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Evaluating Childhood Bipolar Disorder - A Survey of School Psychologists' Knowledge and Practices

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Abstract

Using data gathered from the *Childhood Bipolar Disorder Survey*, this study explored Pennsylvania school psychologists' knowledge and practices when evaluating children for Bipolar Disorder (BPD). Results indicate that only a small percentage of school referrals involved children or adolescents with BPD.

Participating school psychologists were moderately familiar with both the literature and psychopharmacology surrounding childhood BPD. Although doctoral-prepared school psychologists were permitted to diagnose childhood BPD more than non-doctoral practitioners, approximately half of participants trained to diagnose childhood BPD were not allowed to do so in their respective schools. Participants identified disturbed mood, depression, grandiosity, rapid cycling, and sensation seeking as the more important symptoms influencing their understanding of childhood BPD. School psychologists used clinical history, formal diagnostic criteria, collateral data, and behavioral observations as their main instruments when making a diagnosis. Educational implications and future directions for research are discussed.

Evaluating Childhood Bipolar Disorder - A Survey of School Psychologists' Knowledge and Practices

Professional interest in the topic of Bipolar Disorder (BPD) has increased dramatically over the past decade (American Psychiatric Association, 2003). Once considered rare in children, BPD is becoming much more common than ever realized (Cicero, El-Mallakh, Holman, & Robertson, 2003; Wozniak, Biederman, & Kiely, 1995). With each generation a higher incidence of BPD has been reported, with the first episode earlier in the child than in the parent (Johnson & Roberts, 1995). This disorder can appear in children and adolescents, although there is some disagreement about this among professionals.

BPD typically emerges in late adolescence or early adulthood; but in some cases, it begins earlier (National Institute of Mental Health, 2001). Since no large epidemiological studies have been published regarding BPD in children younger than 9 years of age, the incidence and prevalence of this disorder during the early elementary-school years are unknown (McClure, Kubisyn, & Kaslow, 2002). However, the adult BPD literature suggests that 20-40% of adults have their onset during childhood and adolescence (Joyce, 1984; Lish, Dime-Meehan, Whybrow, Price, & Hirschfield, 1994). While there is no community data on the prevalence of childhood BPD, it may be relatively common in clinically referred children (Wozniak et al., 1995).

Childhood BPD appears to be a much more chronic condition that has a very early onset age (Carlson, 1995). Frazier, Doyle, Chiu, and Coyle (2002) purported that the actual prevalence of childhood BPD will be difficult to ascertain until a general consensus is reached on a definition of bipolarity in children. Estimates of the prevalence of childhood-onset BPD appear to be limited not only by the lack of epidemiological studies, but also by the historical bias against diagnosing BPD in this age group (Papolos & Papolos, 2002). The belief that BPD usually begins in late adolescence or early adulthood—rarely in childhood or early adolescence—is still held by some mental health professionals, suggesting that more research and practical information are needed to clarify the onset issue (Boucher, 1999).

Whether many young people who are currently given the diagnosis of BPD actually suffer from this condition has also come into question (Biederman, 1998; Klein, Pine, & Klein, 1998). Conversely, many youths who do suffer from BPD are often symptomatic for several years before a correct diagnosis is made (Findling, Gracious, McNamara, Youngstrom, Demeter, & Calabrese 2001; Geller & Luby, 1997). Specific features and diagnostic boundaries of childhood BPD remain controversial. Moreover, the differentiation of childhood BPD from other disorders is challenging, owing both to high comorbidity with other common childhood disorders and to frequent lack of an episodic course typical of adult BPD (Faedda, Baldessarini, Glovinsky, & Austin, 2004). Until relatively recently, almost all available data on BPD in children and adolescents were derived from small samples of patients and anecdotal reports (Papolos & Papolos, 2002).

Regardless of the questions and disagreement that have surrounded childhood BPD, our knowledge of the phenomenology and biosocial treatment of this condition has been expanding rapidly in recent years (Geller & DelBello, 2003). A growing interest in childhood BPD has been seen in the rise of federally funded projects in children (cf. IDEA, 1997) and the diverse areas that such projects encompass, including phenomenology, natural history, family studies, offspring, epidemiology, neuroimaging, treatment, and preclinical studies (National Institute of Mental Health, 2001).

BPD is a severe, chronic, life-threatening illness (Davazno, Yue, Belin, Mintz, Venkatraman, Santoro, Barnett, & McCracken, 2003) that, despite its severe and chronic nature, frequently goes either undetected or misdiagnosed (Rivas-Vasquez, Rey, Johnson, Blais, & Rivas-Vasquez, 2002). Geller and DelBello (2003) revealed that mood disorders have been largely under-diagnosed in children. It is interesting that most bipolar patients consult as many as three professionals over eight years before diagnosis (Birnbaum, Shi, & Dial, 2003). Reddy and Srinath (2000) offered plausible reasons for under-diagnosis or misdiagnosis, including the widely held belief that BPD is uncommon in children and the symptomatic overlay between mania and other disorders such as attention deficit hyperactivity disorder (ADHD), conduct disorder, or schizophrenia. Similarly, Birmaher (2004) revealed that BPD is commonly misdiagnosed because of the presence of coexisting psychiatric conditions and the fact that some of BPD symptoms (e.g., defiance, hyperactivity, inattention, and irritability) overlap with the symptoms of other psychiatric disorders. According to Papolos and Papolos (2002), childhood BPD is often overlooked because the illness manifests itself differently in children than in adults.

Initially, BPD may have a clinical presentation similar to ADHD; however, there is some concern that mania is frequently mistaken for ADHD in children (Biederman, 1998). It can indeed be difficult to distinguish between manic symptoms and disruptive behaviors in children. It also remains unclear whether the diagnostic criteria for manic episodes in the Diagnostic and

Statistical Manual of Mental Disorders (4th ed., text revision), or DSM-IV-TR (American Psychiatric Association, 2000), are appropriate for children (McClure et al., 2002). Unlike unipolar depression, which is well established as a valid and useful construct in children, McClure and associates (2002) noted that the concept of childhood BPD continues to generate controversy. Given these ambiguities, it should prove informative to investigate how school psychologists conceptualize childhood BPD in their current practices and distinguish it from other disorders with comorbid characteristics.

Statement of Purpose

The purpose of this study is to understand how school psychologists identify BPD in children of elementary and middle school age (6-14 years). As a preliminary investigation relying on survey methodology, it will explore professional consensus concerning school psychologists' assessment and/or diagnosis of childhood BPD. Childhood BPD is clearly an important issue that impacts school psychology practice because children with a BPD diagnosis are likely to have difficulty academically, behaviorally, and socially. However, no study has yet been undertaken to assess school psychologists' familiarity and practices with children and adolescents suffering from BPD. Consequently, present findings may generate future research into the evaluation of treatment outcomes for BPD youth.

Methods

Survey Instrument

As shown below, the Childhood Bipolar Disorder Survey was sent to each participant. The purpose of this questionnaire—blending demographic data, 7-point Likert-scale ratings, closed questions soliciting “yes” or “no” responses, and open-ended inquiry—was to assess various knowledge and practice domains associated with childhood BPD. Survey items were selected based on a review of the diagnostic and treatment literature regarding BPD in children.

Childhood Bipolar Disorder Survey

Childhood Bipolar Disorder Survey

Age _____
 Gender _____
 Ethnicity _____
 Highest Degree _____
 Years Employed as a School Psychologist _____

1. Are you permitted in the school setting to identify childhood bipolar disorder (BPD)? Yes No
2. Do you feel that your training has prepared you to diagnose childhood BPD? Yes No
3. Approximately what percentage of your school referrals (e.g., assessment, consultation) involves children or adolescents with BPD? _____
4. What are the measures that you would use to assist in diagnosing childhood BPD?
5. Are there any other measures that you would use that you do not have access to in the school setting? If so, what are they?

For items 6 and 7, use the following scale in providing your responses:

1 = not familiar, 3 = somewhat familiar, 5 = familiar, 7 = very familiar

6. How familiar are you with the literature on childhood BPD?
 1 2 3 4 5 6 7
7. How familiar are you with psychopharmacology used in treating childhood BPD?
 1 2 3 4 5 6 7

8. How important are each of the following symptoms to your understanding of childhood BPD?

1 = not important; 3 = somewhat important; 5 = important; 7 = very important

Expansiveness	1	2	3	4	5	6	7
Hypersexuality	1	2	3	4	5	6	7
Pressured Speech	1	2	3	4	5	6	7
Disturbed Mood	1	2	3	4	5	6	7
Grandiosity	1	2	3	4	5	6	7
Hyperactivity	1	2	3	4	5	6	7
Sensation-Seeking	1	2	3	4	5	6	7
Aggression	1	2	3	4	5	6	7
Rapid Cycling	1	2	3	4	5	6	7
Night Terrors	1	2	3	4	5	6	7
Depression	1	2	3	4	5	6	7

Participants

Participants, who ranged in age from 25 to 66 years ($M = 50.78$), were school psychologists holding membership in the Pennsylvania Psychological Association (PPA). Out of 150 surveys mailed to participants in two waves, 67 were returned (45%). Ninety-seven percent of respondents were Caucasian. Fifty-one percent of respondents held doctorates, though not all degrees were in school psychology.

Sixty-one percent of respondents were female, whereas 39% were male. The average number of years employed as a school psychologist was approximately 18; however, the survey did not inquire about public school, private school, and private practice employment.

Procedure

Participants were selected randomly from a comprehensive list of PPA members. Along with the Childhood Bipolar Disorder Survey, participants received two copies of an informed consent form and a self-addressed, stamped return envelope. Follow-up prompt was mailed as needed.

Participants were asked to return one signed consent form with the completed survey, whereas the second copy was for their personal records. The consent form included a postal and e-mail address for respondents to contact the lead researcher with questions about the study and to obtain the results of the investigation.

When informed consent was obtained, participants' signed consent forms were separated from their questionnaires in order to maintain anonymity. Questionnaires were accessed only to record participants' responses. Participation was voluntary and no risks were apparent. Questionnaire completion time was estimated at approximately 10-15 minutes.

Results

Participants identified that approximately 3.5% of their school referrals involved children or adolescents with BPD. On a Likert rating scale with anchors at 1 (not familiar) and 7 (very familiar), participants indicated mid-range familiarity with the literature on childhood BPD ($M = 4.10$, $SD = 1.52$). Participants were similarly familiar with the psychopharmacology used in treating childhood BPD ($M = 3.96$, $SD = 1.49$).

Table 1 displays ratings that participants assigned to the importance of 11 different symptoms in understanding childhood BPD. These ratings were anchored by 1 (not important) and 7 (very important) on a Likert scale.

Table 1

Table 1: Importance of Symptoms in Understanding Childhood BPD

Bipolar Symptoms	Mean	Standard Deviation
Disturbed Mood	6.00	1.17
Depression	5.94	1.04
Grandiosity	5.52	1.41
Rapid Cycling	5.42	1.73
Sensation Seeking	5.23	1.57
Hyperactivity	5.16	1.26
Aggressiveness	4.78	1.73
Expansiveness	4.65	2.12
Pressured Speech	4.61	1.68
Hypersexuality	4.31	1.77
Night Terrors	3.70	1.84

A supplemental analysis was also performed on the percentage of participants using instruments to diagnose childhood BPD. Table 2 reports the most frequently used instruments for diagnosis. Results suggest that rating scales, clinical history, *DSM-IV-TR*, interview, collateral information (e.g., parent/guardian, prior evaluations), and behavioral observations were the most popular measures for diagnosing childhood BPD.

Conversely, those measures used with considerably less frequency were Devereux Scales of Mental Disorders, assessment of executive functions, Yale Bipolar Rating Scale, Functional Behavior Assessment, and Young Mania Rating Scale.

Table 2

Table 2: Percentage of Participants Using Instruments to Diagnose Childhood BPD

Instruments	Percent of Usage
Clinical History	64.10
DSM-IV TR	48.70
Interview	48.70
Collateral Information	35.90
Behavior Assessment System for Children	30.80
Behavioral Observations	30.80
Minnesota Multiphasic Inventory	23.10
Auchenbach	20.50
WISC-IV	17.90
Projective Tests	13.80
Connor's Rating Scales	12.90
Cognitive Assessment System	5.10
Depression Inventory	5.10
NEPSY	5.10
Devereux Scales of Mental Disorders	2.60
Executive Function Assessment	2.60
Yale Bipolar Rating Scale	2.60
Functional Behavior Assessment	1.00
Young Mania Rating Scale	1.00

Information was also obtained about whether or not respondents were permitted to diagnose childhood BPD in their respective schools. Results indicate that 43% of respondents were allowed to diagnose, with approximately two-thirds of this group falling into the doctoral-prepared category. Results also show that 42% of the respondents were trained to diagnose; again, roughly two-thirds with doctoral-level training. However, approximately 50% of those practitioners trained to diagnose childhood BPD were not allowed to do so. Reasons for this finding were not identified through the present survey.

Discussion

Overall, survey results show that participating school psychologists were moderately informed about both the literature and psychopharmacology surrounding childhood BPD. Additionally, findings indicate that these same school psychologists used prudent diagnostic strategies for determining childhood BPD, including clinical history, formal diagnostic criteria, collateral data, and behavioral observations. Among the more important symptoms influencing participants' understanding of childhood BPD are disturbed mood, depression, grandiosity, rapid cycling, and sensation seeking. Results also suggest that the diagnosis of BPD in schools falls mainly within the purview of doctoral-level school psychologists.

Childhood BPD is an important issue affecting school psychology practice because children and adolescents with this disorder often have academic problems (Birmaher, 2004) and can be particularly disruptive in the school environment (Schlozman, 2002). Even more incumbent on psychologists in school settings is to recognize childhood BPD symptoms that may go undetected by other school personnel and to comprehensively evaluate for symptoms as they are presented and impact a child's school performance. Although childhood BPD is a relatively new point of departure for discussion in the literature on mood disorders, current findings indicate that its relevance for graduate education has important implications. Moreover, these practical implications for graduate training potentially impact the knowledge bases school psychologists bring to school settings that can, in turn, affect base-rate diagnoses (if and when such diagnoses are permissible). Such knowledge can also bolster awareness among school personnel of childhood BPD and improve accompanying support-team decisions and instructional program planning relative to student need. In short, it is possible to enhance student advocacy in response to education and cultural awareness about childhood BPD.

In light of some of the limitations of this preliminary survey-based investigation, there is a call for additional research into evaluating childhood BPD that might address setting (urban vs. rural vs. suburban), participant sample (local vs. national), ethnic and racial diversity among respondent groups, school district size, school philosophy, differences in diagnosing BPD across grade levels, differences in public versus private school diagnoses, and private versus public school-psychologists' practices. Future directions for research might also involve a larger sample size and quantitative comparisons between doctoral and non-doctoral school psychologists.

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Using the Choice-making Skills of Students with Disabilities for Educational Planning

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Abstract

For students with significant speech and movement impairments, meaningful participation in educational planning activities is difficult. These students face barriers in communicating choices about daily activities and basic knowledge; therefore, student-initiated curriculum goals are not systematically included in IEP and transition planning processes. We present models for conceptualizing the **1)** expression of choice in students with severe impairments in speech and movement, **2)** inclusion of choice-making techniques and abilities into IEP documents, and **3)** inclusion of choice-making in transition planning. Using these models, we argue that optimal student participation in educational planning requires clear identification of a student's current choice-making techniques; and, that advanced techniques and abilities in expressing choices are best developed through systematic consideration in educational planning.

Using the Choice-making Skills of Students with Disabilities for Educational Planning

Case Illustration

P, a 14 year old female diagnosed with quadriplegic cerebral palsy, was placed in a designated classroom for students with cognitive and physical impairments (Multiple Impairments). She was functionally nonverbal. Her cognitive abilities were estimated to be more than three standard deviations below the mean. Parents and teachers described P's curriculum in terms of functional activity goals such as eating and toileting as well as behavioral goals to reduce disruptive and self-injurious behaviors. Parents and individual professionals developed methods of interacting with P and eliciting responses about her preferences and opinions. P was sometimes present for IEP and transition planning meetings, but her participation was often limited to affectionate, social interactions with parents and professionals. Occasionally, P's opinion about a specific goal was elicited through phrasing that anticipated a positive response (e.g. "P, you like to work on the calendar with Ms. X, right?"). Her consistent response was to smile, moving her head up and down.

Rationale and Practice of Student Participation in Educational Planning

As written in the Individuals with Disabilities Education Improvement Act of 2004 (IDEA 2004) the full participation of students in the planning process of Individual Educational Plans (IEP) and transition planning is an important priority. As an ideal, students and their families use these tools to collaborate in crafting curricula that promote optimal learning. Particularly in the view of parents, this collaboration can enhance self-determination by helping students to become responsible partners in their educational planning (Grigal, Neubert, Moon, & Graham, 2003). There is evidence that student participation in educational goal setting is linked to improved academic abilities and communication skills (Mason, McGahee-Kovac, Johnson, & Stillerman, 2002; Schunk, 1985), higher rates of goal achievement (Powers, Turner, Westwood, Matuszewski, Wilson, & Phillips, 2001; Realon, Favell, & Loweree, 1990), and better outcomes in adulthood (Halpern, Yovanoff, Doren, & Benz, 1995; Wehmeyer, Agran, & Hughes, 2000).

Now, years later, the difficulties of achieving this ideal are abundantly clear. Students and families encounter obstacles to full partnership in the tangled and ever-changing nature of federal, state, and local regulations, the power and knowledge differentials between students and school professionals, and in the pragmatic difficulties of finding the time and resources to consult, plan, and follow-up with interventions. Educators also are dissatisfied with levels of student participation, leading Mason, Field, & Sawilowsky (2004) to conclude that teachers lacked instruction on systematic techniques encouraging meaningful student planning and participation, despite the availability of many structured interventions shown to be effective (see Test, Mason, Hughes, Konrad, Neale, & Wood, 2004 for a review).

Person-centered planning is the current model used to frame the participation of students in their educational planning. Although there are various implementations of person-centered planning, the premise of each is to intentionally craft an opportunity for the individual student to shape her future by way of expressing her own vision, goals, and the needed supports and services for success. Person-centered planning methods are beneficial in that they explicitly describe activities that represent meaningful participation in educational planning meetings, as opposed to mere attendance. The distinction is important, as even in a sample reporting high levels of student attendance at IEP meetings, the majority of students who attended reported they had not been told the purpose of the meeting, had no preparation for the meeting, and were not involved with goal-setting in any way (Field & Hoffman, 1994). For students with significant impairments, the likelihood of meaningful participation is even lower, as many do not even attend their IEP meetings (deFur, Getzel, & Kregel, 1994).

For students with significant impairments in speech and movement, difficulties in clear and consistent communication of choice are barriers to even initial efforts toward participation and partnership. Communication of choice requires both clear expression from the student and acknowledgement from the listeners. There have been recent efforts to clarify current abilities in communicating preferences and knowledge for students with significant impairments. A criterion-based model, presented below, lays out progressive levels of responses, and provides a framework for presenting choices to students with significant impairments (see [Table 1](#)). This table has been modified from its original presentation (Van Tubbergen, Warschausky, Birnholz, and Baker, in press).

Choice-making assessment tools, developed within this framework, identify how students with even the most severe impairments communicate preferences and knowledge while providing guideposts to enhance and refine choice-making skills over time. Examining the communication of choice in this manner creates a positive feedback loop: Identifying a student's current abilities to communicate choice facilitates optimal participation in IEP and transition planning, while also providing educational and curricular goals toward more effective communication of choice, which in turn generates more opportunities to participate and partner in IEP and transition planning.

Choice-Making and the IEP

The purpose of IDEA is to “ensure that all students with disabilities have available to them a free and appropriate public education that emphasizes special education and related services designed to meet their unique needs.” These specifications are delivered through the IEP (IDEA, Part B). The IEP is the basis of providing a quality education for each child with a disability and is designed in such a way to meet each child's unique educational needs (section §300.347 of IDEA 1997). The process potentially creates an environment where collaboration among students, parents, teachers, school administrators, and ancillary school personnel results in a quality education for the student. A properly executed IEP also guides and supports the student toward independence and self-determination beyond the school setting. To illustrate the relevance of identifying the student's current capacity for communicating choice and how it can contribute to the IEP process, we focus on three components of the IEP and demonstrate how communication of choice can both contribute to and be incorporated into an educational plan.

