L·E·A·R·N·I·N·G
DISABILITIES
A Multidisciplinary Journal

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Table of Contents

Editor's Note

Grace Fernald
A Remembrance by a Student

Sometimes we think that encountering reading disabilities by individuals is a recent phenomena. Not so. The stories of people from the past reveal how people over the years struggled with reading problems and were helped to learn to read. The following letter was written by a grateful student whose life was changed by a gracious teacher, Grace Fernald. When she died in 1950 at the age of 70, Grace Fernald had touched the lives of many children and adolescents, whom she had taught to read. She also developed theories and methods of learning that continue today as an education force for future generations (Fernald, 1943/1988). This poignant letter was written by Jack D. Barchas to honor his teacher, Grace Fernald (http://www.historyliteacy.org/98_spring/Fernald_stu.html), Jack Barchas recalled with amazing clarity and detail his experiences with Grace Fernald and the Fernald school at the University of California, Los Angeles.

I was the oldest in a family that came to have eight children. Even when very young, my parents talked with me about the world and the politics of the day—we were in the middle of World War II. I liked learning about things. With my second-grade teacher, my otherwise happy world seemed to come to an end. While I was well behaved in school, everything I did or said from the teacher's perspective was wrong. While only a second-grader, I knew I wanted to be a doctor and a medical researcher and in my heart I believed I would be able to do those things well. She asked to see my parents. Because of all the young children at home, my father came alone. It was after school and I was at one end of the room sitting quietly. I can remember hearing her tell my father I was retarded and, of course, would never be a doctor. I can also remember him patiently, but very firmly, telling her he disagreed about my intelligence and that I would be whatever I wanted.

My parents revered education. They called UCLA and were given the name of Grace Fernald, who agreed to see me in her private practice. I remember Dr. Fernald's house from the first visit somewhat differently than does my mother. I though it was grand. It was to me, a very big Spanish home in a very nice area of Westwood (what is now called Little Holmby Hills). It had a tall vaulted ceiling of wood and big timbers with a huge stone fireplace. I was amazed by the furniture which I though must be antique and enjoyed looking at the oriental carpets. There were many shelves with books. Everything was very neat and very quiet.

Dr. Fernald was friendly, gray haired, with a wonderful smile. After talking to my parents, she took me into her office. It was a small office with a big desk and many books. It seemed quite cozy and comfortable. We talked. She then told me I would be given an IQ test. It was fun. At a couple of points we both laughed at some of the questions: "If you fire two bullets at somebody and the first bullet kills the person, what does the second bullet do?" She also did some other testing. I did not feel at all nervous. At the end she told me that I had done just fine and would be learning to read and spell very quickly. She and I were going to impress Miss Potter (a pseudonym). And, we did!

Dr. Fernald's kinesthetic approach involved writing in the air as well as tracing words in large written or scripted format. My mother was very interested in the method and we worked hard on it after school between my visits to Dr. Fernald. In those visits Dr. Fernald was always cheerful and always smiling. As a child, I felt I had a new friend, one who I knew was helping me in very important ways. I wanted to do well.

By the summer, Dr. Fernald decided I should enroll in the class being taught at UCLA for children with my type of problem. My parents taught me to take the big blue bus from Pico and Robertson in West Los Angeles directly to the UCLA bus stop and to navigate to the other side of

campus across its various little ravines to the wooden school building near Sunset Boulevard that housed Doctor Fernald's program. The building was a simple barracks-style green structure that smelled very much of wood, cheap drawing paper, and the type of paint that children used to use many years ago. In the course of getting back and forth to her building I, of course explored many buildings and many ravines!

The class had fewer than sixteen pupils. We sat two pupils to a table. There was a student teacher, who was a UCLA trainee for every two pupils. Dr. Fernald was in the background circulating among the pupils and the student teachers. She did not run the class but was clearly in charge. The student teachers rotated being in charge of the class. The method of instruction was quite interesting. Every day each pupil had to dictate a story to his or her student teacher. It could be as long as you wanted - mine were quite long. The teacher wrote it all down. The next day she (all the student teachers were, as I remember, young women) would bring the story back, typed up on a special typewriter that made letters that I recall as being about a half-inch in height. We then read our stories to the student teachers from the neatly typed manuscript. I appreciated what a nice job the student teacher had done. We then would practice some of the words of the story, which were written on big cards (in my mind's eye the cards were about two or three inches high and about ten inches long). We would trace the words and learn to spell them. While one of the student teacher's pupils was reciting his (most of the pupils were boys) story, the other pupils were doing the word practice, including softly repeating his story and tracing words. There was some work involving the group as a whole with larger cards.

Dr. Fernald always seemed to be in a good mood and as I look back on it, seemed to have an individual relationship and concern for each of the pupils and student teachers. Nevertheless, some of the students also had trouble behaving themselves. She was stern about the class being a place to learn. Students who could not behave in the class had to leave and go outside. I remember one or two of those students had to leave the class permanently.

The sessions lasted a half-day. They included recess breaks as well as some time for painting. Much of that was finger painting, dipping our hands into chalky paints which had a rather nice smell.

Once I got the notion of reading I became quite avid. I tried to explain to Miss Potter what I was learning from Dr. Fernald. But Miss Potter made it quite clear that she was not interested.

Forty-five years after the experiences in this story, I was again at UCLA. Having spent twenty-five years on the Stanford faculty and holding an endowed chair there, I was invited to become Dean for Neuroscience and Research at the UCLA Medical School. I spent four years there before coming to New York. The ravines at UCLA have been filled in. There are far more buildings, and Grace Fernald's simple wood classrooms have recently been torn down for a new business school. But UCLA still has a Grace Fernald School, and it is considered one of the crown jewels of the institution.

In my current positions as Chair of Psychiatry at the New York Hospital Cornell Medical Center with responsibility for its Payne Whitney Clinic, and editor of one of the major scientific journals of psychiatry, I have sometimes wondered what Grace Fernald would have thought. How did life change for some of the other boys as a result of her help and ministrations? I still use aspects of the Fernald method to this day. It thus is a great pleasure to be able to pay homage to her here. I did not know her as a leader in her field – though I came to recognize that. Rather, I knew Dr. Fernald as a teacher who clearly loved helping children who had problems and who – with my two remarkable parents – made possible for me the future I dreamed of.

Jack D. Barchas, Chair, Department of Psychiatry, New York Hospital, Cornell Medical Center and Editor of *Archives of General Psychiatry*.

This remarkable remembrance of Grace Fernald and her methods shows that much what of what our current reading research is uncovering has been used effectively for a long time. What are some of the key lessons of this remembrance?
• Students with serious reading problems have tremendous potential if they receive appropri-

ate instruction.
- These students need intensive, small group instruction.
- The regular classroom setting (inclusion) often does not meet the needs of pupils with serious reading problems.
- Multisensory methods are effective.
- The language experience approach is useful.
- Repeated reading methods are effective.
- Integrating oral language, reading, and writing enhances all language components.
- Rapport, a healthy teacher-pupil relationship, is an essential ingredient.

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The Articles in This Issue.

The articles in this issue of *Learning Disabilities: A Multidiscpilinary Journal* present important topics in the field of learning disabilities

Challenges in Evaluating Eligibility Criteria and Accommodations Needs for Postsecondary Success by Carol A. Layton and Robin H. Lock examines the relationship between the eligibility report developed through individual state education agency (SEA) rules to meet IDEA criteria and the Association for Higher Education and Disabilities (AHEAD) standards for the documentation of a learning disability at the postsecondary level. For students with disabilities in the public schools, schools are required to meet the standards mandated by federal law in the Individuals with Disabilities Education Act (IDEA). In contrast, when students enter college programs, their institutions of higher education are challenged to interpret information for students with disabilities to determine eligibility according to the Americans with Disabilities Act (ADA).

The Effects of Child Maltreatment on Learning Disabilities and Intervention by Barbara Lowenthal describes the types of maltreatment , their possible effects on learning, and school interventions that can assist children with a learning disability. Unfortunately, the rate and intensity of child maltreatment in increasing. Special educators should consider the possible effects of maltreatments of children with learning disabilities.

Giving Students with Learning Disabilities the POWER to Write: Improving the Quality and Quantity of Written Products by Jeffrey Bakken and Craig Whedon report on a study conducted to determine if students with learning disabilities could be taught a cognitive strategy with self-instruction to improve the quantity and quality of their writing. The studies show that strategy instruction has a significant impact on students' writing performance with an increase in quantity and the quality (number of words and sentences) of written products.

Social Skills Training Research with Minority Students with Learning Disabilities by Rosa E. Olmeda and Stanley C. Trout demonstrate in a recent study how sociocultural contexts influence social behaviors in ways that may not always be reflective of majority-culture norms. To better understand culturally sensitive and effective social skills training (SST) for students with learning disabilities, it is important for SST researchers to include a sociocultual perspective in their research.

Janet W. Lerner
Editor-in-Chief

Challenges in Evaluating Eligibility Criteria and Accommodation Needs for Postsecondary Success

Carol A. Layton and Robin H. Lock

Within the United States, public schools are required to meet the Individuals with Disabilities Education Act (IDEA) standards mandated by federal law. Institutions of Higher Education (IHE) are challenged to interpret information presented by students for eligibility documentation in light of the Americans with Disabilities Act (ADA) standards. This study examined the relationship between the eligibility report developed through individual state education agency (SEA) rules and regulations to meet IDEA criteria and the Association for Higher Education and Disability (AHEAD) standards for the documentation of a learning disability at the postsecondary level. A survey of the fifty states in the United States and the District of Columbia's SEAs was conducted to identify their regulations for the determination of a learning disability. The results of the study revealed many similarities between the states with some variations in the SEA eligibility criteria. The necessity for specifically identifying an intrinsic processing deficit differs in the IDEA mandates and those required by AHEAD. IHE in the United States should be aware of the need to gather additional data from incoming students with learning disabilities as well as consider the adoption of supplemental evaluation procedures to investigate specific accommodation needs.

Postsecondary institutions in the United States require that students with learning disabilities requesting accommodations must provide appropriate documentation to certify their disability. Often, these students have been identified for special education services in elementary or secondary education and they, therefore, utilize the information gathered by the school district in accordance with the Individuals with Disabilities Education Act (IDEA) of 1997. While federal law guides each state education agency (SEA) through the requirements to fulfill the mandates of IDEA, the agencies use their discretion in determining the particular components for operationalizing the procedures and specific criteria for determining eligibility for each disability category. This study examined how states differ in eligibility determination requirements based on the IDEA for learning disabilities. Emphasis is placed on the impact of eligibility criteria on the determination of specific accommodations needed in the postsecondary setting.

The Federal Definition of Learning Disabilities

The basis for the federal and state regulations in determining the evaluation criteria necessary to identify students with learning disabilities was initially set forth in the definition established in the 1977 *Federal Register* as mandated by the Education for All Handicapped Children Act of 1975, P. L. 94-142. According to Turnbull and Turnbull (2002), the definition used in the 1997 revision of IDEA is as follows:

The term "specific learning disability" means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.

Disorders included: Such term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

Disorders not included: Such term does not include a learning problem that is primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage (p.106).

Operationalizing a Learning Disabilities Definition

As the field of learning disabilities moved into the 1980s, states sought methods to operationalize the definition by quantifying the discrepancy between academic achievement and intellectual ability through numerical procedures. Frankenberger and Harper (1987) studied the states' criteria and identification procedures during a time when there was growing concern about the increasing numbers of students being identified as learning disabled. In analyzing changes from early to mid 1980's, they found an increased reliance on the development of quantitative achievement discrepancy formulas to identify students for eligibility. Educators used these methods to determine eligibility in over 57% of the states.

When Mercer and co-workers. (1996) analyzed the states' criteria in the mid 1990's, they noted an increased use of many of the eligibility criteria first identified in the

Federal Register/*IDEA* regulations. In their study, some 71% of the states used either the *Federal Register*/*IDEA* definition or some slight variation. They also identified an increase in the use of quantitative data that reflected specific information about each student's academic, processing, and neurological abilities, as well as utilizing discrepancy formulas to meet the states' eligibility criteria. This increased use of quantitative data served to decrease the role of instructionally relevant information in the eligibility process, which resulted in evaluation reports that were long on data and short on usability.

The Necessity of Instructional Relevance

With the 1997 revisions, Turnbull & Turnbull (1998) identified the need for evaluation criteria to include the following: a) evaluation strategies that utilize instructionally relevant information; b) information that enables the student to participate in the general education curriculum; c) the use of technically sound instruments; and, d) the use of evaluation tools and strategies that determine educational need by reviewing existing evaluation information. These issues point to the federal requirement that evaluation reports should no longer contain information that simply identifies the disability. This report should serve to inform the Multidisciplinary Team (MDT) regarding students' abilities as well as their needs in order enable them to access to the general education curriculum. State Education Agencies determine how they will gather this information and to what extent it will be included on the evaluation report. One of the purposes of this study is to examine the different methods that states use to gather instructionally relevant evaluation data and how they require it be identified on the evaluation report.

