired" category of Part B. The third, and final way was if the student's needs could be met with special adaptations to the regular curriculum and classroom, then the school had to develop a "504 Plan". A "504 Plan" is an individualized, written document based on the Civil Rights Rehabilitation Act of 1973 (Federal Register, 1977).

Under the special education criteria of DoDDS, AD/HD clearly was not recognized as a handicapping condition unless it was associated with another handicapping condition or directly effected the educational process. If an AD/HD child came into this system with a "504 Plan" they were reevaluated for category A-Health Impaired and then identified with this handicapping condition. As the result of this position, at the time of this study, schools in DoDDS either had most AD/HD students remaining in the regular education classroom without the benefit of a "504 Plan" or they were arbitrarily identified and labeled with a handicapping condition. Given that most AD/HD students in DoDDS were placed in the regular classroom without assistance, a need existed to identify specific practices that promoted their academic and social successes in the regular classroom. The present study addresses this need.

Statement of the Problem

Clearly there was a need to identify specific practices that promoted the academic and social successes in the regular classroom of students identified with AD/HD. Although there has been considerable descriptive literature that advises teachers about

how to teach students with AD/HD, little research had been done to determine the most effective teaching practices and strategies for these students.

Purpose of Study

The primary purpose of this study was to examine specific teaching practices related to successful teacher and student interactions that result in the academic and social school success of students diagnosed as having AD/HD. The study was conducted in DoDDS elementary schools located in the Kaiserslautern District in Germany. The following three research questions guided the study.

Question One: What influence do teachers have in increasing successful school experiences of the AD/HD student?

Question Two: Are successful teachers able to identify their AD/HD students' needs related to academic and social success in school as defined in the literature?

Question Three: What specific practices do teachers use that promote the academic and social success of students exhibiting AD/HD behaviors?

Definitions of Terms

Teacher successful in working with a student diagnosed with AD/HD – One whose AD/HD student shows an increase in academic and/or social success as a result of the teacher's efforts.

Academically successful student – One who is working at or above his or her ability level as determined by standardized test scores. For students exhibiting AD/HD behaviors, academic success may also be seen in the form of less classroom disruption, more on-task behaviors, improved grades and more class participation than previously (Rief, 1993).

Socially successful student – One who displays problem-solving skills, self- control, and self monitoring abilities (Bloomquist, 1996). For students displaying AD/HD behaviors, social success may be seen in the form of increased self-esteem, better peer relations, and less school disciplinary action than previously, as shown through school behavior reports.

Attention-Deficit/Hyperactivity Disorder (AD/HD) – There are three basic AD/HD types as defined in the fourth edition of the American Psychiatric Association's Diagnostic and Statistical Manual (DSM IV, 1994): (1) Attention-Deficit/Hyperactivity Disorder, predominantly inattentive type, includes those people who show significant problems of inattention, but not much difficulty with impulsivity or hyperactivity; (2) Attention-Deficit/Hyperactivity Disorder, predominantly hyperactive-impulsive type includes people who show significant problems with hyperactivity and impulsivity, but only some difficulty with inattention. (3) Attention-Deficit/Hyperactivity Disorder, combined type includes those who show significant problems with both inattention and hyperactivity and impulsivity.

Discipline – Corrective action designed to help teach students appropriate classroom behavior (Canter and Canter, 1988).

Success – The achievement of a desired result.

Limitations of the Study

The following are limitations of this study:

(1) Data were only collected from Department of Defense Schools in Kaiserslautern, Germany, and generalizations from the findings may be limited to those schools.

(2) Data presented in this study were based on the participants' perceptions, not on actual observations of classroom behaviors.

(3) This research only examined the regular education classroom and did not attempt to examine alternative education settings for AD/HD students.

(4) The results of this study were limited to academically and socially successful AD/HD students in third, fourth or fifth grade and may not be representative of AD/HD students in other grades.

Assumptions

The underlying assumptions of this study include the following:

(1) The supervising administrators used to select teachers who were successful with AD/HD students were qualified to identify successful teachers involved in this study.

(2) All participants were honest in their responses during the interviews.

(3) Classroom discipline of AD/HD students was enhanced through teacher knowledge and instructional skills.

Summary

This chapter provided the background for the study related to Attention-Deficit/Hyperactive Disorder (AD/HD). Next the need for the study and purpose for the study were presented. Following this was the definition of terms, assumptions and limitations. Chapter II will present the review of related research. Chapter III describes the population and procedures for conducting the study. Chapter IV reports the findings of the study and Chapter V the summary of the findings, conclusions, and recommendations from the study.

CHAPTER II

Review of the Literature

This study investigated classroom interactions between young students with Attention-Deficit/Hyperactivity Disorder (AD/HD) and their teachers. The purpose of the study was to help determine successful strategies and practices for teaching children with AD/HD. To maximize the value of the research, it was important to understand the nature of AD/HD, its methods of diagnosis and treatment, and what other writers and researchers have reported about teaching the AD/HD student in the classroom. This review of literature will focus on providing a background in these areas.

The chapter is divided into three main sections. The first section presents an overview of AD/HD and includes basic information about its prevalence, causes, symptoms and effects. The second section discusses the identification and multi-modal treatment of the child with AD/HD. This section also includes information about the legal rights of children with AD/HD at the time of the study. These rights concern the procedures that schools were legally required to perform to help ensure that there was a proper diagnosis of the child, and the actions they were required to take to educate the child who has been diagnosed with AD/HD. The third section focuses on the AD/HD child in the classroom and discusses findings and suggestions of other researchers and writers about how to best teach children suffering from AD/HD.

Overview of AD/HD

The condition that was known as Attention-Deficit/Hyperactivity Disorder has been called by several other names in years past, including "Minimal Brain Dysfunction," "The Hyper kinetic Reaction of Childhood," and "ADD With or Without Hyperactivity"

(Lavin, 1989; Children and Adults with Attention-deficit/Hyperactivity Disorder, 2000a). These changes reflect a gradual increase over time in the understanding of the disorder. Previously, the primary symptom was considered to be hyperactivity. However, by 1991, up to 30 percent of individuals with AD/HD, were diagnosed because of serious difficulties with maintaining attention (Children and Adults with Attention-Deficit/Hyperactivity Disorder and American Academy of Child and Adolescent Psychiatry, 1991).

The diagnosis of Attention Deficit Disorder (ADD) was formally recognized in the third edition of the Diagnostic and Statistical Manual (DSM III), which is the official diagnostic manual of the American Psychiatric Association. In DSM IV, the condition was given its current name of Attention-Deficit/Hyperactivity Disorder to reflect the importance of both the inattention and the hyperactivity/impulsivity aspects of the ailment.

Prevalence and Causes of AD/HD

In 1999, it was estimated that three to five percent of American youth are affected by AD/HD, with 1.4 to 2.2 million children and adolescents in the United States suffering from the disorder (Parker, 1999). The ailment was unequally distributed between the genders, with five times more boys than girls being affected by AD/HD when it manifests as hyperactivity (Accardo, 1991). Overall, three times more boys than girls suffered from the disorder; however, it was believed that AD/HD among girls was underreported (Children and Adults with Attention-Deficit/Hyperactivity Disorders and American Academy of Child and Adolescent Psychiatry, 1991). According to Bloomquist (1996) statistics on the differences between boys and girls generally showed that boys

outnumber girls by approximately a four or six to one ratio. Since hyperactivity tended to decrease in adolescence, until recently AD/HD children were thought to outgrow their disorder in their teen years. However, it was known that for many children with AD/HD, symptoms continued into adulthood (Barkley, Fischer, Edelbrock & Smallish, 1990; Bloomquist 1996; Children and Adults with Attention-Deficit/Hyperactivity Disorder, 2000a).

The cause of AD/HD has been poorly understood. In the past, various causes for AD/HD were considered, including prenatal and/or prenatal trauma, maturational delay, environmental toxicity such as fetal alcohol syndrome or lead toxicity, and food allergies; however, these factors did not seem to be present in the histories of most individuals affected by the disorder (Parker, 1995). At the time of this study, AD/HD was considered to be a neurological ailment that was the result of altered brain chemistry. A study by Zametkin and others (1990) at the National Institute for Mental Health indicated that AD/HD might have been the result of an abnormality in the brain (Parker, 1995). Specifically, the study results suggested that the rate that adults with AD/HD utilize glucose, which is the brain's main energy source, was less than the rate seen in adults without AD/HD. This reduction in brain glucose metabolism was found to be most significant in the area of the brain that is important for attention, handwriting, motor control, and inhibition of responses (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 1993a).

These results were not confirmed, however, in a study by Matochik et al. (1994), whose findings suggested that the brain abnormality might not involve glucose metabolism (Stein, 1994). Research has also indicated that AD/HD was genetically

influenced, having a higher prevalence within some families in comparison to others (Children and Adults with Attention-Deficit/Hyperactive Disorder, 2000a).

Symptoms of AD/HD

Children with AD/HD exhibit a number of developmentally inappropriate behaviors. Some of these children show behaviors that reflect difficulty in sustaining attention and focusing on a task, some show hyperactive and impulsive behaviors, and some exhibit both kinds of behavior. There are three basic types of AD/HD:

1. Attention-Deficit/Hyperactivity Disorder; predominantly inattentive type (AD/HD-I) pertains to individuals with significant problems of inattention but not much difficulty with impulsivity or hyperactivity.
2. Attention-Deficit/Hyperactivity Disorder, predominantly hyperactive-impulsive type (AD/HD-HI) pertains to individuals with significant problems with hyperactivity and impulsivity, but only some difficulty with inattention.
3. Attention-Deficit/Hyperactivity Disorder, combined type (AD/HD-C) pertains to individuals who exhibit significant problems with both inattention and impulsivity/hyperactivity (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 1995a, p. 1).

The child with AD/HD-I typically exhibited behaviors, which indicate serious difficulty in paying attention. These behaviors might have included not paying close attention to details, making careless mistakes, having difficulty sustaining attention, not appearing to listen, having difficulty with organization, being easily distracted, and being forgetful in everyday activities (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 2000a).

According to Fowler (1991), difficulties in maintaining focused attention made it hard for some of these children to concentrate on tasks, especially those that were routine or boring, and he or she might have problems beginning or finishing tasks. In addition, the child could have difficulty following directions, especially when three or more steps were involved. Directions might have to be repeated and the youngster redirected to tasks such as getting ready for school, completing worksheets, or finishing meals. Some children suffering from AD/HD-I tended to wander about, while others appeared to daydream. Inattentiveness might have taken the form of difficulties in figuring out where attention needs to be, focusing attention, sustaining attention, and/or dividing attention between two or more tasks (Fowler, 1991).

The child with AD/HD-HI typically exhibited behaviors that suggested impulsivity and hyperactivity. These included fidgeting with hands and feet, having difficulty remaining seated, running about or climbing excessively, having difficulty engaging in activities quietly, talking excessively, interrupting and intruding on others, and having difficulty waiting or taking turns (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 2000a).

Fowler (1991) added that such children might rush through assignments, shift excessively from one task to another, exhibit outbursts of inappropriate responses such as silliness or anger, have great difficulty regaining emotional control after the giggles or a temper tantrum, and/or engage in physical activity unrelated to the task, such as frequent pencil sharpening or falling out of his or her chair. The overly impulsive child might also undertake dangerous risk-taking behaviors such as running across the street without looking or jumping from rooftops or trees.

Murphy and Della Corte (1987) pointed out that as a toddler, the hyperactive child appeared to be constantly on the move with seemingly little purpose to its constant activity. The authors identified several other common characteristics of the hyperactive child. One was difficulty in hand-eye coordination. This could make it difficult for the child to throw or catch a ball and to engage in some sporting activities and games, although in sports such as swimming, where hand-eye coordination does not play a major factor, hyperactive children might excel. The child might also have serious difficulties in activities involving finger dexterity such as handwriting, coloring, and cutting with scissors. In addition, hyperactive children often displayed excessive attention-demanding behaviors. They were often domineering, demanding that games be played their way, and often aggressive. Hyperactive children also might be subject to rapid mood swings and very low frustration levels so that minor incidents could lead to excessive tantrums.

The third category of children suffering from AD/HD included those who exhibit behaviors from both of the other diagnostic categories. These children had both serious attention-deficit difficulties and serious problems with impulsivity and hyperactivity. The problems must be serious in both areas for the AD/HD child to be classified in this category. (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 1995a, 2000a).

Relation of AD/HD to Other Disorders

There were a number of conditions that could cause symptoms similar to AD/HD. These included stress, discouragement, physical illness, learning difficulties, and family problems (Children and Adults with Attention-Deficit/Hyperactivity Disorder and American Academy of Child and Adolescent Psychiatry, 1991). Anxiety or depression,

middle ear infections that cause intermittent hearing problems, and attention lapses caused by petit mal seizures can also be mistaken for AD/HD (The ADD Center, 2000).

Many children suffering from AD/HD also suffered from another major disorder, such as a learning disorder. While AD/HD was not itself a learning disability, Accardo (1991) reported that 50 percent or more of children suffering from AD/HD also had a learning disability, with the presence of AD/HD often making the diagnosis of the learning disorder more difficult.

In addition, disruptive behavior disorders were often found to co-occur with AD/HD. An estimated 25 percent of children with AD/HD exhibited conduct disorder, and 40 percent had oppositional defiant disorder, which involved a pattern of arguing with multiple adults, refusing to follow rules, losing one's temper, deliberately annoying others, as well as behaviors that exhibit anger, resentment, spitefulness, and vindictiveness (Children and Adults with Attention-Deficit/Hyperactive Disorder, 2000c). The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV; American Psychiatric Association, 1994), defined three types of disruptive behavior disorders including AD/HD, Oppositional Defiant Disorder, and Conduct Disorder. There were clear distinctions between each of these disorders that made them different and some children were diagnosed with more than one of these disorders.

Many AD/HD children also suffered from mood disorders. According to the organization Children and Adults with Attention-Deficit/Hyperactive Disorder (2000c), AD/HD children tended to exhibit both sad moods (e.g., crying daily for no apparent reason) and irritable, manic moods more than other children. Further, an estimated 10-30

percent of AD/HD children were thought to suffer from depression. Such children were withdrawn and had trouble sleeping or sleep excessively, excessively self-criticize, and sometimes talked of dying. As many as 20 percent of individuals with AD/HD had bipolar disorder, which involved incidents with abnormally elevated mood contrasted with incidents of clinical depression. Some children with bipolar disorder experienced rapid mood swings for no apparent reason, were constantly irritable or exhibited premeditated aggression, and might have heard voices or saw things that others did not hear or see. Some children with AD/HD suffered from anxiety disorders, language and communications disorders, chronic tic disorders, or developmental disorders (The ADD Center, 2000). Parker (1999) reported that AD/HD children without hyperactivity (AD/HD-I) showed more signs of anxiety and learning problems than those in the hyperactive group.

Social and Educational Effects of AD/HD on the Child

Parker (1995) indicated that Attention-Deficit/Hyperactivity Disorder could be seriously debilitating and might have lifelong effects. The child with AD/HD was vulnerable to failure in two of the most important development areas for children, school and peer relations. Although the child who suffers from AD/HD could be very successful if he or she was properly treated. If, however, the disorder was not identified and treated, it could lead to school failure, conduct disorder, substance abuse, depression, and failed relationships (Barkley, 1995; Children and Adults with Attention-Deficit/Hyperactivity Disorder, 1993a, 2000a).

Friendships can be an important factor contributing to the adjustment of children with AD/HD (Children and Adults with Attention-Deficit/Hyperactive Disorder, 1993b).

However, Fowler (1991) pointed out that it was often difficult for these children to understand social cues, and they tended to react to a social situation without first determining the desirable behavior (The ADD Center, 2000). As a result, the child's behaviors might be inappropriate for the situation, making it difficult for them to engage in successful social interactions and to make or keep friends. The inappropriate behaviors that the child exhibits might include acting in a domineering way toward other children or behaving impulsively by intruding on other children's games, not waiting for his or her proper turn, or quitting before a game is done. Attention-deficit problems made it difficult for the child to pay attention to what other children were saying or to respond if someone attempted to initiate an activity (Children and Adults with Attention-Deficit/Hyperactivity Disorder). Fifty to sixty percent of children with AD/HD had experienced some form of social rejection from their peers (Guevremont, 1990).