Present Level of Academic Achievement and Functional Performance

An IEP is developed from an understanding of the student's present level of academic achievement and functional performance (PLAAFP). The PLAAFP should accurately describe the student's performance in all areas of education that are affected by the student's disability, anchoring the IEP in results-based accountability [R340.1721e(2)(a)]. The PLAAFP should also provide the information necessary to ensure appropriate involvement in the general education curriculum. Additionally, each identified educational need specified in the PLAAFP should logically connect to measurable annual goals and short-term objectives and supplementary aids, services, or supports designed to enable the student to progress in the general education curriculum.

To integrate the communication of choice into the PLAAFP, at least two assessment strategies are necessary. First, the student's current techniques to express preferences and knowledge can be measured. Educators and parents may need time to experiment with different strategies for presenting questions and detecting responses in order to identify the student's optimal skills (see Table 1 for examples). Second, intellectual, academic, and/or functional skills (i.e. PLAAFP) can be assessed by accommodating typical assessment tools into a format that matches a student's current abilities to communicate choice, as revealed in the choice-making assessment process just described.

Annual Goals and Short-term Objectives

The annual goals and short-term objectives section of the IEP builds upon the abilities and needs identified in the PLAAPF. Annual goals and objectives should provide measurable answers to questions of who, what, where, when, and how. This section of the IEP was designed to describe the reasonable expectations of progress for the student over a 12-month time period. The IDEA and its implementing regulations require that the annual goals meet: **1)** the student's disability-related needs and enable the student to be involved and make progress in the general education curriculum; **2)** other education and transition needs that result from the student's disability [34 CFR § 300.347(a)(7)(ii)(B)]. Each annual goal should have more than one short-term objective and each short-term objective should be measurable and provide an intermediate step between the PLAAPF and the annual goal. The short-term objectives should, in fact, be achievable in a short and specified period of time. Each short-term objective must contain 3 components: evaluation procedures, performance criteria, and schedules for evaluation.

The communication of choice can be incorporated into annual goals and short-term objectives. From the PLAAPF, a student's current abilities in communicating preferences and knowledge are identified. Using a format like the one found in **Table 1**, immediate next steps in refining the student's techniques to express choice while expanding the types of presentation to which a student is able to accurately respond can be identified. For students with beginning skills in communicating choice, goals should emphasize progression from preference-only communication to communication of preferences and knowledge. Methods of presentation and response for choice-making should be used to answer the "how?" questions when setting objectives for academic, assessment, social, and behavioral realms, such that these techniques become part of a standard for Universal Design Learning.

Case Illustration

Over the past marking period, L has been able to use a Jelly Bean Switch® positioned at midline on her tray to correctly select a virtual button from an array of four buttons, presented horizontally on a 17" computer screen with the use of an automatic scanning program set for 2 seconds per button. Each button should be at least 1.5 inches square with at least .5 inch of space between buttons. She is able to click on her desired choice 85% of the time. After each selection, she is able to use yes/no signals (head up/head down, respectively) to answer the question "was that your answer?" Using these techniques, L has a reliable method to express her knowledge of academic material. Using these techniques, objectives for the next marking period in the area of calendar instruction are that L will be able to reliably identify: season, month, date, day, and time.

Related Services and Supports

Related services and supports include: special education; supplementary aids and services; and program modifications or supports for school staff. They are intended to aid the child in meeting their annual goals, and are commonly thought of as accommodations. The services and supports should also enable the child to participate in extracurricular and/or nonacademic activities (e.g. athletics and employment) as well as providing access to the general education setting.

Consideration of accommodations of communication of choice falls into three major domains: Assistive technology (AT), educators and curriculum delivery. AT accommodations for optimal flexibility in communicating preferences and knowledge should be available throughout the school environment and in daily living activities. Support for AT accommodations can be found in the AT section of the IEP and in the Assistive Technology Act of 1998 (05-394, S.2432). Educators, including support/ancillary staff, can be trained in identifying and supporting communication of choice throughout all of the student's school activities. Arguably, such training can be viewed as an expression of the IDEA 2004 requirement for highly qualified teachers. Finally, delivery of the curriculum can be adapted such that opportunities for communicating choice are incorporated into the instruction and assessment.

Incorporating communication of choice into the IEP can facilitate systematic, comprehensive interventions directed toward a students' greater participation in all areas of education. **Table 2** summarizes how choice-making fits into components of the IEP and provides relevant examples.

Choice-Making and Transition Planning

Through the focus of the transition planning, a shift occurs where the student is prepared for the next phase of his/her life. Transition planning facilitates progression from a public education setting to employment, postsecondary education, and/or optimal independent living. It has been argued that transition planning should infuse a student's educational programming from the beginning, but in most states it is not formally addressed until later adolescence (Kohler & Field 2003). A statement of needed transition services is included in the IEP no later than age 16 (Sec. 300.347(b)(1)(iii)) or younger if determined by the IEP team. The statement of transition clarifies how planned interventions link a student's current abilities (obtained through the PLAAFP) with the skills necessary to obtain the student's desired adult outcomes. One technique to assist transition teams in making this shift is called backward planning (Steere, Wood, Panscofar, & Butterworth, 1990). Backward planning encourages teams to identify long term goals at the outset, and work backward through time to identify what and when progressive goals need to be met to achieve the desired outcomes for the child when he leaves the educational system. This anchors the transition planning process at both ends: the student's current abilities and activities, and the abilities and activities desired by the student in adulthood.

Ideally, transition planning begins with a thorough assessment of the student's interests in addition to aforementioned assessment of strengths and difficulties. To accurately assess vocational or recreational interests, it is imperative for a student to practice expressing preferences that have real consequences. A student must also have methods to communicate choices that demonstrate knowledge in order to realistically expand the range of possible (e.g.) independent living opportunities. Therefore, systematic consideration of a student's communication of choice is also important in transition planning although at present including goals related to choice into a transition plan is uncommon (Grigal, Test, Beattie, & Wood, 1997).

We consider three domains highlighted in transition planning: employment, postsecondary education and independent living, and demonstrate how communication of choice can both contribute to and be incorporated into the plan.

Employment

Employment goals in transition planning identify desired and attainable vocational opportunities during and after secondary education. The transition plan also identifies education and training experiences that promote success in a vocational arena. Communication of both preference and knowledge choices are critical in choosing appropriate employment experiences. Preferences in work activities evolve over time as students mature and have exposure to a wider variety of environments. Using the student's optimal methods for presenting and responding to choices, preferences about work activities and environments can be assessed and pursued.

Identifying a student's preferences obviously is not sufficient to develop an appropriate and beneficial employment situation - it also is necessary to consider how the student can express their knowledge. Identifying a student's expressive capabilities will help to clarify employment options as well as encourage creative use of technology that leads to new employment opportunities, including supported environments. For example, a student may master the skills needed to recognize and respond to a pattern that is incomplete. This skill could be adapted to a specific work environment in which on-line applications are reviewed. The student might become adept at recognizing and marking (through the use of a switch) applications as complete or incomplete.

Postsecondary Education

Postsecondary education includes education or training acquired after a student obtains a high school diploma or certificate of completion. Postsecondary education goals may include vocational training, trades school, adult education settings, or college settings. Again, goals are meant to be student-driven and to include reasonable steps from a student's current abilities.

Much as preference and knowledge choices are critical in developing appropriate employment opportunities, systematic consideration of communication of choice is necessary to develop additional education and training opportunities. For example, if a student intends to complete postsecondary coursework in computer skills, it will be necessary that the student have access and expertise with assistive technology that is portable and compatible with computers outside the school environment.

Independent Living

Independent living goals identify a student's goals for living on their own, within a residential community setting, or in their family home. Focus on communication of choice may be most compelling as transition teams plan for a student's increased independence. Safety is a significant concern for many students with severe speech and movement impairments; therefore, developing methods for students to communicate their knowledge and comfort with levels of independence in the home, school and community is vital. Many students in this population will not ever live independently, but this does not preclude the duty to carve out widening domains in which they exercise independence. **Table 3** provides examples for how choices of preference and knowledge fit into independent living and the other transition planning activities.

Conclusion

At the center of all educational planning is the child with the disability. Including communication of choice in IEP and transition planning activities can identify and organize the interventions most likely to be successful, and clarify the goals that make education meaningful for that child. Wehmeyer and Schalock (2001) argue persuasively for the systematic inclusion of self-determination into educational planning. For students with significant disabilities, the systematic inclusion of choice-making into educational planning is a critical first step toward self-determination.

Supported communication of choice emerges quickly and naturally for the typically developing child such that no conscious or concentrated effort is required for its maturation. For many children with significant disabilities, this naturally occurring process is blocked and/or delayed. Most would argue that communication of choice is a basic human right, a right not waived by absence of a swift or otherwise typical acquisition. We argue that for students with severe disabilities, the communication of choice must be an identified, assessed, and articulated domain in educational planning as a whole, rather than a haphazard collection of techniques used in different ways by a variety of educational professionals. The IEP and transition planning are ideal tools to enhance and refine communication of choice for these students.

Articulating and prioritizing a student's abilities to communicate choice offers abundant, positive opportunities for children with severe impairments in speech and movement. When a student is able to make an informed choice, even if it by way of assistive technology, parents and educators can tap into areas of the student's life that may not have been accessible before, such as self-awareness, specific academic strengths and difficulties, or memory, to name a few. A student's communication of choice can be used to develop optimal IEPs and transition plans; those plans can incorporate the student's choices as well as target the development of more advanced choice-making communication techniques. By prioritizing choice-making, a student's experience of participating in educational planning can be empowering and promote independence.

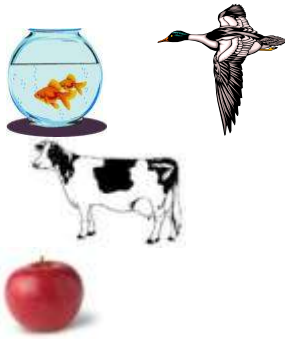
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Table 1

Table 1
Model of Choice-making Skills

Skill Level	Skill Description	Forced Choice	Yes / No
			
Orienting Responsive	Will notice and attend, at least briefly, to novel stimulus		
Preference	Will communicate a general, affective response regarding personal preference	“Which picture do you like best?”	“Do you like this fish?”
Preference-Advanced	Will communicate a specific response signal regarding personal preference	“Which picture do you like best?”	“Do you like this fish?”
Directed	Will communicate a specific response signal to questions unrelated to personal desires	“Which one is a fish?” “Which one is a cow?”	“Does this fish have a tail?” “Is this fish black?”
Prediction	Will communicate a specific response signal to questions requiring indirect application of knowledge	“Which one does not show an animal?” “Which one swims?”	“Is this an animal?” “Can it fly?”

*Examples in the model are accessible and relevant to many, but not all, children. Questions and topics can be tailored to an individual child’s experience.

Table 2

Table 2
Choice-making in Components of IEP

IEP	Purpose in the IEP	Including Choice	Example
PLAAFP (Present Level of Academic Achievement and Functional Performance)	Should accurately describe the student's performance in <i>all</i> areas of education that are affected by the student's disability.	Mary is able to communicate choices of preference through specific signals for "yes" and "no". She moves her head up to signal "yes" and down to signal "no."	1. Mary uses her "yes" and "no" signals to choose preferences for (e.g.) activities, food, and some self-care needs. 2. She does not yet use these signals to answer questions about instructional content (e.g.) math, vocabulary items, or science.
Goals and Short-term Objectives	Should build upon the abilities and needs identified in the PLAAFP. These goals and objectives should be measurable.	1. Mary will learn to use her yes/no signal to answer questions related to instructional content with 80% consistency. 2. Mary, with consultation from staff with expertise in Assistive Technology (AT), will develop initial skills to use computer scanning presentations. She will practice with equipment identified through the AT process at least 3x/day, and choices in her display will always include at least one neutral or undesired consequence.	1. Mary is able to communicate the answer to a math problem through the use of choice by use of her yes/no signal: "Is $2 + 3 = 5$?" 2. Mary will use a head mouse or other switch interface system to choose a 3 minute activity from three choices: sand play, quiet time, or music.
Related Services and Supports	Services and supports include special education, supplementary aids and services, and program modification or supports for school staff. Intended to aid the child in meeting their annual goals.	Teachers, therapists, and ancillary support team members (IEP Team) will coordinate presentation and response styles to encourage consistent use of Mary's yes/no signals and emerging scanning skills. The IEP team will schedule regular monthly meetings to review progress and make necessary modification according to progress.	1. PT: Mary will use yes/no or scanning signals to choose the first PT activity of session. 2. OT: Mary will identify self-care items (toothbrush, comb, etc.) using yes/no. 3. Daily assessment of instructional content will be presented such that Mary can express her knowledge independently.

Table 3

Table 3
Transition Planning & IEP Correlation Table

Components of Transition Planning	Preference Choices	Knowledge Choices
Employment	Photos of Mary's prior vocational experiences will be scanned and used to track her preferences for additional vocational experiences.	As the monitor for on-line order forms in her workplace, Mary will use her switch to accurately identify and mark incomplete order forms.
Post-Secondary Education	Photos of Mary's prior vocational experiences will be scanned and used to track her preferences for future vocational training.	Mary will correctly identify the bus she rides to her vocational training site from an array of four pictures of buses.
Independent Living	Mary will interact with two new people in the community each week by using her signals for yes/no to communicate a preference.	Mary will complete weekly rehearsal exercises to appropriately activate her augmentative communication device to communicate that she needs help and feels unsafe.

Effects of Animal-Assisted Therapy on a Student with an Emotional/Behavioral Disorder

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Abstract

This single-subject action research project examines the effects of animal-assisted therapy on the self-esteem and classroom behaviors of a student with an emotional/behavioral disorder. An 18-year-old male attending a special education school in northeastern St. Paul participated in animal-assisted therapy research for four weeks. Quantitative data were collected from the Rosenberg Self-Esteem Scale, the Coopersmith Self-Esteem Inventory and classroom behavior tracking sheets. The findings of this research reveal an increase in the student's self-esteem and an improvement in the student's classroom behaviors. The results of this study provide important evidence for teachers of students with emotional/behavioral disorders to further consider animal-assisted therapy as a tool to improve the social skills and self-esteem of students.

Effects of Animal-Assisted Therapy on a Student with an Emotional/Behavioral Disorder

"Intimacy with a beloved pet or special animal makes millions of people feel as though they win the lottery every day" (Becker & Morton, 2002, p. ix). It has been the opinion of many professionals that animals have the power to heal the human spirit through unconditional love and unending devotion. Yet, it seems serious research providing empirical evidence into the effects of animal-assisted therapy on patients and other human subjects has just begun.

Positive interaction with animals is not a new phenomenon. It has been a part of Greek, Egyptian, Roman and many eastern and western cultures for thousands of years. The first documented case of accidental animal-assisted therapy is credited to child psychologist, Boris Levinson. In 1962 he discovered that he was able to make significant progress with a disturbed child when his dog Jingles attended therapy sessions (Levinson, 1969). Since Levinson's discovery, other psychologists, veterinarians, doctors, teachers and dog owners have experienced the human-animal bond and have recognized that it is relevant in the treatment of patients and students who are in need of physical and emotional healing. Spadafori (2005) believed dogs have the ability to touch people on a level that provides emotional support. "No one who has ever watched one [therapy dog] work can doubt the difference they make" (Spadafori, 2005, p. H5).

Can a wet nose bring joy? Can a lick heal the soul? Can the touch of soft fur be calming? Can gentle loving eyes ease fear? In a 2005 study by the American Heart Association, researchers found that animal-assisted therapy can reduce blood pressure in both healthy and hypertensive patients and reduce anxiety in hospitalized patients. They concluded that even short-term exposure to dogs has beneficial physiological and psychosocial effects (American Heart Association, 2005).

In her book, *Why the Wild Things Are – Animals in the Lives of Children*, Melson (2001) documented communications between children and animals in many settings. While observing the behaviors of animals and children's interactions with the animals, she noted that social connections are a key coping resource. These social connections are of great importance to those who study how a child's sense of self grows. In fact, a child's self-esteem emerges through interactions with others.

Can relationships with dogs be generalized to human peers? Piaget's theory of cognition suggests that children see animals as peers (Piaget, 1929) and Melson (2001) suggested, "Play with pets might well have the 'horizontal' and symbolic properties shown to be developmentally beneficial" (p. 11). Furthermore, while examining the role of dogs in correctional facilities, Dalton (2001) interviewed male juveniles who received weekly visits from dogs. One respondent stated that he felt his self-confidence was higher and that he was able to deal with his emotions in more positive ways. He also believed that the therapy was instrumental in changing his desire to care for others.

As recognized by many health care professionals, children with emotional/behavioral disorders require emotional support as part of their therapy. A dog can provide assistance to children by helping them learn confidence, trust, responsibility, patience, and other skills that will help them in the future (Dalton, 2001). Chandler (2001) agreed that animals offer nurturance through unconditional acceptance and interaction during therapy. This research provides further evidence of the benefits of animal-assisted therapy to students with emotional/behavioral disorders.

Statement of the Problem

The purpose of this study was to examine the effects of animal-assisted therapy on the self-esteem and classroom behaviors of a male student with an emotional/behavioral disorder. The researcher recognized an opportunity to provide additional evidence for or against animals--in this case a dog--in an academic setting.

Research Questions

The questions guiding this research were:

1. How does animal-assisted therapy effect the self-esteem of a student with an emotional/behavioral disorder?
2. How does animal-assisted therapy effect the classroom behaviors of a student with an emotional/behavioral disorder?

Significance of the Study

Animal-assisted therapy has shown positive results in a number of school settings with different populations (Kogan, Granger, Fitchett, Helmer & Young, 1999), and the use of animal-assisted therapy is shown to be successful in increasing self-esteem, socialization, and problem-solving skills with children who have emotional/behavioral disorders as well as children who have been abused or neglected (Reichert, 1998). As a result of these positive outcomes, animal-assisted therapy has become more popular in recent years. Kogan et al. (1999) suggested that animal-assisted therapy has promising potential as a resource for teachers of students with emotional/behavioral disorders. Despite the positive results, there is little actual research to

substantiate the use of animal-assisted therapy. The results of this study provide important evidence for teachers of students with emotional/behavioral disorders to further consider animal-assisted therapy as a tool to improve the social skills and self-esteem of students.

Definition of Terms

The following definitions will provide the reader a clear understanding of the terminology used in this research. The researcher has created the definition if no citation is provided.

Academic setting. Academic setting refers to a structured educational environment where students are engaged in learning while guided by a certified teacher.

Animal-assisted therapy (AAT). Animal-assisted therapy is defined as a goal-directed intervention, which uses the human-animal bond to facilitate progress toward a desired therapeutic outcome. (Barker & Dawson, 1998; Kogan et al. 1999; Thigpen, Ellis & Smith, 2005; Wilson, n.d.).

Emotional/ behavioral disorder (EBD). Emotional/behavioral disorders are defined as “marked and persistent characteristics having to do with the following:

1. School learning problems.
 2. Unsatisfactory interpersonal relationships.
 3. Inappropriate behavior and feelings.
 4. Pervasive unhappiness or depression.
 5. Physical symptoms or fears associated with school or personal problems”
- (Kauffman, 2005, p. 21).

Human-animal bond. The human-animal bond is defined as a mutually beneficial and dynamic relationship between people and animals that is influenced by behaviors that are essential to the health and well being of both. This includes, but is not limited to, emotional, psychological and physical interactions of people, other animals, and the environment (AVMA, 1998).

Individualized Education Plan (IEP). An Individualized Education Plan is a written plan developed to meet the special learning needs of each student with disabilities (Vaughn, Bos & Schumm, 2006, p 514).

Self-esteem. Self-esteem refers to “a favorable or unfavorable attitude toward self” (Rosenberg, 1965).

Social lubricant. A social lubricant is an instrument that is used to create a more relaxed environment in which social interactions are more comfortable.

Target behavior. A target behavior in behavior modification is an identified behavior to be modified (Kauffman, 2005).

Delimitations

1. This is a case study of one 18-year-old male identified by his Individual Education Plan as having an emotional/behavioral disorder.
2. This study investigated animal-assisted therapy using the same therapy dog each day of the intervention.
3. This study was limited to investigating the effects of animal-assisted therapy on self-esteem and classroom behaviors.