IHE Requirement for Disability Documentation

According to the Association of Higher Education and Disability (AHEAD) students with learning disabilities must present documentation developed by a licensed and qualified individual. The documentation must have been performed within the three previous calendar years or after reaching adulthood. The components include a) a specific diagnosis of a learning disability; b) an indication of a substantial limitation to learning or other major life activity; c) compliance with a one standard deviation discrepancy formula; d) recommendations for reasonable accommodations; e) an exclusionary clause that eliminates alternate explanations for the disabling condition; f) documentation of a history of educational need; and, g) evaluation that addresses aptitude, achievement, and information processing. The evaluation report submitted by students from public schools mirrors what that state requires for eligibility purposes.

Additionally, while it often includes the information required by institutions of higher education (IHE) for disability documentation, it may lack enough instructionally relevant specificity to enable the IHE to make informed decisions about students' accommodation needs. The level of specificity will be determined by the SEA in accordance with their rules and regulations as opposed to meeting the needs of IHE with respect to the determination of accommodations.

IHE Requirements for Accommodations

IHE in the United States are currently debating the role they must play in the accommodation process. In the past, many IHE relied on the selection of accommodations that were global in nature and fit with specific disability categories as opposed to individual needs (Levinson & Ohler, 1998). Thomas (2000) points out that the provision of global accommodations does not necessarily fulfill legal requirements. He indicates that in several cases, federal courts have mandated that postsecondary institutions have a *duty to investigate possible accommodations*. In other words, postsecondary institutions must not only provide accommodations but are obligated to explore critical alternatives that may improve student success.

The first purpose of this study was to examine the information provided by SEAs to establish learning disabilities eligibility criteria. Second, the study detailed a comparison between SEA and AHEAD requirements for eligibility documentation. Third, the study looked at the relationship between the SEAs' documents and the IHEs' needs for information concerning specific accommodation selection through the identification of instructionally relevant information. Finally, the study explored the usefulness of the information in state-mandated public school eligibility documentation provided to IHE with respect to accommodation selection. The following research questions were addressed: a) from a national perspective, what are the specific components of the eligibility documentation process for students with learning disabilities in the public school; b) how do the state and IHE requirements as proposed by AHEAD compare; c) What specific information can be obtained from the documentation required by SEAs for use by IHE to determine specific accommodations necessary for postsecondary success.

Methodology

Participants

Personnel from each of the 50 SEAs and the District of Columbia were contacted by letter and asked to respond to a request for information concerning that state's IDEA compliance rules and regulations. Personnel from all states and

the District of Columbia replied and submitted their state's documentation. In nine cases, the request was supplemented by e-mail correspondence or telephone calls to ensure the participation of that particular state.

Instruments

Each SEA was asked to provide the following information. First, the state's criteria for determining eligibility for a learning disability were requested. Second, the SEAs were asked to describe what qualitative (e.g. non-standardized) data were allowed in the identification process. Third, a listing of instruments and procedures used to determine eligibility was also solicited. Finally, SEAs were asked to submit any additional documents that would clarify that state's specific identification process.

Procedures

Letters were sent to the SEAs in all 50 states and the District of Columbia. A follow-up letter was sent to states not responding to the original request. Finally, a third letter accompanied by a telephone call or an electronic mail message was sent. The response to the survey yielded a total of 51 responses to the research inquires.

Data Analysis

The information for each state was reviewed with respect to each of the three research questions. For the first question, the state documents were examined for the following federally mandated characteristics of the learning disabilities definition: a) underachievement as indicated by a discrepancy in ability versus achievement, b) the exclusionary clause in which the disability is isolated from other variables, and c) specific indicators of disorders in spoken language and academics. Second, the state documents were compared to the requirements stipulated in the AHEAD disability documentation required for IHE. Finally, the documents were reviewed for their identification procedures of specific accommodations necessary for postsecondary success. This review included information such as: a) evaluation strategies that utilize instructionally relevant information; b) information that enables the student to participate in the general education curriculum; c) the use of technically sound instruments across domains; and, d) the identification of evaluation tools and strategies that determine educational need including accommodation practices.

Results

With respect to the use of the approved IDEA definition in determining the eligibility documentation for students with learning disabilities in the public schools, all SEA and the District of Columbia regulations were 100% in compliance. In one case, however, disabilities were documented from a non-categorical perspective and, while the state complies with the regulations of IDEA for a written report, the category of learning disabilities is not individually recognized.

Summary of the Written Report Components

With regard to the operationalization of the learning disabilities definition as it appears in the written eligibility documentation reports, 49 states (96%) reported the determination of a significant difference between intellectual potential and academic achievement as a criteria for the determination of a learning disability. The use of a formula to determine discrepancy was reported by 47 states (92%). The exclusionary clause as stated in the 1997 IDEA revisions was included in the criteria by all states but one (98%), which used a non-categorical approach.

Comparing IDEA and AHEAD Requirements

In Table 1, the percentages that indicate agreement between the IDEA and AHEAD requirements to document a learning disability are presented. The percentages attest to a

Table 1

Percentages of States that are Comparable between IDEA and AHEAD: Eligibility Documentation Requirements

	Number of States	Percentage
Specific diagnosis	50/51	98
Substantial limitation	51/51	100
Discrepancy formula	48/51	94
Reasonable accommodations	2/51	4
Exclusionary clause	50/51	98
History of educational need	51/51	100

varying amount of compatibility between the two sets of requirements. With respect to four factors, there is a 99% agreement. These factors include a) the need for a specific diagnosis, b) the demonstration of a substantial limitation to a major life activity, c) the exclusionary clause, and d) the documentation of a history of educational need.

The SEAs require the use of some type of discrepancy formula 94% of the time. However, the actual formula varies from state to state and some states require a more stringent criterion for eligibility purposes. Finally, information concerning reasonable accommodations is not commonly requested by the SEAs within the eligibility report (4%). In many cases, this information will have to be obtained from additional documentation such as the stu-

Table 2

Percentage and Number of States Addressing Instructionally Relevant Information in the Eligibility Documentation Report

IDEA 1997 Evaluation Standards	No. of States	%
Use of classroom-based assessment	23/51	45
Data for general education participation	12/51	24
Tools to determine educational need:		
Cognitive	41/51	80
Behavioral/social	5/51	10
Intrinsic Processing	14/51	28
Use of data to identify accommodations	2/51	4

Instructionally Relevant Information for Accommodations

After the initial data collection, the documents submitted by the states were further analyzed for the following: a) the use of instructionally relevant data (e.g. classroom based measures) to develop the eligibility report (Table 2), b) the inclusion of information to facilitate general education participation, c) the identification of tools to determine educational need, and d) the incorporation of data to pinpoint necessary accommodations within the eligibility report. This information would be useful in assisting IHE to determine the specific accommodations needed by individual students.

Overall, the information provided in the SEA eligibility reports is cognitive in nature (80%) with some indication of how the data relate to classroom performance issues (47%). Data that specifically address intrinsic processing deficits is not well defined in SEA documentation (28%). Finally, the SEA eligibility documentation reports (Table 2) typically do not provide data to support the identification of specific accommodations (4%), and IHE must obtain that information from other sources.

Discussion

For IHE who are receiving eligibility reports based on SEA rules and regulations, several issues are apparent. The most important finding of this study is the lack of data that is available in the eligibility report to specifically determine the types of accommodations needed by individual students. First of all, the information provided tends to yield a picture of the student's intellectual abilities in order to document average or above average intelligence. Second, the classroom-based evaluation information tends to support the indication of sub-average achievement while providing little information about actual classroom needs. Finally, the SEAs documents do not sufficiently address intrinsic processing deficits, which may provide tremendous insight into students' accommodation needs. In actuality, most states provide information concerning accommodations within the IEP not necessarily the evaluation report.

The second highlighted area concerns the lack of agreement between SEAs and their interpretation of the discrepancy formula. Several different statistical methods for determining a significant discrepancy are used by states. These include grade deviation, expectancy formulas, standard score deviations, and regression analysis. While the AHEAD regulations promote the use of one standard deviation as the benchmark, this is not the case in many instances. IHE will not necessarily know the specific formula and the amount of discrepancy used to determine eligibility. This lack of knowledge concerning the specific discrepancy formula results in questions about the severity of student's disability. These questions are often reflected in the selection of accommodations that might not necessarily meet the student's needs.

Implications of the Study

The first implication of the study is the recognition that while the eligibility documentation from SEAs provides adequate information for certification of a disability, the IHE should not solely rely on that documentation to specify accommodations. Even with additional data provided in the IEP, the IHE may need to engage in additional evaluation procedures to properly investigate each student's unique and individual accommodation needs.

One state provides an example of an eligibility documentation process that uses instructionally relevant information that is then translated into accommodation selection. That state requires that prescriptive evaluative data be gathered during the eligibility process that can be directly linked to the types and intensities of accommodations needed. These data include information regarding the student's functioning in the areas of attention, executive control, language, and concept development. Furthermore, that state recommends that the data be gathered in a variety of settings or environments and under an array of circumstances. They suggest its use to determine both strengths and areas in need for accommodation.

The second implication concerns the importance of acknowledging the variations in the types and rigor of the discrepancy formulas used by the SEAs. These issues point to the need to regard the eligibility report as a method for certification of the disability only. In response to the recent court decisions concerning the provision of accommodations, it is apparent that IHE have an obligation to develop

methods for considering or obtaining instructionally relevant information to determine accommodations. If the documentation provided by the student does not include this information, IHE will want to obtain it in the most efficient and cost-effective manner.

Limitations of the Study

First, the SEA rules and regulations for the eligibility process were the only components evaluated in this study. For secondary schools, IEP development is included as the culmination of the eligibility determination process. Students who are identified with a learning disability and an educational need will have a specific plan for accommodations as a part of the IEP. IHE may need to consider the information provided on the IEP in order to verify the needed accommodations and to determine what supplemental evaluation information may be required.

Second, updates to each SEAs' rules and regulations for the implementation of IDEA occur periodically. As SEAs engage in this review process, changes to the rules and regulations, which have an impact on the information provided in the eligibility documentation report will occur. IHE should be aware of changes both in federal law as well as state compliance documents and how these changes will impact their institutions.

Further Research

Further research is needed in several areas to develop a better understanding of methods to fully accommodate post-secondary students with learning disabilities. First, research that examines large numbers of eligibility reports to discern their common elements and how the IHE use these reports to determine accommodations is necessary to understand current practice. Second, the examination of secondary schools' perceptions of the types of information needed by IHE for their students with learning disabilities might provide some insight into methods for increasing communication and to facilitate students' transition. Finally, studies are critical that examine a variety of methods to easily and efficiently identify best practice procedures that fulfill court mandates concerning the duty to investigate.

Summary

This study examined the relationship between the eligibility report developed through individual SEAs rules and regulations to meet IDEA criteria and the AHEAD standards for the documentation of a learning disability. Fifty states in the United States and the District of Columbia's SEAs were surveyed. This information was then compared with the AHEAD requirements. Results revealed that while there are many similarities, variations in the SEA eligibility criteria exist. Furthermore, the IDEA mandates and those required by AHEAD differ in the need to establish the presence of an intrinsic processing deficit as well as the determination of accommodations. IHE should be aware of the possible need to gather additional data from incoming students with learning disabilities as well as consider the adoption of supplemental evaluation procedures to investigate specific accommodation needs.

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The Effects of Child Maltreatment on Learning Disabilities and Interventions

Barbara Lowenthal

The increase in the rate and intensity of child maltreatment within the last decade is worrisome. In 1996, 44 out of every 1,000 youths under the age of eighteen were maltreated (U.S. Department of Health and Human Services, 1998). Special educators should consider the possible effects of maltreatment on children with learning disabilities. When these children are maltreated by their caretakers, their learning disabilities can be intensified and become more resistant to interventions. This article defines the types of maltreatment, their possible effects on learning, and school interventions that can assist the children with learning disabilities.

Unfortunately, the rate and intensity of child maltreatment has increased in the United States within the last decade. In 1996, 44 out of every 1,000 youths under the ages of eighteen were maltreated (U.S. Department of Health and Human Services, 1998). The umber of reported cases has risen 10% per year since 1976 (National Center on Child Abuse and Neglect, 1996). Special educators need to consider the possible effects of maltreatment on children with learning disabilities. When these children are abused or neglected, their learning problems can intensify and become more difficult to remediate (Reyome, 1993). A number of studies indicate that all types of maltreated children show more symptoms of learning disabilities, more social-emotional problems, and more attention deficit disorders. In addition, maltreated children are considered more at risk for school failure and dropping out of school than their non-maltreated peers (Kurtz, Jaudin, Wodarski, & Hawling, 1993; Reyome, 1993). Special educators can play an important role in assisting these children to be more successful both socially and academically in their classrooms. This article describes the types of child maltreatment, the possible effects on learning, and classroom interventions, which can be used for assisting maltreated children with learning disabilities.