According to Fowler (1991), the child with AD/HD wanted to be liked and accepted, but did not go about gaining acceptance in an appropriate way. The child tended to have a low frustration level and overreacted emotionally and engaged in frequent fights and arguments, making it more difficult for the child to make friends. The AD/HD child who exhibits domineering behavior might have had no friends except for younger children who were more likely to tolerate their attitude (Murphy & Della Corte, 1987). Further, as the child with AD/HD grows older, socially unacceptable behaviors were often misunderstood as being the child's deliberate choice, with the child being blamed (Fowler, 1991). A result of the child's difficulties in making friends with other children might result in increased loneliness and reduced self-esteem (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 1993b).

Success at school requires attention and impulse control, and for that reason, many children with AD/HD found this their greatest challenge at school (Fowler, 1991). Since the student suffering from AD/HD was so challenged they were more likely to be held back in school or to drop out than other children (Barkley, Fischer, Edelbrock & Smallish, 1990; Children and Adults with Attention-Deficit/Hyperactivity Disorder, 2000a).

Although many or most children with AD/HD have not had a learning disability that interferes with the psychological process of learning, their disorder often interfered with their school performance, making them unable to perform to the level of their scholastic ability. Disorganization, not following instructions, and not completing tasks led to poor performance and academic problems or even failure. Some children with AD/HD have had difficulty adjusting to the classroom due to hyperactivity, low tolerance of frustration, and temper outbursts (Fowler, 1991).

Academic and social relationship problems often come to together at school for the AD/HD student. The child may think that other students are out to get him or her, and in turn the child behaves aggressively in many social interactions (Bloomquist, 1996). As the student begins to be rejected and neglected by his or peers, this may ultimately lead the student to begin acting in a disruptive manner in social situations (Bloomquist, 1996). Evidence has suggested that disruptive classroom behavior was directly related to lowered social status and correlated with greater rejection by peers (Whalen, Henker, and Demoto, 1981). Further, children with AD/HD have been the recipients of added and more intense negative attention from their teachers and their classmates (Whalen, Henker, & Dotemoto, 1981).

The child's problems academically and with making and keeping friends may result in lower self-esteem, which was a problem often seen in children with AD/HD. The ADD Center (2000) described how the child's problems in school could affect his or her self-view:

> Difficulty functioning in school, due to inconsistent control over attention and impulses, can often result in the experience of failure, both academically and socially. The child, often being called a failure, lazy, or underachieving, frequently develops problems with self-esteem. The child develops a self picture as a troublemaker, bad kid, the cause of family problems, not trustable, a bad student who is not expected to do any better. They constantly hear others telling them that they are lazy, stupid, crazy, out of control and hopeless. (p. 4)

Identification and Treatment of AD/HD

Diagnosis of AD/HD

Up to 50 percent of children suffering from AD/HD were never correctly diagnosed (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 1993a). If the disorder was left undiagnosed and untreated, it could lead not only to the adverse social and educational results discussed in the previous section, it could also increase the chances that the child would develop significant emotional problems (Accardo, 1991; Children and Adults with Attention-Deficit/Hyperactivity Disorder, 1993a). Failure to identify and properly treat the disorder might also lead to an increased probability of antisocial and/or criminal behavior (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 2000a).

The basic criteria reported by the ADD Center (2000) for identifying AD/HD in the child were the following: (1) the behavioral signs must be evident prior to age seven, (2) these symptoms must be more frequent or severe than in other children the same age, (3) the symptoms must have been present for at least six months, (4) the symptoms must

interfere with the child's functioning, and (5) the symptoms must be seen in more than one setting, e.g., in both the home and in school.

Formal neuropsychological tests, neurological exams, and EEGs have not had much predictive validity in the diagnosis of AD/HD (The ADD Center, 2000, p. 2). Instead, testing for the presence of AD/HD in the child has required a combination of objective assessment and clinical judgment (Parker, 1999). Due to the fact that AD/HD has often co-occurred with other psychiatric disorders of childhood, the child should be evaluated on several different dimensions. As Parker (1995) has noted this evaluation should include medical, psychological, educational, and functional assessments to help ensure the greatest probability of a comprehensive, valid, and reliable diagnosis.

Several individuals should play a role in assessing the child for AD/HD. Those in the field have indicated the child's parents and teachers were the main sources of information about his or her behaviors at home and at school, and they should play an important part in the evaluation process (Children and Adults with Attention Deficit Disorder and American Academy of Child and Adolescent Psychiatry, 1991). An accurate diagnosis required an assessment conducted by a well-trained professional, usually a developmental pediatrician, child psychologist, child psychiatrist, or pediatric neurologist (Parker, 1995).

The assessment usually required a thorough medical and family history, a physical examination, observation of the child, interviews with the child and the child's parents and teacher, behavior rating scales, and psychological tests to measure I.Q. and social and emotional adjustment and to screen for learning disabilities (Fowler, 1991). Parker (1995) indicated that taking of the child's history should include detailed medical,

family, psychological, developmental, social, and educational factors to help establish the existence of AD/HD symptoms over time. Further, a thorough psychoeducational assessment should be made to help determine the child's intellectual functioning and cognitive processes such as reasoning skills, use of language, perception, attention, memory, visual-motor functioning, and academic achievement. The organization, Children and Adults with Attention-Deficit/Hyperactivity Disorder (2000a), also pointed out that in the medical examination by a physician it was important that hearing and vision tests be given to the child in order to rule out medical problems that may be causing symptoms that are similar to AD/HD.

It has usually been relatively easy to spot a child with AD/HD-HI (predominantly hyperactive-impulsive) or AD/HD-C (both inattention and hyperactive-impulsive) due to his or her hyperactive and impulsive behaviors (though not all children who exhibit such behaviors have AD/HD). It has been more difficult to notice the child with AD/HD-I (predominantly inattentive). These children were easier to overlook because their behaviors were less dramatic than the hyperactive and impulsive children. Their disability may go unnoticed, and they may not be diagnosed until they reach the upper elementary or secondary grades, if then (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 1993c, 1995a).

Treatment of AD/HD

Most experts have agreed that a multi-modal approach should be used for treatment of AD/HD. Such an approach was aimed at assisting the child medically, psychologically, educationally, and behaviorally. This required the coordinated efforts of a team of health care professionals, educators, and parents who worked together to

identify treatment goals, design and implement interventions, and evaluate the results of their efforts (Parker, 1995).

A multi-modal treatment could include medication to improve attention and/or reduce hyperactivity and impulsivity, training to help parents understand the disorder and learn effective behavior management, and interventions at home and school to help increase the child's self-esteem and sense of belonging. It also could include counseling and training for the child, and psychotherapy if the child has been depressed or demoralized (Children and Adults with Attention Deficit Disorders and American Academy of Child and Adolescent Psychiatry, 1991). Counseling and/or psychotherapy for the child should be focused on problems with self-esteem, anxiety, and family and peer interaction. Family therapy may also be useful (Parker, 1995).

Medications were usually part of the treatment of the child with AD/HD. They were used to reduce symptoms, not to control behavior, and as part of a multi-modal program, they could help the treatment be effective (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 2000b). Medication should never be the only treatment used for the child (Fowler, 1991).

Different medications act in different ways to modify levels of brain chemicals (The ADD Center, 2000). The most widely prescribed medications for AD/HD have been psycho stimulants, with Ritalin being the one most used (Fowler, 1991). According to the ADD Center (2000), stimulants were, in general, the most effective and safest of the medications. They have had dramatic effects in improving attention and reducing hyperactivity, in improving visual motor skills, and in reducing aggression in 70 percent of more of children with AD/HD (Parker, 1995). For children who had negative

reactions to stimulants, antidepressants were often prescribed, and other drugs may be tried if stimulants and antidepressants were ineffective or had overly negative side effects (The ADD Center, 2000). Usually, doses have been administered gradually to determine the effects of the medication. The child received the lowest dose that was needed to achieve the best therapeutic effect (Fowler, 1991).

An important component of the multi-modal treatment of the child with AD/HD was effective parenting. Working with counselors and/or physicians, parents can help the child by creating a behavior modification plan; providing clear, consistent expectations, directions, and limits; assisting the child with social issues; identifying the child's strengths and building on them; and setting aside a special time each day for the child (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 1993b). Ranucci (1991) suggested that the parent educate all those who come in contact with the child to understand that positive reinforcement works better than negative reinforcement for the child and that achievements and success should be recognized to help increase the child's self-esteem. In addition, the child should be encouraged to participate in areas in which he or she may have a chance to excel.

Ranucci (1991) also indicated that creating structure for the child, including home responsibilities appropriate for the child's level, was very important. The child with AD/HD generally responded positively to structure and rewards. He or she functions best in an environment which was organized, where rules and expectations were clear and consistent, and where rewards for meeting expectations were clear beforehand and immediately given to the child (Fowler, 1991). The presentation of rewards for appropriate behavior was the main principle of behavior management for the AD/HD

child. As a result, frequent and consistent praise and rewards for desired behavior encouraged the child the repeat the behavior (Fowler, 1991).

Educational interventions were also an important part of the treatment of the child with AD/HD, and the final section of the review will discuss these. First, however, the legal rights of parents to seek a diagnosis of their suspected AD/HD child and the rights of the child with AD/HD to an education that takes into account his or her disability will be discussed.

Educational Rights for Children with AD/HD

Based upon the available data, about one-half of AD/HD children were able to perform to their ability level in a regular classroom when curriculum adjustments are made, and about 35-40 percent need special education services which could usually be provided in a regular education classroom or resource room. About 10-15 percent, however, especially children with additional disabilities, needed a special education program in which the child was taught in a self-contained classroom (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 1995b).

The rights of children with AD/HD for an evaluation and an appropriate educational program was guaranteed through Section 504 of the Rehabilitation Act of 1973 and the Individuals with Disabilities Educational Act. A Policy Clarification Memorandum issued by the Department of Education in 1991 made it clear that children with AD/HD might be eligible for special education and related services through those laws (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 1993c).

To determine whether a special education program was needed, the local school district's evaluation team must evaluate the child. The parents' suspicion that the child

has AD/HD does not itself legally require a school district to evaluate the child, yet it was often enough to initiate the process. The child's educational program to include schoolwork and social behavior must be affected. At that time the school must inform the parents of their rights, which included the right to an impartial hearing and to challenge a school district's decision in court. If the decision of the district was not to evaluate the child, that decision could be appealed through due process/mediation.

If the child was diagnosed with AD/HD, and qualified for services, an individualized educational plan (IEP) was developed to address the problems and learning needs of the child and to deal with his or her behavioral and social problems. The IEP was a legal document that must be followed by the school, and no changes could be made to it without the approval of the parents (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 1993c). Educational interventions such as accommodations made within the regular education classroom, inclusion educational instruction, or placement in special education may be required depending on the particular child's needs (Parker, 1999)

The present study focused on teachers and schools in Germany that were under the regulation of the United States Department of Defense, which followed the requirements of the Department of Education in regard to evaluating and teaching children with AD/HD. An assessment and referral flow chart published by the DoDDS outlines the steps that should be taken by parents who suspected that their child was suffering from AD/HD.

1. Discuss concerns with the child's teacher. Parents and teachers complete behavior rating scales.

2. Parents implement home behavior management and teachers coordinate classroom strategies while a counselor, behavior management specialist, or school psychologist makes informal classroom observation.
3. The AD/HD contact person reviews documentation of interventions made by parents and teachers.
4. If further observation is warranted, then it is made, and an action plan is drawn up to determine (a) behavioral contracting/interventions, (b) support counseling, (c) Case Study Committee referral and assessment for Special Education eligibility, and/or (d) a medical exam.
5. If a certified doctor confirms AD/HD, then a trial of medication and/or behavioral strategies is implemented.
6. If results are satisfactory from Step 5, then this strategy is continued and coordinated with the AD/HD school contact person.
7. If learning and/or behavioral difficulties persist, then a formal referral to the Case Study Committee may be made, with assessment for eligibility for Special Education.

The AD/HD Child in the Classroom

Most children diagnosed with AD/HD spent all or much of their school time in a mainstream classroom (Fowler, 1991). Creating an educational setting in the regular classroom that helped the AD/HD student to perform to the highest limit of his or her abilities was a great challenge.

Academic underachievement has been the most frequently encountered symptom of impairment associated with AD/HD (Barkley, 1990). Even where learning disabilities did not exist, students with AD/HD were more likely to have problems with sloppy

handwriting, careless approaches to tasks, poor organization of their work materials, and academic underachievement relative to their tested abilities (Bloomquist, 1996). The AD/HD student tended to be off-task and often did not get his or her work completed. He or she tended to be unorganized, have poor study skills, and experience great difficulty managing time effectively. These students also tended to have poor relationships with their teachers, which may have affected their academic performance (Bloomquist, 1996).

Due to the AD/HD student's problems with attentiveness, impulsivity, and/or hyperactivity, special accommodations often needed to be made and special strategies used to teach the student, as well as to help the child in his or her efforts to socialize and make friends with other children in the school setting. Achieving the best possible educational outcome also depended greatly on the teacher's attitude toward the child and on his or her knowledge of AD/HD and proficiency in using methods that were appropriate for teaching AD/HD students.

This section will focus on these two factors that are important to determining the educational and social success of the student with AD/HD. The first is the role of the teacher in dealing with the AD/HD child in the mainstream classroom. The second is classroom accommodations and suggested strategies and practices that may have a greater possibility of leading to positive outcomes for AD/HD students.

The Teacher's Role

According to Barkley (1995), the most important aspect in the maturation of the AD/HD child was his or her interaction with significant adults. The most significant adults in the child's life were usually his or her parents. Next to the parents, the child's teachers were often the most important adults that he or she came in to contact with; this

was obviously true in the case of the child's time at school. Teachers were most commonly cited as the reason for a child's positive or negative school experience (Fowler, 1992). Teacher classroom personality was a main element that might affect outcomes for students with AD/HD (Greene, 1992), and a poor student-teacher relationship could negatively affect the AD/HD student's academic performance (Bloomquist, 1996).

The teacher's attitude toward the child and toward teaching the child was one of the keys to the success of the AD/HD child in the classroom. According to Lerner (1995), students with AD/HD were the most challenging for the general classroom teacher. The extra work required of the teacher to successfully deal with the AD/HD student, along with the disruptive behaviors of some AD/HD students, frequently resulted in negative attitudes. This has been unfortunate when it happens because the teacher, who feels burdened by teaching the child, compounds the problems of students with AD/HD, misunderstands the child's behavior, and/or was impatient with the child. It was crucial for the student to have teachers who want him or her in their classroom. According to Rief (1993), to be successful, a teacher needed to be committed to working with the AD/HD student on a personal level and willing to exert the time, energy, and effort that were required to emotionally support and listen to the child and to make appropriate accommodations.

If the teacher had a negative attitude toward the child with AD/HD, this could effect the child not only directly, but also indirectly through its effect on classmates. Campell et al. (1977) found more instances of negative teacher attention directed toward a class containing a student with AD/HD, when compared with a control class not

containing a student with AD/HD. One could infer that the presence of a child with AD/HD in a classroom might cause a teacher's negative attention to be directed toward other children in the classroom who might not be displaying inappropriate classroom behaviors or whose behaviors were not directly related to the child with AD/HD. Consequently, if peers perceived the child with AD/HD as the cause of negative attention from the teacher, this could lead to increased peer rejection (Frederick and Olmi, 1994).

The attitudes of teachers toward their students depend, in general, on their perceptions of and assumptions about their students. Savage (1991) maintained that the differences in the ways teachers exercise leadership and authority in the classroom were rooted in the ways they viewed their learners. Those who saw learners as capable, trustworthy, and able were more enthusiastic, gave students more responsibility, and viewed teacher power differently than those who see learners as less capable and trustworthy. Other factors that might have affected a teacher's assumptions about a student included the student's past performance and speech performance, as well as the performance of members of the same group, and the student's temperament (Caruthers, 2000).

These generalizations were also true for teachers of students with AD/HD. For example, Greene (1992), reported that teacher attitudes, expectations, perceptions, and beliefs all had a bearing on how the teacher interacted with the AD/HD student. He pointed out that the characteristic problems associated with AD/HD were sometimes blatant, but sometimes they were subtle, and many teachers were not familiar with AD/HD's various manifestations. Further, there were multiple ways to interpret the behaviors of a student with AD/HD, and these interpretations had the potential to guide

teacher/student interactions. As a result, a teacher who did not understand the disorder might think the child was deliberately misbehaving. Rief (1993) asserted it was essential for the teacher to understand that AD/HD was a physiological and biological problem and that the child's attention-deficit, impulsive, and/or hyperactive behaviors were not matters of the child's deliberate choice. This realization could enable the teacher to deal with the child in a positive way, showing patience and a sense of humor.