Review of Related Literature

Animal-Assisted Therapy vs. Animal-Assisted Activity

Animal-assisted therapy is defined as a goal-directed intervention, which uses the human-animal bond to facilitate progress toward a desired therapeutic outcome (Barker & Dawson, 1998; Kogan et al., 1999; Thigpen et al., 2005; Wilson, n.d.). Animal-assisted therapy has often proven to be an important catalyst for therapist/patient bonding (Wilson, n.d.). It has also shown to be successful in increasing self-esteem, socialization and problem solving (Kogan et al., 2005), and has improved reading and communication skills (Thigpen et al., 2005).

Animal-assisted therapy is different from animal-assisted activity in that the latter does not include therapeutic goals. Instead, the animal acts as a social lubricant in a variety of settings (Thigpen et al., 2005). Animal-assisted activity is less formal and there is no documentation of the event. It is used as a motivational, educational, and recreational tool to enhance quality of life (Delta Society, n.d.). An example of animal-assisted activity would be a visit to a nursing home by a human-animal team. This study focuses on animal-assisted therapy.

History of Animal-Assisted Therapy: Therapy Dogs

Animal-assisted therapy has a long history. Yet little documentation on its effects has been available until recently. It has only been in the last half of the twentieth century that research and documentation have been conducted on the effects of animal-assisted therapy. Clinical psychologist Boris Levinson was the first to bring attention to the role of animals in therapy when he began to document his clients' interactions with his dog Jingles. He found that when Jingles participated in therapy sessions, clients that were normally uncommunicative responded positively (Levinson, 1969). Prior to Levinson's documentation of animals as "co-therapists," Florence Nightingale was recommending the use of animals as companions for the chronically ill in the mid 1800s, as reported by Jalongo, Astorino, and Bomboy (2004). Incorporating animals into the treatment of mental health was recognized as beneficial as early as the eighteenth century in Europe. It was not until 1919, when Elizabeth's Hospital in Washington DC introduced dogs as companions for psychiatric patients, that it was recognized in North America (Pugh, 2004).

The research and support of animal-assisted therapy as a valid treatment modality is growing, and the benefits of the human-animal bond will soon be hard to suppress, as noted by Jalongo et al. (2004), "the physiological as well as psychosocial benefits of positive interactions between young children and therapy dogs are not purely anecdotal; rather, there is a growing body of research to support the existence of a human-animal bond" (p. 10).

Effects of Animal-Assisted Therapy

Effects of Animal-Assisted Therapy on Personal Health

Animals offer a variety of health benefits according to the 2002 educational summit PAWSitive InterAction. The 2002 summit was held to promote and celebrate the positive impact of the human-animal bond. Presenter Dr. Alan Beck (2002) suggested animals encourage touch, stimulate conversation, encourage laughter and social interaction which in turn benefit the individual's sense of well being (PAWSitive InterAction, 2002). Becker and Morton (2002) believed, "Our animal companions can detect the low mood of illness, the need for play and distraction from our woes" (p. 98). Dr. Edward Creagan, oncologist at the world renowned Mayo Clinic in Rochester, Minnesota was so convinced by the beneficial effects of pets that he prescribed them to one-third of his cancer patients (Cukan, 2002).

After many years of theorizing the beneficial effects that animals have on human health, research is now available to back up these theories. In a study by researcher Rebecca Johnson, professor of nursing and veterinary medicine at the University of Missouri-Columbia, it was found that levels of serotonin--a hormone that fights depression--are elevated as a result of petting a dog. Johnson also found that petting a robotic dog had the opposite effect (Warner, 2004). Johnson stated, "By showing this benefit, we can help pet-assisted therapy become a medically accepted intervention that might be prescribed to patients" (Warner, 2004, p. 1). Furthermore, a study conducted by PAWSitive InterAction concluded that pet owners had lower levels of cholesterol, triglycerides and lower blood pressure (Duke, 2003).

Effects of Animal-Assisted Therapy on Psychological Health

A wealth of research exists documenting the psychological benefits of animal companions (PAWSitive InterAction, 2003). Dogs have been shown to provide chemical therapeutic benefits to their owners (American Heart Association, 2005; Becker & Morton, 2002; Duke, 2003; PAWSitive InterAction, 2003; Warner, 2004). Specifically, test results showed a significant release of the beneficial hormones prolactin, oxytocin and phenylethylamine shortly after petting in both humans and dogs. The American Heart Association (2005) studied dogs' effects on the variables that identify individuals with heart failure and found that anxiety scores dropped 24 percent for those patients who received visits from a dog. "What experimental studies don't reveal is the powerful, qualitative impact of the human-animal interaction on a single individual; numbers alone cannot measure these feelings or capture adequately the visible calming of agitated patients in the presence of a dog" (PAWSitive InterAction, 2003, p. 6).

Effects of Animal-Assisted Therapy on Social and Emotional Health

In their book *The Healing Power of Pets*, Becker and Morton (2002) stated, "At residential facilities where children are recovering from a lifetime of abuse and neglect, animals can be a vital therapeutic tool that can serve as a catalyst for growth and change" (p. 52). Providing emotional support to human companions comes naturally to dogs. They provide unconditional acceptance, are "nonjudgmental, and can enhance the child's sense of self-esteem and promote the expression of feelings" (Reichert, 1998, p. 177). Levinson (1969) was the first to provide empirical evidence for the "social lubricant" function that dogs provide. This evidence is based on the natural tendency for children and others to open up in the calm presence of a dog.

Effects of Animal-Assisted Therapy on Self-Confidence and Self-Esteem

One of the common mental health treatment goals in animal-assisted therapy (as cited by

Chandler, 2001, and the Delta Society, n.d.) is to improve self-esteem. Bergensen (1989), as cited by the Delta Society (n.d.), believed that owning a pet enhanced the self-esteem of a child. Reichert (1998) and Scott (2003) also found that animal-assisted therapy was successful in increasing self-esteem. Additional evidence for the improvement of a student's self-esteem was found in a study conducted at an elementary school in Salt Lake City, Utah. The study's primary objective was to measure the effects of animal-assisted therapy on students' reading skills. Researchers found that in addition to increased reading fluency, teachers reported that students' self-esteem and self-confidence had also improved (Gerben, 2003).

Animal-Assisted Therapy Settings

Animal-Assisted Therapy in Reading Programs

Two programs that currently exist in various classrooms and libraries are: Dogs in Education Assisting with Literacy (DEAL), established to work with children who receive special education services in the Albuquerque area, and Reading Education Assistance Dogs (READ), a literacy program developed to improve children's reading fluency levels. Both programs showed dramatic improvement in reading skills (Gerben, 2003; Scott, 2003). Scott (2003) explained, "The ability of an animal to spark the engagement of an individual and get that person involved with reading truly is amazing" (p. 8). Radcliffe (2006) reported local results of the READ program in the Houston Area. Dogs made weekly visits to struggling readers. Radcliffe noted that the participants felt the dogs were nonjudgmental. The dogs reduced anxiety and nervousness and made reading enjoyable. Nebbe (2003) author of *Animal-Assisted Activities/Therapy as an Animal and Human Welfare Project*, believed that animals show great promise in the classroom, not only for help in reading but in all areas.

Animal-Assisted Therapy in The Classroom

In a study conducted by Purdue University's Center for the Human-Animal Bond, nearly two thousand elementary school teachers were surveyed. The results showed that more than one-fourth of classrooms had animals with the purpose of motivation and life-skills training (Purdue, 2000). Jalongo et al. (2004) who wrote *Canine Visitors: The Influence of Therapy Dogs on Young Children's Learning and Well-Being in Classrooms and Hospitals*, discussed the benefits of Therapy Dogs International, an organization on the East Coast which trains therapy dogs. The human-animal teams which make up Therapy Dogs International travel to schools, nursing homes, and hospitals to provide educational and therapeutic services. The teams recently visited an elementary school in Pennsylvania where they shared stories about the dogs. They included important social skills messages, including why each dog was selected; one was a shelter dog and one an unsuccessful guard dog. "It sends the message that animals, like people, are individuals and can be terribly misjudged" (Jalongo et al., 2004, p. 14). As the teams concluded their presentations, they invited the children to pet the dogs. While the students interacted with the dogs, the trainers noted that the children talked to the dogs, offered comments about their own pets, and enthusiastically interacted with peers, teachers, and presenters.

"Animals are living demonstrations of diverse ways of eating, reproducing, communicating and perceiving--some similar to, others different from--human behavior" (Melson, 2001, p. 76). Furthermore, Morgan (2001), a special education teacher, wrote *Animals as Teachers* after witnessing the benefits of incorporating animals into her classroom. The dogs assisted in teaching proper classroom behaviors such as patience and following directions, and brought inspiration and excitement to learning. Morgan also believed the dogs were able to teach the children in ways that she was not able, and was able to make stronger, faster connections with her students. Melson (2001) wrote, "the most effective teaching, even for teens and young adults,

engages all the senses” (p. 79). In answer to her own question regarding the use of animal-assisted therapy beyond working with young children, Melson continued, “animals presence--in homes, schools, and elsewhere--should continue to enrich the ways children and adolescents learn” (p. 80).

Animal-Assisted Therapy in Counseling

Favorable documentation for the use of animal-assisted therapy in counseling was not available until Boris Levinson, a pioneer in child therapy, wrote the 1969 classic *Pet-Oriented Child Psychotherapy*. In his book, Levinson described how the presence of a friendly dog in a therapy session helped create a safe and nurturing environment for withdrawn children (Levinson, 1969). “Since that time, animal-assisted therapy has been implemented worldwide and has been shown to be effective in many therapy programs” (Wilson, n.d., p. 2). Today therapists find that animals make suitable targets for the real objects of a child’s rage, fear and need. Melson (2001) reported that, “animals are the repositories of feelings that, if directed toward authority figures like mother or father, would be unacceptable” (p. 148). Chandler (2001) also noted, “The presence of the animal can facilitate a trust-building bond between the therapist and client. The animal relieves some tension and anxiety of therapy and interacting with the animals is entertaining and fun” (p. 2). Chandler believed it was easier for the child to talk to the animal about more difficult issues while the therapist listened, and sharing their feelings with the animals brought about emotional sharing with the therapist directly. Melson (2001) agrees, “the animal connection then becomes the stepping stone to rebuilding ties to humans” (p. 101).

Animal-Assisted Therapy in Residential and Correctional Facilities

“At residential facilities where children are recovering from a lifetime of abuse and neglect, animals can be a vital therapeutic tool that can serve as a catalyst for growth and change” (Becker & Morton, 2002, p. 52). A counselor at Green Chimneys, a residential facility for abused children, described the interaction between children and animals as providing the healthy physical touch that all humans need. The counselor noted the qualities of animals as “always available, all understanding, sensitive to each feeling, a warm enveloping soft presence” (Melson, 2001, p. 103). Dalton (2001), Thigpen et al. (2005) and Wilson, (n.d.), all discussed the beneficial placement of troubled youth at Green Chimneys, as well as how animals provided a comforting escape for children. They also reported that children would confide in the animals because they knew they would not be judged. The children learned to trust animals and would eventually transfer that trust to humans. This bond between animals and people and the benefits have been explored by Dr. Alan Beck, a pioneer in the field of the human-animal bond and presenter at the Think Positive educational summit in 2002. One of the many health effects of animal companionship Beck listed was that pets would give attention to people who otherwise may not receive it (PAWSitive InterAction, 2002).

Animal-Assisted Therapy in Emotional Emergencies

Terrorism and school violence have required the support of therapy dogs in a new and important therapeutic modality. Therapy dog owners and those involved in helping the victims, survivors, and emergency workers cope with the stress of a traumatic experience know the benefits that therapy dogs can provide. A police officer on the scene of the World Trade Center tragedy in 2001 explained, “People seem to viscerally feel the assistance, comfort, and emotional support that the dogs give” (Crawford & Pomerinke, 2003, p. 26). Therapy dogs were also present to provide support following the Thurston and Columbine High School shootings in 1998 and 1999, respectively. The dogs “enabled the counselors to interact with many more students than would normally be the case” (Chandler, 2001 p. 2).

Animal-Assisted Therapy in Hospitals

Animal-assisted therapy has grown in recognition as an adjunct to traditional medical treatments. “Therapy dogs are a daily sight in health care programs for children in the United States” (Jalongo et al. 2004, p. 12). The American Heart Association, 2005; Cukan, 2002; McKeon-Charkalis, 2005) reported positive therapeutic benefits after patients were exposed to animal-assisted therapy. In a study conducted by UCLA Medical Center, therapy dogs helped lower stress and anxiety in patients. Researchers also documented improved heart and lung function (McKeon-Charkalis, 2005). Furthermore, Dr. Burgess, a physician at the University of Washington Pain Center states:

By initiating and maintaining the relaxation response, pets can take people’s focus off of their pain and elevate their moods. Secondly, through touch or physical contact, they can block the transmission of their pain from the periphery to the central nervous system, shutting the pain processing centers down (Becker & Morton, 2002, p. 106).

Animal-Assisted Therapy and Emotional/Behavioral Disorders

“Children with emotional/behavioral disorders (EBD) are arguably one of the highest at-risk groups for dropping out before graduating high school” (Thigpen et al., 2005, p.1). Students with emotional/behavioral disorders require Individualized Education Plans (IEPs), which outline goals for the treatment and management of their behaviors and social skills. Kogan et al. (1999) stated that therapy for children identified with emotional/behavioral disorders is time consuming, and services are incomplete and inadequate. The professional teams assigned to treat these students are typically overwhelmed by the evaluation responsibilities and are unable to dedicate the time needed for therapy or counseling. Kogan et al. (1999) declared “animal-assisted therapy is a promising potential resource that could meet some of the needs of emotionally disturbed children and place a valuable new tool in the hands of therapists and EBD teachers” (p. 106). Furthermore, Thigpen et al. (2005) noted “animals can provide direct and active teaching. Additionally, they give feedback about the student’s behavior by the manner in which they react to him or her” (p. 9).

Kogan et al. (1999) reported the benefits of animal-assisted therapy in a study that involved dogs trained by boys with emotional/behavioral disorders. The training was developed as part of the boys’ Individual Education Plans. After interventions involving the dogs, the boys demonstrated:

- A decrease in negative comments
- An increased use of praise and positive comments
- A decrease in distractibility
- Improved relationships with peers
- An increased amount of eye contact with people
- An increase in appropriateness of voice tone with people
- A decrease in learned helplessness
- An increased sense of control over self and environment
- A decrease in pouting and tantrums
- An improvement in affective reactivity as indicated by facial expression and gestures
- An increase in age-appropriate behavior

Summary

Students with emotional/behavioral disorders struggle to succeed academically and socially. Many of them have suffered abuse, negative social and academic experiences, and need intensive therapy and emotional support. Modeling appropriate behavior and correcting anti-social

behavior are relevant treatment goals. Research-based evidence has shown that animal-assisted therapy has provided benefits for students and others in a variety of settings. Animal-assisted therapy allows participants to engage in pro-social behaviors that can be generalized to other areas of their lives. This study investigated the effects of animal-assisted therapy on the self-esteem and classroom behaviors of a student with an emotional/behavioral disorder. The results provide additional evidence for the use of animal-assisted therapy in the classroom.

Research Design

The purpose of this study was to examine the effects of animal-assisted therapy on the self-esteem and classroom behaviors of a male student with an emotional/behavioral disorder. The researcher conducted single-subject research using the ABAB design. The research subject received animal-assisted therapy during both treatment phases of the design. Quantitative data were collected on the student through self-esteem evaluations and classroom behavior tracking sheets. This data was used to answer the research questions:

1. How does animal-assisted therapy effect the self-esteem of a student with an emotional/behavioral disorder?
2. How does animal-assisted therapy effect the classroom behaviors of a student with an emotional/behavioral disorder?

Single-Subject

The single-subject was an 18-year-old male identified by his Individual Education Plan as having an emotional/behavioral disorder. Data on an additional subject matching the criteria were collected in order to preserve the research in the event that the primary subject dropped out of the study. Both subjects were studied independently through all phases and at the same time each day--the primary subject from 12:00 p.m. to 1:00 p.m. and the second subject from 1:00 p.m. to 2:00 p.m. The primary subject successfully completed all four weeks of research.

Instrumentation

The researcher collected quantitative data using the Rosenberg Self-Esteem Scale, the Coopersmith Self-Esteem Inventory, and behavior tracking sheets. The Rosenberg Self-Esteem Scale is a ten-item Likert scale. Items are answered by responding to one of four measures ranging from strongly agree to strongly disagree. The subject answered statements by selecting SA for strongly agree, A for agree, D for disagree and SD for strongly disagree. These statements are designed to measure adolescents' feelings of self-worth and self-acceptance. The Rosenberg Self-Esteem Scale is accepted as the standard against which other measures for self-esteem are compared. Furthermore, extensive and acceptable reliability and validity information exists for this well-utilized scale. Test-retest correlations are in the .82 to .88 range (Blascovich & Tomaka, 1991).

The researcher also used the adult version (ages 16 and older) of the Coopersmith Self-Esteem Inventory. This self-esteem inventory contains 58 questions. The questions in the inventory are researched to assess attitude toward oneself in general and in specific situations. The questions, which portray favorable and unfavorable aspects of a person, are answered by selecting Like me or Unlike me. The Coopersmith Self-Esteem Inventory has a built in 'lie scale' to help determine if the subject is trying to appear to have a high self-esteem. The results were evaluated based on a table showing scores for both males and females. The table identifies scores at significantly

below average, somewhat below average, average, somewhat above average and significantly above average. The reliability and validity of this scale is well documented (Blascovich & Tomaka, 1991).

Classroom staff collected data on the student each day by placing frequency tallies on the classroom behavior tracking sheets (Appendix C). Data were collected on the research subject's target behaviors as indicated on his IEP: impolite behavior, off-task behavior, and noncompliance. Data collection was broken down hourly and included lunch and transitions. The same classroom staff collected the data each day in order to keep the recordings consistent. The classroom behavior tracking sheets were developed by the school's behavioral specialist and are used daily in each of the program's classrooms. These behavioral tracking sheets have been tested, improved upon and used by school staff for the last three years.

Data Collection Procedures

After receiving permission from the parent/guardian, and verbal permission from the student, the research began. Self-esteem testing began the first week and continued each Friday. Animal-assisted therapy was provided during treatment weeks two and four. During the treatment weeks the subject spent one hour each day with the dog at his side. The subject was completely responsible for the dog during this time and was given specific tasks to complete. During the hour the subject walked, groomed, and played with the dog, was encouraged to pet and hold the dog, and learned basic training commands.

Data were collected from the self-esteem assessments each Friday at the conclusion of the school day. The researcher administered both the Rosenberg Self-Esteem Scale and the Coopersmith Self-Esteem Inventory. The scales provided baseline data during weeks one and three and results following treatment weeks two and four. The assessments were always presented in the same order; the Rosenberg scale followed by the Coopersmith inventory. The student was allowed ten minutes to complete both instruments. The student was always seated at the front of the room in the seat nearest to the researcher while completing the evaluations.

Data were also collected using classroom behavior tracking sheets. The subject was monitored in the areas of impolite behavior, off-task behavior, and noncompliance. A frequency tally was made in the appropriate behavior box corresponding to the time that the behavior was observed. The same staff collected behavioral data each day. This ensured that the criterion used to collect the data was consistent. The staff charting the frequency tallies used the following descriptions of the students target behaviors as their guide:

1. Impolite behavior: impolite language, inappropriate listening, or disrespect of others.
2. Off-task behavior: incomplete assignments, inappropriate participation, or inappropriate problem resolution.
3. Noncompliance: not following instructions, loss of self-control, or out of place.

Of important consideration to the researcher was the ability to conduct this research over four consecutive five-day school weeks. Considering this, the researcher studied the school calendar and set up the research to avoid weeks where there were not five days of class. The research was conducted over 20 consecutive school days from November 27th to December 22nd, 2006.

Data Analysis

Results of the self-esteem scales were scored using the scoring methods detailed by both the Rosenberg Self-Esteem Scale, and the Coopersmith Self-Esteem Inventory. The results of the assessments answered the research question, “How does animal-assisted therapy effect the self-esteem of a student with an emotional/behavioral disorder?” The results were displayed using a table showing the test scores during each phase of the research and a line graph to illustrate the effects of animal-assisted therapy on the subject’s self-esteem. One line graph is used to display the results of both self-esteem scales during each phase of the four-week research period.

The behavior data collected during the four weeks of research were counted and answered the research question, “How does animal-assisted therapy effect the classroom behaviors of a student with an emotional/behavioral disorder?” The data collected on the behavior tracking sheets is displayed using both bar and line graphs to illustrate the effects of animal-assisted therapy on the subject’s classroom behaviors. The line graph shows research days and target behavior frequency while the bar graph displays the alternating phases--baseline and treatment--and target behavior frequency. A table is also used to provide a valuable comparison of target behavior frequencies between baseline and treatment weeks.