Types and Definitions of Child Maltreatment

There are four categories of child maltreatment: physical, sexual, and psychological abuse and neglect:

1. **Physical abuse** is defined as inflicting injuries by hitting, kicking, pinching, choking, shaking, burning, and cutting or otherwise physically hurting a youngster (Sattler, 1998). The most common injuries inflicted on children are to their heads, damage to the smooth muscles or organs or visceral injuries, and damage to the skin (Barry & Weber, 1994). Physical maltreatment can cause later developmental and sensory problems in a child such as: impaired vision or hearing, mental retardation, difficulties in the acquisition of speech and language, learning disabilities, and motor impairments (Monteleone & Brodeur, 1994).

2. **Sexual abuse** is described by Nunnelley & Fields (1999) as when an adult uses a child for sexual gratification or permits another adult to behave in the same way. Sexual abuse is classified by Lambie (2000) as involving contact or non-contact maltreatment. Contact abuse occurs when the adult has actual sexual contact with the victim. Non-contact abuse includes coercing children to watch or pose for pornographic movies, videos and pictures; forcing the youngsters to observe sexual intercourse or perform sexual activities; and to witness sexual exhibitionism (Lambie, 2000). Patterns of behavior exhibited at school by students, who have been sexually abused, include: difficulties in following directions, inattentiveness, fear of failure, depression, extreme aggression, dependency, and difficulties with peer relationships.

3. **Psychological abuse** occurs when the caretakers inflict psychological or emotional abuse on the children by the use of threats and verbal harassment, which can result in the systematic destruction of their self-esteem (Sattler, 1998). When adults constantly stigmatize or belittle their child with learning disabilities, this treatment can have harmful lifetime effects on the child's total development and learning. The youngster suffers as much or more from psychological abuse than those who are victims of other types of maltreatment. Psychological abuse negatively impacts on their behaviors, feelings, and thoughts (American Humane Association, 1998). A number of studies report that psychologically abused children are less persistent and enthusiastic in their schoolwork when compared to their non-abused classmates (Kurtz, et al., 1993; Reyome, 1993). Their teachers also rated them as more impulsive, overactive, and

less attentive in their schoolwork than the non-maltreated students.

4. **Neglect**. The last category of maltreatment is neglect, which can include: inadequate parenting, affective and social deprivation, parental detachment or indifference, and failure to anticipate or respond to the child's needs (Gil, 1996). Severely neglected children may have physical and developmental delays, which are most noticeable in the areas of language and cognitive development. Willis, Dobree, & Sipes (1992) state that the insidious nature of neglect can have more negative consequences on children's development than physical maltreatment because it sends a message to the victims that they are not valued or loved. A study by Eckenrode, Lavid, & Doris (1993) reports that many students who have been neglected perform below grade level and that their rate of school absences is nearly five times that of comparison non-neglected peers. This type of maltreatment also impacts negatively on their social skills and interactions, as the neglected children engaged in less positive social behaviors than other types of maltreated children.

However, for all types of maltreatment, there is a great need for special educators to try to prevent abuse and neglect and to assist the child victims who may have their learning disabilities intensified and compounded because of their maltreatment.

Classroom Interventions

Teachers of maltreated children with learning disabilities can assist these students both through the use of strategies to make their classrooms safe and nurturing and effective teaching methods. The combination of these techniques can help the children to achieve at school. The strategies will be discussed first followed by a description of specific teaching methods.

Strategies for Safe and Nurturing Classrooms

Strategies that teachers can implement to make their classroom environments more predictable, safe, and nurturing for maltreated children with learning disabilities include: structure through consistent routines, reasonable rules and limits, appropriate styles of discipline, and behavioral supports.

Structure through Regular Schedules and Routines

A number of maltreated children with learning disabilities may have chaotic home environments, which can produce pervasive anxiety and anger in the youngsters. These emotions may be reflected in disruptive behaviors at school.

The child victims can benefit from very structured and predictable schedules and routines, because they tend to increase their feelings of safety and security. Routines can be reinforced through their practice in daily activities (Cook, Tessier, & Klein, 2000). Visual aids such as pictures, photographs, charts, verbal explanations, and signs act as reminders of class schedules. It is helpful if special educators refer to the periods during the day by name such as group time, recess, center, etc., and indicate what is expected at each time. Then at the end of each period, the teacher can review what has occurred and discuss what will happen next. Reviewing necessary changes at the beginning of the day prepares the students and avoids possible frustration and temper tantrums later. Transitions often are difficult for many typically functioning children because they involve changes. Neglected and abused youngsters with learning disabilities, who are unsure of the availability of their family caregivers, may regard transitions as especially frightening because they increase their insecurity. To assist them and other non-maltreated children, signals can be given such as flicking the lights, playing a note on the piano, or singing a special song, which then prepares the students for the transitions and the changes of activities. The children need time to disengage from activities just like they need time to get involved in them. Other suggestions, which help them to adjust to transitions are provided by Cole (1995) and Cook, et al., (2000). These are:

• Limiting the number of transitions by streamlining the class schedule.

• Providing explanations as often as needed about the reasons for the changes.

• Decreasing the waiting times when some of the children are through with an activity and are waiting for their other classmates to finish. Misbehavior is more likely to occur at these times. To prevent this, have some simple activities available such as self-selected books and board games.

• Materials for the next activity should be set-up and ready to use which also decreases waiting times.

The physical needs of the children should be kept in mind to enable them to pay attention to school tasks (Berger, 2000). Accommodations to these needs require the teacher to notice and care for signs of hunger, fatigue, thirst, and toileting needs. In scheduling teacher-led activities need to be alternated with child-initiated ones, and quiet activities balanced with active ones. Alternate individual work with small and large group assignments. Help excitable students to calm down by modeling deep breathing, counting to ten, and self-talk. An orderly, organized, and neat physical environment also can have a calming effect. Therefore, broken equipment should be fixed or removed, and there should be specific places for books, games, toys, and classroom materials (Cole, 1995).

Other suggestions that help to make the school an emotionally and physically safe place are to give the students with learning disabilities choices, set achievable goals, protect them from disturbing noises and distractions, and offer opportunities for the youngsters to participate in creative activities such as art, music, and drama. Maltreated children with learning disabilities may lack a sense of control in their home lives. When given choices at school, their sense of being in control is facilitated as well as their feelings of safety and security. Setting goals that are attainable increases their self-confidence especially when they receive sincere praise for their efforts. To lengthen their attention span for school tasks, teachers should be careful about auditory and visual distractions such as over crowded classes and loud noises. Participation in creative work such as in music, drama, and art give child victims of abuse and neglect the freedom and safety to express their feelings in constructive ways. Participation in after school extra curricular activities provides a safe haven for them and may decrease possible delinquency and unsafe behaviors (Koplow, 1996).

The Necessity for Reasonable Rules and Limits

Another method of enhancing a sense of security is to establish consistent and clear rules and limits. All children need to have limits and to adhere to reasonable, brief school rules. For some maltreated youngsters with learning disabilities, who have caretakers who exert authority in frightening ways, it is essential that rules are established within a nuturing, supportive relationship with the teacher. When rules or limits are set in a neutral, consistent, and meaningful manner, the children can learn to trust and develop their confidence that adults can be authoritative with being hurtful or threatening. Their teachers can say no but they are still available to assist and guide them. Then, the students are motivated to follow the rules and to tolerate frustration without acting out in inappropriate behaviors (Ferber, 1996).

In order for rules to be reasonable, they should be developmentally appropriate in their expectations. For example, kindergarten children should not have a rule which states they must always sit quietly in their seats during every activity. Developmentally, their attention span is limited, and they need times when they can be active and exercise their motor skills.

Reasonable rules will provide the structure for acceptable behaviors. Only rules that are necessary for a positive learning environment should be established. In addition, limits are best adhered to when they are derived collaboratively by both the students and teachers. When the rules and limits need modifications, both parties should be involved in making the changes. When developing rules, the following advice is beneficial (Bos & Vaughn, 1998): 1) students are more likely to follow rules if they are generously praised for their efforts, and 2) rules need to be stated in positive ways.

Some examples of general classroom rules are provided by Bos and Vaughn (1998) and by Ferber (1996). A modified summary is:
1. No one can be hurt by others.
2. No property can be destroyed without permission.
3. Assignments should be completed on time.

Appropriate Methods of Discipline

Maltreated youngsters with learning disabilities may need several types of discipline methods that are appropriate to meet their needs (Koplow, 1996). Defiant, physically abused children can misinterpret their peers' playful behaviors as threatening and anxiety provoking. As a result, they may lash out with verbal and physical aggression. Child victims of severe neglect may treat other children as objects and grab their toys and food. Other at-risk students may display negative behaviors in order to get the attention that they are severely lacking at home. If all these types of maltreated youngsters with learning disabilities are responded to and disciplined in the same way, their individual needs will not be met, and their behavioral difficulties can worsen.

Teachers, with the help of counselors, social workers, and psychologists, should try to understand the underlying reasons for the negative behaviors. Maltreated, aggressive students with learning disabilities need to learn how to better interpret the emotions and actions of others and recognize their own feelings as well. It is a necessity that they learn how to communicate positively with other people. Discipline should be firm but neutral, and the social advantages of positive behaviors be demonstrated to them. Abused and neglected child victims with learning disabilities, who are anxious and fearful of their hostile caretakers, should be kept busy with school activities and be given appropriate choices so that they feel more in control of what happens to them. Punishment should be avoided if at all possible, but if necessary it should be brief and mild (Koplow, 1996; Ferber, 1996; Cicchetti, Toth, & Hennessy, 1989).

In addition, it is essential that punishment not be combined with positive regard or affection for these students. Many of them receive confusing messages from their caretakers. For example, a parent could be abusive one moment and overly affectionate the next minute in order to obtain the child's compliance. Therefore, the special educator should not use a confusing method of discipline such as removing the child from an activity while at the same time expressing a positive feeling such as saying, *You know how much I care for you*. Coercion and power struggles need to be avoided. The emphasis should be on praise and positive reinforcement as much as possible through the recognition of the child's efforts, strengths, successes, and interests (Lowenthal, 1996).

Behavioral Supports

Another approach to behavioral difficulties is the use of behavioral supports. Behavioral supports are defined by Snell and Janney (2000) as approaches that *emphasize the use of a collaborative problem solving process to develop individualized interventions that stress the prevention of problem behaviors through the provision of effective educational programming* (p. 2). To be effective, this approach requires teaching the student appropriate behaviors which substitute for the negative ones (Taylor, 2000). Snell and Janney (2000) describe some characteristics of behavioral supports, which make them especially appealing when assisting maltreated children with learning disabilities and disruptive behaviors.

Behavorial supports share the following characteristics:
• *Positive behavioral supports are respectful.* They do not use force, cause pain, or emotional distress. They emphasize caring and trusting relationships with students.
• *Behavioral supports can be used in inclusive environments.* In both public and private schools, they give the at-risk students chances to work, play with, and learn more appropriate behaviors from the modeling of some peers who are more socially skilled.
• *Behavioral supports stress the avoidance of failure.* These supports focus on successful self-management procedures and the ability to express feelings in appropriate ways. This is a necessary positive emphasis for at-risk children with learning disabilities and disruptive behaviors.
• *Behavioral supports focus on teaching social skills.* Well developed social skills lead to successful interpersonal relationships, as well as controlling behavior.
• *Behavioral supports are individualized.* They should meet the unique needs of the student.

There are a number of behavioral supports that can be implemented by teachers (Farmer, Farmer, & Gut, 1999). These are: (1) modifying the curriculum to simplify it or to include more functional, adaptive, or social skills; (2) accommodations such as additional tutoring, preferential seating in proximity to the teacher; (3) a peer buddy to help on difficult assignments and to model more positive social skills; (4) easy access to school mental health professionals such as psychologists, counselors, and social workers; and (5) modifications in scheduling by alternating easy with hard subjects and balancing quiet with busy times (Snell & Janney, 2000; Bos & Vaughn, 1998). In addition, behavioral supports respect individual choices and emphasize appropriate social skills and success in everyday interactions.

Perhaps, the most beneficial part of its philosophy for maltreated students with learning disabilities is its stress on the caring, empathetic relationships that teachers can develop with their students within the context of encouraging more positive behaviors.

Effective Teaching Methods for Maltreated Children with Learning Disabilities

In addition to the strategies discussed, educators can help maltreated children with learning disabilities through the use of a variety of instructional methods that match with their different abilities (Kagan, 1998). The strengths of individual students can be used to help them overcome their weaknesses and to improve their self-confidence in mastering academic tasks. By giving students choices of ways that they can accomplish schoolwork, they can increase their sense of control in the school environment, which may be lacking in their chaotic homes. Effective teaching methods include cooperative learning and modifications.