When the teacher avoided untested negative assumptions and instead learned about the nature of AD/HD and how it affected the student in the classroom, Twiss (1997), indicated that this could go a long way toward helping to defeat false thinking and to instill a positive attitude toward the child. She also noted that it was important for the teacher to understand the rights of AD/HD students under the law and appropriate interventions and accommodations. The teacher must be willing to modify his or her ideas of how best to help students experience academic success in order to accommodate the AD/HD student's learning strengths and needs. It was necessary according to Twiss, for teachers to understand that the student identified as having AD/HD might not thrive in a classroom environment with strongly rooted beliefs about learning that leave little room for flexibility.

Hudsen (1997), suggested that it is preferable for students with AD/HD to be in highly structured, well managed classrooms. In agreement, Greene (1992), maintained that teachers who were sophisticated in their understanding of AD/HD and were experienced in methodologies for handling AD/HD behaviors had greater potential for successful outcomes with their students. The teacher's attitude toward and use of behavior management strategies was a main factor contributing to the success of the

student with AD/HD; however, many teachers were unfamiliar with complex behavior modification techniques.

Greene (1992) recommended three goals that can further a positive interaction between the teacher and the AD/HD student. First, the teachers should be assisted in recognizing and understanding AD/HD and how it affected students through workshops, seminars, and videotaped presentations. A second goal was to help teachers become more involved in the therapeutic process, especially for students experiencing significant problems in school. The third goal was to develop the technology and means for selecting a teacher who represented the best match for a particular child with AD/HD.

Finding a proper match between student and teacher was important. However, Pollion (1989) claimed that the matching of instruction to learning style impacts achievement more than the matching of teacher type to student type. Pollion suggested that if student and teacher were mismatched in relation to teacher psychological type and instructional style, the teacher could still develop and implement instructional strategies commensurate with the learning styles of the students.

One of the important roles that the teacher assumed to further the success of the AD/HD student was to act as a partner with the child's parents. Bloomquist (1996) has indicated that it is vital for parents and school personnel to form a collaborative and respectful partnership on the student's behalf. Collaboration and consistency benefited students with AD/HD, who function best with routine, structure, and consistent expectations. The teacher and parents must have a common understanding of what is best for the success of the student. Parents, for their part, could assist teachers with improving their children's school conduct and performance through the use of home-

based reward programs. Such procedures have resulted in improved teacher ratings of school behaviors and improved homework performance (Atkeson & Forehand, 1978). The teacher should understand, however, that unfortunately many AD/HD students had parents who were also afflicted with the same disorder and who experienced many of the same difficulties the student was displaying. This might have made it more difficult for the parents to apply behavioral management strategies to their child consistently at home.

Davino and his colleagues (1995), recommended that the teacher should also consider himself or herself to be in partnership with medical and mental health practitioners who work with the child and as one element of a multi-modal treatment. For example, teachers should have an important role in monitoring the effects of medications used to treat the disorder. According to Batsche and Knoff (1994), the greatest threat to the child's success was the failure of parents, educators and medical and mental health personnel to work together.

Classroom Structure and Interventions

Barkley (1990) claims that optimum development for children with AD/HD occurred when there was a match or compatibility between the capacities and characteristics of the individual and the demands and expectations of the environment. Application of this framework to educational settings suggests that the instructional goal should be to improve the goodness of fit for students with AD/HD and the classroom environment.

To do this might require different kinds of classroom intervention. McEwan (1998) suggested that there were seven kinds of classroom interventions that the teacher can make. These included (1) changes to the physical setting of the classroom,

(2) modification of classroom procedures and expectations, (3) modification of teacher behavior and lesson presentation, (4) strategies to assist the student in self-organization, (5) homework interventions to help ensure homework will be productive, (6) behavioral interventions to increase the likelihood of positive behaviors and to increase learning, and (7) social skills interventions to help the student relate more positively to his or her peers.

Abramowitz and O'Leary (1991) agreed that classroom intervention was an essential component of a comprehensive treatment for AD/HD and that the teacher of the AD/HD child might need to make significant modifications to the curriculum and the physical layout of the classroom. General education schools have been designed with what was assumed to be the typical student in mind, one who was insightful, attentive, works well in groups, and learns at a particular rate. However, these were characteristics that are not descriptive of students with AD/HD (Barkley, 1995). When teaching students identified with AD/HD, the teacher needed to consider restructuring his or her schema to embrace the needs of all children in the classroom (Twiss, 1997).

No two students with AD/HD are alike, so no single educational setting, practice, or plan will be best for all AD/HD students. Barkley (1995), Bloomquist (1996) and Rief (1993), all pointed out that teachers could help students by identifying individual strengths and special learning needs and designing a plan for mobilizing those strengths to improve the student's academic and social performance. Students did best in a structured classroom where expectations and rules were clearly communicated to them and where academic tasks were carefully designed for manageability and clarity.

Some studies have documented the effectiveness of classroom interventions based on contingency management or on modifications of tasks and of the physical

environment of the classroom (Abramowitz & O'Leary, 1991). Contingency management interventions that may increase the likelihood of teaching success with the AD/HD student included contingent teacher attention, both positive and negative; classroom token economies, including reinforcement and response cost; school/home contingencies; group contingencies and peer mediated interventions; time out; and cognitive behavioral interventions (Abramowitz & O'Leary, 1991).

Abramowitz and O'Leary (1991) suggested several factors that the teacher should take into consideration when organizing the academic environment for the AD/HD student. First, the teacher should consider classroom noise, difficult tasks, and tasks paced by others which result in off-task behavior. Second, seating plans should be linked to the learning tasks and activities most prevalent in the classroom. Third, greater task structure and increased use of stimulating materials may increase attention, though the authors pointed out that the impact of these factors on productivity and accuracy was not yet known. Finally, novelty and stimulation appeared to improve learning outcomes for easy tasks, but not for more difficult tasks.

Moss and Dunlap (1990) pointed out that the child with AD/HD needed to be in a structured classroom with few distractions. It was important to note, however, that this did not mean that the classroom must be boring. Rief (1993) added that a structured classroom did need to be a rigid one with few visual or auditory stimuli, and that an inviting and stimulating classroom could be a structured one.

Seating arrangements can be an important element of the classroom's physical structure and can help to reduce distractions and to manage the student's behavior. Harrell (1996) presented many suggestions have been made in relation to the physical

arrangement of the classroom and recommends that open or traditional classrooms that are arranged in centers may be effective. He also suggested seating well-behaved peers next to the AD/HD student and avoiding cluster seating because it may promote student interaction.

Special attention and rewards were often cited in the literature as important factors in classroom interventions with AD/HD students; however, singling out these student for special treatment may not be perceived as fair by teachers and other children. Anhalt et al. (1998) maintained that there was empirical rationale for use of the AD/HD Classroom Kit, which seeks to solve this problem by providing an approach to managing the disruptive behavior of the AD/HD child while involving the entire class.

It was important to point out that many of the suggested strategies and practices and much of the advice that was given for teaching the AD/HD child was very similar to what was considered to be sound teaching practice for all students. For example. Rief (1993) suggested that creative, engaging, and interactive teaching strategies were important in teaching the AD/HD child, and that these same strategies were also of benefit to all students. Other suggestions for teaching AD/HD students that could be considered to be good teaching practice for mainstream students included creating learning projects based on the child's interests, teaching organizational skills, and involving the child in creating rules and consequences (Armstrong, 1996).

Summary

The review of the literature consisted of an overview of Attention-Deficit/Hyperactivity Disorder (AD/HD). Next, the identification and multi-modal treatment of the child with AD/HD were addressed which included information about

legal rights of children with AD/HD. Finally, discussions on findings and suggestions from other researchers and writers on how best to teach the AD/HD child in the classroom were presented. The next chapter, Chapter III, describes the population and procedures for conducting the study.

CHAPTER III

Research Design and Methodology

The purpose of this chapter is to describe the procedures utilized in this study to answer the research questions. The three questions addressed in this study are presented below:

Question One: What influence do teachers have in increasing successful school experiences of the AD/HD student?

Question Two: Are successful teachers able to identify their AD/HD students' needs related to academic and social success in school as defined in the literature?

Question Three: What specific practices do teachers use that promote the academic and social success of students exhibiting AD/HD behaviors?

The chapter is divided into five sections. The first section provides a description of the sample for the study. The second section includes information about the interview schedule that was developed and used in the study to collect the data to answer the research questions. A description of the pilot test of the interview schedule and the changes made to improve the instrument is also provided. The third section identifies the procedures used to collect the data. The fourth section describes the procedures that were used to analyze the data collected in the interviews to answer each of the research questions. Finally, the fifth section presents a brief summary of the chapter.

Population

The sample for this study consisted of six elementary school teachers, six of their students who had been identified with Attention-Deficit/Hyperactivity Disorder (AD/HD), and one parent of each of the six students. The teachers taught in grades three

through five. These grades were chosen because in the interview process, students in the third through fifth grades are generally better able to verbalize what the teacher has done and their perceptions of the teacher than are children at earlier ages.

The study was conducted in the Department of Defense Dependent School (DoDDS) system in Kaiserslautern, Germany. The curriculum in DoDDS was similar to that in public schools in the United States, although, as with any school district, adjustments were made to reflect unique aspects of the district such as geographical area. The Kaiserslautern District includes 12 elementary/middle schools, and teachers and students from five of those schools were involved in this study. The number of students in these schools ranged from 200 to 400. Appendix A contains a list of the schools in the district and their enrollment for school year 1998-1999.

The six teachers included in the study were individuals who had successfully taught at least one child with AD/HD during the 1998-1999 school year. The student population of the study consisted of six students, one student for each of the six teachers. Each of the students had been diagnosed as having AD/HD, and each had shown academic and social improvement during the 1998-1999 school year. For each child, one of the child's parents was also interviewed. The teacher and student were interviewed in order to identify the teacher's strategies and practices that were associated with the in-school success of the learner. The parents of the students were interviewed in order to gain further insight into the teacher's strategies and into the child's relationship to the teacher. Thus triangulation was used to gain three different perspectives of the child's successful classroom experience in relation to his or her teacher.

Only teachers identified as having a positive impact on the academic and social achievement of the student during the 1998-1999 school year were selected for the study. Successful teachers were identified by their school principals or assistant principals. The main criterion used in this identification process was documented successful teaching during the 1998-1999 school year of one or more students diagnosed as having AD/HD, with success measured through academic data and social non-test data.

After each teacher was selected and had agreed to participate, a successful ADD student of that teacher was identified. This was a student who was identified both by the school administration and the teacher to be academically and socially successful during the 1998-1999 school year. Academic success of a student was partly defined as working at or above his or her ability level as determined by the student's grades and standardized test scores. School administrators, through the student's records, identified grades and scores; due to guarantees of confidentiality, these records were not revealed to the researcher. Academic success was further defined as a student's causing less classroom disruption than in previous classes and exhibiting more on-task behaviors, improved grades, and more class participation than previously. The student's teacher generally determined these aspects of success.

Another important aspect of success was the student's assuming responsibility for his or her actions. Social success was viewed as the ability to solve problems, to exhibit self-control, and to self-monitor. Key success signals were increased self-esteem, better peer relations, and less school disciplinary action in comparison to the child's experience in earlier grades. Rates of social success were assessed by the teacher based on

cumulative records of the number of detentions and school disciplinary actions as well as the written observations of the classroom teachers for the six students.

After a teacher and student had been selected, the parents of the student were contacted by telephone to request permission for their child to participate in the study and to ask the parents to become involved in the study. The purpose of the research and the importance of understanding the students' and parents' perceptions of what had contributed to the success of their child during the previous year were explained. The parents were also told that the focus of the interview would be on the teacher-student interaction.

After six sets of parents had agreed that their child and one of the parents would participate, the sample of those to be interviewed was complete. The total sample therefore consisted of six teachers, six of their AD/HD students, and six parents, one for each of the students. All teachers interviewed were females; of the students, three were boys and three were girls; and of the six parents interviewed, five were females and one was male.

Instrumentation

The data for this study were obtained through in-depth interviews of the 18 participants. The researcher developed and followed an interview schedule designed to address the research questions. These research questions examined specific practices of successful teachers in order to achieve a more comprehensive understanding of effective teaching methods and strategies for working with students exhibiting AD/HD behaviors. The interview schedule was constructed to include three broad areas that were relevant to the study. They were the following: (1) teacher influence on AD/HD students, (2) the

extent of the teacher's awareness of the AD/HD student's learning needs, and (3) successful teaching strategies used with AD/HD students. The schedule included predetermined questions and allowed for the addition of probing questions to gather additional information or clarify a response. The interview schedule is presented in Appendix B.

After it was developed, the interview schedule was sent to three experts for feedback: the Director of Special Education of the Kaiserslautern District, a school counselor, and a Child Study Chairperson (CSC) from the district. The Director of Special Education was selected because of her expertise in the area of Attention-Deficit/Hyperactivity Disorder. This expertise comes from the fact that many students with AD/HD also have learning disabilities, with AD/HD being covered under the "Other Health Impaired" category of special education regulations. The school counselor was chosen because she works directly with AD/HD students in the school setting and her knowledge of their social and academic difficulties. She was also the mother of a child with AD/HD, had completed study of this subject, and had first-hand knowledge of the disorder. Finally, the CSC was selected because of her 15 years of experience in the field of special education and with AD/HD students. The chairperson worked directly with the student and parents during and after the diagnosis of a handicapping condition. These three experts were asked to determine whether the instrument adequately covered the research questions and to recommend additions, deletions, and modifications to the questions included in the schedule. They were also asked to check the questions for clarity for use with children and parents who were not educators. Based upon their feedback only minor editorial changes were made in the interview schedule.

A field test of the interview schedule was conducted. A teacher with experience working with AD/HD students, one of her AD/HD students, and a parent of the student were interviewed. These were all individuals who were not part of the sample. After the interviews, each individual was asked for feedback on anything he or she had trouble understanding and asked if there were items that were not addressed that should be considered in the interview. Again, based on the field test feedback, only minor editorial changes were necessary.

Procedures

This section summarizes the procedures used to collect data for this study. First, permission to conduct the study was obtained from the Kaiserslautern DoDDS District Superintendent's Office. The researcher then contacted administrators of the 12 elementary schools in the Kaiserslautern district to explain the study and ask for their cooperation in identifying teachers at their school who had successfully taught at least one AD/HD student during the 1998-1999 school year. Seven of the administrators identified one or more successful teachers according to the criteria listed in the section on the study sample; a total of 14 teachers were originally identified. Successful teachers were then contacted by the researcher and asked to participate. Teachers who agreed to participate contacted the parents of one of the AD/HD students who they had successfully taught to ask them if their child and one of the parents would participate in the study.

When a teacher, one of the teacher's successful AD/HD students, and a parent of the student all agreed to be part of the study, they were included in the study until a total of eighteen participants were found. However, during the course of the study, one of the original six teachers decided to withdraw and had to be replaced by another teacher, one

of her successful AD/HD students, and one of the student's parents. During the course of the study it was also discovered that two of the originally selected students had not been diagnosed as having AD/HD. This required that two new teachers, their successful AD/HD students, and two parents of the students replace those children and their teachers and parents in the study.

In-depth interviews of the eighteen participants were conducted beginning in June 1999, with the last interview conducted in March 2000. Interviews of teachers and students were generally done at the teacher's or child's school, and interviews of parents were done in a location convenient for the parent. Two interviews, one with a teacher and one with a parent, were conducted by phone. All teachers, students, and parents were interviewed alone, except one child was interviewed with the school psychologist present at the request of the child's parents, and another child was interviewed with a parent present. All of the interviews were audiotape-recorded after permission to record the interview was given by the participant.

Each interview lasted for approximately one hour. The interview began with an introduction to the study, including a summary of its purposes. Next, demographic information about the interviewee was collected in order to gather general information about the respondent and to establish rapport with the teacher, student, or parent. Then the interviewer asked a set of pre-determined questions, some of which were followed by further probing questions to gather additional information or to clarify responses. In each of the interviews, a main consideration was to gather information about the respondent's beliefs and perceptions about strategies and practices that the teacher had used that were considered effective in helping the student to succeed in school. Afterward, the

audiotape-recorded interviews were professionally transcribed so that they could be analyzed.