The researcher chose the single-subject research ABAB design (Fraenkel & Wallen, 2006). This design combines two baseline periods--weeks one and three--with two intervention periods--weeks two and four. The intervention or treatment in this research is animal-assisted therapy. The results of the ABAB research design provide the researcher with a reproduction of the AB design for comparison of data in weeks one and two with weeks three and four. This provides the researcher additional information regarding the intervention and strengthens the conclusions about the effectiveness of animal-assisted therapy.

Results

Population

The study population was one 18-year-old male identified by his Individual Education Plan as having an emotional/behavioral disorder. The student attends class full-time at a special education school in northeast St Paul. He is not able to attend general education classes in his local school due to the severity of his disability. The research subject lives in a group home and does not work. He has been attending this school full-time since he was 12.

Quantitative Findings

Quantitative findings were collected from the Rosenberg and Coopersmith self-esteem scales. The Rosenberg Self-Esteem Scale is a ten-item Likert scale. Items are answered by responding to one of four measures ranging from strongly agree to strongly disagree. The subject answered statements by selecting SA for strongly agree, A for agree, D for disagree and SD for strongly disagree. These statements are designed to measure adolescents’ feelings of self-worth and self-acceptance. Scores on the Rosenberg scale range from 10-40. The results of the scale are scored by assigning values to each of the ten questions. Five of the items are designed to be reverse scored. Rosenberg provides no points to delineate high or low self-esteem. Blascovich and Tomaka (1991) suggest that researchers interested in norms for comparison must find research using a similar sample. No norms for comparison were found.

The Coopersmith Self-Esteem Inventory contains 58 questions. The questions in the inventory are researched to assess attitude toward oneself in general and in specific situations. The questions, which portray favorable and unfavorable aspects of a person, are answered by selecting Like me or Unlike me. The Coopersmith Self-Esteem Inventory has a built in 'lie scale' to help determine if the subject is trying to appear to have a high self-esteem. The results were scored and evaluated based on a comparison table identifying ranges for both males and females. The table identifies scores of 33 or below as significantly below average, scores of 33 to 36 as somewhat below average, scores of 36 to 40 average, scores of 40 to 44 somewhat above average, and scores of 44 to 47 as significantly above average.

The scores from both of these self-esteem scales were used to answer the following research question, "How does animal-assisted therapy effect the self-esteem of a student with an emotional/behavioral disorder?" Table 1 shows scores for both the Rosenberg and Coopersmith self-esteem scales following each phase of the research. Figure 1 shows the results of the self-esteem scales plotted on a line graph. The line graph shows the baseline and treatment phases and scores from both scales.

Table 1

The Research Subjects Scores for the Rosenberg and Coopersmith Self-Esteem Scales

Scale	<u>Week 1</u> Baseline	<u>Week 2</u> Treatment	<u>Week 3</u> Baseline	<u>Week 4</u> Treatment
Rosenberg	28	28	30	30
Coopersmith	32	32	33	35

Table 1 shows the score totals for both self-esteem scales. The subject scored a 28 on the Rosenberg Self-Esteem Scale at the end of the first and second weeks and 30 at the end of the third and fourth weeks. The Rosenberg scale range is 10-40 points. As mentioned previously, the Rosenberg scale provides no delineation in scores between high or low self-esteem and no norms for this scale were found in previous literature.

The subject scored 32 on the Coopersmith Self-Esteem Inventory at the end of weeks one and two. A 32 on the Coopersmith scale is considered to be significantly below average when measured against other males the same age. The subject's test at the end of week three was 33 and still considered to be significantly below average. The subject scored 35 at the end of week four, which according to the scale is somewhat below average.

Figure 1

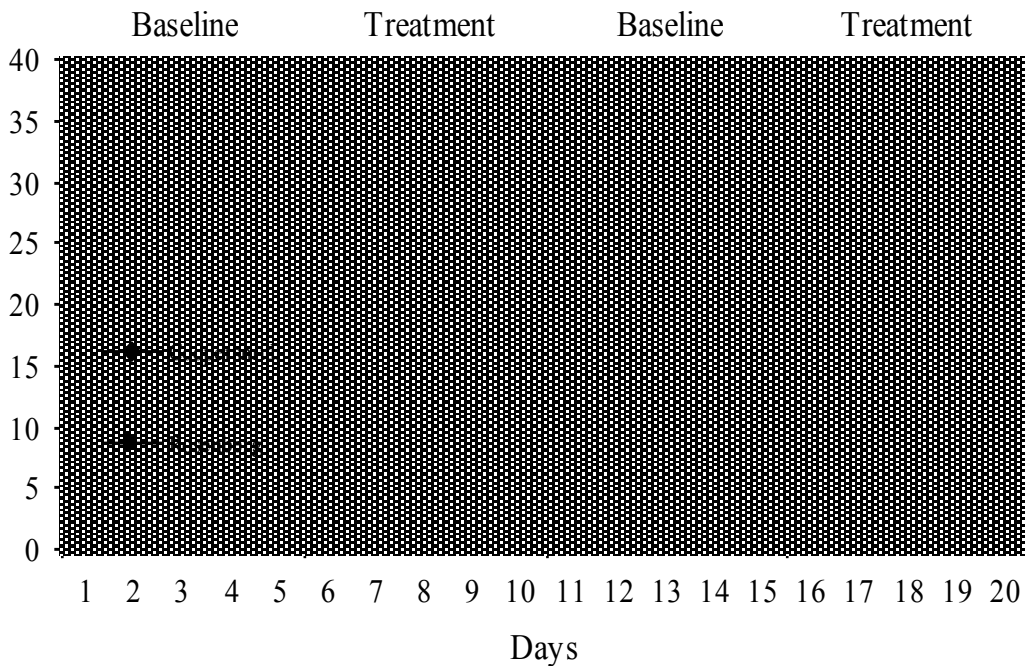


Figure 1. Self-esteem scores recorded at the end of each week over four weeks.

Figure 1 shows the quantitative data collected from both the Rosenberg and Coopersmith self-esteem scales in a line graph. The subject's self-esteem scores are plotted at the end of each of the four research phases. Both of the scales showed identical results for each scale in the first and second weeks of research; Rosenberg scale scores for weeks one and two were 28 and Coopersmith scale scores for weeks one and two were 32. The Rosenberg scale showed a score of 30 points for weeks three and four and the Coopersmith scale showed scores of 33 at the end of the third week and 35 at the end of the fourth week. The quantitative data shows an upward trend in both self-esteem scale scores. The subject's Rosenberg self-esteem scores rose from a score of 28, or 70% of the points possible at the end of the first baseline week to 30, or 75% of the points possible on the last day of research, a 5% increase. The Coopersmith scale scores increased from 32 at the end of the first baseline week to 35 on the final day of research, an improvement from a baseline of significantly below average to somewhat below average at the end of the fourth week.

The quantitative data from the behavior tracking sheets are provided in Figures 2 and 3, and Table 2. The subject's behavior was monitored in the areas of impolite behavior, off-task behavior, and noncompliance. Frequency tallies were made on the subject's behavior tracking sheet. The tallies were placed in the appropriate time segment in which the behavior was observed. Daily totals were compiled in each of the target behavior areas during the four weeks of research. The results of the behavior tracking sheets were used to answer the research question, "How does animal-assisted therapy effect the classroom behaviors of a student with an emotional/behavioral disorder?"

Figure 2

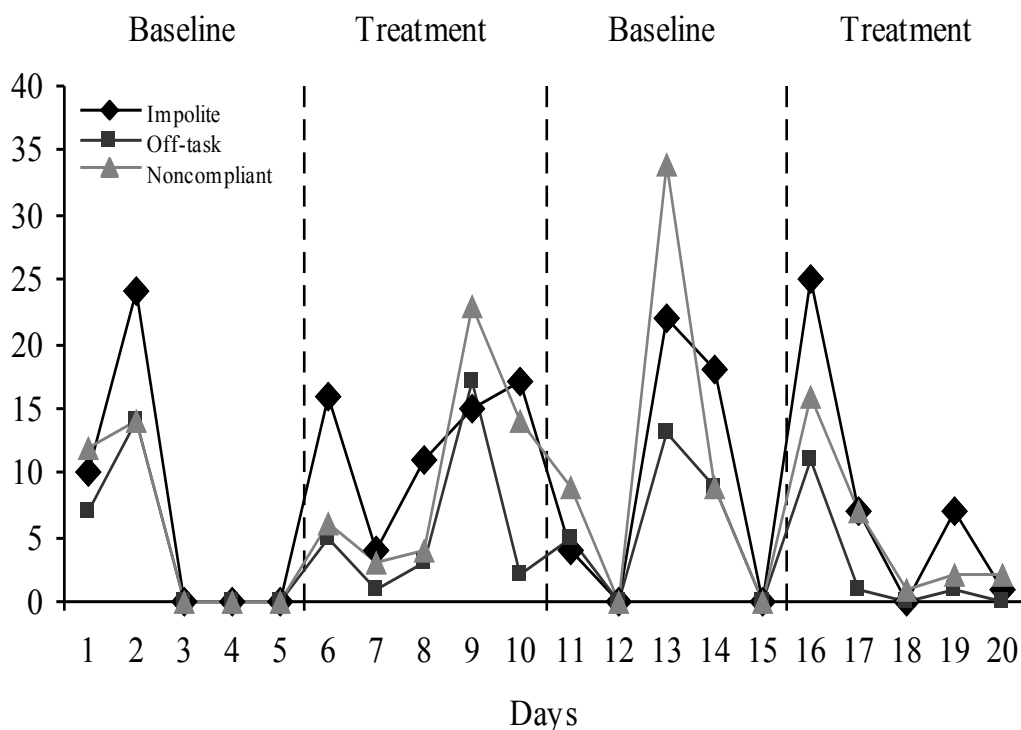


Figure 2. Behavior frequency tallies recorded daily over four weeks.

Figure 2 shows the students total daily target behaviors during both baseline and treatment weeks. The research subject attended school each day during treatment weeks two and four. The subject was absent for part of two days during both baseline weeks one and three. Data were not collected on the days the subject was not in school for a full day. The quantitative data from the behavior tracking sheets shows a general reduction in target behavior frequency tallies and an increase in the subject's attendance during both treatment phases. Figure 3 and Table 2 will provide further clarification of the data by comparing behavior frequency on similar days of school attendance during baseline weeks one and three and treatment weeks two and four.

Figure 3

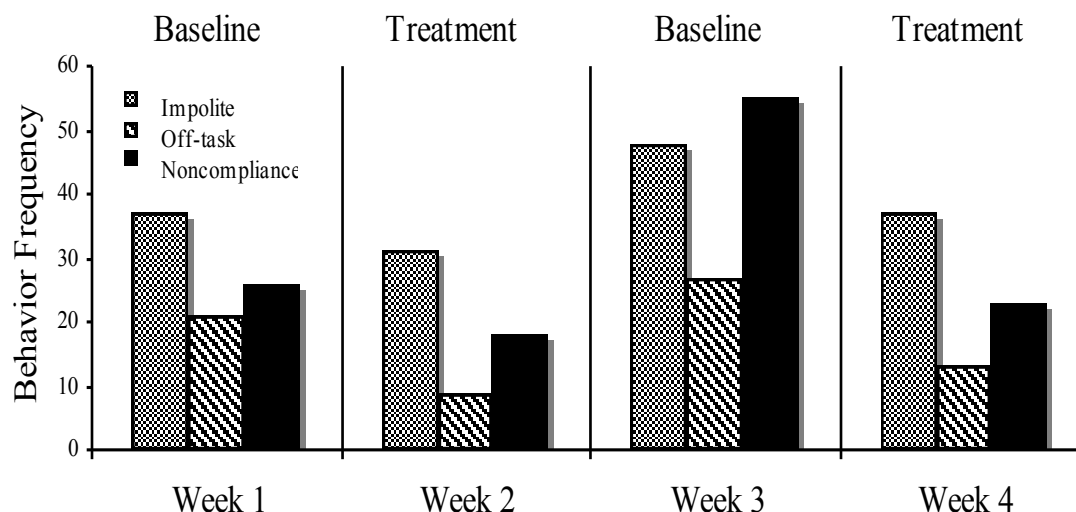


Figure 3. Behavior frequency totals comparing similar days of school attendance.

Figure 3 is a graphic illustration of the behavior data collected during the four weeks of research. Because the subject was absent for part of two days during both baseline phases, the illustration above shows data collected on the same days during weeks one and two and weeks three and four. This data provides a more accurate comparison between baseline and treatment phases. Data were compiled from Monday, Tuesday and Wednesday of weeks one and two and Monday, Tuesday and Thursday of weeks three and four. Figure 3 shows a reduction of frequency tallies in each target behavior during both treatment weeks. The research subject's target behaviors showed improvement in the following ways:

1. Impolite behavior decreased in treatment weeks two and four by showing a reduction of 6 tallies in week two and a reduction of 11 tallies in week four.
2. Off-task behavior decreased in treatment weeks two and four by showing a reduction of 12 tallies in week two and 14 tallies in week four.
3. Noncompliance decreased in treatment weeks two and four by showing a reduction of 8 tallies in week two and 32 tallies in week four.

Table 2 below provides the behavior data used in Figure 3.

Table 2

Behavior Data Comparisons Between Baseline and Treatment Weeks

Days	M.T.W. Week 1	M.T.W. Week 2	M.T.TH. Week 3	M.T.TH. Week 4
Target behavior	Baseline	Treatment	Baseline	Treatment
Impolite behavior	37	31	48	37
Off-task	21	9	27	13
Noncompliance	26	18	55	23

Note. M = Monday, T = Tuesday, W = Wednesday, TH = Thursday.

Table 2 shows the quantitative behavior data collected on the same days of the week during baseline and treatment weeks one and two, and baseline and treatment weeks three and four. The data show a reduction in frequency tallies during both treatment phases in all three target behaviors. Impolite behavior decreased by 16% at the end of the first week of animal-assisted therapy and 23% at the end of the second treatment week. Off-task behavior was decreased by 57% at the end of the first week of therapy and 52% at the end of the second week. Noncompliance decreased by 31% at the end of the first therapy week and 58% at the end of the second treatment week.

Summary

This action research project studied the effects of animal-assisted therapy on the self-esteem and classroom behaviors of a male student with an emotional/behavioral disorder. Many children with emotional/behavioral disorders require support as part of their therapy. A dog can provide support for these children by helping them learn trust, responsibility, patience and by improving their confidence (Dalton, 2001). Many theories have been proposed about an animal's ability to provide emotional and physical healing. In fact, positive results have been shown in a number of school settings with different populations (Kogan, et al., 1999). Specifically, animal-assisted therapy has been shown to improve self-esteem, socialization, and problem-solving skills in children diagnosed with an emotional/behavioral disorder (Reichert, 1998). Even though Kogan, et al. (1999) suggested animal-assisted therapy had promising potential as a resource for teachers of students with emotional/behavior disorders, very little evidence to substantiate the use of animal-assisted therapy exists. This researcher recognized an opportunity to provide additional evidence for animals as 'teachers' in an academic setting.

Purpose

This researcher found evidence during a review of the existing literature that children and adolescents benefit cognitively, socially, and emotionally from their interactions with animals. After witnessing and hearing the many positive interactions students have had with visiting

animals at my school, I was compelled to analyze the effects of animal-assisted therapy with one of my own students.

The following research questions guided this study:

1. How does animal-assisted therapy effect the self-esteem of a student with an emotional/behavioral disorder?
2. How does animal-assisted therapy effect the classroom behaviors of a student with an emotional/behavioral disorder?

Literature Review

Humans have an evolutionary tendency to pay attention to animals, possibly originating from the need to hunt and forage (Katcher & Wilkens, 2000). While very few families today use hunting as a primary source of food, humans are inclined to attend to animals, which “is in turn associated with increased capacity for response inhibition” (Katcher & Wilkens, 2000, p. 153). This may be especially important for students with emotional/behavioral disorders who have a tendency to act impulsively because of their inability to reflect between stimulus and reaction (Lieber, 2002). This researcher capitalized on this innate tendency in order to study the effects of animal-assisted therapy.

Utilizing animals in therapy is built upon the notion that human interactions with animals can result in psychological and physiological change (Hines & Bustad, 1986). In fact, the use of animals as part of the therapeutic process has occurred for over 200 years with the first recorded efforts taking place at the York Retreat in England near the end of the 18th century (All, Loving & Crane, 1999). Even though many have praised the positive aspects of the human-animal bond and its ability to contribute to the therapeutic process, very little empirical research exists to prove its validity.

Boris Levinson was one of the first proficient writers in the area of pet-facilitated psychotherapy. Levinson felt his dog was critical in helping him develop a rapport with children who were withdrawn or disturbed (Levison & Mallon, 1997). He believed that the dog moved the therapeutic process along more quickly than it would have without animal assistance. Levinson published an article about his experiences. This is considered to be the formal beginning of animal-assisted therapy (Cusack, 1988). Levinson’s work in the 1950’s was followed by Green Chimneys Children’s Services, a residential program which has incorporated animal-assisted therapy in its programming for the treatment of children with emotional/behavioral disorders for over 50 years.

The use of animal-assisted therapy has demonstrated efficacy in increasing empathy for others, acting as a catalyst for the expression of emotions, enhancing self-esteem, improving self-control, improving social competence, decreasing feelings of stress, and decreasing feelings of social isolation (Drawe, 2001; Jalongo, et al. 2004; Lieber, 2002; Levinson & Mallon, 1997; Melson, 2001).

Methodology

The design selected for this action research was the single-subject ABAB design. The quantitative data were collected over four weeks of alternating baseline and treatment phases.

The Rosenberg and Coopersmith self-esteem scales were administered to the research subject at the end of each week, resulting in eight test scores. Data were also collected on behavior tracking sheets; frequency tallies were used to provide daily data over four weeks on the subject's target behaviors.

Findings

Both of the subject's self-esteem test scores increased during the last two weeks of the research. The subject's Rosenberg scale increased from a baseline of 28, or 70% of the points possible to 30, or 75% of the points possible. The Rosenberg scale does not provide a distinct cut-off for low or high self-esteem. However, an increase of 2 points on a scale ranging from 10 – 40 represents a 5% increase. When measured against males the same age, the subject's Coopersmith scale scores increased from 32-significantly below average-to 35- somewhat below average.

The data collected from the behavior tracking sheets shows a reduction in frequency tallies during both treatment phases in all three target behaviors. Impolite behavior was reduced by 16% by the end of the first week of animal-assisted therapy and 23% by the end of the second week of animal-assisted therapy. Off-task behavior was reduced by 57% by the end of the first week of animal-assisted therapy and 52% by the end of the second week of animal-assisted therapy. Noncompliance was reduced by 31% by the end of the first week of animal-assisted therapy and 58% by the end of the second week of animal-assisted therapy.

Conclusions

Three conclusions can be drawn from this study. The first conclusion relates to research question one, the second conclusion relates to research question two, and the third conclusion relates to both research questions. From this single-subject study, the researcher concludes:

1. Self-esteem improves for a male student identified with an emotional/behavioral disorder when animal-assisted therapy is included as part of his daily program.
2. The occurrences of impolite, off-task, and noncompliant behaviors decrease for a male student identified with an emotional/behavioral disorder when animal-assisted therapy is included as part of his daily program.
3. Attendance improves for a male student identified with an emotional/behavioral disorder when animal-assisted therapy is part of his daily program.

Discussion

If not for the previous research into animal-assisted therapy, it would be hard to generalize the findings and conclusions of this research to a wider population based on the data collected from one 18-year-old male. This discussion will be a general overview reflecting on all conclusions, as well as other observations.

The student I selected for this research is one of the most difficult in my classroom. His lack of self-control and disrespectful behavior are demanding challenges throughout the day. When I asked him how he felt about helping me with this project and working with the therapy dog, he was very interested and motivated to get started. After his first week of working with the therapy

dog I asked him to reflect on his experience by writing a few words about it in his daily journal. Normally just getting him to sit at his desk is a big challenge; if we get to the assignment within five minutes it is a very good day. Not only did he immediately get to his desk to begin the journal, he wrote an entire page, then brought it with to computer class and typed it out for me. The pride he had in his work with Lizzy (the therapy dog) appeared to be transferring to his daily academics. I was amazed at the difference in his behaviors after just one week.