This strategy stresses the cooperation of students in the learning process. Instead of competing against each other, the students work together to solve problems and find solutions to academic tasks. Important outcomes of cooperative learning for maltreated youngsters, as indicated in a review of research by Slavin (1995), can be the positive effects on academic self-esteem, its provision of multiple experiences for active learning, and effective practice in social skills. Other teaching strategies that are described which also assist maltreated students with learning disabilities to succeed academically are adaptations of the school environment and modifications of the curriculum. However, the most important ingredient of effective teaching for abused or neglected students with learning disabilities can be the role of the teacher who provides plentiful guidance, encouragement, and support for their efforts and achievements.

Cooperative learning methods are defined by Slavin (1991) *as instructional techniques in which students work in heterogeneous learning teams to help one another learn academic material* (p. 177). Characteristics of this teaching strategy which can benefit maltreated children with learning disabilities include: (1) emphasis on success for all children; (2) recognition of each student's achievements; and, (3) modeling and practice of useful social skills. The first two features build academic self-esteem and confidence, which are so essential to the successful educational performance of maltreated youngsters. The third feature assists the child victims to gain acceptance by their non-maltreated peers because they are able to display appropriate behaviors.

Cooperative learning stresses the positive interdependence of students instead of negative interdependence in which they compete with each other for school achievement. In negative interdependence, the students who attain success do so at the expense of their peers. In positive interdependence, the pupils work together to ensure that each one is successful. Thus, academic success comes from the cooperation of each learner in the group and is not based on competition (Johnson & Johnson, 1996a). Cooperative learning also encourages constructive face-to-face interaction on the

students with their peers on a team. The teammates share thoughts, experiences, and recognize each other's accomplishments. Another characteristic of cooperative learning is the accountability of each team member who has the responsibility to help complete the assignment and demonstrate progress. However, each student can fulfill this objective by the use of her preferred learning style, which fosters success and achievement. Methods of accountability include constructive self-evaluation, team assessment, and teacher evaluations.

Modifications and Adaptations of the School Envrionment

Maltreated students with learning disabilities, who are academically at-risk, may need special modifications to assist their learning and increase their mastery of schoolwork.

Modifying the Objective, Response, Workload, and Materials

Modifications may be necessary in the objective of the lesson, presentation of it, response, workload, and material. The following modifications are summarized from the recommendations of Snell and Janney (2000), Lerner (2000), and Yehle and Rambold (1998):

1. *Same objective with an alternate response.* For example, the students work on the same objective but instead of writing the answers down on an assignment, they are allowed to give them orally.

2. *Same objective but with an alternate presentation.* An example is that when students have difficulties in reading, assigned chapters can be read to them by peers.

3. *Same objective but the workload is less.* Instead of assigning 10 math problems, five are given to the student.

4. *Same objective with different materials and expectations.* The objective is similar but fulfilled at a lower level of development. For example, instead of learning seventh grade spelling words, the pupil learns second grade level words.

5. *Individualized objective.* Instead of an academic objective, it is more functional and relates to life skills. For example instead of doing story problems in mathematics, the students work on coin and dollar recognition.

When planning modifications, teachers need to keep in mind the significant components of the curriculum so they will be included in the changes. Modifications should be meaningful, useful, and meet the individual needs of maltreated children with learning disabilities so that they are actively involved, work with their peers, participate fully in class activities, and achieve success.

Conclusion

This article defined the types of child maltreatment, their possible effects on the learning and social development of children with learning disabilities, and strategies and effective teaching methods which can assist these children. Special educators facilitate resiliency in the child victims with learning disabilities by helping them develop their learning potential, and by fostering their feelings of safety, security, and nurturance in their classrooms.

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Giving Students with Learning Disabilities the POWER to Write: Improving the Quality and Quantity of Written Products

Jeffrey P. Bakken and Craig K. Whedon

This study was conducted to determine if students with learning disabilities could be taught a cognitive strategy with self-instruction to improve the quality and quantity of their writing. Fifteen high-school students with learning disabilities were taught the acronym POWER and how to use self-instruction to improve their writing performance. Training effects were investigated using a pretest-posttest design. Strategy instruction had a significant impact on students' writing performance with an increase in quality and the quantity (number of words and sentences) of written products. Students also were able to perform the strategy over a delayed period of two weeks.

Teaching students with learning disabilities to become more proficient in writing is a challenge not only because these students are generally weak in writing, but also the students many times see no need to improve their writing. Written expression is a common specific deficit of students with learning disabilities (Parker, Tindal, & Hasbrouck, 1991). Common writing deficits of students with learning disabilities include: the inability to produce a cohesive story (Barenbaum, Newcomer, & Nodine, 1987; Graves, Montague, & Wong, 1990); the inability to maintain a specific topic throughout the written product (Englert & Thomas, 1987; Graham & Harris, 1989); low productivity (Montague, Maddux, & Dereshiwsky, 1988; Newcomer, Barenbaum, & Nodine, 1988); a high number of mechanical errors (Poteet, 1979); and the inability to use organizational strategies (Englert, Raphael, Fear, & Anderson, 1988).

The question is how do we help students with learning disabilities become more proficient writers? Some professionals would say to become a more proficient writer you must write more. Simply having students with learning disabilities write more, however, will not in itself improve the quality of their writing (Cunningham & Allington, 1994; Graham, 1982). It can, however, improve the quantity of their written products. By simply encouraging students with learning disabilities to *write more*, Graham (1989) found students doubled and tripled their output. As to the quality of students' writing, many students with learning disabilities lack the strategies to aid them in the writing process, and simply writing more will only perpetuate the existing problem to a higher degree.

Students with learning disabilities often do not know where to begin the writing process. Atwell (1985) states that the prewriting phase in the writing process appears to be the most important element. In this stage, the writer thinks about the topic and tries to plan what they are going to write about. This requires students to implement strategies to help them with the process of writing. Schwartz and MacArthur

(1990), however, found that setting goals and planning the content is very difficult for students with learning disabilities because of their lack of strategies. Graham and Harris (1988) and Harris and Graham (1992) suggest that students should be taught how to approach the writing process through teacher modeling, guided practice, and the development of relevant skills and strategies.

The development of writing for students with learning disabilities is a process that requires guidance with the use of strategies that will possibly be generalized to other settings to improve their writing performance. Because of the problems that students with learning disabilities have in the area of writing in regard to being effective planners and organizers along with editing and revision skills this study focused on teaching students the acronym POWER (P = Plan, O = Organize, W = Write, E = Edit, R = Revise) (Englert, 1990) to help improve their writing performance. In a somewhat similar investigation, Hallenbeck (1996) implemented the acronym POWER with the addition of organization *think* sheets (where students could write down their thoughts in a structured way) and had students type their papers into the computer. Hallenbeck found that these adaptations were very effective in improving the writing of adolescents with learning disabilities. This investigation examined the implementation of the acronym POWER, without utilizing the *think* sheets. The students with learning disabilities were taught how to incorporate the acronym into their daily writing and how to plan in their notebook as they would in a general education classroom. In addition, a self-instruction component was also implemented. Self-instruction training procedures have been very beneficial for students with learning disabilities to aid them in transferring classroom strategies to other classes and content areas. It put the emphasis of implementing the strategy on the students (Graham & Harris, 1987; 1989; Graham, Harris, & Sawyer, 1987; Harris & Graham, 1985; 1988). The purpose of the self-instruction component was to give the ultimate

responsibility of recruiting, applying and monitoring the strategy to the students.

Method

Subjects

The subjects in this study were 15 ninth-grade students with learning disabilities from low/middle class families in a high school in a large midwestern city. Of the 15 students with learning disabilities, six were female and nine were male. Thirteen students were Caucasian, one was African-American, and one was Hispanic. The mean age was 185.4 months (SD = 5.44, ranging from 180 to 192 months) which translates to a mean age of 15.9 years old (SD = .49, ranging from 15.3 to 16.8 years old). The mean intelligence quotient (IQ) of the entire sample was 76.05 (SD = 8.25, ranging from 62 to 91). IQ scores were obtained from the following tests: *Wechsler Intelligence Scale for Children-Third Edition* (Wechsler, 1991) (n = 10), the *Kaufman Brief Intelligence Test* (Kaufman & Kaufman, 1990) (n = 3), and the *Stanford-Binet Intelligence Scale, Fourth Edition* (Thorndike, Hagen, & Sattler, 1986) (n = 2). The mean achievement standard score for the entire sample in reading was 74.78 (SD = 6.78) (n = 25), while the mean standard score in math was 70.13 (SD = 4.12) (n = 17), and the mean standard score for spelling was 75.08 (SD = 11.7) (n = 16). The achievement test scores were obtained from the following tests: *Kaufman Test of Educational Achievement* (Kaufman & Kaufman, 1985) (n = 1), *Wechsler Individual Achievement Test* (Wechsler, 1992) (n = 16), and the *Woodcock-Johnson Test of Achievement* (Woodcock & Johnson, 1988) (n = 4). Ns vary due to the number of students taking more than one test.

All students had been enrolled in special education classes since approximately the fourth grade. The students were all classified as learning disabled according to the requirements and guidelines of the state. According to the Indiana Department of Education article 7 [511 IAC 7-26-8] (2000)Sec. 8.:

> (a):A learning disability: is characterized by severe specific deficits in perceptual, integrative, or expressive processes involved in understanding or in using language, spoken or written, that adversely affect the student's educational performance…(b) Identification as a student with a learning disability and eligibility for special education shall be determined by the case conference committee upon finding that a severe discrepancy exists between the student's academic achievement and normal or near normal potential (p. 48-49).

All subjects that participated in the study were selected for participation using the following criteria. First, unsatisfactory performance in writing. Unsatisfactory performance in writing was determined by each student's performance in the learning disabilities English class throughout the first six months of the year. Journal writing, essays, and papers that each student had completed were viewed to be unsatisfactory due to content, length, and grammar according to the state and school standards in English. Second, subjects attended an English class for students with learning disabilities. Third, parental/guardian and student permission was required to participate. Permission forms were given to the students to take home and students could not participate unless both the student and parent/guardian forms were returned signed.

Setting

The setting for this study was a ninth-grade English classroom for students with learning disabilities in a large urban city in Indiana. A certified special education teacher provided instruction. It was a typical classroom with desks, chairs, and a dry erase board.

The students attended special education classes, but were mainstreamed two or three blocks (out of four) a day. The other special education class was generally a resource class for the students. Blocks were one hour and thirty-seven minutes long. Each student was scheduled for eight blocks per semester (i.e., Monday students would attend blocks 1-4, Tuesday students would attend blocks 5-8, Wednesday students would attend blocks 1-4, etc.).

Procedures

The lessons were presented during regularly scheduled English classes for students with learning disabilities, which met every other day because of block scheduling. For all lessons, the teacher effectiveness variables of daily review, teacher modeling, guided and independent practice, and formative evaluation were implemented (Mastropieri & Scruggs, 1994). The teacher followed a detailed lesson plan addressing these components to assure each lesson was instructed in the same manner over each session. A fellow teacher also randomly monitored sessions to make sure the lead teacher, in fact, was following the lesson plans.

Baseline procedures. Initially, before baseline procedures were implemented, students were given a writing interest inventory to find out if they enjoyed writing and how they organized their thoughts and ideas prior to instruction. Questions were generated by the authors to investigate pre- and post-instruction writing knowledge and views. The questions asked were: a) Do you enjoy writing? Why or why not?, b) How does writing make you feel?, c) Do you find writing difficult/hard? Why or why not?, d) Do you plan (think about what you want to write) before you begin writing? Why or why not?, e) Do you organize your ideas before writing? Why or why not?, f) Do you look for mistakes after writing your paper? How?, and g) After finding mistakes in your paper do you make corrections? How? After the implementation of the writing interest inventory, writing began. Every other day for two weeks students were given topics on

which to write. These topics were chosen by English teachers as being relevant to the students based on student interests and local topics in the school community. The topics chosen were: a) year round school, b) dress codes in school, c) design a school you would like to attend, d) write about a favorite teacher you have had in school, e) create a discipline plan for your school, and f) how should the drug testing policy be used in schools?

The topics were presented to the students at the beginning of class. Students were given the topic and encouraged to write as much as they could with no time limits or constraints. Students used previous knowledge to write on the topics provided.

During the writing process students were given no suggestions on the writing processes (i.e., mechanics, such as spelling, punctuation, length, and that handwriting was important).

Intervention procedures. A week following the completion of baseline procedures the teacher taught the POWER (Plan, Order, Write, Edit, and Revise) (Englert, 1990) plan for writing (one class period for a total of 90 minutes). The first lesson for the POWER plan was to teach students what the acronym POWER stood for (through brainstorming). The teacher questioned the students on writing. *Why do we need to be able to write? Why is it important to write in a structured way? Why should your writing flow?* After discussing these and related points, the teacher wrote the word POWER on the board. *What does POWER mean? How can you have POWER when you write? Who gives you the POWER to write? I'm going to give you the POWER to write better and more efficiently. How am I going to do that you ask? Just like this.* (Teacher writes this on the board).

P
O
W
E
R

Below is a sample of teacher dialogue of the introduction of the POWER strategy.