Data Analysis

Analysis of interview data in this study was accomplished through the use of qualitative methods following the guidelines of Huberman and Miles (1984,1994). This process consisted of three main steps. The first step was data reduction. This consisted in the reading of the transcripts of each of the 18 interviews for the purpose of identifying themes, patterns, and clusters of related information in the responses. The second step was data display, which involved organizing, compressing, and assembling the information to permit relationships to be discovered and conclusions to be drawn about the teachers', students', and parents' perceptions. The third step was to draw conclusions and to verify these among the three respondent groups.

Conclusions were drawn based on the presence of common themes that were found in the interviewees' responses. First, the researcher looked for common themes within each group. This was followed by determination of common themes across all three respondent groups. Themes that appeared in two of the three groups were identified and noted. By means of this systematic analysis of the interview responses, answers to the research questions were determined.

Summary

This chapter included a description of the sample for the study and information about the instrument developed and used in the study. A description of the pilot test of the interview schedule and the changes made to improve the instrument was provided.

Next, the procedures used to collect the data were identified and then the procedures that were used to analyze the data were described. The next chapter, Chapter IV, reports the findings of the study.

CHAPTER IV

Analysis and Interpretation of Data

For this study, in-depth interviews were conducted with six elementary school teachers who taught in the Department of Defense Dependent School System (DoDDS) in Kaiserslautern, Germany. These teachers were identified as successfully teaching at least one AD/HD student during the 1998-1999 school year. In addition, six of their successful AD/HD students and one parent of each of the students were interviewed. The interviews took place between June 1999 and March 2000. Each interview lasted approximately one hour and was audiotape-recorded.

In each interview, demographic information about each participant was collected, then the interviewer asked a set of pre-determined questions to gather information about the participant's beliefs and perceptions about teacher practices and other factors that he or she thought had contributed to the student's success in school. When appropriate, follow-up questions were asked to gather additional information or to clarify responses. Afterward, the audiotape-recorded interviews were professionally transcribed so they could be analyzed.

The analysis of interview data in this study was accomplished through the use of qualitative methods following the guidelines of Huberman and Miles (1984, 1994). The analysis process consisted of three basic steps: data reduction, data display and consolidation, and triangulation. The first step was data reduction. This consisted of an examination by the researcher of each transcript individually to determine its content and to mark the factors and practices that the participant mentioned as having an influence on the student's success. A data summary of these factors was completed for each

interview. The next step was data display and consolidation. This consisted of displaying together all factors mentioned by members of a group so that common themes occurring in the interviews for that group could be identified. Factors that were mentioned by three or more participants in a group were considered to be recurrent themes for that group. The final step was triangulation. In this step, the results for all three groups were compared in order to determine the common themes that occurred in two groups and in all three groups.

This chapter presents the results of the analysis and is divided into five sections. The first section briefly describes each of the respondents. The second section presents the common themes that were found in the participants' responses for each group, and the third section presents the themes that were found in more than one group. The fourth section examines the three research questions that guided the study in light of the results of the analysis. The fifth section provides a brief summary of the chapter.

Description of Participants

A brief description of each participant is presented below with descriptions organized into six groups, each group consisting of a participating teacher, her student, and the parent of the student. All of the participant names used in this dissertation are fictitious to protect the confidentiality of the participants.

Interview Group 1

Teacher. Mrs. Welde was a veteran teacher 53 years of age, with 26 years of experience. For nine of those years she had been a media specialist in public schools in the continental United States, and for 17 years had taught the fourth and fifth grades in DoDDS.

Mrs. Welde's direct supervisor, the school principal, identified her as an excellent candidate for this research project because of her professional and personal experiences with AD/HD students. Mrs. Welde's personal understanding and experience with AD/HD children was furthered by the fact that both of her own children had been identified as having AD/HD.

Student. Dave was identified by Mrs. Welde, his fifth grade teacher, as a success both academically and socially during the 1998-99 school year. He was so successful he received the Presidential Award for Excellence. He was also awarded a Young Author's ribbon for a book he had written in a school competition.

At the time of the interview Dave was 11 years of age. He was involved with the Boy Scouts of America organization and was a member of the base library reading program. Dave had been diagnosed with AD/HD in the second grade after recommendation from his teacher for an evaluation. Medication therapy was not part of his program. His family was an excellent example of "his, hers and ours": he lived with his mother, his stepfather, and five siblings. He was the oldest child, with five siblings. Three of these were in the fourth, third, and second grades, respectively, while one was a toddler and the other a newborn.

Parent. Mrs. Braun, Dave's biological mother, was a homemaker in her early thirties. By the first week of school she had contacted Mrs. Welde to discuss Dave and his AD/HD. She was involved with the teacher almost daily through the agenda book (a notebook of daily assignments and correspondence for student, teacher and parent communication) and/or telephone conversations.

Mrs. Braun regretted not being able to volunteer in Dave's classroom, but she said that she did her best to give support in other ways. She reported that with two small children, she was able to participate in the activities conducive to the presence of small children.

Interview Group 2

Teacher. Mrs. Finch was a veteran teacher 46 years of age, with 23 years of teaching experience. For 13 of those years she had taught in DoDDS. Her background included experience in first, second, third, fourth and fifth grade. She also taught high school, special education and worked as Child Study Chairperson (CSC). Her direct supervisor, the school principal, identified her as an admirable candidate for this research project because of her professional experiences with AD/HD students.

Mrs. Finch had teaching experience in both regular education and special education classrooms. Under her current supervisor she had experience teaching with the special education teacher in the inclusion classroom, which was one model for providing special education services where the student remains in his/her regular education classroom. She had been chosen for that position because of her expertise and success working with students with identified special education needs, including students diagnosed with AD/HD.

Student. Betty was identified by Mrs. Finch, her fourth grade teacher, as a success both academically and socially during the 1998-99 school year. She was an A/B honor role student. At the time of the interview she was ten years of age and in fifth grade.

Betty had been diagnosed with AD/HD through the combined efforts of her second grade teacher and physicians at a U.S. Army hospital. Medication therapy was part of her program. She was an intelligent student who presented more difficulties socially than academically. Due to the fact that she was part of a single-parent home, her extracurricular activities were limited to specific school programs and the American Youth Association before- and after-school program. She lived with her father and her younger sister; her mother was deceased.

Parent. Mr. Colangelo, Betty's father, was in his thirties and a senior non-commissioned officer in the U.S. Army. He stated that he felt that Mrs. Finch was very aware of the effect of AD/HD and understood how to deal with Betty. He said that she did not single out Betty for special treatment, but that she gave her that little extra bit that she needed.

Mr. Colangelo regretted not being able to volunteer in Betty's classroom. He said, however, that he did his best to give support in other ways by participating in field trips, plays, and Career Day.

Interview Group 3

Teacher. At the time of the interview, Mrs. Ruffin was a veteran teacher 36 years of age, with 12 years of teaching experience. Her experience encompassed three years in early childhood education, one year teaching first grade, three years teaching third grade, four years teaching fourth grade, and one year teaching sixth grade. All of her experience had been with DoDDS.

Mrs. Ruffin's direct supervisor, the school principal, identified her as a praiseworthy candidate for this research project because of her professional experiences

with AD/HD students. She had several years of experience teaching with a special education teacher in the inclusion classroom. She had been chosen for that position because of her expertise and success working with students who had identified special education needs, including students diagnosed with AD/HD.

Student. John was identified by Mrs. Ruffin, his fourth grade teacher, as a success both academically and socially during the 1998-99 school year. He was the first-place winner in the school oral reading competition. At the time of the interview he was 11 years of age and in the fifth grade.

John had been diagnosed with AD/HD in third grade after his teacher requested an evaluation for special education services. Medication therapy was not part of his program. He was a smart young man who had emotional as well as learning difficulties and received special education services under Public Law 94-142 within the inclusion model, which means that he received special education services within the regular education classroom. John was an active participant in the after-school intramural program, and he also played basketball with the base youth program. He lived with his mother, father, and two sisters.

Parent. Mrs. Perez, John's mother, was a civilian employee for the Department of Defense, and Mr. Perez was a non-commissioned officer in the U.S. Army. The mother reported that both parents were very involved with John's educational program. They communicated with Mrs. Ruffin daily through the agenda book and/or telephone conversations.

John's father was the parent who spent more time volunteering in the classroom and did so several times a month. The parents said that they respected Mrs. Ruffin and

tried to support her in every way they could. One of their major concerns was moving back to the United States and finding another teacher who would take an interest in John the way Mrs. Ruffin had.

Interview Group 4

Teacher. At the time of the interview, Mrs. Panzarella was a veteran teacher in her fifties, with 24 years of experience. Twelve of those years had been spent in stateside public schools and the other 12 with DoDDS. Her background encompassed experience teaching the fifth, sixth, third, and second grades.

Mrs. Panzarella's direct supervisor, the school principal, identified her as a superb candidate for this research project. The principal emphasized both her professional experiences and her success with AD/HD students.

Student. Fiona was identified by Mrs. Panzarella, her third grade teacher, as a success both academically and socially during the 1998-99 school year. At the time of the interview she was ten years of age and in the fourth grade.

Fiona had been diagnosed with AD/HD when she was four through the Child and Adolescence Psychiatry department in a military hospital. Medication therapy was part of her program. She was a young lady with a combination of situations she had to overcome, including oppositional defiant disorder. She received special education services under Public Law 94-142 within the pull-out model, which states that the child will attend a special education classroom for part of the school day. Fiona took piano lessons weekly and loved participating in her ballet classes. She was an adopted child and lived with her mother, father, and older brother. She was an intelligent student who presented difficulties both socially and academically.

Parent. Mrs. Brown-Boam, Fiona's mother, was a professional civilian employee working overseas with the military population, and her husband was a civilian employee with the military hospital. They considered themselves older parents who were supportive of Mrs. Panzarella and characterized her as a "saint."

Mrs. Brown-Boam was not able to spend much time in the classroom, but felt that the daily report card communication with the teacher was crucial in Fiona's success. She reported that they had good experiences with the school and attributed this to their supportive, non-combative attitude. They also felt it was a necessity to encourage other positive adult relationships in Fiona's life through her piano and ballet teachers.

Interview Group 5

Teacher. At the time of the interview, Mrs. Lerner was preparing for her retirement. Though she did not choose to reveal her age, she had more than 30 years of teaching experience. She had a modicum of experience in third, fourth, and fifth grades, and the entirety of her experience was with DoDDS.

Mrs. Lerner's direct supervisor, the school assistant principal, identified her as a worthy candidate for this research project because of her professional experiences with AD/HD students. She had several years of experience teaching with a special education teacher in the inclusion classroom. She had been chosen for this position because of her expertise and success working with students who had identified special education needs, including students diagnosed with AD/HD.

Student. Bob was identified by Mrs. Lerner, his fourth grade teacher, as a success both academically and socially during the 1998-99 school year. At the time of the interview he was 11 years of age and in the fifth grade.

Bob had been diagnosed with AD/HD at the end of first grade and at the same time had also been diagnosed with learning disabilities, so he received special education services under Public Law 94-142 within the inclusion model. Medication therapy was part of his program. At the request of his parents he had been retained in first grade. He was involved with Boy Scouts and played sports with the base youth programs. He lived with his mother, father, brother, and sister.

Parent. Mrs. Ledlow, Bob's mother, worked at the school which Bob attended. Her husband was a civilian employee working overseas with the military population. Both parents were in their thirties.

Both Mr. and Mrs. Ledlow were involved in several activities supporting the development of their children, including sports teams and Boy Scouts. Mrs. Ledlow was not able to spend much time in the classroom, but she said that since she worked at the school, she had the opportunity to see Bob in various social situations and some learning situations. She felt that this was beneficial to his success. Her relationship with Mrs. Learner was positive, and she felt she could share information on AD/HD with Mrs. Learner without causing feelings of professional inadequacy.

Interview Group 6

Teacher. At the time of the interview, Mrs. Stewart was a veteran teacher in her fifties, with 24 years of experience. Her entire teaching experience had been in the primary grades, and she had spent 21 years with DoDDS.

Mrs. Stewart's direct supervisor, the school principal, identified her as an outstanding candidate for this research project. The supervisor cited her professional experiences and her success teaching AD/HD students.

Student. Susan was identified by Mrs. Stewart, her third grade teacher, as a success both academically and socially during the 1998-99 school year. She was an A/B honor role student and a member of the school chorus. At the time of the interview she was ten years of age and in the fourth grade.

Susan had been diagnosed with AD/HD in the second grade by a child psychiatrist at a military hospital. Medication therapy was part of her program. She lived with her mother, stepfather, and older sister; her father was deceased. She was an intelligent young lady who presented more difficulties socially than academically.

Parent. Mrs. Nussbaum, Susan's mother, was in her thirties and a registered nurse. She routinely spent considerable time in the classroom, generally two days per week. She also volunteered her time conducting the school hearing tests every year.

Prior to the start of third grade Mrs. Nussbaum had met with the principal and asked for Susan to be placed with a teacher who was aware of and understood the effects of AD/HD. She had also requested that the teacher be one who was willing to work with students who were diagnosed with AD/HD. She felt the school and administration were wonderful and remarked that there was lots of involvement between parents and teachers. She was thrilled that she was able to volunteer in the school and felt that this was a significant factor in Susan's success.

Summary

Overall, the six teachers had an average of over 23 years of teaching experience, most of it with DoDDS. Of the six children interviewed, two were in third grade, three in fourth, and one in fifth during the 1998-1999 school year. Four of the children were on medication therapy, and three were enrolled in special education services. All of the

children were involved in some form of extracurricular activity either in or out of school or both. Of the six parents interviewed, all had substantial communication with their children's teachers, sometimes on a daily basis, and several of the parents spent significant time volunteering in their children's classrooms. Table 1 provides a summary of some of the main characteristics of the three groups.

Common Themes for Each Group

This section presents the common themes that were found in the responses of each group of interviewees. The section is divided into three parts, which correspond to the three groups (teacher, parent, and student). Each theme is discussed separately and for each theme one or two quotations will be provides to illustrate the kind of comments that were made about the factor.

Common themes in a group of participants were considered to be those teacher practices and other factors that were mentioned by at last three members of the group. A number of such common themes were identified for each group. In most cases, even if two factors were closely related, they were considered to be separate and distinct themes. However, in a few cases, when the terminology of two factors might be different but had the same meaning, they were consolidated into a single theme. For example, all six teachers mentioned that parents and teachers communicated well on issues relating to the child's education and also that they worked well together on those issues. These two closely related factors were consolidated into the single theme of Good Parent-Teacher Working Relationship

Table 1

Profile of Participants

Teachers	Age	Years Experience	Years in DoDDS	Special Qualifications
Mrs. Welde	53	26	17	2 children with AD/HD
Mrs. Finch	46	23	13	Has worked with Spec. Ed.
Mrs. Ruffin	36	12	12	Has worked with Spec. Ed.
Mrs. Panzarella	50s	24	12	
Mrs. Lerner	-	30+	30+	Has worked with Spec. Ed.
Mrs. Stewart	50s	24	21	

Students	Grade	Medication	Special circumstances
Dave	5	No	Step Family
Betty	4	Yes	Single-parent family
John	4	No	Spec. Ed. services
Fiona	3	Yes	Spec. Ed. services; oppositional-defiant disorder
Bob	4	Yes	Spec. Ed. services
Susan	3	Yes	Step Family

Parents	Work	School involvement
Mrs. Braun	Homemaker	Near daily communication with teacher
Mr. Colangelo	Military	Support for field trips, other activities
Mrs. Perez	Defense Dept	Daily communication with teacher; husband volunteered several times/month
Mrs. Brown-Boam	Civilian Employee	Daily report card communication
Mrs. Ledlow	School employee	Observed child in school settings
Mrs. Nussbaum	Nurse	Volunteered two days/week

Common Themes for the Teachers

A total of 22 themes were found in the responses of the teachers. Of these, 15 were mentioned by all six of the teachers. Of the other seven themes, one was mentioned by five of the six teachers, four were mentioned by four of the six teachers, and two were mentioned by three of the six teachers. The themes were organized by strength according to the number of respondents that identified each theme as a factor of successful interaction between the teacher and students with AD/HD. Table 2 presents the full listing of the common themes for the teachers.