The following is a brief excerpt revealing his sense of achievement and enjoyment in working with Lizzy:

Yes, at times it can be very frustrating because you need to say a command over and over so she knows it's not playtime anymore. We still have a lot of work ahead of us. It is so fun that even staff is helping me out with teaching Lizzy her commands. It is actually very rewarding because while you are teaching her you get to take a break to just sit and relax or play games with her.

Seeing this student use words of emotion in his writing about his work with Lizzy, after only one hour a day for one week, confirmed for me that even short interactions could make a difference and begin to have a lasting impact.

Even though the student's self-esteem scores had not changed after his first week with the therapy dog, the change in his classroom behaviors was dramatic. He was not as impulsive or irritable. He had a sense of commitment to something and was proud to be doing something for Lizzy. Other students in the program would ask him what he was doing. He was so proud to tell them about the goal he had with her that day. He really connected with Lizzy and started to become more aware of her needs--when she needed to go out, when she needed water, when she was looking for her master. His empathy for her grew over the two weeks they worked together, and he really took ownership in caring for her. After months of attempting to teach empathy through social skills training to this student, it only took ten days with the therapy dog to make significant progress. These results are consistent with conclusions by Field (2006). It is easier to teach children to be empathetic to animals. "What you see is what you get". Field (2006) also believes that as children get older, their ability to empathize with animals will carry over into their experiences with people.

The other students in my room were also motivated to build a relationship with Lizzy and would often ask if they could help. This provided the research subject an opportunity to teach his classmates about what he was doing and help them work with Lizzy as well. This created an environment to develop the social skills of everyone in the class. By working with Lizzy they learned that if you treat another being with sensitivity and kindness, you get something back. Field (2006) believes that those skills will then be transferred to the other students.

Beyond the research subject's improved classroom behaviors, social skills, perspective-taking and sense of self-worth, his attendance was perfect during the weeks he knew he was working with Lizzy. He normally misses one or two days of school each week or is truant during the school day. This student has not been successful in a work setting because he is not a responsible employee. He has lost several jobs because he just decides he doesn't feel like going to work. During animal-assisted therapy, he had a purpose and felt responsible for her training. Improved attendance was an additional outcome that I had not anticipated.

This study provides additional support to that of Reichert (1998) in that the use of animal-assisted therapy is successful in increasing self-esteem, socialization, and problem-solving skills

with children who have emotional/behavioral disorders. This study also aligns with the findings of Kogan et al. (1999), who suggest that animal-assisted therapy has promising potential as a resource for teachers of students with emotional/behavioral disorders.

To further strengthen the findings of this study, it was important to determine if the results could be reproduced. The ABAB design used in this research provided similar results a second time. The results of this study support prior research and provide encouraging evidence for teachers to further consider therapy dogs as an additional intervention to improve the social skills and self-esteem of students with emotional/behavioral disorders.

Recommendations

Recommendations for Practice

When designing an animal-assisted therapy program for the classroom, teachers should include individual treatment goals and combine appropriate interventions and strategies. A typical animal-assisted therapy lesson may range from discussing the companion animals needs to the importance of treating animals with compassion, respect and empathy. Humane education helps bring about the above mentioned values along with a sense of responsibility and a reverence for life (Field, 2006). Other important considerations are matching the energy level and size of the animal with the student, infection control, and the animal's welfare and safety. The Delta Society would be a good starting point for educators and service providers who wish to incorporate animal-assisted therapy into their programs.

Recommendations for Further Study

Because it is vital to have research-based applications for animal-assisted therapy, more longitudinal studies are needed to better understand its impact over time. As research into the benefits of animal-assisted continues, effective strategies for improving outcomes are also necessary. Lieber (2002) agrees that developmental tools to measure and quantify significant progress are essential to the advancement of animal-assisted therapy in schools. Further research may also lead to better collaboration among general education, families, and other service providers.

Even though the results of this study are encouraging, the improvement of self-esteem and behaviors as a result of goal-oriented animal-assisted therapy programs will continue to be debated until enough research exists to support its validity with students identified with an emotional/behavioral disorder.

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Self-Determination Skills in Postsecondary Students with Learning Disabilities

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Abstract

Many adult students with learning disabilities have entered postsecondary schools in recent years. Many of these students experience cognitive, emotional, and behavioral limitations that may act as obstacles in their educational processes and subsequent careers. Research has shown that self-determination skills can help ameliorate the effects of these limitations in secondary students. The purpose of this article is to investigate and to discuss the level and need of self-determination skills of students with learning disabilities who are enrolled in postsecondary education.

Self-Determination Skills in Postsecondary Students with Learning Disabilities

The diversity of students on college campuses includes an ever growing number of students with a diagnosed learning disability (LD) (Adelman & Vogel, 1993; Cosden & McNamara, 1997; Dalke & Franzene, 1988; Zurcher & Bryant, 2001). Brinckerhoff (1996) reported that the number of college freshmen with LD by the mid 1990s had risen to 35,000 students. Modern medicine, federal legislation, and better technology have allowed students with disabilities to better control obstacles that previously kept them from pursuing goals in higher education (Reber, 1999). The growing numbers represent an increased interest in higher education by students with a learning disability (Cosden & McNamara, 1997; McGuire, Madaus, Litt, & Ramirez, 1996). However, students with LD on college campuses often experience multiple difficulties such as lack of motivation, lower levels of self-esteem and self-confidence, greater academic and personal-emotional adjustment dysfunctions, lack of understanding of their disability, an inability to express their perceived needs to others, limitations in strategic knowledge and self-monitoring, and lack of understanding of their disability and how it affects their learning throughout their academic careers (Brinckerhoff, 1996; Hall, Spruill, & Webster, 2002). They experience less emotional support and more feelings of isolation than their peers without disabilities (Hall et al., 2002). As a result, students with LD have a higher rate of failure and lower college graduation rates than students without LD (Cosden & McNamara, 1997).

Individuals with a learning disability often experience greater apprehension levels than a person without a learning disability when making the decision of whether or not to attend a college or university (Higgins & Raskind, 1995). Adding to the apprehension levels of these students is the ever present question or doubt as to whether longer study hours will be sufficient to compensate for the deficits associated with their disability (Higgins & Raskind, 1995). However, famous individuals such as Winston Churchill, Whoopi Goldberg, Cher, and Greg Louganis have been diagnosed with LD or dyslexia and been successful in life despite their disability (Brinckerhoff, 1993).

Research has shown that transition issues faced by students with LD include initiating or maintaining employment, pursuing postsecondary education, adjusting to social and community life, and being able to live independently (Hoy, Gregg, Wisenbaker, Manglitz, King, & Moreland, 1997). Although students with LD realize that they have problems, they do not understand how their deficits affect their performance in school (Adelman & Vogel, 1993). As a result, they are often unable to develop compensatory strategies to help them meet the responsibilities of timely completion of duties or assignments (Adelman & Vogel, 1993). Many of them do not understand their disability, how it affects their learning, or how to describe it to others in plain language (Brinckerhoff, 1996). Many college-age students with LD are deficient in the content preparation necessary to succeed in college (Brinckerhoff, 1996). According to McGuire, Norlander, and Shaw (1990), students with LD suffer from this under-preparedness because of a system of “tracking” established in high school.

Tracking allows limited choice in course selection in high schools; therefore, some students with LD do not meet post-secondary requirements for admission even though they have all of the aptitude for college studies. Curriculum decisions which are made early in the student’s high school program may inadvertently be limiting any post-secondary options for students with LD (McGuire et al., 1990). Difficulty in matching the student’s academic preparedness with a college’s expectations may result in students with LD being unable to compete with their peers and later dismissed from the school due to this mismatch (Dalke & Franzene, 1988). After leaving high school, one of the reasons why students with disabilities are not more successful is because the educational process has not prepared them to be self-determined young adults (Wehmeyer & Schalock, 2001). Brinckerhoff (1996) reports that, even though students with LD have been admitted to college, they very often need services that help them stay there in order to graduate.

Current research findings, regarding employment of adults with learning disabilities indicate that most of these individuals work on a part time basis or at an entry level position for minimum wages (Sittlington, Frank, & Carson, 1993; Williams, 1998). Rojewski (1996) emphasized that persons with learning disabilities are more likely to be underemployed and concentrated in lower-prestige occupations which deemphasize academic skills while capitalizing on individual strengths. Research has also shown that, despite average or above average intelligence, fewer students with learning disabilities choose to attend either a two or a four-year college than their peers without disabilities (Williams, 1998). Only 23% of students with learning disabilities versus 56% of students without disabilities enroll in postsecondary education (Adelman & Vogel, 1993).

Recent research has shown that self-determined students with cognitive or learning disabilities are more likely to be employed and have higher earnings than their peers with similar disabilities who are not as self-determined (Field & Hoffman, 2002). Self-determination curricula has had a definite, positive impact on high school students with mild cognitive disabilities, students with moderate to severe mental retardation, and students with cross-categorical special needs (Nevin, Malian, & Williams, 2002). Wehmeyer and Schwartz (1997) used The Arc’s Self-Determination Scale as a questionnaire for 80 high school students with cognitive disabilities (mental retardation and learning disabilities) to assess adult outcomes one year after their graduation. The sample was divided into dichotomous groups based on a frequency distribution of self-determination total scores with the top and bottom third of each frequency count (MR and LD) assigned to a high or low self-determination groups. This ensured that groups consisted of students with different levels of self-determination.

They found that:

Throughout the data there was a consistent trend characterized by self-determined youth doing better than their peers 1 year out of school. Members of the high self-determination group were more likely to have expressed a preference to live outside of the family home, have a savings or checking account, and be employed for pay. Students who earned the most had significantly higher self-determination scores (Wehmeyer & Schwartz, 1997, p. 253)

Many studies on learning disabilities have been conducted in elementary and secondary schools (Coffey & Obringer, 2000; Field, Sarver, & Shaw, 2003; MacMillan, Gresham, Bocian, & Siperstein, 1997; Shepard, Smith, & Vojir, 1983; Vaughn, McIntosh, Schumm, Haager, & Callwood, 1993). However, “Unlike their counterparts in elementary and secondary schools, postsecondary students with learning disabilities represent a relatively unstudied subpopulation of students with disabilities” (Zawaiza & Gerber, 1993, p. 65). All things considered, very little research on self-determination skill levels or its correlates has been conducted on the population of students with LD at the postsecondary level (Zawaiza & Gerber, 1993). There is little data available on the attendance and/or completion rates in vocational programs or graduation from college rates for students who have learning disabilities (Adelman & Vogel, 1993). It has been difficult to assess current adult outcomes for people with disabilities because very few researchers cared to ask and definitional inadequacies have limited the validity of the findings from those investigations which did focus on that question (Wehmeyer, 1997).

The purpose of this article is to investigate and to discuss the level and need of self-determination skills of students with learning disabilities who were enrolled in postsecondary education. Information is provided on attitudes towards disability, the definition of a learning disability, and the prevalence and incidence rates of students with LD. Next, the problems students with LD may face in their educational or vocational lives, some specific demographic variables addressed in LD research, and the effects of the disability on students in college are discussed. Motivational and attribution factors, as well as locus of control and self-efficacy of students with LD, are also addressed in this commentary. Lastly, aspects of self-determination are discussed such as: its roots, effects of legislation, definition and component parts, and the teaching of self-determination in the school system.

Attitudes Toward Disabilities

Societal attitudes towards individuals with disabilities have changed over the centuries. Similar to the roles of women and members of minority ethnic groups, individuals with disabilities have been distinctly underplayed or totally absent from academic discussion in the histories of Europe and the United States (Kent, 2001). In early Greek and Roman eras, people with physical and mental disabilities were thought to have their conditions because their souls had somehow been “cursed” by the deities or because they were sinful (Rubin & Roessler, 2001; Snow, 2001). People with disabilities were killed either for economic reasons, to promote population control, or simply because the father disapproved of the child due to its disability (Rubin & Roessler, 2001). Leaders in Greece, such as Aristotle, had established an understanding of the idea of a perfect human body for that society so that anyone born with a disability was subsequently viewed as imperfect and considered as deformed, monstrous, deviant, or mutilated (Kudlick, 2003). Additionally, early Greek and Roman laws mandated the desertion or death of babies

with disabilities to fulfill their societies' quest for "human perfection" (Snow, 2001). This negative societal attitude towards people with disabilities actually represented an early form of eugenics that carried over into modern times (Rubin & Roessler, 2001; Snow, 2001).

During the early part of the Christian era and the Middle Ages, people with disabilities were present everywhere in society, but had been excluded from the Old Testament and were conspicuously absent in history books (Kent, 2001). It was widely thought that disabilities were a direct result of the people being sinful (Snow, 2001). Consequently, during these periods they were treated in the monasteries by priests and monks through methods such as exorcisms rather than by physicians (Rubin & Roessler, 2001; Snow, 2001). Individuals with mental illness received less humane treatment methods such as starvation, whipping, or immersion in hot water in order to drive out the supposed devil causing their disability (Rubin & Roessler, 2001). Snow (2001) reported that a continuum of treatment methods were used ranging from prayer to beating the devil out of the person with the disability. From the sixteenth to the eighteenth century, people with mental illnesses were thought to be sick rather than possessed by the devil; consequently, they were placed in asylums that were very similar in patient treatment to that of prisons rather than hospitals (Rubin & Roessler, 2001). Despite these prevailing negative attitudes, there were instances of positive attitudes displayed by ancient leaders such as Hippocrates. He presented Greek society with the idea that mental illness was caused by the interaction of the human being and her/his environments rather than that of supernatural causes (Rubin & Roessler, 2001). Perhaps, Hippocrates rejected the supernatural pathology because he was a physician himself. Consequently, sanitariums were designed that provided more humane treatment efforts that included occupation, exercise, and entertainment (Rubin & Roessler, 2001). Roman society provided equally humane treatment methods to those who were of the upper classes but the lower classes received harsher treatment methods which included starvation (Rubin & Roessler, 2001).

In America's twentieth century, the trend in attitudes towards those with disabilities became one of preventing them from reproducing as Chief Justice Oliver Wendell Holmes proclaimed that, "Three generations of imbeciles is enough" (Snow, 2001, p.1). This attitude towards people with disabilities amounted to a modern day form of eugenics (Snow, 2001). In America, such attitudes resulted in hundreds of thousands of men, women, and children with disabilities being abandoned in institutions, where segregation, isolation, various forms of abuse, and death were quite common occurrences (Snow, 2001). Still, government officials and political leaders of the early twentieth century began to realize a need for vocational rehabilitation programs due to changes in society prompted by the Industrial Revolution and wars. Large numbers of industrial workers were injured while on the job and these occurrences resulted in early workers' compensation laws (Rubin & Roessler, 2001). Soldiers wounded in war could benefit more from vocational rehabilitation programs than they could from social isolation programs of institutionalization. The Soldier's Rehabilitation Act (1918) authorized vocational rehabilitation services for returning veterans with disabilities resulting from their military service (Rubin & Roessler, 2001). Legislation passed during the presidencies of Eisenhower, Kennedy, and Johnson expanded funding for rehabilitation services so much that the years from 1954 to 1972 became known as the Golden Era of Rehabilitation (Rubin & Roessler, 2001). This era became "... a time of increased funding for client services, expanded training opportunities for rehabilitation personnel, further development of rehabilitation facilities, and implementation of many significant rehabilitation research projects" (Rubin & Roessler, 2001, p. 40).

This time period fostered a slowly changing attitude towards persons with disabilities as further legislative assistance from the federal government reflected the changing attitudes of people as being more amenable towards those with disabilities who needed rehabilitation. The subsequent passage of policies, such as Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the Individuals with Disabilities Education Act (IDEA) of 1997 were instrumental in ensuring equal access to education for people with disabilities and simultaneously improving the attitudes and treatment of this population by individuals in society (Rao, 2004). IDEA has been amended on several occasions, most recently in 2004 as P. L. 108 – 446, and is now known as the “Individuals with Disabilities Education Improvement Act, 2004.” Research indicated that employees with disabilities were equal to people without disabilities in terms of their productivity, turnover rates, absenteeism, and accident rates (Berry & Meyer, 1995). “In some cases, employees with disabilities have been shown to be more productive [italics added], have better work attitudes, and lower absenteeism, turnover and accident rates than non-disabled employees” (Berry & Meyer, 1995, p. 212). Despite these positive findings, concerns of skepticism still existed among employers with regard to the cost of reasonable accommodations, providing interpreters, adjusting examinations and training materials, adapting work schedules and other employer’ apprehensions (Berry & Meyer, 1995). It became apparent that attitudinal barriers towards people with disabilities were quite commonplace in society despite the good intentions of policymakers and the presence of legislation designed to eradicate said barriers.

Regrettably, it was the negative, non-accepting attitude towards people with disabilities that resulted in society’s wariness, even to the point of hostility, regarding the idea of community integration that permeated society (Yazbeck, Villy, & Parmenter, 2004). Negative attitudes toward disability have seriously obstructed the progress of people with disabilities inclusion in schools, the workplace, the broader community, and unjustifiably confined the choices or alternatives created by professionals for people with disabilities receiving services (Gilmore, Campbell, & Cuskelly, 2003). In fact, professionals’ negative attitudes towards disability, and those that have disabilities, affected the delivery of the quality of services as well as the outcomes of those services (Wong, Chan, Cardoso, Lam, & Miller, 2004). Berry and Meyer (1995) reported that people without disabilities may have low expectations of people with disabilities; consequently, they were expected not to behave in a competent manner in the workplace, school, or community. People without disabilities have displayed behaviors such as devaluating pity, avoidance, and exclusion when they encountered people with disabilities (Berry & Meyer, 1995). In the end, these negative attitudes towards people with disabilities affected their successful rehabilitation, education, integration, and their ability to live independently (Wong et al., 2004).

Just as adults needed laws in the workplace, adolescents and children with disabilities need special laws in schools (i.e., IDEA, 2004) to be afforded the special protections necessary for combating negative attitudes towards people with disabilities (McGrath, Johns, & Mathur, 2004). York and Tundidor (1995) conducted 12 interviews with 257 secondary-age students without disabilities to investigate their attitudes about inclusive education as experienced by typical high school students, to understand their recommendations about inclusive education, and to give voice to their concerns about this educational practice. The researchers noted that three main barriers to inclusion were identified by the students: 1) the teasing of students with disabilities, 2) the challenging behaviors of students with disabilities, and 3) the negative adult attitudes towards students with disabilities (York & Tundidor, 1995). Bunch and Valeo (2004) stated that students with disabilities generally have “lower positions of status” than their non-

disabled peers and that this attitude of rejection displayed by peers without disabilities is based upon their observation that students with disabilities do not exhibit acceptable behavior in both general and special education classes. Whenever a teacher responded to a student with disability, in a manner marking her or him as different from students without disabilities, the students without disabilities also viewed the student as different (Bunch & Valeo, 2004). This has led to abusive behavior, a lack of friendships, and the need to protect students with disabilities (Bunch & Valeo, 2004). Children with intellectual disabilities, such as learning disabilities, often experience social isolation, social neglect, rejection by their peers, and their social skills may be assessed as low by their teachers (Nowicki & Sandieson, 2002).

Gender and age are two personal factors found in previous research to be correlated with children's and youth's attitudes toward their peers with disabilities (MacMillan, Widaman, Balow, Hemsley, & Little, 1992; McDougall, DeWit, King, Miller, & Killip, 2004). Males hold more negative attitudes toward their peers with disabilities than do females (McDougall et al., 2004; Nowicki & Sandieson, 2002; Rao, 2004; Yazbeck et al., 2004). McDougall et al. (2004) claimed that attitudes become more negative in early adolescence than in the higher grades. However, other researchers found that attitudes giving rise to discrimination against people with disabilities have been noted as less prevalent among younger than older people (Yazbeck et al., 2004). The latter finding was explained by the fact that older people grew up in an era in which people with disabilities were placed in residential hospitals and were less visible to the community; therefore, they might not be as influenced by "political correctness" or feel obliged to provide "acceptable" responses as would younger people (Yazbeck et al., 2004).

Perhaps, these contradictions can best be explained by Yazbeck et al. (2004) who asserted that the inconsistency in the findings could be due to the type of contact people have with those with disabilities. In order to promote positive attitudes towards people with disabilities, it is not sufficient to only promote contact with people with disabilities to overcome negative attitudes. The type of contact with people who have disabilities should be structured, organized along a meaningful dimension, and the quality of the contact must be high (Yazbeck et al., 2004). Therefore, different attitudes among genders, age groups, education levels, racial groups, etc., could be due to deficiencies in one or more of these criteria in their contact with people who have disabilities. Understanding the prevailing attitudes of a community, which in turn influence the actions of its members, is crucial to bring about social change through effective public policies that promote an inclusive society (Yazbeck et al., 2004).