T: *This is the word power, correct? This is what we call an acronym. Each letter stands for a word. Since we are talking about writing, what is the first thing we need to do before we begin to write?*
Students brainstorm ideas, predict, prepare and plan.

T: *Good. We plan before we write. The P stands for plan. How do we plan before we write?*

S: *We think about a topic or a subject.*

T: *Right. That is one way we plan. We think about and*

write down ideas that we may want to write about in our paper. For example, we might choose to write about Michael Jordan (M.J.). Let's do some planning. When we think of M.J. what comes to mind?

Students brainstorm ideas and these are all written on the board. All ideas from all students are accepted as long as they are related in some way to the major topic.

T: *Right. Lets continue. O. Who has an idea what O may stand for in our POWER plan? No one has any ideas? What do we do when we put things together?*

S: *We organize them.*

T: *Nice job. How would we organize a paper?*

S: *Put all the same things in a paragraph.*

T: *Can you give me an example?*

S: *Like, if I'm writing about M.J. hoopin I don't want to start talking about him playing baseball in the same paragraph as his basketball."*

T: *That's exactly right! We want to organize our ideas and thoughts so they make sense to someone who may not know who M.J. is or what he has accomplished. The plan that we have is for M.J. So how do we organize the ideas?*

Teacher models and guides students through the organization process. Related topics are grouped together, paragraph order is decided upon, and unrelated information is discarded.

T: *Now, what does the W stand for. Any ideas?*

S: *Write?*

T: *Yes, so now what?*

S: *We write out our paper.*

T: *Good. Now how do we use the P and O in writing our paper?*

Teacher models and guides the students through the writing process. The teacher emphasizes complete thoughts, sentence structure and grammar as much as possible.

T: *All right. What does the E stand for?*

S: *End.* (Students laugh.)

T: *Not yet. If we have planned, organized and written what is the next thing we might do?* (No response) *What do we call a person who reads a paper that is finished and suggests corrections?*

S: *A corrector.*

T: *Close. Think E words. At a book publisher there is a person who checks the writing of other people. What do we call this person?*

S: *An editor!*

T: *YES! E stands for edit. How do we edit a paper?*

S: *We check it for mistakes and see if it reads right.*

Teacher models and guides the students through the editing process. The teacher again emphasizes complete thoughts, sentence structure and grammar as much as possible. Students are also shown how papers can be traded and other people can help you edit your work.

T: *We have now reached the final letter. What do you think the R stands for?*

S: *Redo.*

T: *Good answer, but that's not exactly what it is.*

S: *Its rewrite isn't it.*

T: *Close. Everyone is on the right track. It's revise. Does anyone know what revise means?*

S: *To make changes.*

Again, the teacher modeled and guided the revision process for the students.

The teacher explained that this was a way in which to assist them in writing. It would give them the power over what they were writing. It could help them organize their thoughts and plan out their paper in a systematic way. The teacher also implemented self-instruction procedures. These procedures of saying the steps and talking through the strategy was modeled and practiced with the students.

As with baseline procedures the same topics were then presented to the students at the beginning of each class one month after baseline procedures had been completed. Students were given the topic and encouraged to write as much as they could using the POWER plan. Before the students began the teacher told the students to remember to use the acronym POWER and remember how they used it in

class. The teacher wrote the topic on the board and handed out a 3x3 inch piece of paper containing the acronym POWER. The teacher explained to the students that as they went through the strategy they could check off each letter as that step was completed during the writing process. This process was used for the first two topics. For the next two topics the teacher suggested that the students might want to write the acronym POWER on the top of their paper. Finally, for the last two topics no directions regarding the acronym POWER were implemented. After students wrote on the last topic, the same writing interest inventory was administered with two additional questions. The two additional questions were: a) What are the steps you learned about writing?, and b) What other classes could you use this technique in? In addition the question, *What are the steps you learned about writing?* was also asked two-weeks after the completion of the study.

Dependent Variables

Student stories were evaluated for quality and length of writing and a qualitative component addressed the use of the POWER strategy by the students.

Quality of writing. The quality of each story was evaluated using the following twelve questions (adapted from Zipprich, 1995): (1) Did the student have a clear introduction or opening sentence?; (2) Did the student have supporting ideas?; (3) Did the student have a number of arguments?; (4) Did the student have a clear rationale?; (5) Did the student have more than one paragraph?; (6) Did each paragraph deal with one topic?; (7) Are major points presented in a logical sequence?; (8) Do paragraphs have opening sentences that introduce ideas discussed?; (9) Is each paragraph started on a new line?; (10) Is each paragraph indented?; (11) Is the overall essay sequenced appropriately?; and, (12) Did the student only include relevant information? All questions were evaluated on a five-point likert scale (1 = unacceptable, 2 = unacceptable/some improvement, 3 = acceptable with errors/needs improvement, 4 = acceptable with errors/showing improvement, and 5 = acceptable/meets criteria). All scores were then added giving the total score for quality of writing. It should also be mentioned that obtaining the same score for two different questions does not necessarily mean they have the same importance.

Quantity of writing. The number of words and sentences written in pretest and posttest stories were counted.

Writing interest inventory. Students were given a survey and results were tabulated and compared from pre-intervention to post-intervention.

Qualitative analysis of strategy implementation. Student work was also evaluated to see if they had implemented the strategy that had been taught. Work was checked to see if students planned, organized, wrote, edited, and revised. Besides collecting finished products, all student

work was collected.

Instrument Scoring Procedures

Student stories were typed and minor punctuation and spelling errors were corrected so that the evaluations of the children's written products were not negatively affected (Graham, 1982). Two graduate students were trained to evaluate the quality of written products and evaluate strategy usage to a criterion of 100% agreement. Percent of agreement was calculated as the number of agreements divided by the number of agreements plus the number of disagreements. For the 12 quality questions, stories were randomly ordered and scored independently by the two graduate students. Percent of agreement on the individual questions as well as the total scores for all items was calculated. The average interrater agreement for this procedure was 85%. Any discrepancies between raters were discussed between them and reconciled so that agreement was obtained. The number of words was also evaluated. Again, both graduate students counted all passages, and responses were compared. Average interrater agreement for this procedure was 100%.

Results

Quality of Writing

All students' written products were evaluated on the quality of writing using 12 questions (adapted from Zipprich, 1995). All questions were evaluated on a five-point Likert scale (1 = unacceptable, 2 = unacceptable/some improvement, 3 = acceptable with errors/needs improvement, 4 = acceptable with errors/showing improvement, and 5 = acceptable/meets criteria). All scores were then added giving a total score for quality of writing. Results indicated that students written products did indeed improve. Student holistic scores went from a mean of 24 (SD = 5.25, range from 15 to 27) out of a possible 60 to a mean of 46 (SD = 7.20, range from 38 to 52) out of a possible 60 favoring the implementation of the POWER acronym.

Quantity of Writing

All students who were instructed in the use of the POWER strategy with the self-instruction component improved in the number of words and sentences written.

Words. The effects of training was consistent across all subjects with all students improving in the number of words written across all passages from pretest to posttest. Students improved from and average of 40.3 words (SD = 11.4, range from 27 to 62.2) on the pretest writing samples to an average of 66.7 words (SD = 26.8, range from 32.2 to 113.3) on the posttest writing samples, which favors the implementation of the POWER acronym. Data were entered into independent-paired samples' t tests. Statistically significant differences for the number of words were found across all pas-

sages as was the average number of words written. The results for the average number of words were, $F(1, 14) = 26.3467$, $p < .001$. See Figure 1 for mean number of words written.

Figure 1

Mean Pre and Posttest Results for Words by Topic
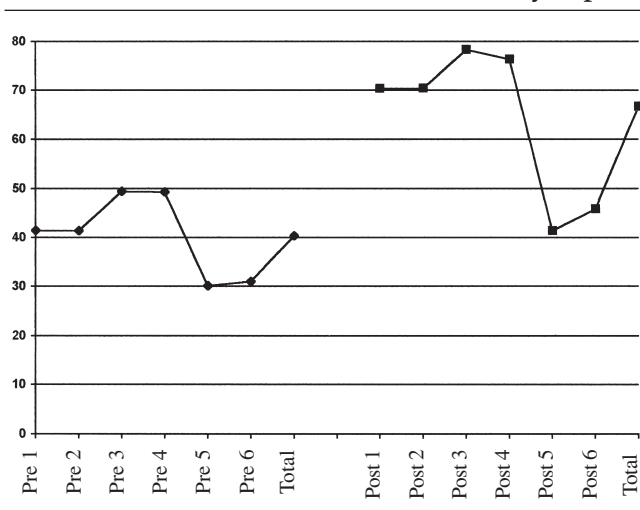
Sentences. The effects of training were consistent across all subjects with all students improving in the number of sentences written across all passages from pretest to posttest. Students improved from an average of 2.59 sentences (SD = 1.31, range from 1.20 to 5.50) on the pretest writing samples to an average of 4.34 sentences (SD = 2.06, range from 2.20 to 7.80) on the posttest writing samples, which favors the implementation of the POWER acronym. Data were entered into independent-paired samples' t-tests. Statistically significant differences for the number of sentences were found across all passages as was the average number of sentences written. The results for the average

Figure 2

Mean Pre and Posttest Results for Sentences by Topic
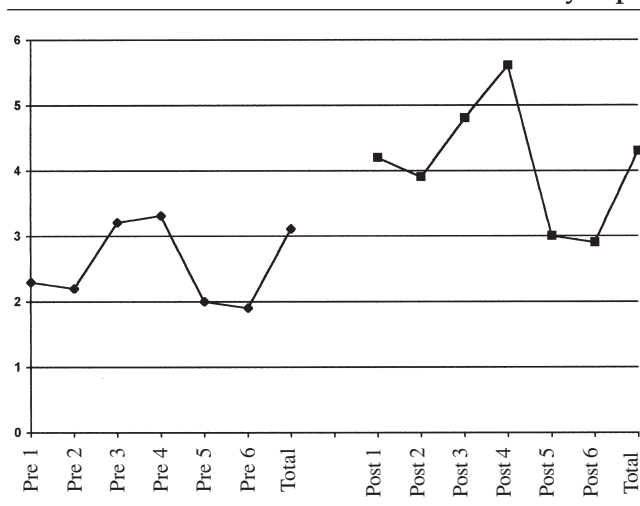
number of sentences were, F (1, 14) = 1.76, $p < .001$. See Figure 2 for mean number of sentences written.

Writing Interest Inventory

Students were administered pre- and post-instruction writing interest inventories (See Tables 1, 2, and 3). The first question, *Do you enjoy writing? Why or why not?* resulted in students improving from 47% with a response of *yes* to 100% with a response of yes. The second question, *How does writing make you feel?* resulted in students improving from 73% with a response of *good* to 100% with a response of *good* or *happy*. The third question, *Do you find writing difficult/hard? Why or why not?* resulted in students improving from 80% responding that it was *difficult* to only 27% responding that *it was difficult* after instruction. The fourth question, *Do you plan (think about what you want to write) before you begin writing? Why or why not?*

resulted in students improving from 73% responding with the answer of no to 0% responding with the answer no (all students responded that they now plan before writing). The fifth question *Do you organize your ideas before writing? Why or why not?* resulted in students improving from 93% responding with the answer *no* to 0% responding with the answer no (all students responded that they now organize their thought before writing). The sixth question, *Do you look for mistakes after writing your paper? How?* resulted in students improving from 47% responding with the answer no to 0% responding with the answer no (all students responded that they now look for mistakes after writing). The seventh question, *After finding mistakes in your paper do you make corrections? How?* resulted in students improving from 20% responding with the answer no to 0% responding with the answer no (all students responded that they now make corrections to their papers after finding mistakes in

Table 1

Writing Questionaire-Pretest

Question	Responses		Question	Responses	
1. Do you enjoy writing?	Yes	47%	Why or why not?	Just write (11)	
	No	53%		To think about it (4)	
Why or why not?	Not good at it (5)		5. Do you organize your ideas before writing?	Sometimes	7%
	You need to get better skills (3)			No	93%
	To get what's in head out (2)				
	Can't spell (2)		Why or why not?	Just write (14)	
	Boring (2)			So I don't forget (1)	
	Environmental non-threatning (1)				
2. How does writing make you feel?	Tired	13.5%	6. Do you look for mistake safter writing your paper?	Yes	53%
	Good	73%		No	47%
	Don't like it	13.5%			
			How?	Have someone else check it (6)	
3. Do you find writing difficult/hard?	Difficult	80%		Read over a couple of times (5)	
	No	20%		Just look at it (3)	
				Capitals and periods (1)	
Why or why not?	Don't know words to say (9)				
	Have to write a lot of stuff (2)		7. After finding mistakes in your paper do you make corections?	Yes	80%
	Spelling (2)			No	20%
	Pressure (2)				
4. Do you plan (think about what you want to write) before you begin writing?	Yes	27%	How?	Erase and put right answer (7)	
	No	73%		Ask a teacher (6)	
				Just read it (2)	

Table 2

Writing Questionaire-Posttest

Question	Responses	Question	Responses
1. What are the steps you learned about writing?	<u>All</u> students listed POWER steps	Why or why not?	To write better (10) To think about it (3) To know what to write (2)
2. What other classes could you use this technique in?	History (10) Health (10) Science (8) Writing paragraphs & papers (6) Reports (5)	7. Do you organize your ideas before writing? Why or why not?	Yes 100% No 0% To write better (15)
3. Do you enjoy writing? Why or why not?	Yes 100% No 0% To express feelings (13) To get what's in head out (2)	8. Do you look for mistakes after writing your paper? How?	Yes 100% No 0% Read over it (8) Get help from someone (5) Punctuation (2)
4. How does writing make you feel?	Good 67% Happy 33%	9. After finding mistakes in your paper do you make corrections?	Yes 100% No 0%
5. Do you find writing difficult/hard? Why or why not?	Yes 20% No 80% It's easier with POWER (13) Spelling and grammar (2)	How?	Rewrite it (10) Ask a teacher (3) Dictionary (2)
6. Do you plan (think about what you want to write) before you begin writing?	Yes 100% No 0%		

their writing). The eighth and ninth questions were only asked on the posttest. The eighth question, *What are the steps you learned about writing?* resulted in all students recalling the POWER acronym and the associated explanation of steps. The ninth question, *What other classes could you use this technique in?* resulted in students responding it could be used in history, health, science, to write papers, and to write reports. In addition, two-weeks following the completion of the posttest students were able to still recall the POWER strategy steps.