A Good Parent-Teacher Working Relationship. One commonality found in the responses of all of the teachers was that there had been a good working relationship between the parent of the AD/HD child and the teacher. The teachers all stated that it was important for parents to work with the teacher, and all mentioned that there had been good communication between teacher and parent about the child, through such means as agendas, notes, and behavior cards sent home with the student. All of the teachers indicated that they were open to information from the parents and from any source that would help in their efforts to teach their AD/HD students.

About communication with parents, one of the teachers said, "We stayed in really close contact.... She's [the parent] real good about the agenda book. If I have a note to go home it just goes in the agenda book.... She calls. I call her.... She's really good." Another teacher commented on the degree of support she had received from the parents:

> ... they were 100 percent supportive the entire time. Anything that -- academically, there was a lot of stuff that they couldn't help him with because they didn't necessarily understand where it was we were going, so - but they were more than willing to come in and let me explain it to them so that they could get him through it at home. So they were really helpful.

Table 2

Common Themes for Teachers

All teachers

- Good Parent-Teacher Working Relationship
- Caring Relationship between Teacher and Student
- Acceptance of Student as an Individual
- Positive Feedback
- Counseling the Student
- Good Organization
- Consistency and Predictability
- Clear Expectations
- Explaining Clearly
- Modifying Tasks
- Many Approaches
- Use of Humor
- Attention to Physical Environment
- Preventive Approach
- Outside Activities

Five teachers

- Eye Contact

Four teachers

- Flexibility
- Not Yelling
- Assigning Jobs
- Wait Time

Three teachers

- Behavior Contracts
- Touch

Caring Relationship between Teacher and Student. A second common theme for all of the teachers was the presence of a caring relationship with the student. This involved the teacher's expressing her concern for the student and her genuine interest in

the student as an individual. The two third-grade teachers and one of the fourth-grade teachers mentioned that they had thought of themselves as having a "mothering" role with the children they taught, and all six of the teachers indicated that they cared about the children as individuals.

One teacher said about working with the AD/HD child, "I think relationship is everything." Another made the following comment:

> I cared about him . . . . Forget school and forget you were in trouble over the weekend, tell me how you are; and I don't think that he has very many people talk to him, not about him, but talk to him. When he realized that I really cared how he was, he wanted to do well.

Acceptance of Student as an Individual. Another theme that was expressed in all six of the teacher interviews was acceptance of the student as an individual. This involved accepting the child where he or she was and being tuned-in to the child's special needs and behaviors. It included the teacher's recognition that it was sometimes necessary to modify directions, tasks, or modalities in order to meet the child's learning needs.

One teacher expressed this idea by saying, "All students learn different and you can't teach the class, you've got to teach the child." Another teacher made the following comment:

> As long as we're moving, whether it's emotionally, socially, or academically from one level to the next, that's where I'm headed. It doesn't really matter what level they start on; it's just a matter of getting them to the next level.

Positive Feedback. All six teachers talked about the value of giving the AD/HD child positive feedback for his or her behavior or accomplishments. Teachers commented on how giving positive feedback to the child helped to build confidence and

self-esteem. Some examples of positive feedback were a smile, a pat on the back, or verbal praise such as "way-to-go."

One teacher emphasized the importance of giving lots of positive feedback and doing it very quickly by saying, "The most effective tool: very quick and numerous reinforcements." Another teacher said, "They need lots of feedback, particularly at the very beginning when you're trying to sort of train them, lots of feedback like you go by and tap on their desk, smile at them, and make eye contact."

Counseling the Student. All of the teachers mentioned spending time with the student with AD/HD in order to help him or her to better cope with social and/or educational problems. Teachers spoke about both individual counseling time and group discussions for the sake of modeling behaviors. In group discussions teachers talked students through both academic and social difficulties using these natural opportunities as learning situations for all the students.

One of the teachers made the following comment in reference to counseling one-on-one with her student about a behavior/social problem:

> He needed to focus on the problem. He needed to focus on what happened because even after it was over, a lot of times in his brain, it went so fast that he didn't fully comprehend everything that went on. So it helped us to review, it helped us to analyze the situation; and then we had to come up with some coping mechanisms and learn to make a situation turn out better next time.

Good Organization. All of the teachers emphasized that they took good organization seriously. This included such matters as keeping the classroom and the school day structured and making sure that student folders and homework assignments were organized. They thought that structure was important for the AD/HD child – not structure in terms of rigidity, but just in the way of clear organization. This was seen as a

way of giving the student tools which would help increase their sense of competence in and out of the school setting.

One of the teachers described what she did as, "Organizing my day, organizing their day, organizing their time, telling them what they're going to do if they don't think they can finish something, how they're going to do it, what we're going to do with this." Another comment was, "There is a pattern.... this is what happens – this is how it happens – this is where it goes, but within that structure, we could be anywhere, but the structure doesn't change. A framework."

Consistency and Predictability. This factor, which was mentioned by all six teachers, was closely related to the theme of Good Organization. The teachers all indicated that they took consistency to be an important factor to help the child to know what to expect from the teacher and the class. They felt that predictability and consistency were important calming and settling influences that helped the student to better focus on lessons and tasks and to learn better.

One teacher said, "It's consistency he needs. So that he knows he has this area in which he functions, and here's what he has to do." Another teacher commented: "I'm very consistent about consequences, and that makes a big difference to kids."

Clear Expectations. This was a factor that was closely related to the themes of Good Organization and Consistency and Predictability, but was considered to be a separate theme. All of the teachers said that they had tried to make sure that the AD/HD child knew what was expected of him or her in regard to such matters as behavior in the classroom and academic achievement. Providing Clear Expectations was considered to be a factor that helped the student to better focus on lessons and assignments and on

goals to be achieved. It was also considered to be an important aid for behavior management.

One teacher said, "I think it has a lot to do with expectations, and I let them know right away—the first day of school; and I repeat it a lot and just try to get it to be a part of them." Another said, "They know what the consequences are going to be for everything, for everything."

Explaining Clearly. This theme referred to the teachers' emphasis on explaining concepts, assignments, and rules in clear, understandable language for the child. Although this theme was different from Clear Expectations, it was related to Clear Expectations because giving the students clear expectations required clearly explaining what the expectations were. All six of the teachers mentioned this factor.

In talking about clearly explaining things, the teachers seemed well aware that the AD/HD student might have more difficulties than some other students in understanding ideas or completing assignments. One of the teachers commented, "I think what really helped her learn was the clarity with which I explain things and the way I list things on the board; and I help the kids a lot with organizational skills."

Modifying Tasks. All of the teachers talked about sometimes modifying tasks for the AD/HD child in order to make them more attainable by the child. Ways to modify tasks included breaking them down into smaller parts, allowing the AD/HD child more time to complete a task, and changing the modality of a task, for example from written to oral.

One teacher said the following about breaking down tasks:

> I break down large tasks into smaller tasks because an ADD kid will look at something and they'll look at the whole thing they have to do rather than the parts.

I like to get them to finish this part, then the next one and so forth and they can build on that success.

Many Approaches. All of the teachers mentioned that they had used a variety of approaches in teaching the AD/HD child. They believed that it was important to be open to trying different methods in order to find what worked best with each child. They felt it was necessary to consider each student's individual needs when determining methods or techniques for teaching new concepts.

One of the teachers said, "I don't know whether I've trained them or they have trained me, but I think you just have to try everything; I don't know anything else that works." Another teacher commented, "I try whatever I can with whomever I can."

Use of Humor. The use of humor in the classroom was one approach that all of the teachers talked about. For all the teachers humor was considered an important instructional tool. As a technique, the use of humor helped to create a non-threatening and enjoyable environment in the classroom that encouraged learning.

One teacher made the following comment about her use of humor: "Yeah, we make up all sorts of jokes or expressions . . . we have lots of fun. School is supposed to be fun." Another teacher talking about humor said, "You have to hook them in to wanting to pay attention. . . . It's the tap dance, basically."

Attention to Physical Environment. All six teachers said that they paid attention to arranging the physical environment in the classroom so as to enhance learning. Arranging the environment to be calming and so that it helped bring about a sense of belonging were mentioned. At least two of the teachers had couches in their classroom.

One of the teachers said, "I like for them to be comfortable; and I think if they're comfortable, they're going to learn there." Another comment made by one of the teachers was following:

> I used to change posters in his area so that the colors were muted. It was like fuzzy pictures, as opposed to bright sunshine. We kept his area calm. We kept his desk calm. I play music all the time so we did calm music.

Preventive Approach. All of the teachers mentioned things that they did to prevent problems in the classroom. Sometimes these were actions that the teacher took that were meant to keep problems from arising and at other times to keep a developing problem from getting any worse. Some examples were considering how AD/HD might affect the child's interactions with other particular individuals when setting up groups, preferential seating, and separating certain students in line.

An example of a comment made about preventing problems from arising was, "I don't allow the kids to have anything on their desk they can fiddle with." A comment about seeing a problem developing and taking some action to alleviate it was the following:

> I would have my most difficult time right before lunch because everybody's medicine was wearing off and I was trying to do math class. . . . There were times when I would tell them, 'Do you need to sit somewhere else?' and it wouldn't be a punishment.

Outside Activities. All of the teachers mentioned that their AD/HD student had been involved in outside activities. Their comments indicated that they felt that this was beneficial to the student in building confidence and positive self-esteem. Also, many students with AD/HD have a lot of extra energy, and outside activities could help teach those students to use their extra energy in a positive way.

One teacher made the following comment about attending a presentation where her student received some awards:

> He is very active in scouts and he is extremely successful, and when he did his – I think he got the Arrow of Life, his crossover thing or something like that; and my husband and I were invited. He got so many badges, unbelievable. So he really likes that, and that makes him very, very successful.

Eye Contact. Five of the six teachers mentioned eye contact as something they had used in dealing with the AD/HD student. Eye contact was a method to keep the student's attention and help the student to keep focused on the lesson or task. It was also a way to show the student that the teacher was watching and aware of what the student was doing or not doing in the classroom.

One teacher said, "I think the eye contact thing you tend to do automatically." Another said, "I give them the look, they call it the teacher look, and they know what they're doing."

Flexibility. Four of the six teachers referred to their flexibility in their approach to the AD/HD student. They indicated their willingness to change approaches in order to meet the student's specific needs. This factor was closely related to the theme of Many Approaches. These teachers adjusted their programs so that their students were able achieve success rather than continuing with the standard way of doing things if those ways were not working to help the student succeed.

One teacher said, "... a spelling test came up on Friday, and he had games on Thursdays. He didn't do okay, so I moved my spelling test to Thursdays." Another teacher made the following comment: "I feel out the situation; and I figure what works for that point in time. . . . it's essential to be flexible."

Not Yelling. Four of the teachers mentioned yelling as something that they specifically did not do in the classroom. The teachers talked about keeping their voice under control and showing a matter-of-fact attitude and not anger in the way they spoke.

One teacher said, "I use my firm voice, but I don't yell. I'm real matter of fact. I don't ever get emotional about it [behavior]. I think the kids feed off that." Another teacher said, "The voice I use in the classroom is this voice right here. I never ever raise my voice, ever."

Assigning Jobs. Four teachers talked about assigning specific jobs to the AD/HD student. The teachers mentioned using jobs both as a means of positive reinforcement and for distraction if the child needed a break. This was one way to utilize the child's extra energy in a positive way.

One teacher made the following comment:

> He was my message person; so I made up messages once every afternoon, and it allowed me to let him get out of his seat, out of that room, change his environment; and when he came back in he was ready again to settle for a long enough attention span that I could get the information that I needed to get to him.

Wait Time. Four of the teachers mentioned wait time as a specific practice they had used in the classroom. Wait time is the practice of letting the child have as much time as needed to answer a question. Wait time was useful when the student may have been experiencing nervousness or anxiety when called on by the teacher to answer a question during class. This extra time allowed the student to relax and gather his or her thoughts before answering.

One teacher made the following comment about giving the child plenty of time to answer:

> Wait time – I am very good at that. I'll wait forever. I'm serious about this and they know that after awhile and I think it makes them feel a little calmer. I make the class wait too if a student needs time, and they get used to that.

Behavior Contracts. Three of the teachers said that they had used behavior contracts with their AD/HD student. These were agreements by the student that he or she would behave in some way or accomplish something. They typically included a daily record and target goals such as not talking out of turn in class or finishing a certain proportion of each assignment.

One teacher made the following comment about this factor:

> I have a contract with him, and he has three behaviors on the contract. He has to show respect for children and adults; he has to finish three-quarters of his assignments, which is a major task, but he usually does it; and he is not to blurt things out in the classroom. And if he can stay under control he gets to spend the last 20 minutes of the day in a reward group.

Touch. Three teachers mentioned touch as a specific practice they had used with the AD/HD student. They used touching on the shoulder, for example, as a way to keep contact with the student and to provide positive feedback. Holding the child's hand when standing in line was another method used which helped to transfer the teacher's concern and/or to calm the child.

One teacher made the following comment, which indicated that she had used touch as a way to keep the child mentally and emotionally present in the classroom:

> A lot of times I would walk around the room; and then I would just walk by and just pat her on the back or something; and that brings them back to you. Touching, you know, touch on the shoulder.

Common Themes for the Parents

A total of 13 themes were found in the responses of the parents. Of these, seven were mentioned by all six parents, two was mentioned by five of the six parents, one was

mentioned by four of the six parents, and three were mentioned by three of the six parents. Table 3 presents the full listing of the common themes for the parents. Each of these themes will be discussed separately and selected quotations are provided for each theme.

Good Parent-Teacher Working Relationship. All six of the parents mentioned that they had worked well with their child's teacher. Good communication with the teacher was especially emphasized as important by the parents.

One parent said, "She always wrote us notes to keep us informed about his progress and what wasn't completed." Another expressed the fact that the teacher was very receptive to communication by saying, "I can call the teacher just to check up and say 'How's he doing?"

Acceptance of Student as an Individual. All of the parents indicated that the teacher had accepted their child as an individual who had his or her own unique strengths and weaknesses. They felt that the teacher understood and was able to meet the child at his or her own ability and behavioral level.

One parent said, "He knew that he needed extra help, but she never focused on that. She always made him feel like he could do what anybody else can do, and that was real good for him." Another commented, "She knew what his needs were, and she made sure they were met, stayed on top of him."

Table 3

Common Themes for Parents

All parents

- Good Parent-Teacher Working Relationship
- Acceptance of Student as an Individual
- Positive Feedback
- Counseling the Student
- Good Organization
- Clear Expectations
- Outside Activities

Five parents

- Teacher Knowledgeable about AD/HD
- Caring Relationship between Teacher and Student

Four parents

- Student Happy in Classroom

Three parents

- Flexibility
- Not Yelling
- Preventive Approach

Positive Feedback. All six parents mentioned that the teacher had provided positive feedback to their child. All indicated that this had been beneficial to their child's success in the classroom.

One parent made the following comment:

> . . .at the award ceremony, she did come up and in front of him, you know, told how proud she was. She wanted him to know that she was definitely proud of him and he could definitely do it,. . . that helped to hear it from a teacher and not – you know, "Mom, you have to say this."

Counseling the Student. All of the parents said that the teacher had counseled their child to help him or her with special difficulties or problems. Several commented that their child needed this extra attention in order to learn from a situation.

One parent commented, "I think he thinks she understands him, and he usually feels better after talking to her." Another said, ". . .there was a lot of discussion about sharing and taking turns and . . . this kind of stuff."

Good Organization. All six parents spoke favorably about the teacher's organization. They commented on the teacher's ability to structure her class and her ability to model organizational skills for the child.

One parent said, "She's organized; she keeps them focused." Another commented, "She was structured and she was always on time and did what she said she was going to do when she said she was going to do it."

Clear Expectations. All of the parents said that the teacher had provided clear expectations to their child. Several of them related this to the teacher's good organization.

One parent said, "She was firm and strong, I mean keeping them focused, letting them know what she expected from them, and understanding what they could give her in return." Another said, "Everything was the same everyday, and he knew what to expect."

Outside Activities. All of the parents spoke about the outside activities that their child was involved in. The parents expressed their views that such activities were beneficial to their child.