Definition, Prevalence, and Incidence of Learning Disabilities

The assessment of a learning disability has been most heavily influenced by the initial federal definition by the U. S. Office of Education (U.S.O.E.). The U.S.O.E. definition has been incorporated into the 2004 IDEA definition:

- (i) The term means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

(ii) The term does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage (U. S. O. E. Office of Special Education Programs).

Individuals are considered to have a learning disability when a substantial difference exists between their expected abilities, measured by intellectual performance on IQ tests, and their actual academic performance, measured by achievement tests, in one or more specific areas (Gordon, Lewandowski, & Keiser, 1999).

The Individuals with Disabilities Education Act of 1997 (IDEA) was passed for the purposes of providing federal funding assistance to help meet the educational needs of students with disabilities (Tate, 2000). However, of all the disability categories covered by the act, the number of children with a learning disability has grown at an exponential rate over a short period of time (Anderson, 1997; Fuchs & Fuchs, 1998; Siegel, 1999; Swanson, 1996; Tomasi & Weinberg, 1999). Since the Education for All Handicapped Children Act of 1975 (P. L. 94 – 142) passed, the number of children receiving services under the LD category has increased dramatically (Tomasi & Weinberg, 1999). Specific numbers of children identified as having a learning disability in the 1977 school year were 969,368; however, 20 years later in 1997 the numbers were 2,748,497 (Ysseldyke, 2001). Each year approximately 120,000 new students are being classified as having a learning disability (Swanson, 1996). The learning disabilities category now represents over 52% of all students with disabilities served in special education under IDEA (Gresham, 2001). From 1989 to 1998, there has been a 173% increase of students with learning disabilities attending higher education programs (Lock & Layton, 2001). Lock and Layton (2001) reported that, of the 428,000 students with disabilities currently enrolled in higher education settings, 196,000 (46%), were identified as having a learning disability. In spite of their growing numbers, according to Hall et al. (2002), only 1.8 % to 3% of individuals who have LD have been found to enroll in a four-year college or university one year after graduating from a high school.

Problems Faced by Students with LD

Students with learning disabilities have a lifelong condition that impacts their affective and cognitive development significantly (Hoy et al., 1997). Future employment for adults with LD tends to be part-time or at entry and minimum wage levels with very few employee' benefits (Hoy et al., 1997). Hoy et al. (1997) found that males with LD are more likely to be employed than females with LD and also to earn higher wages than females with LD; however, both genders usually find employment in, "...low level fast food, laborer, service, production line or helper occupations" (p. 281). Adults with learning disabilities face higher unemployment rates, are less likely to have an employment plan, will work longer in entry-level positions, earn lower wages, and are more likely to be in dependent living situations than their peers without handicaps (Reekie, 1995).

Hoy et al. (1997) found that many adults with LD do not go beyond the high school level academically, are dissatisfied with their current social lives, and remain heavily dependent upon their immediate families. There is a great amount of emotional stress related with growing up having a learning disability that forces many adults to drop out of secondary or postsecondary schools (Hoy et al., 1997). Hoy et al. (1997) reported that 30 – 40% of students with LD drop out of high school each year. Wagner (1995) reported that students with LD rarely furthered

their education or training after high school. Hall et al. (2002) reported that a mere 14% of students from special education with LD had enrolled in postsecondary schools while 53% of students with no disability had enrolled in either a college or university. They also reported that postsecondary students with LD were more likely to attend some type of vocational program as opposed to attending a four year college or university. Field et al. (2003) report, "... high percentages of students with learning disabilities dropping out of high school, not seeking admission to postsecondary education, and not being prepared to succeed in postsecondary education" (p. 340). They attribute these negative occurrences to colleges which promote dependence producing programs such as course waivers, substitutions unsupported by data and content tutoring (refers to assistance with the specific subject matter in a course that help students understand the course material by explaining and demonstrating concepts, reviewing topics, providing guidance through exercises, answering questions, clarifying, etc.) and other short term solutions that assist the student in passing courses but not in learning them. Vogel and Adelman (1992) reported that students with LD had lower GPAs at the end of each year of college study as well as at exit. Overall, postsecondary students with LD have been found to have a propensity to be slower and less competent as learners when compared with their peers without disabilities (Zawaiza & Gerber, 1993).

Demographic Variables in LD Research

An increasing number of minority ethnic students have been identified and subsequently placed into classes for those with learning disabilities (Argulewicz, 1983; Gregory, Shanahan, & Walberg, 1986). Overall, this increase has resulted in a disproportionate number of minority students being placed in special education classrooms (Argulewicz, 1983). In a nation wide survey of over 26,000 12th grade students with learning disabilities, Gregory et al., (1986) found that these students tended 1) to be older than their peers without disabilities, 2) to be minority students, i.e., African American, Hispanic American, and Asian American, and 3) to have other handicapping conditions. Research based on self-determination theory has shown that encouraging self-determination skills, especially among minority students, has resulted in more positive academic and psychological outcomes (Cokely, 2003).

Stodden, Kim-Rupnow, Thai, and Galloway (2003) recommended that secondary and post-secondary schools should promote more training in self-determination among minority ethnic groups and that follow-up investigations should be performed to help ensure gains in self-determination skills from these activities. Cokely (2003) collected data through a self-report questionnaire administered to 687 students attending three public colleges in the Midwest and South over a three-year period. He compared the students' GPAs, the mean scores of academic motivation, academic self-concept, and self-esteem and found that, although there were differences in academic performance, African American students did not lack academic motivation. Nor did they suffer from lower self-esteem and lower academic self-concept than "white" students (Cokely, 2003). He asserts that the studies done to date on the promotion of self-determination related to positive academic and psychological outcomes have been primarily limited to "White" students. However, very little research has been performed to study this relationship within the population of African American students (Cokely, 2003).

Mellard and Byrne (1993) provided data from a four year study on students, in the California community college system, who referred themselves for LD services, were eligible for services, and were already receiving services. They found that younger students (18 – 19) were referred in higher proportions than older, non-traditional students (Mellard & Byrne, 1993). Students

with disabilities, especially those with learning disabilities, feel less academically capable as they grow older and compare themselves more with students without disabilities in the mainstream (Renick & Harter, 1989).

In a study comparing sociological characteristics of elementary age boys and girls with LD, Ryckman (1981) suggested that psychological differences exist between the two groups, “The composite that emerges based on these results is that LD girls are verbally inferior, less capable of abstract thinking, more field dependent, and more impulsive than LD boys. However, on academic skills, there were no significant differences” (p. 51). Wehmeyer (1993) investigated locus of control for students with LD and found that girls perceived locus of control scores were more external than boys. He also found that the scores of the students were consistent with previous reports for students with LD.

Zurcher and Bryant (2001) maintain that when examinees with LD are provided with necessary accommodations, their scores as a group are very comparable to those of examinees without LD taking the test under customary administration conditions. When students with LD were provided with accommodations, scores from entrance examinations predicted higher GPAs than the students actually earned (Zurcher & Bryant, 2001). In a recent study, Sarver (2000) investigated the relationship between self-determination and academic success for college students with LD and found a positive and significant relationship between grade point averages and their levels of self-determination.

In a study done by Adelman and Vogel (1990), career attainments of college students with LD were investigated to see if their participation in support programs enhanced their career opportunities. Some of the findings of the study show that developing a self-understanding of a student’s learning disability should be one of the major goals of any college support system. These researchers found that college support services greatly assisted the students in finding out their individual strengths and weaknesses thereby allowing them to develop compensatory strategies (Adelman & Vogel, 1990).

Obstacles faced by adolescents at risk of poor academic outcomes due to learning disabilities may be further complicated by socioeconomic disadvantage which only serve to put children at an even higher risk of academic failure (Fleming, Cook, & Stone, 2002). “Studies have shown that the reading and arithmetic scores of children from lower socioeconomic status families are generally lower than those obtained by children from families of higher socioeconomic status” (Kealy & McLeod, 1976, p. 64). Without some degree of competence in these areas, the student is unable to learn adequately from other educational experiences and thus falls behind his or her peers. This fact is glaringly apparent for students with a learning disability. In a study investigating the relationship between socioeconomic status of the family and the incidence of diagnosis of LD, Kealy and McLeod (1976) found that approximately 73% of the children from higher status families had been diagnosed and received proper educational treatment whereas approximately only 35% of the children from lower status families had been diagnosed and received proper educational treatment illustrating the fact that the later have less chance of receiving the attention they require.

O’Connor and Spreen (1988) reviewed four prior studies of the educational and occupational outcomes for children with LD and concluded from them that the higher the SES background the higher the adult educational and occupational achievement and the lower the unemployment rate of children with LD. In their own study, these researchers found similar results showing, “... a

significant positive linear trend exists between the parents' SES and education level, and the educational and occupational achievement for the children with LD, including salary and employment, as adults in their twenties" (O'Connor & Spreen, 1988, p. 152). It was demonstrated that fathers' SES and education level played an important role in the outcome of children with LD as the increase of either of these variables positively correlated with outcome variables. Blair and Scott (2002) investigated the proportion of LD placements associated with low socioeconomic status. The findings of their research showed that 30% of LD placements among boys and 39% of placements among girls were attributable to low SES markers (gender, race, maternal education, maternal age at delivery, marital status, birth weight, and trimester of prenatal care initiation). This rate ratio was more than it was for the general population illustrating that low SES does indeed have an increased effect on children's LD placement. More specifically, the researchers found:

- that boys are more than 2 ½ times more likely than girls to receive an LD placement by age 12 to 14 years
- that children of mothers reporting less than 12 years of education at the time of the child's birth are approximately 1 ½ times more likely to receive a placement of LD than are children of mothers reporting higher levels of education (Blair & Scott, 2002, p. 17).

Fleming et al. (2002) investigated 19 Chicago public schools to examine the effects of social influences on the lives of 5th through 8th grade students with and without learning disabilities. Among other things, they found that there was a significantly greater portion of students with LD living in single-parent families as well as a significant proportion of students with LD reporting that their parents were out of work (Fleming et al., 2002). These researchers suggested that families of students with LD may be among the most socio-economically disadvantaged of students.

College Life for Students with Learning Disabilities

Cosden and McNamara (1997) reported that college students with LD are more likely to be a "subset" of those students who graduated from high school who performed well while they were in school. This could be attributed to the fact that their intelligence, personal coping and compensatory skills, or home and school support have enabled them to go beyond a secondary education (Zawaiza & Gerber, 1993). Despite their ability to attend and to be successful in college, students with LD still do not understand how their disability affects their learning or how to communicate this impairment to others (Brinckerhoff, 1996; Williams, 1998). In high school, students with LD have the opportunity to interact with their teachers day after day in classes that last approximately 45 to 50 minutes; however, in college the students may meet in classes with a professor only 2 or 3 times a week for 1 to 2 hours (Williams, 1998). High school classes are usually made up of no more than 25 to 30 students, but in college the number of students in classes may be as large as 200 to 300 (Brinckerhoff, 1996). The lack of understanding of their disability and lack of teacher feedback leave the students at a distinct disadvantage when seeking tutorial or special assistance from professors or others on campus (Brinckerhoff, 1996; Williams, 1998). While students without disabilities require little one-to-one teacher interaction, students with LD need instruction that is very deliberate and elaborate in order for them to learn (Zawaiza & Gerber, 1993).

College life is structured much differently than high school with the students being held more responsible for their own learning. Colleges demand that the students master their subjects as

opposed to merely achieving rote learning as in high school (Williams, 1998). Brinckerhoff (1996) reported that, “High school students find that their time is structured by the limitations set by parents, teachers, and other adults. College environments require students to function independently by managing their time and organizing their days” (p. 120). Brinckerhoff (1996) also reports that high school students with LD are encouraged to take easier classes like general science rather than chemistry or physics in order to boost their grade point averages (GPA). Due to this poor curriculum planning, students with LD are less well prepared to attend a college or a university compared to their peers without disabilities (Dalke & Franzene, 1988; McGuire et al., 1990).

There are varying levels of academic support on each college campus for students with learning disabilities. Brinckerhoff (1996) suggests that high school students need to understand the difference between a college that offers a comprehensive LD program and a supported services model. A comprehensive LD program is one that is led by a person, with expertise in the LD area, which offers postsecondary components such as: diagnostic testing, individual education programs, academic and program advisement, basic skills remediation, subject area tutoring, specialized courses, auxiliary aids and services, and counseling (Brinckerhoff, 1996).

In contrast, support services on colleges or universities usually include the minimal requirements mandated by Section 504, i.e., access to taped textbooks, tape recorders, assistance in arranging testing accommodations, readers, note takers, and provisions for arranging course substitutions (Brinckerhoff, 1996). While the former programs contain critical aspects of individualization geared towards those with LD, the latter support services are geared towards generic activities carried out to ensure equal educational opportunity to any and all students with disabilities (Brinckerhoff, 1996). Apart from the type or degree of services offered on campuses, many high school students do not realize that they have a right to them as reasonable accommodations and they are not “favors” offered by schools. Williams (1998) reported that many students with LD do not bother to use the accommodations offered by colleges and universities.

Despite having almost 9% of their first year students identify themselves as having a disability, college administrators report that only 1% to 3% of their students request accommodations (Aune & Friehe, 1996). Aune and Friehe (1996) reported that some students with LD are afraid of being stigmatized by their peers and professors, so they do not use support services that are offered on campus. Some students do not wish to be seen walking in the door of campus support services for fear that people on campus will learn of their disability. Other students hesitate to disclose their disabilities to professors because they anticipate that the instructor might think them less capable, refuse to allow them to continue in the class, or might reveal their disability in front of the class (Aune & Friehe, 1996).

Most students with learning disabilities will need additional assistance to be successful in college. The exact extent to which students with learning disabilities use services for students with disabilities in postsecondary environments is unknown (Adelman & Vogel, 1990; Mellard & Byrne, 1993). These students may profit from programs provided by whatever campus organizations have been established for people with disabilities. These campus centers can assist in guiding students in determining study strategies and positive course selections as well as to have staff members present who can also assist the student (Lock & Layton, 2001). However, according to Yocum and Coll (1995), only 31% of the faculty and 6% of the academic counselors in community college environments have received any type of special education training. Lock and Layton (2001) suggest that this lack of training and understanding of learning

disabilities may lead to typical accommodations for the student rather than individual matching of services that would best fit the student's needs.

Motivational and Attribution Factors

Students with learning disabilities have had their entire academic and personal lives affected by the disorder and need to be provided with techniques for gaining better control in order to be successful (Basse & Slauter, 1997). Hall et al. (2002) assert that this group of students faces problems in motivation, attributions, self-esteem, and affective responses that can negatively affect their academics. Klassen (2002) asserts that, "...when compared with their typically achieving peers, LD students are in general less metacognitively aware and tend to focus on the concrete demands of tasks, rather than on the more obscure evaluative and self-awareness skills demanded by metacognitive processes" (p.89). Cosden and McNamara (1997) indicate that there have been few studies directed at identifying factors related to self-esteem for college students with LD, or that have examined factors related to self-esteem for students with or without LD. Differentiation of areas of self-esteem is of special interest in assessing the self-perceptions of students with LD, because one could then distinguish among precise areas of perceived strengths and weaknesses as well as assess the relationship of these perceptions to global self-esteem (Cosden & McNamara, 1997).

Successful transition planning for students with LD requires identifying and teaching them objective skills relevant to various careers as well as teaching them to manage subjective feelings such as inferiority, insecurity, and uncertainty about success in their future careers (Panagos & DuBois, 1999). Nurturing these subjective feelings becomes especially important for students with LD because of inaccurate and negative messages they receive regarding their skills and potential abilities. Techniques should be developed by educators to assist students with learning disabilities to become more aware of and to utilize their strengths while compensating for their learning style differences (Basse & Slauter, 1997). These techniques should increase the students' opportunities for success as well as their full involvement in the community. Most educators have long recognized the significance of affective and motivational factors in the instruction of students with learning disabilities (Bendell, Tollefson, & Fine, 1980; Hisama, 1976). The affective component focuses on a number of factors chief among them is self-efficacy and locus of control (Hall et al., 2002). The next sections will specifically provide some information as to how locus of control and self-efficacy impact the lives of students with learning disabilities.

Locus of Control and Students with Learning Disabilities

Academic locus of control has long been shown to be an important affective variable that strongly influences learning (Boersma & Chapman, 1981). This concept refers to the way in which individuals view their successes and their failures. An internal locus of control is one in which the perception of positive or negative events are a consequence of one's own actions and thus under their personal control while an external locus of control is one in which the perception of positive and negative events are a consequence unrelated to one's own behavior and therefore beyond their personal control (Bendall et al., 1980; Connor, 1995; Hallahan, Gajar, Cohen, & Tarver, 1978; Hisama, 1976; Tur-Kaspa & Bryan, 1993). Hallahan et al. (1978) enumerate several characteristics of individuals with an internal locus of control; they are: 1) people who have previously experienced success, 2) more likely to occur among middle-class than lower-

class persons, 3) positively associated with intellectual striving and expectancy of success, and 4) positively related to academic success. Further, Boersma and Chapman (1981) report that: Those who attribute the source of success and failure to themselves (internal locus of control) and who see within themselves the ability to achieve, tend to obtain higher levels of achievement. On the other hand, individuals who attribute success-failure experiences to others, to luck, or chance (external locus of control), tend to achieve at lower levels (p.350).

This link between the locus of control and academic success seems plausible because academic achievement demands a certain degree of effort and persistence on tasks and this type of effort would not be forthcoming if the student sees little relationship between effort and outcomes (Boersma & Chapman, 1981).

Connor (1995) likens internal and external loci of controls to two opposite ends of a continuum. On the internal end of the continuum are individuals who will attribute to him/herself a capacity to exert some control over events and more readily avoid negative states such as passivity or perception of inability to cope with daily events (Connor, 1995). On the external end of the continuum are individuals who under socialize, have maladaptive behaviors, have less effective communication skills, and possibly have learned helplessness (Connor, 1995; Miranda & Villaescusa, 1997). Students with learning disabilities may fit anywhere along this continuum according to their individual characteristics and personalities.

Hallahan et al. (1978) also distinguish between the two ends of the continuum asserting that those with an internal locus of control believe that good things happen to them because they worked hard and with skill to bring about their success. Persons with an internal locus of control believe that they are also responsible for undesirable events that occur in their lives. They think that such events occurred either because they were not sufficiently skillful in their efforts or they believe they did not try hard enough to be successful. Meanwhile, those with an external locus of control believe that what happens to them is unrelated to what they do and that positive/negative events occur because of luck, fate, other peoples' involvement, or are just one of those things that uncontrollably happen (Hallahan et al., 1978). Students with an external locus of control tend to aspire to achieve but they also tend to rationalize their failures by blaming external circumstances for their ill fates in school. They also tend to be less successful academically than those students who have an internal locus of control (Connor, 1995).

Self-Efficacy and Students with Learning Disabilities

Self-efficacy theory (Bandura, 1993) suggests that sources of self-efficacy are not perceived to be inherent; instead, the sources are integrated into self-efficacy judgment through cognitive processing. In other words, the theory centers on how individuals operate cognitively on their social experiences and how these cognitive operations influence their behavior and progress (Hampton, 1998). Bandura (1993) identified four sources that can influence the level of self-efficacy of an individual: 1) performance accomplishments, 2) vicarious experience, 3) emotional arousal, and 4) verbal persuasion. Performance accomplishments acknowledge that individuals are more likely to believe that they can achieve a desired result if they have been successful in similar or related tasks. Vicarious experience allows the individual to become convinced of their potential for success when they see others struggle and achieve their desired goals. Emotional arousal refers to the potentially motivating or debilitating effects of anxiety. Finally, verbal persuasion refers to social and self reinforcement through verbal encouragement.

Klassen (2002) defines self-efficacy as “... beliefs in one’s capacity to organize and execute the courses of action required to produce given attainments” (p.88). It also refers to personal judgments of one’s capacity to organize and implement actions in the face of obstacles (Hampton, 1998). Hampton (1998) further asserts that how much energy is expended by the individual and how long these efforts are sustained in the face of obstacles is influenced by the self-efficacy beliefs of students with learning disabilities. Individuals with enhanced self-efficacy usually exhibit increased internal motivation, more favorable self-perceptions, and more adaptive attribution patterns (Tabassam & Grainger, 2002).