Qualitative Analysis of Strategy Usage

Student work was also evaluated to see if they had implemented the strategy that had been taught. Work was checked to see if students planned, organized, wrote, edited, and revised. Rough drafts, scratch paper and final written products were collected. Results indicated that all students implemented the POWER strategy and were able to improve their writing quality and quantity.

Discussion

In the present study, students with learning disabilities were taught a strategy for planning and writing essays. The POWER strategy instruction demonstrated it was significantly more effective than what students were currently implementing. This strategy gave students the means to plan before they began writing through the brainstorming of ideas; organize those thoughts and delete any unnecessary or unimportant information; write their paper; go back through their paper and look for mistakes, errors, or things that do not make sense; and finally revise and make any necessary corrections. Prior to instruction, students typically wrote on the topic they were given and when they finished they would hand it in without planning or organizing before writing, editing, and revising after writing.

Table 3

Writing Questionaire-Pretest-Posttest Comparison

Question	Responses				Question	Responses			
	Pretest		_Posttest_						
1. Do you enjoy writing?	Yes	47%	Yes	100%	5. Do you organize your ideas before writing?	Sometimes	7%	Yes	100%
	No	53%	No	0%		No	93%	No	0%
2. How does writing make you feel?	Tired	13.5%	Good	67%					
	Good	73%	Happy	33%	6. Do you look for mistakes after writing your paper?	Yes	53%	Yes	100%
	Don't like it	13.5%				No	47%	No	0%
3. Do you find writing difficult/hard?	Difficult	80%	Difficult	27%					
	No	20%	No	73%	7. After finding mistakes in your paper do you make corrections?	Yes	80%	Yes	100%
4. Do you plan (think about what you want to write) before you begin writing?	Yes	27%	Yes	100%		No	20%	No	0%
	No	73%	No	0%					

Quality of Writing

Many students with learning disabilities lack the strategies to aid them in the writing process, and simply writing more will only perpetuate the existing problem to a higher degree. Students need some direction in the writing process.

The implementation of this strategy assisted students in the organization of their thoughts before writing which allowed them to cognitively think before they began writing. The POWER acronym gave students with learning disabilities a concrete method to work on written products, which by their nature, is very difficult for students with learning disabilities. Students were able to maintain a specific topic throughout their writing without getting off the subject or incorporating irrelevant information.

The quality of students' writing increased by almost two times, according to holistic scores. From pretest to posttest the average scores of quality nearly doubled from an average of 24 to an average of 46 out of a possible 60, which favors the implementation of the POWER acronym. This is a significant finding and shows that the implementation of the POWER acronym for these students was a very effective tool. Students improved on all aspects investigated including: having a clear introduction or opening sentence; having supporting ideas; having a number of arguments; having a clear rationale; having more than one paragraph; each paragraph dealing with one topic; major points presented in a logical sequence; opening sentences of paragraphs introduc-ing ideas discussed; paragraphs starting on a new line; paragraphs being indented; appropriate sequencing of the essay; and including only relevant information. The strategy instruction was very effective in improving the quality of written products for this sample of students with learning disabilities. By providing the students with a purpose for their writing, guidance, and practice, the written products improved significantly from pretest to posttest.

Quantity of Writing

Although the quality of writing was the major area of investigation it was a pleasant surprise to see that all students also improved on the quantity of words and sentences written. Students improved from and average of 40.3 words on the pretest writing samples to an average of 66.7 words on the posttest writing samples and students improved from an average of 2.59 sentences on the pretest writing samples to an average of 4.34 sentences on the posttest writing samples. Although the number of words and sentences might still appear low, the implementation of the POWER acronym for these students was very effective at increasing the number of words and sentences in their writing. Because students with learning disabilities have been documented to have low productivity on written products (Montague et al., 1988; Newcomer et al., 1988), it was an important finding that implementation of an organizational strategy focusing on cohesion and organization produced more words and sentences in students' written work. Furthermore, it has been

documented that students with learning disabilities often write whatever comes to mind (Newcomer & Barenbaum, 1991) and possibly this strategy instruction allowed them to think more coherently and thus write more.

Writing Interest Inventory

With regard to the writing process, the question of whether students currently had strategy knowledge and just were not implementing it or if they lacked the specifics of the strategy altogether was also investigated. A pre-instruction and post-instruction writing interest inventory was administered for this purpose. Prior to instruction fewer than half of the students responded that they enjoyed writing and about three-fourths responded that writing made them feel good. After instruction all students responded that they enjoyed writing and that writing made them fell good or happy. All students have a more positive attitude toward writing after instruction. Maybe the structured approach and purpose allowed students to become more familiar with the writing process and what was expected, thus becoming more comfortable in the writing process itself. Students also reported that after the implementation of the strategy writing was not as difficult as it had been.

Questions related to the actual strategy focused on planning, organizing, editing and revising. In general, prior to instruction students did not implement these components in the writing process. Generally, students just wrote on a topic and handed it in when they were finished writing. After instruction students were now incorporating these components into their writing process and producing longer written products and written products with more quality. This strategy allowed the students to become more effective and they were aware of it.

Finally, all students were able to recall the strategy steps after the completion of the posttest as well as after a two-week delayed period without any prompts. This is an important finding. Students also responded that this strategy could be used in history, health, science, to write papers, and to write reports. This is also an important finding since we know students with learning disabilities often have difficulties generalizing strategies to other situations and academic areas. Even though these particular students had lower IQs than would be expected for average students with learning disabilities, they were able to learn and implement the POWER strategy and recall the strategy steps and use this specific writing strategy in other classes or content areas.

Limitations

There were several limitations to this study. First, the small size of the sample population (N=15) places uncertainty on the validity of the results. The students were selected for this study because they had poor writing skills. Second, the students had daily contact with the researcher. Bias is likely due to utilizing this sampling technique because of the methods, styles, and preferences of the treatment employed at the school. A replication study with a greater number of subjects is needed in order to obtain reliable and generalizable results to more inclusive settings.

Future Research

This research could be extended in a number of ways. Assuming students have access to computers and have effective computer skills, this strategy could be implemented with students writing their works on the computer, which would make editing and revising simpler. Students could print out a copy of their work, edit it, and go back and make revisions on the computer before printing out a final copy. Students could also serve as peer editors for each other. Although this idea was mentioned, most students in this investigation chose to do their own editing. This process might aid students in producing better quality products. Students should also be followed or tracked to make sure they maintain the use of this strategy and that they transfer this strategy knowledge to other situations when appropriate. If this does not occur, the teacher may need to reteach some or all of the components of this particular strategy. Finally, an attribution component could be implemented to make sure students are aware that the instruction and the implementation of the strategy was the reason their writing improved. It is very important that students with learning disabilities be aware that effort and the implementation of strategies can and will increase their performance.

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Social Skills Training Research with Minority Students with Learning Disabilities

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Sociocultural contexts influence social behaviors in ways that may not always be reflective of majority-culture norms. They also may vary the impact social skills training (SST) programs have on minority students with learning disabilities. To better understand culturally sensitive and effective SST for students with learning disabilities, it is important that SST researchers include a sociocultural perspective in their research. In this article, SST and learning disabilities research is reviewed to determine the types and outcomes of SST programs used with minority and non-minority students. The extent to which SST researchers incorporated a sociocultural perspective in the design, implementation, and reporting of their research is examined. Implications of the findings and suggestions for future research and practice are discussed.

Many students with learning disabilities have problems with social competence, including poor social skills and poor peer acceptance (Goldstein, 1997; Kavale & Forness, 1995; Stone & La Greca, 1990). Socially incompetent students with learning disabilities often have trouble adapting their communication style to the needs of their listener, following standard rules of conversation and social activities, reading social cues, recognizing body language, and expressing their feelings, emotions, and preferences clearly to others (Goldstein, 1997; Vaughn, 1985). They also tend to be ignored or disliked by their peers (Bryan, 1998; Gresham & Reschly, 1986; Stone & La Greca, 1990) and teachers (Seidel & Vaughn, 1991), and underrepresented in the positive social status classification of "popular" (see Stone & La Greca). In fact, difficulties with social competence may be seen as early as kindergarten before any formal learning disabilities identification has even been made (Vaughn, Hogan, Kouzekanani, & Shapiro, 1990).

Students with learning disabilities and poor social competence are at risk for low involvement in school activities and classroom learning (McIntosh, Vaughn, Schumm, Haager, & Lee, 1993), and poor school performance and dropping out of school (Seidel & Vaughn, 1991). They are also likely to engage in delinquent or criminal behavior (Winters, 1997), and experience psychiatric problems into adulthood (Goldstein, 1997). Not surprisingly, given these risks, social skills training is increasingly being recommended for these students and included in Individualized Education Plans (IEPs, Rivera & Rogers-Adkinson, 1997).

Numerous social skills training (SST) programs have been developed and implemented with students with learning disabilities to help ameliorate their social functioning (Kavale & Forness, 1995). Some SST programs may include the use of operant and social learning techniques, such as observation, modeling, rehearsal, guided practice,

feedback, and reinforcement. Such interventions may involve role-playing, peer initiation, cueing, and prompting. Other SST programs have focused on cognitive learning techniques, such as self-assessment and self-monitoring of behaviors, and social problem solving. Still other SST programs have used a combination of these techniques. Despite their differences, these three types of behavioral, cognitive-behavioral, and combined therapy SST programs, respectively, have been shown to have positive effects on targeted social behaviors (Schneider & Byrne, 1985).

There are several factors to consider when deciding on social behaviors that require SST. These may include the student's developmental level to learn new skills, the social validity of the skills being taught, the situational context, and the cultural context (Cartledge & Milburn, 1995). In particular, students' beliefs, attitudes, values, and behaviors are strongly influenced by cultural contexts (Tharp, 1989). Therefore, it is important to understand social behaviors within the student's cultural context to distinguish between skill deficits and cultural differences, and to optimize instruction.

Sociocultural considerations are especially salient when developing instructional programs. For example, Tharp (1989) demonstrated that by learning the sociocultural needs and abilities of some Hawaiian children who were at high risk for reading failure, he was able to adapt a reading program to their culture and improve their reading performance. He capitalized on the teaching-learning interactions characteristic of the Hawaiian culture and empirically supported sociocultural compatibility as a necessary feature of effective reading instruction when working with non-mainstream cultural groups. In addition, he noted that a sociocultural approach is fundamental to other forms of effective instruction, including SST, particularly when minority students are involved. Given the rapid demographic changes in this

country that has led to a continued increase in the number of culturally and linguistically diverse students with learning disabilities, [e.g., racial and ethnic minority students account for 36.9% of the special education population with learning disabilities (U.S. Department of Education, 2000)], there is a greater need for sociocultural considerations in SST to facilitate culturally sensitive and effective SST practices (Cartledge & Milburn, 1996; Rivera & Rogers-Adkinson, 1997; Tharp, 1989).

Bos and Fletcher (1997) discussed the importance in considering a sociocultural perspective when conducting research and disseminating research findings. Although their research focused on learning disabilities and inclusion, the sociocultural perspective they described could easily be adapted and applied to learning disabilities and SST research (see Table 1). According to Bos and Fletcher, a sociocultural framework *assumes that the context interacts with and dramatically affects students' abilities and disabilities* (p. 92). Therefore, to better understand effective SST with students with learning disabilities, especially those who are also from culturally and linguistically diverse groups, it is important that personal characteristics be considered (e.g., race/ethnicity, cultural and linguistic background, and socioeconomic status), as well as other sociocultural contexts, such as family, community, and SST programs (Bos & Fletcher, 1997; Cartledge & Milburn, 1996; Hilliard, 1995).