One parent made the following comment:

> She has a very nice piano teacher. She has a ballet teacher. She has other people that are adults in her life; and I specifically try to create that because, with a child

like this, it's very, very difficult. I don't want her to feel bad about herself, so if you have other relationships out there, I think she does do better.

Teacher Knowledgeable about AD/HD. Five of the parents expressed their approval of the teacher's knowledge of AD/HD. They talked especially about the teacher's understanding of ways to teach the AD/HD child.

One parent made the following comment: "I believe the biggest thing for him last year was the knowledge that she had of his disability; she'd show him how to work with what he had." Another said, "She's someone that understands the needs and understands what AD/HD is and that it's just not a child wiggling in their seat and not wanting to do their work."

Caring Relationship between Teacher and Student. Five of the parents mentioned that there had been a caring relationship between the teacher and student. They generally thought that the teacher's showing that she cared for the child had had a positive effect on the child's education.

One parent said, "I know she liked him and she was nice to him. He loved her. He thought she was God's gift to teaching." Another commented, "He felt that she really cared about him, and I think that's going to carry him for a while."

Student Happy in Classroom. Four of the parents mentioned that their child had been happy in the teacher's classroom. Several parents indicated that they thought the child had been happier in the teacher's classroom than in any other class before or since.

One parent said, "He [the student] absolutely loved it." Another parent commented, "She loved being there, and she loved all the activities that they worked on."

Flexibility. Three of the parents remarked on the flexibility of the teacher. They spoke approvingly of the teacher's open and non-rigid attitude and of her willingness to try different methods in teaching the student.

One of the parents made the following comment: ". . . she's one of those sort of people that sort of, well, we'll try it out, see what happens.... there's this flexibility there." Another parent stated, "This woman was this very easy going, flexible lady."

Not Yelling. Three parents pointed out that the teacher had refrained from yelling in their child's classroom. Two of these parents indicated that they especially admired this quality because they understood that dealing with the child's behavior could be quite frustrating.

One parent commented simply, "She never yelled." Another said, in reference to dealing with the child patiently, "She likes kids to begin with. I think that's from her personality, and she's very professional."

Preventive Approach. Three out of the six parents commented on the teacher's taking a preventive approach to problems. This involved the teacher seeing the potential for a problem to develop and then taking action to prevent that development.

One parent stated, "She just was really good at knowing when [child's name] was off track and just really immediately getting her back on." Another said, "I think she was good on picking up what all the individual kids were doing. . . . "

Common Themes for the Students

A total of 13 themes were found in the statements of the students. Of these, nine were mentioned by all six of the students, one was mentioned by five of the six students, and three were mentioned by four of the six students. Table 4 presents the full listing of

the common themes for the students. Each of these themes will be discussed separately and selected quotations for each are provided.

Caring Relationship between Teacher and Student. All six students indicated that their relationship with their teacher had been good. They all indicated that they had liked their teacher and felt that their teacher had liked them.

One student said, "I knew she like – in her heart I was her favorite student. I know that." Another student commented, "She smiles a lot and she was a nice teacher."

Positive Feedback. All of the students said that their teacher had given them positive feedback. They expressed this by speaking of things that the teacher did to show approval.

Table 4

Common Themes for Students

All students

- Caring Relationship between Teacher and Student
- Positive Feedback
- Counseling the Student
- Good Organization
- Consistency and Predictability
- Explaining clearly
- Many Approaches
- Student Happy in Classroom
- One-on-one Help

Five students

- Special to See Teacher off School Grounds

Four students

- Not Yelling
- Equitable Treatment
- Use of Humor

One student said, "She'd pat me sometimes or she'd put a sticker on my report card. I have a sticker collection." Another commented, "She gave it back and she said, 'Very good, you're the highest scorer. You got the highest score. I'm proud of you.' "

Counseling the Student. All six students mentioned ways or incidents in which the teacher had counseled the student. Counseling involved individually talking with the student about issues or talking with the class about social problems or incidents.

One student said, "Like if something happened outside, she would talk about it inside with everybody." Another stated, "We talked about things. The whole class talked about things."

Good Organization. All of the students talked about good organization. In some cases their comments were about the organization of the teacher and/or the class. In other cases the comment was about the teacher helping the student become more organized.

One student made the following comment about becoming more organized during the school year. "At the beginning of the year, I wasn't so organized and at the end – like at the middle and at the end, I started getting organized and I started learning."

Consistency and Predictability. All of the students commented on the consistency of the teacher and/or the classroom. In their comments, it was clear that some of the children recognized their need for consistency.

One of the students said, "I need structure, I have problems when I don't have it. I don't do that in her class—I know she won't accept it." Another commented, "First, we copy our assignments, then we do DLP (Daily Language Practice) and get our journals ready. It's the same every day."

Explaining Clearly. All six students said that their teacher had explained things clearly to them. They commented on aspects of explaining clearly such as talking slowly and drawing pictures on the board to help explain something.

One student said, "She wouldn't go too fast. She would draw it on the board. She wouldn't just say it (this is how you do this), she would stop and draw it or something, explain it." Another made the following comment: "She would help you do things. If you didn't really understand something, she would stop and explain it."

Many Approaches. All six students commented on the various approaches their teacher had used in the classroom. They all indicated their appreciation of the teachers' use of different approaches.

One student commented on how singing helped him learn multiplication and other facts. He talked about "Videos—Multiplication Rock, Vowel Rock, Grammar Rock, and American Rock."

Student Happy in Classroom. All of the students said that they had been happy in the teacher's classroom. They indicated not only that they had learned in the teacher's class, but also that they had had fun there.

One student said, "Really I wanted to be here every single day." Another commented, "I feel good about school. I like it, school. I like being here at [name of school]."

One-on-one Help. All six students said that their teacher gave them help individually. Several of these noted in addition that the teacher always had time for them.

One student said, "She had time to walk around the room and help other people. She helped everybody." Another remarked, "If you were having trouble she would come to your seat and help you."

Special to See Teacher Off School Grounds. Five of the students talked about seeing their teacher off the school grounds, while out shopping or in some other context. They regarded unexpected encounters with their teacher to be special events.

One student said, "When I was with my mom at the commissary, I saw her. I'd say hi to her and give her a hug. I like her a lot." Another said, "Once she came over to our house. It was cool."

Not Yelling. Four students mentioned that their teacher had not yelled in at them. They generally associated this with the teacher being patient and not being angry with them.

One student said, "She didn't yell at anybody." Another commented, "She didn't go "QUIET!" to me."

Equitable Treatment. Four students commented that the teacher treated them equally with the other children. Their comments indicated they did not mean that they thought that they were always treated exactly the same by the teacher, but that they were treated fairly and equitably.

One student said, "She helped pretty much everybody. She treated everybody equal." Another commented, "Whatever somebody needed she'd reach out to them and help them."

Use of Humor. Four of the students talked about the teacher's use of humor in the class. Their comments made clear that they thought that the teacher's use of humor had been a positive aspect of the class.

One student said, "She was funny – strict sometimes, cool." Another made the following comment: "She makes me laugh—I don't know—things are funny."

Common Themes for More Than One Group

In this section, the common themes that were found in more than one group of participants will be presented. The section is divided into two main parts. The first part identifies the themes that were common to two groups, and the second lists the themes that were common to all three groups.

The method for determining which themes were common to more than one group was to identify the themes that were mentioned by at least three members of more than one group. Table 5 lists the common themes for each combination of two groups – teachers and parents, teachers and students, and parents and students – and it also lists the common themes for all three groups.

Themes Common to Two Groups

Themes common to teachers and parents. A total of 11 themes were found to be common to both the teachers and the parents. Of these, all six members in each of these groups mentioned eight. These eight factors were the following:

- Good Parent-Teacher Working Relationship
- Caring Relationship between Teacher and Student
- Acceptance of Student as an Individual
- Positive Feedback

- Counseling the Student
- Good Organization
- Clear Expectations
- Outside Activities

The other three themes that were common to the teacher and parent groups are listed below. The number of individuals in each group that mentioned the factor is also listed (T is for teachers, and P is for parents).

- Preventive Approach (T = 6, P = 3)
- Flexibility (T = 4, P = 3)
- Not Yelling (T = 4, P = 3)

Themes common to teachers and students. A total of nine themes were found to be common to the teachers and the students. Of these, all six members of each group mentioned seven factors. These themes were the following:

- Caring Relationship between Teacher and Student
- Positive Feedback
- Counseling the Student
- Good Organization
- Consistency and Predictability
- Explaining Clearly
- Many Approaches

Table 5

Themes Common to Two and Three Groups

Themes Common to Teachers and Parents

- Good Parent-Teacher Working Relationship
- Acceptance of Student as an Individual
- Good Organization
- Preventive Approach
- Not Yelling
- Caring Relationship between Teacher and Student
- Positive Feedback
- Counseling the Student
- Clear Expectations
- Outside Activities
- Flexibility

Themes Common to Teachers and Students

- Caring Relationship between Teacher and Student
- Consistency and Predictability
- Many Approaches
- Not Yelling
- Counseling the Student
- Good Organization
- Explaining Clearly
- Use of Humor

Themes Common to Parents and Students

- Caring Relationship between Teacher and Student
- Good Organization
- Not Yelling
- Counseling the Student
- Positive Feedback
- Student Happy in Classroom

Themes Common to All Three Groups

- Caring Relationship between Teacher and Student
- Positive Feedback
- Counseling the Student
- Good Organization
- Not Yelling

The other two factors mentioned by at least three teachers and three students are listed below. The number in each group that talked about the theme is listed beside each entry (S is for students).

- Use of Humor (T = 6, S = 3)
- Not Yelling (T = 4, S = 3)

Themes common to parents and students. Six themes were common to both the parents group and the students group. All six in each group mentioned the four themes listed below:

- Caring Relationship between Teacher and Student
- Positive Feedback
- Counseling the Student
- Good Organization

The other two common themes for parents and students are listed below along with the number in each group that mentioned the factor.

- Student Happy in Classroom (P = 4, S = 6)
- Not Yelling (P = 3, S = 4)

Themes Common to All Three Groups

Out of the 27 themes that were identified in one or more groups, a total of five were found to be common to all three groups. These were the following:

- Caring Relationship between Teacher and Student
- Positive Feedback
- Counseling the Student
- Good Organization

- Not Yelling

All six members of each group mentioned the first four of these themes. The fifth, No Yelling, was mentioned by a total of 11 members in the three groups (T = 4, P = 3, S = 4).

Summary

This chapter provided a summary of the analysis of data. The first section presented a brief description of each of the 18 participants. The second section listed the themes that were present in the interviews of each group. The third section identified the themes that were present in more than one group. Five themes were found to be present in all three groups: Caring Relationship between Teacher and Student, Positive Feedback, Counseling the Student, Good Organization, and Not Yelling. Several other themes were present in two groups. The next chapter, Chapter V, provides a summary of the study, the findings, the answers to the research questions, the implications for practice with AD/HD students, and recommendations.

CHAPTER V

Summary, Implications, And Recommendations

This chapter presents a summary of the study and its results. The first section reviews the purpose of the study, the research questions, population, and procedures for collecting and analyzing the data. The second section presents the major findings of the study and provides answers to the research questions based upon these findings. The third section compares the findings of this study for working with AD/HD students and relates it to the literature and research in Chapter II. The fourth section reports the implications of this study for working with AD/HD elementary students who are mainstreamed in the regular classroom. The fifth and final section reports recommendations for DoDDS and for further research in the area of teaching and learning of AD/HD students.

Summary of the Study

Purpose

The purpose of this study was to examine specific teaching practices related to successful teacher and student interactions that resulted in the academic and social school success of students diagnosed as AD/HD. Three research questions guided the study:

Question One: What influence do teachers have in increasing successful school experiences of the AD/HD student?

Question Two: Are successful teachers able to identify their AD/HD students' needs related to academic and social success in school as defined in the literature?

Question Three: What specific practices do teachers use that promote the academic and social success of students exhibiting AD/HD behaviors?

The study was conducted for teachers and their AD/HD students in the DoDDS elementary schools located in the Kaiserslautern District in Germany. Six third through fifth grade teachers who had been identified by school administrators as successfully teaching AD/HD students during the 1998-99 school year, six of their AD/HD students who had been successful in the 1998-1999 school year, and six parents of those students comprised the population of the study.

Instrument

These 18 subjects were interviewed using an interview schedule (Appendix B) designed to address the research questions. The interview schedule sought to determine: (1) teacher influence on AD/HD students, (2) the extent of the teacher's awareness of the AD/HD student's learning needs, and (3) successful teaching strategies used with AD/HD students. The interview schedule included predetermined questions and allowed for additional probing questions to gather additional information or clarify responses.

Three experts in special education and AD/HD from the Kaiserslautern school district were asked to examine the instrument for clarity and to determine whether it adequately covered the research questions. Based on their feedback, minor editorial changes were made to the instrument. A field test of the interview schedule was then conducted with a teacher experienced in working with AD/HD students, one of her AD/HD students, and a parent of the student. Based on the field test feedback, again, only minor editorial changes were necessary.

Procedures

After gaining permission to conduct the study from the Kaiserslautern DoDDS District Superintendent's Office, the researcher contacted administrators of the 12 elementary schools in the Kaiserslautern District to explain the study and ask for their cooperation in identifying teachers at their school who had successfully taught at least one AD/HD student during the 1998-1999 school year. Fourteen teachers were identified. The researcher then contacted teachers on this list and asked them to be part of the study and to identify one of their students and a parent of the student who would be willing to be in the study. This was continued until six groups of three subjects each had been identified. During the course of the study, three of these original groups were replaced by other teacher-student-parent groups.

In-depth interviews of the eighteen participants were held from June 1999 to March 2000, with interviews lasting about one hour. All of the interviews were audiotape-recorded after permission to record the interview was given by the participant. Afterward, the interviews were professionally transcribed so that they could be analyzed.

Data Analysis

Analysis of interview data was done using qualitative methods following the guidelines of Huberman and Miles (1984, 1994). This process consisted of three main steps: (1) data reduction to identify common themes in the interviews, (2) data display, which organized the information so relationships could be discovered, and (3) drawing and verifying conclusions among the three groups of subjects.

In analyzing the interviews, the researcher first looked for common themes within each group and then for common themes that occurred in two and three of the groups. By

means of this systematic analysis of the interview responses, answers to the research questions were able to be determined.

Major Findings

This section consists of two main parts. The first summarizes the major findings of the study that were presented in Chapter IV. It briefly presents the results for each of the three groups – teachers, parents, and students – and the themes that were common to more than one group. The second presents the answers to the research questions based on the findings.

Summary of Findings

For teachers, a total of 22 common themes were found in their responses. These included 15 that were mentioned by all six of the teachers, one theme that was mentioned by five teachers, four that were mentioned by four teachers, and two that were mentioned by three teachers.

All six of the teachers indicated that as they worked with their AD/HD students they developed good parent–teacher relationships; developed a caring relationship with the student; accepted the student as an individual; provided positive feedback; counseled the student with social and academic problems; had good organization; were consistent and predictable; provide clear expectations; explained clearly; modified tasks; used many approaches; used humor; attended to the physical environment; used a preventive approach; and participated in some of the student's outside activities.

In addition three or more teachers noted that during their work with AD/HD students they used eye contact and touching to keep students on task; were flexible; used

wait time, behavior contracts and assigned these students special jobs. They also reported that they did not yell at students.

For parents, a total of 13 common themes were found. Seven of these were mentioned by all six parents, two were mentioned by five parents, one was mentioned by four parents, and three were mentioned by three parents.

All six of the parents indicated that as the teacher worked with their AD/HD child they developed good parent–teacher relationships; accepted their child as an individual; provided positive feedback; counseled their child on social and academic problems; had good organization; provided clear expectations; and participated in some of the child's outside activities.

Three or more of the parents reported that their child's teacher was knowledgeable about AD/HD students; had developed a caring relationship with their child; had a student happy classroom; was flexible and used a preventive approach. They also noted that the teacher did not yell in the classroom.

For students, a total of 13 common themes were found. Nine of these were mentioned by all of the students, one was mentioned by five students, and three were mentioned by four students.

All six of the AD/HD students indicated that as the teachers worked with them; the teacher developed a caring relationship with the student; provided positive feedback; counseled them on social and academic problems; explained clearly; was consistent and predictable; used many approaches; provided one–on–one help and had classrooms where the students were happy.