According to Klassen (2002), students need much more than ability and skills to perform successfully in a school environment because they will also need a sense of efficacy in order to use the aforementioned skills and ability to regulate their learning. Students, and especially young women with disabilities, have come to believe that they do not have control over their lives particularly in educational environments (Wehmeyer & Lawrence, 1995). Students with learning disabilities are often characterized by learned helplessness and consequently believe that their failures are due to their low ability and that their successes are due to ease of the task (Miranda & Villaescusa, 1997). Tabassam and Grainger (2002) state that research has shown students with learning disabilities differ from typically achieving students in terms of self-concept, attributions for success and failure, and self-efficacy beliefs. The presence of a learning disability, and the associated secondary characteristics such as low self-efficacy beliefs, can cause more students with learning disabilities to experience difficulties if not total failure in academic settings (Hampton, 1998).

Background of Self-Determination

According to Ward (1999), the beginning of the self-advocacy movement can be traced back to 1968 at a meeting for parents of people with disabilities. At a later conference the phrase “People First” evolved when someone at the meeting declared that he or she was tired of being called mentally retarded because “... we are people first” (Ward, 1999). Over time, self-advocacy groups came into existence all over the United States, Canada, England, Australia, New Zealand, and Sweden (Ward, 1999).

There is a need for self-determination to go hand-in-hand with self-advocacy (Walker, Shoultz, Hall, & Harris, 1999). Students must learn to become their own advocates in view of the fact that most instructors and counselors are unfamiliar with the educational needs and requirements of those with disabilities (Lock & Layton, 2001). According to Williams (1998), self-advocacy has been interchangeably used with self-determination. However, Williams (1998) claims that self-advocacy is a component of self-determination. M. Wehmeyer (personal communication, February 8, 2003) stated that self-determination is a broader construct than self-advocacy. Self-Determination generally refers to exerting control in one’s life through a variety of means, one of which is self-advocacy. According to Eisenman and Tascione (2002), a self-determined individual, “... acts from awareness of personal needs and preferences, sets goals and works toward them, creates solutions to problems, advocates for self [*italics added*], identifies needed supports, and regularly evaluates and adjusts performance” (p. 35). These comments substantiate Williams’ (1998) claim that self-advocacy is a component of self-determination.

Effects of Legislation

The 1997 Individuals with Disabilities Education Act (IDEA) laid a strong foundation for more active student involvement in their Individualized Education Program (IEP)/Individual Transition Plan (ITP) (Price, Wolensky, & Mulligan, 2002). This act required school systems to consider students' transition needs by the age of 14 with the planning for the students' adult status to begin one year prior to his or her attaining the age of majority. Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 were mandates providing "... equal access to postsecondary education and employment for individuals who self-advocate, request accommodations, and indicate how their disability affects their ability to perform" (Price et al., 2002, p. 109). There was an increased focus on self-determination in the IDEA legislation that was mirrored in the Rehabilitation Act Amendments of 1992. The Rehabilitation Act Amendments of 1992 state in part in Section 2:

Disability is a natural part of the human experience and in no way diminishes the right of individuals to live independently; enjoy self-determination; make choices; contribute to society; pursue meaningful careers; and enjoy full inclusion and integration in the economic, political, social, cultural and educational mainstream of American society (Field & Hoffman, 2002, p. 91)

According to Field and Hoffman (2002), the Rehabilitation Act Amendments of 1998 actually strengthened the concept of empowerment for all persons who have a disability emphasizing the need for them to make informed choices. If the person with the disability is eligible for services, then he or she should actively participate with counselors in completing a rehabilitation plan (Rubin & Roessler, 2001). If people with disabilities learn self-advocacy and conflict resolution skills, they will be better able to use the legal rights afforded them by clearly voicing their opinions and communicating their needs to employers, professors, and others in positions of authority (Rubin & Roessler, 2001). Field and Hoffman (2002) assert that students with LD need to be equipped with self-determination skills in the secondary setting if they are to assume responsible roles as defined by rehabilitation legislation.

Definition of Self-Determination

Historically, self-determination has referred to the right of a nation to self-governance (Price et al., 2002). This concept has been adopted and adapted by disability rights advocates to refer to the rights of people with disabilities to control their own lives. Various definitions of self-determination have been offered by different authors. Nevin et al., (2002) offered several of them in a report: "...the opportunity and ability to make choices and decisions regarding ones quality of life"; "... the ability of the person to consider options and make appropriate choices regarding residential life, work, and leisure time"; "... an educational outcome referring to acting as the primary causal agent in one's life and making choices and decisions regarding one's quality of life free from undue external influences or interferences" (p. 75). Price et al. (2002) report, "... that self-determination was the acquisition of attitudes, abilities, and skills that led students to define their own goals and then to find the personal initiative necessary for goal acquisition" (p. 110).

For purposes of this article, self-determination will be defined as, "... acting as the primary causal agent in one's life and making choices and decisions regarding one's quality of life, free from undue external influence or interference" (Wehmeyer, 1995, p. 1). It is a general theme

which must include some aspect of choice and action that lead students to define and achieve their goals and then to find the initiative that is necessary for goal acquisition.

Components of Self-Determination

According to Wehmeyer et al. (1998), individuals who are self-determined act autonomously, self-regulate their behavior, are psychologically empowered, and are self realizing. These four characteristics are essential in the individual's life if they are to be considered to be self-determined. Price et al. (2002, p. 111) lists some of the major components of self-determination:

- Behavioral Autonomy: progression from dependence to self care and self direction
- Choice-Making Skills: select from among alternatives based on preferences
- Decision-Making Skills: weigh adequacy of various solutions
- Problem-Solving Skills: Respond in order to function effectively in one's environment
- Goal setting/attainment skills: develop goals and perform necessary actions
- Independence, Risk-Taking, and Safety Skills: perform tasks without help
- Self-regulated behavior: decide to plan, act, evaluate, and revise plans as needed
- Goal-Setting/Attainment Skills: develop goals and perform necessary actions
- Self-Observation, Evaluation, and Reinforcement Skills: access, observe, and record what you discover
- Self-Instruction Skills: self-talk to provide prompts for problem solving
- Self-Advocacy Skills: speak up to defend oneself, a cause, or a person
- Psychological Empowerment: internal locus of control, self efficacy, outcome expectations
- Internal Locus of Control: belief that one has control over critical outcomes
- Positive Attributions of Efficacy/Outcome Expectancy: behavior leads to expected outcomes
- Self-Realization: accurate knowledge of individual strengths and needs, along with the ability to act in a manner that capitalizes on that knowledge
- Self-Awareness: basic understanding of one's strengths, needs, and abilities
- Self-Evaluation: ability to use/apply personal insights to real world settings

Teaching Self-Determination Skills

Self-determination skills can be taught anytime, anywhere to students with disabilities (Price et al., 2002). Price et al. (2002) believe that classroom teachers, administrators, and teacher educators can and should teach self-determination to students on a daily basis. Self-determination can also be taught in the workplace either through formal vocational education classes or through work-study experience. Students with disabilities can practice using the component elements of self-determination, i.e., decision-making skills, problem-solving skills, safety skills, risk-taking skills, and goal setting and attainment in natural classroom settings (Price et al., 2002). When classroom instructors provide students with LD the opportunity to select from a variety of assignments instead of arbitrarily making the assignment, they provide them with different components of choice making, problem solving, independence, and decision making (Price et al., 2002).

Palmer and Wehmeyer (2003) conducted a study in which teachers used the Self-Determined Learning Model of Instruction (based on the four component elements of self-determination

listed by Wehmeyer: Autonomy, Self-Regulation, Psychological Empowerment, and Self-Realization) to develop goal setting and problem solving methods with children as young as five years old (5 – 9). In this study, children with disabilities (learning disabilities, mental retardation, speech impairments and gifted) and without disabilities were taught to set goals and to use the model to achieve them (Palmer & Wehmeyer, 2003). Using the same Self-Determined Model of Instruction in a multiple-baseline design, four secondary students with mental retardation learned to set their own goals, develop an action plan, implement the plan, and adjust their goals and plans as needed (McGlashing-Johnson, Agran, Sittlington, Cavin, & Wehmeyer, 2003).

Teachers have indicated they would benefit from additional training and information regarding curricula to support more student involvement in IEP and self-determination activities (Mason, Field, & Sawilowsky, 2004). Mason et al. (2004) found that elementary teachers are in greater need of such training than are secondary teachers. It was recommended that researchers need to find ways to enhance teacher and teacher candidates' knowledge and skills of self-determination during pre-service and in-service training (Mason et al., 2004). Along these same lines, if teachers are to promote self-determination training for their students, it becomes imperative that teachers model this behavior in their own classrooms. Therefore, staff development programs must foster knowledge, skills, and beliefs that assist educators to further develop their own self-determination (Wehmeyer, Field, Doren, Jones, & Mason, 2004).

In previous research, Wehmeyer (1993) had found that young women with disabilities were consistently at risk for holding perceptions of themselves and their surroundings which were not advantageous for self-determination, or positive adult outcomes. Wehmeyer and Lawrence (1995) subsequently conducted a study on the effect of a 36 week intervention on the self-determination skills of special education students. The intervention consisted of students receiving instructions for one hour per week during the school year. The instructions consisted of teaching students to make decisions, to set and accomplish goals, and to actively participate in their transition planning meetings. Using a sample of 53 students from special education (with Learning Disabilities and Mild Mental Retardation), the researchers found that there were significant changes between students' pre and post scores on The Arc's Self-Determination Scale after the intervention. When the analyses were conducted based on gender, it became evident that these changes were primarily among young women with disabilities (Wehmeyer & Lawrence, 1995).

Many students leaving our nation's special education programs remain dependent upon teachers, support staff, and parents to make decisions, evaluate performance, and make needed connections to post school services (Martin, Marshall, & Maxson, 1993). According to Hoy et al. (1997), many adults with LD do not have the advocacy skills that are necessary for success in postsecondary education or employment. They exhibit fewer coping and stress reduction skills while displaying high levels of anxiety (Hoy et al., 1997). Additionally, these adults have unfocused goals, little vocational direction, and have quite a bit of difficulty maintaining supportive relationships (Hoy et al., 1997). It has been hypothesized that teacher education programs do not include instruction on strategies that promote students' self-determination (Thoma, Baker, & Saddler, 2002). However, teaching self-determination skills to students with and without disabilities would greatly assist them in preparing for the transition to adulthood and postsecondary education (Hoffman & Field, 1995). Therefore, there is an impelling need for this population of students to be trained in self-determination skills in order to have more successful outcomes in school and at work.

Summary

Adult life in contemporary societies is becoming increasingly more complex (Magolda, 1998). In just about every aspect of adult life, societies place demands on people with disabilities to take on responsibility, to manage their affairs more effectively, and to make informed decisions as they enter into the world of work and school (Magolda, 1998). This type of active and informed lifestyle is necessary to keep pace with daily changes and improvements in technology, science, the economy, and cultural traditions. Because of a highly advanced and technological society, students with learning disabilities must be trained in self-determination skills in order to successfully compete in school and at work (Williams, 1998). Research by Wehmeyer and Schwartz (1997) found, "...that self-determined students with cognitive or learning disabilities were more likely to have achieved more positive adult outcomes, including being employed at a higher rate and having higher earnings, than peers who were not as self-determined" (p. 247). Self-determination skills are key factors that should be addressed in school settings in order to increase the likelihood of students being involved in the planning, decision making, and implementation of their educational programs (Field & Hoffman, 2002). Self-determination skills, such as the ability to advocate for oneself, are crucial for the successful transition of students from elementary to secondary schools when they begin to make course selections that will affect their high school careers and beyond (Barrie & McDonald, 2002).

Malian and Nevin (2002) report that self-determination is a desirable skill whose level can be measured and correlated with success in adult life at work and school. Self-determined students have been shown to be comparatively more successful in adult roles upon exiting from their school programs than students who lack self-determination skills (Malian & Nevin, 2002). Self-determination levels should be a predictor of successful transition to adult life by students with LD who attend colleges. The literature suggests that high school students who have a learning disability, whose IEPs and ITPs include self-determination goals, objectives, and processes, will more likely be successful after graduating from school than those who have not had like experiences (Malian & Nevin, 2002). Contemporary educators need to include components of self-determination in their curriculum to help ensure the success of students with learning disabilities.

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Integrating Service-Learning in Teacher Education to Raise Disability Awareness

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Abstract

This article examines how service-learning was integrated effectively into two teacher education courses at a Mercy university in New Jersey to raise awareness regarding the needs of diverse learners, particularly those with disabilities. Specific goals of the service-learning requirement, description of the service-learning activities, and student reflections and attitudes towards their experience are reported. Future recommendations for integrating service-learning in teacher education are discussed.

Integrating Service-Learning in Teacher Education to Raise Disability Awareness

Students across America are participating in service-learning activities as part of their educational experience and students in higher education are no exception. The use of some form of service-learning paradigm has increased dramatically in the past two decades. Recent research (Learn and Serve America, 2006) shows that at least one quarter of all higher education institutions, and more than half of all community colleges, have adopted some type of service-learning program. These service programs span a wide range of disciplines and teacher education is among the most prominent.

The use of service-learning as a viable instructional pedagogy is supported by research (Eyer, Giles, Stenson, & Gray, 2001; Furco & Billig, 2002) pointing to gains in students' personal and social development, civic responsibility, and academic learning. Anderson (1998) further identifies the following rationale for integrating service-learning specifically in teacher education: (a) to prepare pre-service teachers to use service-learning as a teaching method with their students; (b) to sensitize teachers to the professional ethical obligation of teaching with "care," fostering life-long civic engagement, adapting to the needs of diverse learners, and demonstrating a commitment to advocate for social justice for children and families; (c) to enhance teachers' ability to reflect critically on their teaching and current educational practices; (d) to develop in pre-service teachers the dispositions needed to adopt other educational reforms; (e) to facilitate the learning of how to perform a variety of roles needed to meet the diverse needs of students such as counselor, community liaison, and advocate; and (f) to cultivate service-oriented teachers who can collaborate effectively in schools with integrated community partners.

Research investigating service-learning in teacher education is still in its early stages. The variety of terms used to describe service-learning, including volunteerism, service, community service, and experiential learning, has contributed to difficulty analyzing its effectiveness. While many definitions of service-learning exist (Eyer & Giles, 1999), all have two core concepts in common. First, service-learning is an instructional strategy that integrates service and learning. Unlike service or volunteerism, service-learning distinguishes itself by requiring reflection of the

service for the purpose of learning. This learning is linked with academic content and standards. Reflection may take the form of oral discussions, silent thinking, or written journals and papers. Second, the service provided addresses a real community need in a meaningful way. Service-learning is a specific type of experiential learning that provides reciprocal benefits to both the provider and the recipient. The student benefits from the deeper learning that occurs from the authentic experience while the community benefits from the needed service provided.

In addition to discrepancies in terminology, considerable variance exists in approaches (Furco & Billig, 2002) to integrating service-learning in higher education. Strategies range from short term experiences designed to introduce teacher candidates to the variety of community service opportunities available to intensive experiences which immerse students in an unfamiliar culture for an extended period of time. Regardless of the approach utilized, positive benefits may be gained if learning goals and objectives are specified clearly.

This article examines how service-learning was integrated effectively into two teacher education courses at a Mercy university in New Jersey. Specific goals of the service-learning requirement, description of the service-learning activities, and student reflections and attitudes towards their experience are reported. Future recommendations for integrating service-learning in teacher education are discussed.

Method

The writer introduced service-learning into the teacher education curriculum at a Roman Catholic university located in the suburbs of central New Jersey. As an institution founded and sponsored by the Sisters of Mercy, the university is committed to the core values of respect, integrity, justice, compassion, and service. Service-learning appeared to be a promising method to achieve the university's mission of developing actively engaged citizens with the education and will to translate concern for social justice into action. Mindful that service-learning programs must operate as integral parts of the institution and be consistent with the mission and goals of the institution (CAS, 2005), the Office of Service-learning was established during the same academic year this research was conducted to facilitate and support the integration of service-learning into the culture of the university.

All teacher education programs at the university include an integrated curriculum resulting in eligibility to teach both general and special education. The program is based on an inclusive perspective that all students have a right to a quality education, that all students are capable of learning, and that all students learn best in classrooms reflective of the social, ethnic, racial, religious, and ability levels represented in society. Consequently, all candidates must exit the program prepared to teach students with diverse and special needs.

While the teacher education program includes experiential learning through practicum field experiences, the integration of service-learning into two key courses was designed to provide valuable opportunity to focus specifically on the diverse needs of exceptional students the candidates would be qualified to serve. A total of 50 undergraduate students participated in service activities required in these two courses instructed by the writer during the Spring semester. The primary purpose of the experience was to raise awareness and increase sensitivity to the needs of diverse learners so that these future inclusive educators would serve students with special needs with the core values of the university. A secondary goal was to increase students'

sense of civic, moral, and professional obligation to lead, serve, and advocate for others by raising awareness of the community organizations and opportunities that exist.

Students were instructed to select from a “menu” of approved service activities provided by the writer (see Table 1). Activities conducted by the Student Chapter of the Council for Exceptional Children (CEC) at the university comprised the majority of suggestions on the menu.

Table 1

Table 1
Menu of Service Activities

Activity	Description
Direct service	
Arc Dance	CEC Student Chapter hosted dance for members of the Arc. Service involves providing and serving refreshments and socializing with guests.
Arc Bowling	Recreational activity sponsored by the Arc. Service involves assisting and socializing with members of the Arc's Ocean Rollers bowling league.
Arc Art Club	Recreational activity sponsored by the Arc. Service involves assisting and socializing with members of the Arc while creating an arts and crafts project.
Arc Cooking	Daily living skills activity sponsored by the Arc. Service involves assisting and socializing with members of the Arc while cooking a meal.
Arc Saturday Program	Recreational program sponsored by the Arc including board games and field trips to malls, food shops, and movie theatres. Service involves assisting and socializing with members who participate in the program.
Tournament of Champions Dance	CEC Student Chapter assisted Senior Class in hosting this <i>Evening of Stars</i> dance for adolescents who participated in the local Tournament of Champions.
Indirect service	
Providence House Book Drive	CEC Student Chapter sponsored book drive for children of abused and battered women.
Honduras Fund Raiser	CEC Student Chapter participated in this university event to raise funds for a service trip to Honduras.
Six Flags Great Adventure Science Day	CEC Student Chapter participated in this event by sharing modified science lesson plans to accommodate diverse learners.
Advocacy	
Annual NJCEC Conference	CEC Student Chapter attended and presented at this annual conference.

The primary mission of the Student CEC Chapter at the university is to better serve individuals with exceptionalities by applying knowledge and expertise in the area of special education, providing voluntary services, and promoting educational programs that inform individuals about disabilities. The Student CEC Chapter also cultivates future leaders in the education of youth with disabilities and encourages individuals to advocate for persons with disabilities and become part of the special education profession. Since the Chapter had been active for three decades, a rich resource of service activities from which to choose was available, particularly with the local Arc organization. Activities fell into three broad categories: (a) direct service where students engage in face to face interaction with the individuals being served; (b) indirect service where students address a community need but were physically apart from the individuals benefiting from the service; and (c) advocacy where students increase public awareness of a problem, need, or injustice. Students were also permitted to participate in service activities not included on the list, with prior instructor approval. The challenge was to formalize the learning gained from the service performed.

In an effort to facilitate learning and make the service more meaningful, students were instructed to prepare for their selected service activity by reading related literature about the organization sponsoring the event and the population being served, interviewing knowledgeable persons (e.g. family members of individuals with disabilities, employees of the Arc), and/or attending chapter, community, and state meetings addressing related needs. Students were required to document their preparation, service, and reflection on timesheets. Performance was assessed using the timesheets and written reflection papers integrating knowledge gleaned from the experience.

Results

Qualitative analysis of written reflection papers indicates positive effects of service on student learning (see Table 2). All students reported decreased apprehension and increased feelings of compassion, understanding, and competency toward meeting the needs of individuals with disabilities.

Additionally, one third of the students expressed a heightened sense of civic responsibility and desire to participate in community service in the future as a result of their service experience. Other written reflections referred to faith-based personal growth, willingness to use service-learning as an instructional pedagogy in their own k-12 classrooms, and reciprocity in learning from the experience.