The adapted sociocultural framework (see Table 1) contains sociocultural factors that predict what students with learning disabilities will learn and how they will be treated (Hilliard, 1995). For example, the family context may influence the level of acculturation (e.g., adapting to the values, beliefs, and attitudes of a new cultural milieu) of minority students with learning disabilities. These students' acculturation may affect the amount and type of background knowledge or schema they have—understanding that is critical for success in a social curriculum and the pedagogy used to implement it (Bos & Fletcher, 1997; Hilliard, 1995). Therefore, social skills trainers and researchers should be aware of how their use of social curriculum and pedagogy reflecting their own family context (e.g., middle-class, majority-culture values and perceptions) may affect low-income ethnic minority students. Ultimately, the degree to which there is a match between social curriculum and pedagogy and the students' background knowledge or schema will determine performance in social settings (Bos & Fletcher, 1997).

Sociocultural contexts assist and interact in explaining the definition and amelioration of social skills (Cartledge & Loe, 2001). They also influence social behaviors in ways that may not always be compatible with the procedures, routines, and expectations of the majority culture (Tharp, 1989), which may have a direct impact on the SST of minority students with learning disabilities (Bos & Fletcher, 1997; Cartledge & Loe, 2001). Therefore, SST researchers who

work with students with learning disabilities, especially minority students, would form a better understanding of SST if they included a sociocultural framework in their research. In this article, the research literature on SST and students with learning disabilities is examined to determine: (a) the quantity of SST research with minority and non-minority students with learning disabilities within a span of 25 years, (b) the types and outcomes of SST programs used with minority and non-minority students with learning disabilities, and (c) the extent to which SST researchers incorporated a sociocultural framework in the design, implementation, and reporting of their research. In addition, implications of the findings and suggestions for future research and practice are discussed.

Method

Selection Criteria for Research Studies

Social skills training (SST) studies published over a 25-year period (i.e., 1976-2000) were reviewed. This time period was chosen because SST became increasingly popular in psychology and education after the enactment of the 1975 Education for All Handicapped Children Act (Cartledge & Milburn, 1978; Gresham & Nagle, 1980; Rotheram, 1980; Trower, Bryant, & Argyle, 1978). Articles were also selected and included in this review based upon the following criteria:

1. Journal articles were data-based, using qualitative or quantitative designs. Therefore, literature reviews, editorials, essays, and other theoretical articles on social competence and individuals with learning disabilities were excluded.
2. Journal articles focused on social skills training programs.
3. Journal articles contained U.S. Caucasians, ethnic minorities, or both, who were labeled as eligible for special education services under the federal category of *specific learning disability* (actual labels were dependent on local and state preferences).

Search Outcomes

A list of studies was derived from a search of six databases: Medline; PsycINFO Journal Articles, Chapters, Books; Educational Resources Information Center (ERIC); Wilson Social Science Abstracts; Wilson Humanities Abstracts; and Wilson Education Abstracts. The searches were conducted one at a time using each of the following descriptors: *LD, learning disability, learning disabilities, learning disabled, learning disorders, learning problems, learning impaired, slow learner, dyslexic, dyslexia, minimal brain injury, perceptually disabled, and psychological-processing problems.* Each term was searched in combination with the phrase *social competence* or *social skills* or *social*

Table 1

Sociocultural Framework for Social Skills Training (SST) Research in Learing Disabilities (LD)

Students with Learning Disabilities	Family and Community	SST Prgram
Race/ethnicity[a]	Family household/empolyement/ environment[b]	Trainer characteristics Race/ethnicity[a]
Cultural background		Cultural/linguistic background[b]
	Communtiy type/region/	
Linguistic background		Socioeconomic status
	environment[b]	
		LD education/training/experience[b]
Socioeconomic status		Pedagogical or therapy education/training/experience[b]
		functional assessment based on input from parents, teachers, peers, and participants[c]
		Consistent discourse with family[d]
		Culturally relevant curriculum[e]
		Culturally relevant pedagogy
		Student-centered learning
		Maintence/generalization strategy[a]
		Pace adjustments/instructional level changes/ modified directions/use of advanced organizers[b]
		Activation and use of students' background knowledge

[a]Considered as one factor. [b]Recieved score=1 if information was provided on at least one of the varaibles.

[c]Functional assessment was apporprite if input was recieved from at least two of the four groups to determine needs.

[d]Discourse was consistent if a minimum of three meetings occured between researchers/trainers and gamily members throughout the program.

[e]Curriculum was culturally relevant if researchesrs stated explicity that it contained culturally approproprate materials, or if researchers used students' background knowledge to talier it.

skills training. The outcomes were reviewed to ensure that the descriptors selected were included in the title and abstract (or description), and to verify that the entries were empirical studies.

The results of each search is as follows, with the number in parentheses representing the actual number of records identified: *LD* (4), *learning disability* (1), *learning disabilities* (29), *learning disabled* (4), *learning disorders* (9), *learning problems* (0), *learning impaired* (0), *slow learner* (0), *dyslexic* (0), *dyslexia* (0), *minimal brain injury* (0), *perceptually disabled* (0), *and psychological-processing problems* (0). A total of 47 records were found, including 5 entries that were detected more than once by some of the combined descriptors. The results of these extensive searches yielded 42 studies of potential use in this literature review.

Journal articles were reviewed systematically with a cri-

teria checklist, coding information regarding their type (e.g., empirical, editorial), social skills training (e.g., behavioral, cognitive-behavioral), and participants (e.g., learning disability diagnosis, Caucasian, African American). To determine the inter-rater reliability of the coding procedure, an independent reviewer (fourth year undergraduate student) knowledgeable in the areas of learning disabilities and social skills training was asked to code 10 randomly selected studies (24% of the total) with the same procedure. Inter-rater reliability was calculated as 1.00 using Cohen's Kappa—the proportion of agreement between raters correcting for chance agreement. A Kappa of .80 and above is considered an acceptable level of agreement (Sattler, 1992).

After the reviewers analyzed the studies' methods and results sections, four studies were found ineligible because they did not include participants from the United States, and

nine were excluded because they did not focus on SST programs. In addition, two studies were found ineligible because they did not include participants with officially diagnosed learning disabilities (although they did contain ethnic minority participants). Of the 27 remaining studies, 5 studies met all of the selection criteria, but 22 studies did not include information on race or ethnicity. An attempt to contact researchers responsible for these 22 studies was made via e-mail or phone to obtain this information. Although most researchers could not be reached, eight researchers revealed that they had included Caucasians, ethnic minorities, or both as participants. However, most could not provide percentage information about their participants. A total of 13 research studies were found eligible for inclusion in this literature review—5 studies with Caucasian participants exclusively and 8 studies with both Caucasian and ethnic minority participants. These 13 studies (see Table 2) came from psychological, education, and social work journals, including *Analysis and Intervention in Developmental Disabilities, Education and Treatment of Children, Exceptional Child, Exceptional Children, Journal of Humanistic Education and Development, Journal of Learning Disabilities, Journal of Research and Development in Education, Learning Disabilities Focus, Learning Disabilities Research and Practice, Rural Special Education Quarterly, and Social Work with Groups*. Each study is numbered in Table 2 and is referred to by number throughout this article.

Selection Criteria for Sociocultural Factors in the Research Studies

The 13 research studies were reviewed to determine which and how sociocultural factors were reported in the research. Specifically, research articles were examined systematically with a record form that listed 18 sociocultural factors (see Table 1). Study information was coded regarding student data (e.g., race/ethnicity, cultural background), family and community (e.g., family employment, community type), and SST program data (e.g., trainer race/ethnicity, culturally relevant curriculum). In addition, each factor received a score of 1 if the researcher(s) provided explicit information about it, made reference to it, or both. For example, the cultural background factor was coded a 1 if the researcher(s) reported Hawaiian as their students' culture, acknowledged culture in some way in their research, or both. If no information was reported on the students' culture, then the factor would receive no score, and this lack of information would be noted. The inter-rater reliability of this coding procedure was determined with the help of the independent reviewer who had assisted previously. This independent reviewer coded 3 (23%) randomly selected studies using the same procedure. All disagreements between reviewers were resolved. Inter-rater reliability was calculat-

ed as .84 using Cohen's Kappa—the proportion of agreement between raters correcting for chance agreement.

Results and Discussion

In reviewing the 13 SST empirical studies, several trends were noted. First, the number of empirical studies with ethnic minority students with learning disabilities did not increase between 1976 and 2000. Specifically, 60% of the studies published from 1991-1999 contained ethnic minorities with learning disabilities, compared to 63% of the studies published from 1983-1989. Second, none of the studies included ethnic minority participants exclusively, whereas five studies included Caucasian participants exclusively. Third, in comparing studies with and without ethnic minorities with learning disabilities, there were no significant differences found in the types of SST programs used. Finally, during the period 1983-1999 the percentage of sociocultural factors that have been reported in SST research for students with learning disabilities has remained relatively stable, with most researchers reporting less than 21%. Beyond these trends, specific information was collected based on student, family and community, and SST program sociocultural factors.

Students with Learning Disabilities

The 13 articles were reviewed for their authors' consideration of sociocultural factors (race/ethnicity, cultural and linguistic background, and socioeconomic status) involving their students with learning disabilities. Five of the 13 articles contained information about race/ethnicity (1, 2, 9, 10, and 13). In four of these five articles, race/ethnicity (e.g., Caucasian, Black, Hispanic) was the only means by which culture was addressed, which suggested that in this research race/ethnicity was substituted for culture (1, 9, 10, and 13). A small number of articles (2, 5, and 8) provided general cultural background information (e.g., Samoan, Hawaiian). However, none of the 13 articles acknowledged students' culture or linguistic background as a potential influence on SST. This finding is noteworthy because 8 of the 13 studies contained ethnic minorities as participants. Specifically, in the five studies that provided ethnic minority percentage information, one study had 13% ethnic minorities, one study had 50% ethnic minorities, and three studies had over 75% ethnic minorities. Although these five studies, and an additional study (1), included general information about their students' socioeconomic status (SES), its impact on the research was not discussed. These results indicate that given the cultural variations that exist in the United States, their influence on social behaviors (Rivera & Rogers-Adkinson, 1997), and the effects that culture, language, and SES have on successful learning (Bos & Fletcher, 1997; Tharp, 1989), there is a need for more detailed reporting of these charac-

Table 2

Social Skills Training Research Studies with Students with Learning Disabilities

Researchers	Design	Social Skills Training	Participants	Results
1. Blackburn (1989)	Single subject; multiple baseline; 9-week follow-up	Modeled after procedures developed by deshler & Alley (1979), & Stokes & Baer (1977); [Behavioral]	3Ca boys; 6-11 years old	Adapted target social behaviors to new settings
2. Clement-Heist, Sieglel, & Gaylord-Ross (1992)	Single subject; multiple baseline; no follow-up	Carreer Ladder Program (Siegel et al., 1989) [Behavioral]	1 boy, 3 girls; 1 AA[b], 1C[a], 1 H[c], 1 Chinese; 7-19 years old	Improved conversation skills; improved instruction giving and job duty ordering
3. Ferre & Ferre (1991)	Single subject; pre-, posttest; no follow-up	Modeled after Skillstreaming (McGinnis et al., 1984), Walker Social skills Curriculum (1983), 100 Ways to Improve Self Concept (Canfield & Well, 1976), & Good Apple Social Skills (1983); [Behavioral]	2 C[a]boys, 2 Ca girls; 6-11 years old; 3rd graders	Improved attending behaviors; increased self-esteem and reduced negative self-statements
4. Trapani & Gettinger (1989)	Three groups; pre-, mid-, posttest; no follow-up	Modeled after procedures developed by rinn & Markle (1981); [Behavioral]	20 C[a] boys; 9-12 years old	Increased appropriate greetings and question answering
5. Whang, Fawcett, & Mathews (1984)	Single subject; multiple baseline; 1-month follow up	Medeled after procedures developed by Mathews et. al. (1980); [Behavioral]	1 AA[b] boy, 1 C[a] girl; 17 years old	Increased job-related social skills
6. Fox (1989)	Four groups; pre-, posttest; 6-week follow-up	Communicating to Make Friends Program (Fox, 1980); [Cognitive-Behavioral]	86 boys & girls; ethinically diverse; 4th-6th graders	Increased peer social acceptance
7. Omizo, Cubberly, & Omizo (1985)	Two groups; pre-, posttest; no follow-up	Rational Emotive Education Program (Knauss, 1977); [Cognitive-Behavioral]	48 boys, 12 girls; most were C[a], 8-11 years old	Improved self-concept and internal locus of control
8. Omizo & Omizo (1998)	Two groups; pre-, posttest; no follow-up	Modeled after procedures developed by amerikaner & Summerlin (1982);	40 Asian, 17 Samoan & Hawaiian, &	Improved self-concept interpersonal behaviors, and task-related behaviors

Table 2 (continued)

Social Skills Training Research Studies with Students with Learning Disabilities

Researchers	Design	Social Skills Training	Participants	Results
		[Cognitive-Behavioral]	5 C[a] children; 9-11 years old	
9. Vaughn, Lancellota, & Minnis (1988)	Case study; pre-, posttest; 1-year follow-up	modeled after procedures developed by Ridley & Vaughn (1982, 1984); [Cognitive-Behavioral]	1 C[a] girl; 9 years old; 4th grader	Improved peer acceptance
10. Wanat (1983)	Two groups; pre-, posttest; no follow-up	Modeled after procedures developed by Palomares & Ball (1997), & Pal Filmstrips (1997); [Cognitive-Behavioral]	24 boys, 6 girls; 26 C[a], 4Bd, 16-18 years old	Improved self-concept and interpersonal relations
11. Prater, Serna, & Nakamura (1999)	Two groups; multiple baseline; 7-week follow-up	Modeled after ASSET[e] (Hazel et al., 1981), Skillstreaming (McGinnis et al., 1984), & procedures developed by Serna et al. (1991); [Combined Therapy]	14 boys, 3 girls; ethically diverse; 7th graders	Improvement in giving positive feedback, accepting negative feedback, and contributing to discussion
12. Hepler (1997) Spencer-Rowe (1991)	Two groups; pre-, posttest; 6-month follow-up	Modeled after procedures by Vaughn & McIntosh (1989); [Combined Therapy]	9 C[a] boys, 3 B[d], 2 C[a], 4 H[c], 1 ME[f]; 9-12 years old	Improved interpersonal skills; for boys

[a]C = Caucasian. [b]AA = African American. [c]H = Hispanic. [d]B = Black.