Four of the six students reported that their teachers treated them equitably; had a good sense of humor; and did not yell at them. Five of the six said that it was special to see teachers off school grounds.

Several of the themes were mentioned by at least three members of more than one group. There were 11 themes that were common to both the teachers and the parents, including eight themes mentioned by all members of both groups. Themes mentioned by all teachers and parents included:

- Good Parent-Teacher Working Relationship
- Caring Relationship between Teacher and Student
- Acceptance of Student as an Individual
- Positive Feedback
- Counseling the Student
- Good Organization
- Clear Expectations
- Outside Activities

The other three themes that were common to the teacher and parent groups (with the numbers from each group) were Preventive Approach (T = 6, P = 3), Flexibility (T = 4, P = 3), and Not Yelling (T = 4, P = 3).

There were nine themes common to teachers and students. Seven of these were mentioned by all members of both groups. These seven included:

- Caring Relationship between Teacher and Student
- Positive Feedback
- Counseling the Student

- Good Organization
- Consistency and Predictability
- Explaining Clearly
- Many Approaches

The other two common themes between teachers and students were Use of Humor (T = 6, S = 3) and Not Yelling (T = 4, S = 3).

There were six themes that were common to parents and students. All members of both groups mentioned four of these:

- Caring Relationship between Teacher and Student
- Positive Feedback
- Counseling the Student
- Good Organization

The other two common themes for parents and students were Student Happy in Classroom (P = 4, S = 6) and Not Yelling (P = 3, S = 4).

A total of five themes were found to be common to all three groups. These were the following:

- Caring Relationship between Teacher and Student
- Positive Feedback
- Counseling the Student
- Good Organization
- Not Yelling

All members of each group mentioned the first four of these themes. Not Yelling was mentioned by a total of 11 participants (T = 4, P = 3, S = 4).

Answers to Research Questions

On the basis of the results presented in Chapter IV, the three research questions that guided the study were answered. This section addresses these three research questions. The section is divided into three parts, each part corresponding to one of the research questions. The questions were answered on the basis of the common themes that were found in the interviews.

Research Question One asked what influence teachers have in increasing the successful school experiences of the AD/HD student. That is, do the attitudes and actions of the teachers of AD/HD students have a substantial effect on their success? To help answer that question it was necessary to determine whether the teachers interviewed for this study helped bring about a more successful school experience for their AD/HD students who were interviewed.

The individuals who were in the best position to answer the question of whether the teacher positively influenced the child's success were the AD/HD student, the parents of the student, and the teacher. On the basis of the interviews of these individuals, there was strong evidence that all six of the teachers involved in this study had a substantial positive influence on the success of the students that they taught. In all of the interviews, the participants related the teacher's practices, attitudes, and efforts to the student's success. This is further supported by the agreement between two or more groups on several factors relating to the teacher's practices and attitudes.

There were five teacher-related factors that all three groups mentioned as having a positive influence on the student. Four of these were characteristics and practices of the teacher: providing "Positive Feedback", "Counseling the Student", having "Good

Organization", and "Not Yelling". The fifth factor, which was mentioned by all students and parents, was not so much a specific practice or characteristic as it was the teacher's attitude toward the student, which was one of developing a "Caring Relationship between Teacher and Student".

In addition, both the teachers and the parents mentioned several other characteristics, practices, and attitudes of the teacher that they felt were conducive to the student's success. These included using a "Preventive Approach", having "Clear Expectations", being "Flexible", and "Acceptance of the Student as an Individual". Both of these groups also mentioned the factor of having "Good Parent-Teacher Working Relationship", which also reflected on the teacher's practices.

Further, both the teachers and the students mentioned several other practices of the teacher that they felt had positively influenced the student. These were using "Many Approaches", "Use of Humor", "Explaining Clearly", and behaving with "Consistency and Predictability".

Overall, there was overwhelming support for the idea that for each of the teacher-student pairs in this study, the teacher had positively influenced the child's success in school. This finding gave evidence for a positive answer to Research Question One. On the basis of the findings of this study, it appears that the practices and attitudes of teachers of AD/HD students did influence the success of the students.

Research Question Two asked whether successful teachers are able to identify their AD/HD students' needs related to academic and social success in school as defined in the literature. The specific question for this study was whether the teachers were able

to identify their students' needs for achieving academic and social success as those needs are specified in the literature.

The literature review made clear that the two main symptoms exhibited by children with AD/HD were difficulty sustaining attention and focusing on tasks, and hyperactive and/or impulsive behaviors (Children and Adults with Attention-Deficit/Hyperactivity Disorder, 2000a). Generally, such children have found their greatest challenge to be at school because of the requirement for attention and impulse control (Fowler, 1991). Disorganization, not following instructions, and not completing tasks have been cited by Fowler as leading to poor performance.

Social problems with peers in and out of school have also been found to affect the AD/HD child (Bloomquist, 1996; Whalen, Henker, & Demoto, 1981). Further, The ADD Center (2000) pointed out an association between difficulties in school and the development of a negative self-image.

Given these problems associated with AD/HD, a number of needs of the AD/HD child have been identified. One of these was the need for structure (Ranucci, 1991; Fowler, 1991). Fowler stated that the AD/HD child functions best in an organized environment in which rules and expectations are clear and consistent and rewards for meeting expectations are clear and immediately given.

Another important need of the AD/HD child was for a positive, accepting attitude by the teacher toward the child. Research has shown that children with AD/HD are recipients of added negative attention from their teachers (Whalen, Henker, & Dotemoto, 1981). Also, Bloomquist (1996) stated that poor relationships with their teachers might affect the academic performance of the AD/HD student. Furthermore, Fowler (1991)

asserted that the AD/HD student needs acceptance from his or her teacher. This and other evidence thus indicated that a positive, accepting attitude by the teacher is an important need for the AD/HD student.

A third need of the AD/HD child in the classroom is the child's need for behavioral management techniques. Greene (1992) stated that teachers who are experienced in methodologies for handling AD/HD behaviors tend to be more successful. Hudsen (1997) pointed out that the classroom should be one in which behavioral procedures are part of the curriculum.

A fourth need of AD/HD students that has been identified is for creative teaching strategies (Rief, 1993). The AD/HD child often has special difficulties maintaining attention, and creative and engaging strategies are often needed to help him or her focus. Ambramowitz and O'Leary (1993) pointed out that increased use of stimulating materials might increase attention of the AD/HD student.

These four needs are among the most important that have been noted for the AD/HD child in the classroom. For each of the needs, the present study provided strong evidence that the teachers interviewed understood and acted on that need.

In the case of the need for structure, all of the teachers interviewed understood the special need for organization and structure for the AD/HD student. This was evidenced by the fact that among the themes mentioned by all six teachers were Good Organization, Consistency and Predictability, and Clear Expectations, which were all factors relating to structure and organization. The teachers all showed in the interviews that they recognized that these were important issues for their AD/HD student. The fact that the

teacher understood the student's need for structure and organization was also shown by the fact that themes related to organization were present in student and parent interviews.

In the case of the second need of the AD/HD student, the need for acceptance, the results of the data analysis showed that the teachers were also knowledgeable about this need. This was shown in the teacher themes of Acceptance of the Student as an Individual and Caring Relationship between Teacher and Student. It was clear from the interviews with the teachers that they understood and acted upon the need for treating the AD/HD child in a positive and accepting way.

For the third need, the need for teachers to use techniques of behavioral management, it was again clear that the teachers recognized and acted upon it. All of the teachers mentioned using such behavioral techniques as Positive Feedback, Modifying Tasks so that they would be more achievable by the AD/HD student, and Counseling the Student on social and academic problems. Teachers also used Behavior Contracts and Touch as behavioral management tools. The fact that the teacher used such methods was reinforced by the interviews with parents and students. For example, both groups mentioned Positive Feedback and Counseling the Student as methods that the teacher used.

In regard to the fourth need, the need for creative teaching strategies, the results of the interviews showed that the teachers were also aware of this need. This is supported by the fact that both the use of Many Approaches and Use of Humor themes were reported by the teachers and students. In addition, Flexibility was a theme reported by teachers and parents. All of these themes suggested that the teachers were open to various teaching methods and strategies.

Overall, the results strongly indicated that the six teachers were aware of and acted on the special needs of their AD/HD students. In fact, this could be considered as a primary reason for their success in teaching their students. These findings gave evidence for a positive answer to Research Question Two. On the basis of the results of the interviews, it appeared that successful teachers were able to identify their AD/HD students' needs related to academic and social success in school that were found in the literature.

Research Question Three asked what specific practices teachers use that promote the academic and social success of students exhibiting AD/HD behaviors. To answer this question, the practices that teachers in this study used to promote the academic and social success of their AD/HD students were identified.

The interviewees mentioned a number of teacher practices that they thought had helped lead to the success of the student. Of these, every participant in all three groups mentioned three practices. These were Positive Feedback, Good Organization, and Counseling the Student. Another practice that was mentioned by at least three people in all three groups was Not Yelling.

In addition, several teacher practices were mentioned by at least three members of two groups. Teachers and parents reported that the teacher used a Preventive Approach and had Clear Expectations. The themes of Consistency and Predictability, Many Approaches, Explaining Clearly, and Use of Humor were also identified as practices used by teachers in teaching the AD/HD student.

Overall, there were 11 teacher practices that at least three members of two or more groups mentioned as beneficial to the AD/HD student. These 11 practices provided

an answer to Research Question Three since they were specific practices that teachers in the study used that promoted the academic and social success of their AD/HD students. These 11 teacher practices were the following:

- Caring Relationship between Teacher and Student
- Positive Feedback
- Counseling the Student
- Good Organization
- Not Yelling
- Preventive Approach
- Clear Expectations
- Consistency and Predictability
- Many Approaches
- Explaining Clearly
- Use of Humor

Implications

On the basis of the findings from this study, it was possible to draw implications for educators working with AD/HD students. Most of these are consistent with the literature and research reported in Chapter II.

First, teachers of AD/HD students have an effect on the social and academic success of those students. There was substantial evidence that this was true for the teachers and their students interviewed in this study. This is in agreement with Barkley's (1995) assertion that the AD/HD child's interaction with significant adults was the most important aspect in the maturation of the AD/HD child, which implies that the child's

teacher can have an important effect on the child. It also supports Fowler (1992) who indicated that teachers have been found to be the most commonly cited reason for an AD/HD student's positive or negative school experience.

Second, the teacher's classroom attitude was an important factor in affecting outcomes of students with AD/HD. In the present study, the teachers' classroom personality included displaying an open, positive attitude that showed a genuine concern for their AD/HD students, and this attitude seems to have been a factor in their successfully teaching the students. This is supported by Greene (1992), who held that the teacher's classroom personality was a main element that affected outcomes for students with AD/HD. In addition, Bloomquist's (1996) reported that the student-teacher relationship played an important role in the AD/HD student's academic performance. The teachers in the present study were also willing to work with the children on a personal level, support the child emotionally, and make appropriate accommodations. Rief (1993) claimed that all of these behaviors were necessary to successfully teach the AD/HD student.

Third, these results suggested that teachers who were knowledgeable about AD/HD were more likely to take a positive attitude toward their AD/HD students and their behaviors in the classroom. In the present study, all of the teachers interviewed were knowledgeable about AD/HD through training and/or experience as a parent of an AD/HD child. This may have played a part in the positive and accepting attitudes displayed by the six teachers. It supports Savage (1991), who claimed that different ways of viewing learners lead to different ways in which teachers exercise leadership and authority in the classroom. It also agrees with Greene (1992), who reported that teacher

attitudes, expectations, perceptions, and beliefs affected the teacher's interactions with AD/HD students.

In addition, it seems likely that by thoroughly understanding AD/HD, the teachers in the study were better able to deal with students patiently, keeping their tempers and not raising their voices. Greene (1992) pointed out that there were multiple ways to interpret the behaviors of a student with AD/HD and that a teacher who did not understand the disorder might think the child was deliberately misbehaving. Rief (1993) suggested that if the teacher understands the physiological and biological basis of AD/HD, then he or she will better understand that the child's attention-deficit, impulsive, or hyperactive behaviors are not due to deliberate choice.

Fourth, these findings pointed out that good classroom organization, consistency, predictability, and clear expectations were important factors in teaching the AD/HD child successfully. These practices were used by all of the teachers in this study and were considered by members of all three groups to be factors that helped lead to the success of the AD/HD students. This is in agreement with Hudsen (1997), who said that AD/HD students should be placed in highly structured and well-managed classrooms. Moss and Dunlap (1996) reported that the child with AD/HD needed to be in a structured classroom with few distractions; they also pointed out that this did not mean that the classroom must be boring. Rief (1993) added that a structured classroom could be an inviting and stimulating one for AD/HD students.

A Fifth implication of this study was that the use of behavior management strategies by teachers can affect the success of students with AD/HD. The teachers in this study used behavioral management strategies that seemed to have a positive impact

on the child's success. These included such practices as using behavior contracts, giving positive feedback to the student, taking a preventive approach to problems, counseling, and eye contact. This is consistent with Greene (1992), who maintained that teachers who were sophisticated in their understanding of AD/HD and were experienced in methodologies for managing AD/HD behaviors had greater potential for successful outcomes with their students.

The sixth implication of these interviews was that the partnering of teachers of AD/HD students with the students' parents could increase the success of the student. In the present study, all of the teachers and parents worked together and communicated well, which seems to have had a substantial beneficial effect on the children. This was consistent with Bloomquist (1996), who indicated that it was vital for parents and school personnel to form a partnership on the student's behalf. Atkeson and Forehand (1978) held that collaboration between parents and teachers resulted in improved homework performance. Furthermore, Batsche and Knoff (1994) claimed that the failure of parents, educators, and medical and mental health personnel to work together is a threat to the AD/HD child's success.

This study clearly revealed that the success of AD/HD students tended to increase when the teacher was proactive in modifying lessons, assignments, and approaches to help insure that the lessons are correctly targeted to the AD/HD student. In the present study, the teachers used many approaches in their teaching and were willing to change approaches in order to meet the AD/HD child's needs, and it was believed by both teachers and students that this added to the child's success. This is in agreement with Abramowitz and O'Leary (1991), who stated that teachers of AD/HD children might

need to make significant modifications to curriculum and classroom layout. Further, Twiss (1997) held that teachers of AD/HD students should consider restructuring their teaching plan to insure that they meet the needs of all children in the classroom.

The eighth implications that emerged from the findings was not grounded in or supported in the review of literature. This study suggests that involvement of the AD/HD child in outside activities and the teacher attending those activities, may have a positive effect on the child's success at school. Both teachers and parents noted the involvement of their children in extracurricular activities such as scouting, music, and dance, and they thought that this had been of positive benefit to the children in helping to build self-esteem and social skills.

This was a very individual factor, however, it was important for the child to be involved in activities that he or she chooses and enjoys. It is also important for parents and teachers to be supportive of the child in such activities and to stay aware of how well the child is doing in them.

Finally, on the basis of the findings of the study and the literature reviewed, a profile of a successful teacher of AD/HD students can be presented. She (or he) has a caring and nurturing nature and works to develop positive relationships with the AD/HD student and his or her parents. She understands AD/HD and how it affects the student, and she accepts the student as an individual. She is always able to find appropriate positive feedback and to give it sincerely. She is adept at counseling, has the intuition and ability to talk a student through a problem to the solution, uses a preventive approach to avoid difficult situations, and is patient and never yells at the student. She enjoys teaching, truly likes kids, and makes learning fun. She sees the humor in situations and

enjoys sharing it with her students. Organization is a priority for her. Her expectations are clear, and her classroom feels safe and predictable. While she is structured in her expectations, she is flexible and capable of finding many ways to accomplish her goals. She wants the students to succeed and will modify her approaches in whatever ways are necessary to insure their success. Although this is study focused on successful teachers of AD/HD students these teacher practices could be used by any effective teacher.

Recommendations

There are a number of recommendations that can be made on the basis of this study. These are presented below in relation to several groups, including teachers of AD/HD children, parents of AD/HD children, the children themselves, school principals, the DoDDS System, and researchers. These recommendations may be of benefit to school districts with similar demographics to those of DoDDS, Kaiserslautern District and should be particularly appropriate for the Kaiserslautern District itself.

Teachers

This research provided evidence that the success of the teachers studied in teaching AD/HD students was due to their sensitive and accepting attitude toward the students, their knowledge of AD/HD and behavioral management of AD/HD children, and their teaching practices. On the basis of these results a number of specific recommendations can be made to teachers.