[e]ASSET = A Social Skills Program for Adolescents. [f]ME = Middle Eastern.

teristics of students with learning disabilities. This is especially salient considering the percentage of ethnic minority students who participated in this research involving the effectiveness of SST interventions.

Family and Community

The 13 articles were also reviewed for sociocultural information related to family (household, employment, and environment) and community (type, region, and environment). No information was reported about family household (e.g., single parent, foster parent), family employment (e.g., professional/nonprofessional, employed/unemployed), home environment (e.g., child-rearing practices, physical and emotional support), or their potential influence on SST

research. Although no family context information was provided, most studies (1, 2, 3, 4, 5, 6, 7, 8, 11, and 13) included community type (e.g., rural, urban) and region (e.g., city, state) information. However, no community environment data were reported. Overall, specific information related to family contexts and community environments, as well as discussions of how family and community variables affect SST is necessary given the influence of these variables on social behaviors (Cartledge & Milburn, 1996; Irvine, 1990; Rivera & Rogers-Adkinson, 1997). Researchers and trainers need to understand the interrelations between their students' family and community contexts and the demands of their SST programs, to ensure that relevant and meaningful training activities are used that promote their students' success

(Mehan & Trujillo, 1989). Therefore, striving toward more complete reporting of how these contexts affect and complicate SST may prove important for valid generalizations of SST research to different populations and to inform SST research decisions.

Social Skills Training Program

Sociocultural factors related to the SST programs described in the 13 articles were also reviewed. These factors included trainer characteristics, functional assessment, discourse with family, culturally relevant curriculum, and culturally relevant pedagogy (see Table 1).

Trainer characteristics. Trainer characteristics play an important role in the SST program context because the trainer sets and influences the instruction for the students with learning disabilities. For example, a trainer's cultural self-awareness leads directly to the identification of cultural influences that impact SST programs with ethnic minority students (Bos & Fletcher, 1997; Garcia & Malkin, 1993). Nevertheless, the 13 groups of SST researchers reported little information regarding their trainers. None of the researchers acknowledged or discussed their trainers' race or ethnicity, cultural or linguistic background, SES, or formal learning disabilities education, training, and experience, and only three groups of researchers provided information about their trainers' program training and experience (9, 11, and 12). However, even these three groups reported limited trainer information. For example, the most extensive description came from Hepler (1997) who wrote, *The school social workers and psychologists were trained by the author. This was the second social skills program they had implemented together, so they were very skilled leaders* (p. 27). Clearly, the critical role trainers play in SST and their apparent influence on its success supports the need for more rigorous reporting of detailed information regarding social skills trainers.

Functional assessment. Functional assessments are important to SST programs because they provide specific information related to a student's adequate and inadequate social skills, which helps set and direct SST (Merrell & Gimpel, 1998). In reviewing the 13 articles, 6 of the 13 groups of researchers described functional assessments to determine their students' specific social problems (1, 2, 3, 4, 5, and 8). The functional assessments involved direct observation and multiple groups, such as parents, teachers, peers, and students with learning disabilities who completed scales and checklists. However, none of the 13 groups of researchers reported the cultural appropriateness of their instruments. Moreover, in the three studies that contained ethnic minority participants (2, 5, and 8), no information was provided about parents participating in the functional assessments of their children, and only two of the 13 groups of researchers disclosed information about tailoring their pro-

gram to meet their students' specific needs (1 and 11). Given that minority students were included in a major portion of this research, further information regarding functional assessments and their cultural appropriateness and influence on SST programs could prove to be valuable in understanding the skills and training required by culturally diverse students with learning disabilities.

Discourse with family. Discourse with a student's family, especially with a minority student's family, may improve a researcher's view of how knowledge about SST is developed, understood, and communicated to others (Elmore, Peterson, & McCarthey, 1996; Trent, 1997). The 13 studies were reviewed for evidence of consistent communication between researchers and their students' families. One group of SST researchers reported opportunities for family involvement in their study (1). This group described meeting with family members (a minimum of 3 times) to teach them how to use target behavior prompts and reinforcement in the form of systematic, contingent attention at home with their children, and how to collect data through the use of a frequency count. Nevertheless, the researchers did not mention whether they had gained new knowledge by meeting with parents, or if it had made an impact on their program and how they viewed and conducted SST with their students with learning disabilities. The exclusion of this type of information limits the understanding of how consistent discourse with families, particularly culturally diverse families, plays a role in shaping SST programs (Bos & Fletcher, 1997). This suggests that researchers need to document and report more of these data.

Culturally relevant curriculum. All 13 studies lacked information regarding the representation of cultural diversity in the content of their SST curriculums. Specifically, none of the researchers reported using a curriculum that reflected their participants' race/ethnicity, culture, or experiences. Considering that the degree to which a student's background knowledge is incorporated in the SST curriculum helps determine his or her success or failure in the program (Bos & Fletcher, 1997; Diaz & Flores, 1991), increased information about the curriculum's cultural validity is warranted in future SST research.

Culturally relevant pedagogy. The 13 studies were reviewed for culturally relevant pedagogical practices (student-centered learning, maintenance/generalization strategies, instructional strategies, and activation and use of students' background knowledge). Most researchers (1, 2, 4, 6, 7, 8, 9, 10, 11, 12, and 13) described the use of a student-centered approach to learning, integrating discourse into instruction to provide students the opportunity to discuss the skills they were learning. Fewer researchers reported the use of maintenance/generalization strategies, such as homework (1, 2, 9, and 12) and self-monitoring (13). Finally, no researchers noted the use of instructional strategies such as adjusting the pacing, modifying the directions, using

advanced organizers, modifying the lessons to an appropriate grade level, or activating and using the students' background knowledge. Given the strong impact relevant pedagogy has on learning (Bos & Vaughn, 1998), and given that minority students were included in only 8 of the 13 studies, more detailed reporting of maintenance/generalization strategies, instructional strategies, and activation and use of students' background knowledge could prove to be salient in understanding SST of culturally and linguistically diverse students with learning disabilities.

Conclusions

This literature review was conducted to determine the types and outcomes of SST programs used with minority and non-minority students with learning disabilities. No significant differences were found in the types of SST programs implemented, based on ethnicity. However, it was impossible to detect treatment outcome differences because there were no published SST studies that focused exclusively on ethnic minority students. In addition, most of the studies with ethnic minority students did not provide information about individual treatment responsiveness, nor were the findings reported by ethnicity. This also made it impossible to determine whether the SST programs were equally effective for ethnic minority students and Caucasian students. Clearly, there is a need for SST researchers to report similar or differential treatment effects across ethnicities. It is also necessary that some SST researchers examine the needs of culturally homogenous participants, and later cross-cultural groups, to determine *whether a given truth [in SST] prevailed despite cultural differences* (Stockman, 1995, p. 25).

This literature review was also performed to examine the extent to which SST research involving students with learning disabilities incorporated a sociocultural framework in their research. The investigation revealed that for the last two decades there seems to have been a slight decrease in the number of published SST empirical studies involving ethnic minority students with learning disabilities. It also uncovered that there has been neither a significant increase in the reporting of sociocultural factors in SST research, nor an adequate discussion of their interactions and influence on SST research. The limited information provided on student cultural and linguistic backgrounds, family contexts, community environments, trainer characteristics, functional assessments, researcher and family discourse, culturally relevant curriculums, maintenance and generalization strategies, instructional strategies, and activation and use of student background knowledge are areas that require more assiduous documenting and reporting to better understand their relationships and impact on SST research.

Limitations of this Literature Review

A few limitations should be considered when interpreting the results of this literature review. First, 16 of 42 studies were excluded because they contained insufficient diagnostic or racial and ethnic information. If these details had not been omitted, they may have been found eligible, which may have affected the results of this review. Second, it is possible that due to limited journal space, details were edited from the original studies that may have affected the ratings that they received. Finally, the use of a dichotomous rating scale to rate the sociocultural factors may have decreased the variability and sensitivity of the outcomes. A rating scale with a greater range may have resulted in more precise judgements. However, even with these limitations, the indicated need for more reporting of sociocultural factors in SST research found in this study is consistent with Bos and Fletcher's research findings (1997). Clearly, further investigations are required to afford a more complete interpretation.

Implications

Adopting a sociocultural framework extends the abilities of researchers to form an understanding of culturally and linguistically diverse students and the interplay of their contextual factors (Bos & Fletcher, 1997). Therefore, in conducting SST research with students with learning disabilities to improve their social competence, there is logic in incorporating sociocultural factors in its design, implementation, and interpretation. Nevertheless, embracing a sociocultural perspective in SST research is a considerable challenge that requires insights on the part of trainers and researchers. Given the additional demands placed on these individuals to investigate the complexities of SST research with students, conducting qualitative studies might be a first step to further their understanding of specific sociocultural factors. Subsequently, studies might be extended to intervention research.

Incorporating a sociocultural perspective in SST research methodology calls for researchers to report and journal editors to publish richer descriptions of students and contextual factors. In practice, this requires strong alliances among researchers, trainers, parents, and schools, so that the focus of research is more about sharing information that furthers the understanding of the intricacies of SST research. This notion upholds the importance of qualitative research, which can add depth and context to quantitative research and help shape its direction. It also suggests the need to collect data from different sources (e.g., parents, siblings, teachers, peers) to comprehend the different viewpoints influencing SST research and its long-term outcomes.

In this investigation, we noted that most of the reviewed studies did not include any information related to SST effec-

tiveness and cultural group differences. Although this finding is not surprising given the small number of culturally diverse participants, we suggest that future SST researchers consider evaluating the outcome of training from a broad perspective. For example, when comparing groups of participants, researchers should examine not only how their participants' characteristics may have contributed to the success or failure of their SST program, but also how they themselves may have developed, structured, and implemented their SST program in such a way that influenced how certain culturally diverse individuals performed (e.g., clinical vs. school settings, degree of parental involvement, trainer qualifications, and curriculum).

Prior to conducting cross-cultural SST research, which facilitates the researcher's ability to generalize empirical findings to heterogeneous groups, researchers must be aware of how they have defined social skill norms in their programs. Therefore, we encourage researchers to conduct SST research with culturally homogeneous groups that will help improve their ability to understand *both* cultural minority and majority social norms. During this process of acknowledging and learning from homogeneous groups, researchers must recognize cultural group similarities and differences, including how they define appropriate and inappropriate social behavior. In doing so, SST researchers will be able to: (a) teach their culturally diverse participants that there is a common thread of social standards found in most cultural groups that must be adopted and practiced in certain settings (e.g., classroom, church) and with certain individuals (e.g., teachers, teammates) in order to succeed in school, work, and play; and (b) acknowledge and teach their participants that they possess unique culturally-rooted social behaviors that help define who they are and thus, should remain in their repertoire. Once researchers have a clearer understanding and a stronger empirical database of social norms to work from (based on homogeneous groups), they will be better equipped to design a generalizable SST program for heterogeneous groups.

This literature review suggests a need for more SST research involving students with learning disabilities that attends to a sociocultural perspective. Therefore, both novice and seasoned researchers are encouraged to move beyond the deficit model approach to SST and embrace a more contextual approach that increases their awareness of the sociocultural needs of students whose cultural practices are distinguished from their own. Ultimately, a greater regard for sociocultural factors in SST research involving students with learning disabilities will lead to better interventions for all students.

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