1. It is recommended that the teacher of AD/HD students be committed to working with the AD/HD child on an individual basis. Each of the successful teachers in the present study took into account the special learning challenges of the AD/HD child under her care, focused on the specific needs of the student, and offered counseling as needed.

2. It is recommended that teachers collaborate and coordinate with the parents of the AD/HD student and develop a good parent-teacher working relationship on behalf of the student. This study showed that all of the teachers had a good working relationship with the AD/HD students' parents, and this seemed to have played a role in the students' successes. By working together, teachers and parents are more likely to have a common understanding of what is best for the academic and social successes of the student.

3. Closely related, it is recommended that teachers promote open communication between the home and school utilizing whatever forms best meet the parents' needs (e.g., written letters and memos, phone call, and/or email). This provides the parents with a rich source of information on the child's conduct at school each day as well as information about the child's homework. It also provides the benefit of more frequent feedback for the students from the teacher and parent, which AD/HD students need.

4. It is recommended that teachers of AD/HD children take a proactive role in fostering a warm and caring climate in the classroom. The caring attitude that was described by the teachers, parents and students in this study seems to have played an important role in the students' success. Teachers should be nurturing, should provide opportunities for the AD/HD student to excel in his or her areas of strength, and should recognize these students' successes. This should be done in an atmosphere in which the teacher displays a genuine commitment to the AD/HD student's success.

5. It is recommended that teachers of AD/HD students focus on good organization and on consistency and predictability in the classroom. The teacher's focus on organization should include modeling good organizational skills that will help the AD/HD student in his or her later years of education and as an adult. It should also

include demonstrating and presenting concepts so that expectations are clear for the AD/HD student. Creating structure for AD/HD students will help to foster a sense of security and set them up for success.

6. It is recommended that teachers of AD/HD students attend and/or participate in outside activities in which the AD/HD student participates.

Parents

Parents of AD/HD children should be the first advocate for their children, and how they fulfill this role is one of the highest predictors of student success. Parents also possess knowledge, competency, and diverse ideas that can help in the education of their child. Based on the review of literature and the findings of this study, several specific recommendations to parents of AD/HD children can be made.

1. It is recommended that parents of AD/HD children should take a proactive role in obtaining the best educational services available for their child. This should start with the parents being aware of the laws and regulations pertaining to education for children with AD/HD so that they will know what the child is entitled to under the law. If the parents suspect that their child has AD/HD, they should notify school personnel so they can begin to monitor the child's academic and social behavior at school. The parent should follow the progress of this monitoring while consulting closely with involved school administrators, counselors, medical personnel, and teachers.

2. It is recommended that parents of AD/HD children should communicate the importance of academic and social success to their children, modeling how they value the importance of both of these. This may be shown through involvement in school programs and ongoing contact with school personnel. In addition, the parents should

assist the AD/HD student with academic activities, decision making, planning, and organizing and should instill the concepts of respect, responsibility, and accountability in the AD/HD student to help reinforce what is taught at school.

3. It is recommended that parents of AD/HD children should insure proper and consistent use of any medication which is a part of the AD/HD student's treatment.

4. It is recommended that parents of AD/HD children work closely with and communicate often with their child's teacher to make sure that they are kept abreast of the student's progress and that the teacher and parents are working together for the same goals. Good communication between parents and teachers was one of the factors found in the present study to be associated with success in teaching the AD/HD child.

5. It is recommended that the parents of AD/HD students encourage schools to place their AD/HD child with teachers who are knowledgeable about AD/HD and have the teaching skills and the commitment to work with these students.

Students

Accountability and responsibility will ultimately fall on the shoulders of the AD/HD student. The student is in the best position to know their limitations and needs. With knowledge and an understanding of this disorder they will be equipped to take control of their social and academic success. AD/HD will not be an excuse, but a disorder they learn to compensate for on a daily basis.

1. It is recommended that children with AD/HD learn as much as possible about AD/HD and how it affects them. This is likely to help them to be able to deal more effectively with the symptoms of AD/HD. Teachers and parents are advised to help

educate the child about AD/HD, while at the same emphasizing to the child his or her strengths and potentialities.

2. It is recommended that the student become involved in social activities such as scouting, dance, sports, music, or other youth organizations which help develop social skills and self-esteem. All of the students in the present study engaged in activities outside school, and both parents and teachers commented on the value of these for the students. Parents should pay close attention to the child's success in and enjoyment of outside activities to help insure that they do in fact help further the child's self-esteem.

Administrators

The administrator is an important member of the educational team. He/she must organize programs to help support both classroom teachers and parents of AD/HD students in the school, as well as create a framework in which AD/HD students can achieve success.

1. It is recommended that administrators match AD/HD students with teachers who are knowledgeable about, trained in and experienced with dealing with AD/HD students and especially with those who have a proven record of success with AD/HD students. It is important that AD/HD students, who tend to have difficulties that many other students do not, are given the best opportunity for success by being provided teachers who are well equipped to teach them.

2. It is recommended that administrators match their supervisory skills to the developmental needs of teachers in order to promcte their success with AD/HD students. The supervisor should assume a high degree of responsibility with definite, concrete, and immediate assistance to teachers with AD/HD students in their classrooms. He or she

should know, understand, and be able to apply validated teaching and learning principles related to AD/HD.

3. It is recommended that administrators form a collaborative and respectful working relationship with the parents of AD/HD students. This should include continued open communication, the orchestrating of parent training programs, and the offering of options for parent involvement with the school through many different avenues, such as home tutoring and assisting in the classroom. The administrator should be visible and personable in interactions with parents, students and teachers, working to create a warm, supportive school environment.

DoDDS

The Department of Defense Dependent Schools System is an organization under the Department of Defense Education Activity (DoDEA), whose mission is to provide quality public education to children of military and civilian Department of Defense personnel in seven states, Puerto Rico, Guam, and 13 foreign countries. Many of the AD/HD students attending DoDDS are placed in regular education classrooms without the benefit of modifications. Therefore we make the following recommendations to ensure the success of theses AD/HD students.

1. It is recommended that DoDDS adhere to a low student/teacher ratio for classrooms containing AD/HD students. According to Rief (1993) lower student/teacher ratios has a direct impact on the success of the AD/HD student.

2. It is recommended that DoDDS districts and individual schools conduct teacher in-service training for AD/HD instruction to assist teachers to work more effectively with AD/HD students. This is in agreement with Greene (1992), who recommended that

teachers be assisted in recognizing and understanding AD/HD through workshops, seminars, and video taped presentations. In-service training topics could include recognition of AD/HD, educational challenges presented by the AD/HD student, discipline and classroom management plans, specifics of planning for learning experiences, and the use of a variety of teaching strategies. It could be useful for teachers to observe and interact with veteran teachers who are adept at analyzing and working with AD/HD students and who can model effective instructional techniques and strategies.

3. It is recommended that DoDDS develop a policy for assigning the AD/HD student to classrooms where the teachers have experience or a background in AD/HD and/or some special education training.

Researchers

For researchers, this study offers a starting point for a better understanding of factors related to successfully teaching AD/HD students in DoDDS, Kaiserslautern District. More information should be gained through additional studies. Several suggested areas for future research are identified below.

1. It is recommended that this study be replicated in other DoDDS Districts and in districts in the United States. This could serve to test the results of the present study while providing a larger database.

2. Studies could be conducted that compare samples of AD/HD students and their teachers and parents who have had both successful and unsuccessful experiences in order to gain an understanding of the variety of difficulties and successes that have occurred

during the educational process and to help further determine the factors that are associated with success.

3. A longitudinal study should be conducted which follows the same AD/HD students over several years and includes interviews with their different teachers and with their parents each year. In this way, it might be possible to correlate variations in a student's success over time with teaching attitudes and practices.

4. It is recommended that a study be conducted which is similar to the present study except that it also involves the perceptions of other members of the education team, including administrators, nurses, instructional aides, and/or teachers of special classes such as physical education, art, and music.

5. Although this study looked at the influence teachers have on the academic and social success of AD/HD students, a future study could be conducted on the influence of parental involvement on the academic and social success of the AD/HD student.

6. Research is needed on successful teachers of AD/HD students with no prior AD/HD training or experience in special education.

7. A qualitative study should be conducted combining interviews with direct observations to determine specific techniques or methods for teaching AD/HD students.

8. Information is needed concerning the different ways in which successful teachers have built good parent-teacher working relationships.

Summary

This chapter included a brief summary of the purpose, instrument, procedure, and analysis used in the study. The findings of the study were also summarized, and the interview results were organized to address the three research questions. In regard to

Research Question One, the study provided evidence that teachers had an influence on the success of their AD/HD students. In regard to Research Question Two, the study provided evidence that successful teachers of AD/HD students were knowledgeable about and responded to the needs of those students. In regard to Research Question Three, the study found ten practices teachers of AD/HD students used that promoted the success of their students.

A number of implications were drawn on the basis of the findings of the study and the literature reviewed. Also, on the basis of the study findings, recommendations were made regarding the teachers of AD/HD students, the parents of AD/HD students, the students themselves, administrators in schools serving AD/HD students and DoDDS. Possible future studies related to the learning and teaching of AD/HD students were also identified.

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APPENDICES

APPENDIX A

Kaiserslautern District Third, Fourth, and Fifth Grade Enrollments, 1998-99

School	Third	Fourth	Fifth
Bad Kreuznach Elementary School	52	58	48
Dexheim Elementary School	11	10	12
*Kaiserslautern Elementary School	97	98	86
*Landstuhl Elementary/Middle School	84	97	84
Neubreucke Elementary School	41	39	30
*Ramstein Elementary School	264	0	0
Ramstein Intermediate School	0	273	245
Sembach Elementary School	110	0	0
*Sembach Middle School	0	91	110
Smith Elementary School	59	52	40
*Vogelweh Elementary School	116	96	92
Wetzel Elementary School	65	66	64

Note. Schools with asterisks are those from which teachers and students were chosen for this study. Figures as of September 30, 1998.

APPENDIX B

Student Interview Schedule

Explanation of the research and purpose:

You have been identified as successful this year. I need your help to find out what helped you in school this year. Teachers need to learn what works with AD/HD students like yourself, from the student's point of view.

This is not a test and there are no right or wrong answers. If you do not know the answer to a question, I ask you to just say I don't know, that's perfectly OK. I will be tape recording because I want to be able to listen carefully and concentrate on what you are saying. I don't want to miss anything you say. I want to know what you think.

Demographic information:

Your name is *(blank)*. How old are you? What grade are you in this year? Who is your teacher? How long have you been in Germany? How long have you been attending this school? Why do you think your teacher feels you are successful in school this year? Is this year any different than other years? How? Why? How do you feel about school?

Questions:

1. What is your school day like? What happens in your classroom? Does it change?
2. Why do you think you were successful this year? Can you tell *(teacher)* thinks you are a successful student? How?
3. Describe *(teacher)*, what does he/she do to help you learn?

Possible follow-up:

A. Does he/she always do things the same way each day?

B. Is she usually busy or does he/she have time to help you?

C. What does *(teacher)* do that is most helpful when you are learning something new?

D. What do you like most about what *(teacher)* does in class?

5. What do you like or think is fun and special that *(teacher)* does?

6. Can you think of a time when you did really well in class? What happened?

Possible follow-up:

A. What did you do?

B. What did *(teacher)* do?

C. How does this make you feel?

D. Is this different from what *(teacher)* does with other students?

5. What does *(teacher)* do when you are having trouble learning in class?

Possible follow-up:

A. How does this make you feel?

B. How does this help you?

C. Is this different from what *(teacher)* does with other students who are having trouble learning?

4. What does *(teacher)* do with you when you are not in class that you like? For example:

A. On the playground?

B. In the lunchroom?

C. After school?

D. Before school?

9. Is there anything we haven't talked about that you think has made a difference for you in school this year?

***Thank you. You have been helpful and given me lots of good ideas.

Parent Interview Schedule

Explanation of the research and purpose:

The goal of our interview is to identify the techniques, characteristics, and practices of successful teachers of students diagnosed with Attention-Deficit/Hyperactivity Disorder (AD/HD) based on your experience with *(teacher's name)*. I am conducting this research to help students diagnosed with AD/HD and their teachers. You have been identified as the parent of a successful AD/HD student during this school year. As a parent of such a child you have insights that may help other AD/HD children and their teachers. I hope you will share anything that has helped *(child)* this year as you answer the questions I ask.

Demographic information:

How long have you been in the KMC? How long has *(child)* been in this school? How do you feel about *(Child's)* school? How do you feel AD/HD students are treated in this school? When, where, why, how, who diagnosed *(child)* with AD/HD? In your words what is AD/HD?

Questions:

1. How do you think *(teacher's name)* feels about *(child's name)*? About AD/HD students?
2. How do you think *(child's name)* feels in *(teacher's name)* class?
3. Do you think *(teacher)* has been successful with *(child)*? How.
4. Does the *(teacher)* help him/her get along with others, with other students? How?
5. Based on your experience what does *(teacher)* do to help your child?

Possible follow-up:

A. To help *(child)* learn?

B. Time for *(child)*?

C. Consistency?

D. Why do you think this is so?

6. What do you see as the major needs of *(child)* to be able to learn in school? What about getting along with others? (peers)

   Possible follow-up:

   A. Do you think *(teacher)* has addressed these?

7. Does *(teacher)* do anything special when your child is successful or having problems? Example?

8. Describe your relationship with *(teacher)* this year.

   Possible follow-up:

   A. What kinds of things did you do with the school?

   B. Is this different this year from past years?

3. Are there other things at home or outside of school that have changed or that might have influenced *(child's)* success?

4. Is there anything we haven't talked about that you think has made a difference for your child this year?

***Thank you. You have been helpful and provided great insight.

Teacher Interview Schedule

Explanation of the research and purpose:

The goal of this research is to identify the techniques, characteristics, and practices of successful teachers of students exhibiting Attention Deficit/Hyperactivity Disorder (AD/HD) behaviors. I am conducting this research to help teachers who work with students diagnosed with AD/HD. You have been identified as having success with AD/HD students this year. Discovering what leads to success should help other AD/HD students to succeed.

Your student, *(name)*, was identified as successful this year and I want to discover what you did, as a teacher, to promote this success.

Demographic information:

Name, grade(s) you teach or have taught? How long have you taught? How long in this school/grade? How many students in your class? How many AD/HD and special education students in your class this year.

Questions:

In responding to these questions please keep *(name)* in mind.

1. What have been your experiences and interactions with AD/HD students?
2. How do you feel about teaching *(name)* and the other AD/HD students in your class?
3. Tell me your beliefs and feelings about AD/HD students.
4. What did you do this year to help *(name)* learn?

Possible follow-up:

A. Instruction- planning, delivering, following up, what do you do? (When working in groups, class discussions, or when getting in line)

B. What do you do when *(name)* is successful?

C. What do you do when *(name)* is having difficulty?

D. Is this the same or different from what you do with other students?

5. What are the techniques or instructional methods that are most effective in promoting academic and social growth for *(name)* and other AD/HD students?

6. What is the most important thing to remember to do when working with AD/HD students?

Possible follow-up:

A. To what does he/she respond best?

7. What is it that you have done special with *(name)* that you think has made a difference?

8. Are you aware of any things that have changed outside of school that may have affected his/her success?

9. Tell me about *(name's parents)* and your involvement with them this year.

Possible follow-up:

A. What have you done?

B. What have they done?

C. Do you feel there was anything here that made a difference? Why?

10. I have compiled a list of ten things the literature states are important for the academic and social success of AD/HD students (hand copy to teacher).

Possible follow-up:

A. What do you see as the most important?

B. Do you personally or conscientiously do any of these things with AD/HD students?

C. With *(name)*?

D. With regular students?

E. Tell me a little more about this.

11. Is there anything we haven't talked about that you think has made a difference for you this year?

***Thank you. You have been helpful and provided lots of good insight.

Ten Possible Classroom Interventions for The AD/HD Student

1. Give them structure.
2. Give them frequent feedback.
3. Use logical consequences for unwanted behaviors.
4. Teach in novel ways with lots of humor.
5. Break down large tasks into smaller tasks.
6. Be consistent and predictable.
7. Provide ample wait time.
8. Make eye contact before giving instructions.
9. Ask student to restate instructions before beginning independent practice.
10. Utilize preferred seating.