Student attitude towards service-learning was also positive. Results of a 10 item survey administered to 50 students participating in the study reveals 90% agreed or strongly agreed that service-learning should be a part of the teacher education program. Additionally, approximately 90% rated the service-learning activity helpful or very helpful in terms of their personal and professional growth. While no time requirement was specified, survey results indicate the majority of students spent 30 minutes to 1 hour preparing, 2 to 3 hours performing the actual service, and 30 minutes to 1 hour reflecting for a total of 3 to 5 hours. Perhaps most encouraging is three quarters (76%) of the students responded they would be likely or very likely to seek additional service-learning opportunities in the future as a result of their experience.

Table 2

Analysis of Written Reflections

Increased Disability Awareness

“It was a wonderful experience..... It allowed me to gain a better understanding of people with special needs.”

“To be honest, up until this point in my life, I have been slightly intimidated and frightened by the differences of those children with mental impairments and handicaps.....I walked out of this experience happy to have taken part in such a fun and rewarding activity. I feel that I am much more understanding and willing to help all unique students.”

“I have a better understanding of the needs of those with mental retardation and developmental disabilities..... I gained sensitivity and compassion while conversing with them....As a future inclusive teacher, I will respect and have compassion for all students.”

“I will now be more conscious about students who have special needs and try my best to accommodate them.”

“This was an eye opening experience and I realized these people were just like us.....They have feelings, emotions, and needs just like everyone else.”

“Just because an individual is deficient in some area such as cognitive or physical ability, they still have something to offer. Everyone is able to contribute to a group in his or her own way.”

“In my classroom I want all my students, no matter who they are, what they look like, or what they can and can’t do, to feel accepted and acknowledged. I don’t want them ever to feel left out or not accepted by me or their peers. Their abilities will not change this either because I learned that they each will have many unique talents.”

“I learned that a good teacher can teach most children, a great teacher can teach ALL children.”

“This was a moment to take in..... I guess what I am saying is that it felt as if I made a difference.”

Civic/Community Responsibility

“Teachers must be involved with their students and the community.”

“I hope I can find the time to volunteer at another function where I can contribute my time so others can benefit.”

“In the years to come, I plan to be very involved in this program and organization.

“Being a part of this event made me realize that I would want to volunteer at more events like this.”

“I am now interested in joining CEC and think that teachers should be involved in their professional organizations

Faith-based Personal Statements

“God created them just as He created me and each of us has gifts, talents, and worth.... I understand the wealth of helping oneself while helping others.”

“The Arc has core values.....one in particular stood out, *People First*. We are all people no matter what shape, size, color, or disability we have..... I connected with this value and it made me realize we are all important.”

Use of Service-learning in Classroom

“I learned about the importance of getting students more involved in what they are learning in the classroom.”

“As a future teacher, I will incorporate hands-on experiences into my lessons in order to keep students interested and motivated.”

Reciprocal Learning

“When I am an inclusion teacher, I will always keep in mind that students with special needs can teach me and other students.”

Discussion

Results of this study support the use of service-learning as an effective instructional pedagogy in teacher education. While the scope of the service performed was limited, substantial gains were observed. Participation in service activities appeared to raise students' awareness and sensitivity toward the diverse needs of the disabled and contribute to the development of professional dispositions such as caring, acceptance of diversity, and high expectations necessary for inclusion. Additionally, participation in service-learning activities introduced students to their role in collaborating with community partners and the variety of opportunities available for lifelong civic engagement. These initial findings are encouraging as service-learning is integrated into additional programs at the university. Future plans to further integrate service-learning into the teacher education program include extending the service time required, increasing the number of community partners, and broadening the range of service activities suggested.

More than a decade has passed since Boyer (1990) challenged leaders of higher education to broaden their view of scholarship to encompass application, where knowledge is applied to address real problems and world needs. Boyer (1994, 1996) envisioned a new American college engaged with the community and committed to improving the human condition in a very intentional way.

Boyer's scholarship of engagement invites university leaders to re-examine the mission of higher education to include educating students to be lifelong, responsible citizens. Service-learning appears to be a promising method to meet this challenge.

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FUTURE ACTION RESEARCH - The Relationship of the General and Special Education Teachers in the Inclusive Setting

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Statement of Problem

Over the past three years I have worked educating children with different needs. Far too often, general education teachers make every attempt to exclude students from “their classroom” who they feel “don’t belong”. I believe that in order to change these beliefs teachers have to be confident in their ability to provide an education for all students. This confidence will develop only with support, hard work, the pledge to work together and proper training. I have decided to focus my attention toward inclusion because I feel that inclusion is not utilized effectively and exclusion does not work. I have observed the power struggle that exists in and outside of the classroom and want to aid in a solution to eliminate this struggle. The problem that I will examine in this action research is how the working relationship between the general and special needs educators in the inclusive setting affect learning in the classroom. I believe that teachers preparing to teach in an inclusive setting need more training. This lack of training creates an inability for inclusion to be utilized and our children miss the opportunity of an appropriate education. The way the system currently works excludes certain students who have the right to be included in their local school educated with their peers. Transporting students to another school other than their local neighborhood school segregates them. Restricting an individual from being included is against their civil rights as an American.

“Separate is not equal. If something is offered to all children it must be accessible to all children. Access should not be denied based on disability or any characteristic alone. Children with disabilities have a right to go to the same schools and classes as their friends, neighbors, brothers and sisters. They have a right to be afforded equal opportunities. Giving every child a sense of belonging, value and worth enhances their overall quality of life. Including children with disabilities in general education classes models acceptance of diversity. It teaches children how to function together with others of different abilities” (www.kidstogether.org/right-ed.htm).

Hypothesis

The working relationship of the general education and special education teacher in the inclusive setting affects the learning environment. Because of the need for team teaching in the inclusive setting, it is necessary for cooperation in all aspects of planning and teaching. If there is a lack of cooperation and or a power struggle emerges, the classroom environment will be negatively affected. With the pledge to work together and proper training, the inclusive setting will succeed. During the school year if there is time spent on collaborating efforts, all of the students within the classroom will receive an appropriate education. I believe that if inclusion is practiced throughout all grade levels, all students will benefit. An education obtained in a diverse classroom environment is the only way to prepare our future generations to function as members in our diverse society.

Definition of Terms

- Accommodations: Changes in the way a student accesses learning, without changing the actual content.
- Differentiated instruction: Education that is responsive to the needs of individual students with a wide variety of learning styles, interests, goals, cultural backgrounds, and prior knowledge.
- Exclusion: Omission of students with disabilities from being educated with peers without disabilities in the regular educational environment
- Free Appropriate Public Education (FAPE): An education for a person with a disability, regardless of the nature or severity of the person's disability in the public school, without cost to the parent.
- General Educator: Teacher of the general population of students.
- General Education: The gradual process of acquiring knowledge for the preparation for life.
- Inclusion: The educational setting where a child with disabilities can receive a free appropriate public education (FAPE) designed to meet his or her education needs while being educated with peers without disabilities in the regular educational environment to the maximum extent appropriate.
- Inclusive Education: All students in a school, regardless of their strengths or weaknesses in any area, become part of the school community. They are included in the feeling of belonging among other students, teachers, and support staff.
- Individual Education Plan (IEP): A plan written for an individual student and their specific needs outlining support services to be provided and the expected outcomes for that student.
- Individuals with disabilities in Education Act (IDEA): Federal law that governs special education in all schools receiving federal school aid requiring each state to meet or exceed the law.
- Least Restrictive Environment (LRE): Educational setting where a child with disabilities can receive a free appropriate public education (FAPE) designed to meet his or her education needs while being educated with peers without disabilities.
- Modifications: A small alteration or adjustment to curriculum or lessons taught.
- Special Educator: Teacher of students with Individual Education Plans.
- Special Education: Education of children with specific special needs in education.
- Students with special needs: Students that require specialized instruction in education.
- Supportive Teaching: The student receives the instruction from the classroom teacher. Modifications and support are provided to the student within the classroom setting by the special education teacher.
- Team Teaching: Two teachers (Special Educator General Educator) cooperatively plan, develop and teach the lessons.

Importance of Study

The importance of this study is the improvement of the inclusive setting. With the examination of inclusion and its barriers to success it is my hope to uncover how to fully include successfully. The attitudes that surround special education have fueled the belief that we need to segregate children. “Such prejudice must be directly addressed in the schools. Simply integrating youngsters with disabilities into the mainstream without pedagogically dealing with attitudes is meaningless, and in some cases, increases negative attitudes” (Arthur Shapiro 5).

One purpose of education is to promote the values and beliefs of our democratic and free society. As the facilitators of this obligation, it is the teachers' responsibility to change the negative attitudes and promote non-discrimination to ensure that our future generations will suffer less from the ignorance that exists today. We can no longer exclude based on the label disabled. Teacher and author, bell hooks believes that we should teach our students to "transgress" against racial, sexual, and class boundaries in order to achieve the gift of freedom. She wrote,

"Despite the contemporary focus on multiculturalism in our society, particularly in education, there is not nearly enough practical discussion of ways classroom settings can be transformed so that the learning experience is inclusive. If the effort to respect and honor the social reality and experiences of groups in this society...is to be reflected in a pedagogical process, then as teachers—on all levels, from elementary to university settings, we must acknowledge that our styles of teaching may need to change" (Hooks 35).

As educators it is our responsibility to communicate and cooperate in the development of a successful classroom environment. We have to change the attitudes of inclusion and put a stop to exclusion because exclusion affects our society as a whole. Children develop opinions based on their observations of what surrounds them. How can our children learn to be nonjudgmental if we show them its acceptable? Our schools and classroom communities have to model our diverse society to provide true experiences for our children to learn. John Dewey (1938) wrote about learning from experience, what better personal life experience than the lessons learned through acceptance and cooperation. *"It is not enough to insist upon the necessity of experience, nor even of activity in experience. Everything depends upon the quality of the experience which is had"* (Dewey 27). Schools have an essential obligation to change these attitudes because schools are a major institution where our society expects its values to be instilled in our future generations.

For change to occur, the first step is for educators to take on the responsibility of including those who are excluded and to believe in their role as an educator in the classroom. It is now time for educators to learn to work together and examine why inclusion has not been successful in most districts and how to make inclusion beneficial for the entire class.

Many Americans are unaware of these negative attitudes because they do not think about nor are faced with their results. Changing the attitudes toward persons with disabilities is extremely important. With a closer look at these effects and their acknowledgement a desire for change will appear promoting a free and welcome environment to learn. The classroom community is a great arena for our children to learn and develop skills based on understanding and cooperation. "If students with special educational needs are given the chance for small accommodations in the regular classroom, they can thrive in their local community schools. Because of their desire to compensate for their impairments, many are motivated to achieve highly when given opportunities to learn" (Carol A. Kochhar, Lynda L. West, Julian M. Tayman 6).

Literature Review

"Schools have a responsibility for encouraging diversity and tolerance, eliminating discrimination, increasing among youngsters an understanding of those perceived to be different, and respecting and protecting the rights of all diverse populations within our pluralistic society" (Shapiro 17). If we teach prejudice our only option is for a prejudice

society. *“The role of the school in the development of positive attitudes has now become particularly significant, and to a degree legally mandated”* (Shapiro 20). The Individuals with Disabilities Education Act Amendments (IDEA) is the law that guarantees all children with disabilities access to a free and appropriate public education (FAPE). IDEA also requires that students be placed in the least restrictive environment (LRE).

“LRE provisions of the IDEA require that to the maximum extent appropriate for each child, children with disabilities must be educated with children without disabilities, and that removal of children with disabilities from the regular educational environment occurs only when the nature or severity of the disability is such that satisfactory education in regular classes with the use of supplementary aids and services is not possible” (Least Restrictive Environment Coalition www.lrecoalition.org).

This does not mean that a child can be removed because the school cannot afford additional support. It is mandatory for each local school to provide the appropriate services needed. This means that children are entitled to learn with their peers and not be sent to another school within their community. We as educators can provide the services that are needed as long as we have support in place, the willingness to cooperate and learn how to educate all of our students.

In the past “the notion of “segregated” buildings was state-of-the-art in the early 1970s; “integrated” opportunities were promoted in the early 1980s; “inclusive practices” emerged based on research and evidence of the impact on students in the early 1990s” (www.bridges4kids.org). The belief was that a student with a disability included in the “regular” classroom was not the best setting for them to learn. What they needed to achieve their fullest potential was for them to be educated in a segregated setting, away from their peers. These ideas that some educators still hold are based on the belief that students with disabilities are individuals with different needs that can’t be met in a “regular” classroom. This is where I feel that a change has to be made. We know now that these ideas are false. Educators do not have the right to exclude children from the classroom because they feel that he/she “doesn’t belong”. We as educators are in the business of learning. We guide learning of others therefore it is our job to learn how to provide the proper education to guide all of our children. We have to continue to learn and develop our skills so that we can be successful in our roles as teachers.

Segregated programs, by their very nature, tend to isolate students and lead to more restrictive services and lives within the community. There is ample supporting data to show that segregated settings do not result in interventions that return or “promote” students to regular education status over time; or said another way, more restrictive settings do not prepare students for less restrictive ones.

The goal is not to have children “visit” community settings where peers are; the goal is to enable children with disabilities to be a part of and interact with their peers in ways that will both meet their educational needs and cultivate their membership as a part of the community” (www.bridges4kids.org).

For inclusion to succeed educators have to learn to work together. Education has to be responsive to the needs of individual students with a wide variety of learning styles, interests, goals, cultural backgrounds, and prior knowledge. With an approach to educating and a philosophy of teaching based on providing to each student's needs, inclusion can be successful. Educators need the realization that instruction in a segregated setting (exclusion) deprives all children of an effective education. Exclusion does not prepare children for adulthood. Exclusion acts as a blindfold of

who and what our society is. If we continue to exclude certain members of our society from being educated with the general population, all students will continue to miss out. One major goal of mine as an educator is for my students to learn, share and take from each other's strengths. I believe in not labeling people especially children. In the elementary level most students are at different levels and stages in their education. Working in an elementary classroom, it is my job every day to monitor and develop a plan to guide my students. There will be differences working in a true inclusion setting but the team teaching approach will ensure that each student will learn.

We proudly voice how diverse our society is and in the same breath say that inclusion can't work. I believe this because of certain beliefs that exist and the current teaching style. I agree when I hear teachers say, "It's best for him/her to be pulled out; they won't get what they need in my class." They are absolutely correct. If we fail to change the structure we will not be able to provide an education for all. This is why I feel that we as educators have to have the resources to learn how to implement inclusion. Inclusion is essential for the preparation of students. If we fail to provide the essential support to students' labeled disabled we will insure a disability; which I believe would be a tragedy. As Judy Heumann, disability activist and Assistant Secretary for the Office of Special Education and Rehabilitative Services put it: "Disability only becomes a tragedy for me when society fails to provide the things we need to live our lives; job opportunities or barrier free buildings for example. It is not a tragedy for me that I'm living in a Wheelchair" (www.dinf.ne.jp/doc/english/Us_Eu/ada_e/pres_com/pres-dd/tainter.htm).

Believing that we are in the business of educating the future I do not see how we can continue to exclude. Our classrooms have to mirror the diverse society in which we live. How can our children learn to work in a diverse society without learning in a diverse environment? "Children that learn together, learn to live together" (www.uni.edu/coe/inclusion/). Mara Sapon-Shevin Professor of Education, at Syracuse University wrote: "We know that the world is an inclusive community. It's very important for children to have the opportunity to learn and grow within communities that represent the kind of world they'll live in when they finish high school. Students in special programs might not be prepared adequately for life outside of school, where they will need to interact (sic) with their peers. Students in special programs may not be able to develop the peer social skills they need to succeed in life" (www.uni.edu/coe/inclusion/).

For inclusion to work "educators need special skills to recognize and counter stereotypical negative images and their sources. Their role is critical for the success of full inclusion and acceptance of disabled individuals into our schools and society, which is now a matter of rights as well as matter of right" (Shapiro 19). In-service, training, support, hard work, and the pledge to work together are essential components of inclusion. With the proper training in place educators will have the ability to examine inclusion and reconfigure their attitudes. "All educators must be enthusiastic and ready to implement a change. Research also suggests that attitudes are modifiable and can be altered with proper in-service and training" (Hammeken 41).

As an educator I have the obligation to learn for myself how to teach all students who may enter my classroom. I have taken courses on inclusion, and attended workshops that focused on individual needs. All educators should take the time to learn about educating a diverse group. The information conveyed in these professional hours would benefit all children whether or not they have a disability. Administrators should examine and ask their staff what training would benefit them as teachers. The specific needs of each teacher and or student should be made a

priority. Instead of time spent on how to operate a website time should be spent on strategies to educate. We do not have the luxury of not learning how to include; it is now the law not a choice.

Educational Styles

In the inclusive setting there are two different styles for running the classroom, which are team teaching and supportive teaching. Team teaching is defined as “a group of two or more teachers working together to plan, conduct and assess the learning activities for the same group of learners, i.e., two or more instructors are teaching the same students at the same time within the same classroom”(www.hcc.mass.edu/html/Learning_at_HCC/TeamTeachingModels.htm).

When a classroom is run with supportive teaching there is a head or lead teacher and one teacher who provides “support”. This is where I have seen the power struggle occur. In this case the head teacher (usually a general education teacher) utilizes the support teacher (special education teacher) as an aide. This generates a conflict in most cases creating an atmosphere easily noticeable to the students furthering to isolate the “included” student(s). I prefer the style of team teaching because the only way for inclusion to be successful is with two teachers equally invested in the inclusion setting. Instructional aides are also utilized in the support of students with special needs. These aides are greatly beneficial and useful in the classroom. The problem with using only an aide for an inclusive classroom is that they are not part of the development and delivery of the lessons. The aides are there for the sole reason of helping the student(s) with disabilities. In some cases this contributes to further isolation of certain students. These aides are far too often given responsibilities of a teacher without compensation. For these reasons I feel that a team teaching approach works the best which consists of one special education and one general education teacher. Both educators are utilized in all aspects of education. Both share in the development and delivery of the lessons. In a true inclusion setting you should not be able to walk into a classroom and identify the special or general educator.

The Team Teaching Relationship

During a typical day in a general education classroom the educator takes on the role as the leader guiding the students through the process of discovering and learning information. During the process of implementing an inclusive setting the teacher who once taught alone has to share the classroom making them re-evaluate their role. “When the special education teacher or inclusive assistant becomes a part of the group, the dynamics of the entire group change. Not all adults are comfortable with another adult in their classroom. Trust will develop. The working dynamics of the inclusion program will change as the comfort level increases. With time one educational team will evolve in place of two separate educational systems” (Hammeken 25).

When team teaching, collaboration is the key.

“Special educators and regular educators view situations differently because of their educational backgrounds and experiences. This is important in an inclusive setting! As a special educator you are an advocate for the student with special needs. The regular educator is an advocate for all students in the classroom. If the program is to be successful, educators must learn to collaborate effectively” (Hammeken 25).

Pairing educators with teaching styles that compliment one another and individuals who are committed to the goal of inclusion is important. The team becomes a professional marriage sharing all aspects of the job.

When two educators engage themselves in inclusion they will experience a much greater reward. There needs to be time allotted for the “wrinkles” to work themselves out. The team has to be honest with one another about how they feel things are going and be committed to solving any problems. The most important thing to remember is that the working relationship effects the classroom environment in a positive or negative way. Cooperation is an important part to an inclusive setting. “The teamed teachers enjoy a continual and collaborative relationship around a shared commitment to inclusive...”(Beverly Rainforth, Judy W. Kugelmass 173). When educating children in the same classroom “this process of spiraling curriculum, which takes its inspiration from John Dewey (1902/1990), determines the organic quality of these classrooms in which growth is experienced on multiple levels”(Rainforth, Kugelmass 173). Differentiated instruction is defined as a “flexible approach to teaching in which the teacher plans and carries out varied approaches to content, process, and product in anticipation of and in response to student differences in readiness, interests, and learning needs” (www.misd.net/gifted/terms.htm).

What Inclusion Looks Like

When educating it is important to remember that equal does not always mean the same. *“An educationally inclusive school is one in which the teaching and learning, achievements, attitudes and well-being of every young person matter. Effective schools are educationally inclusive schools. This shows, not only in their performance, but also in their ethos and their willingness to offer new opportunities to pupils who may have experienced previous difficulties. This does not mean treating all pupils the same way”* (Stephanie Lorenz 38).

Inclusion has to be a planned process; inclusion does not just happen. There has to be hard work and a commitment for success. Just like any new approach there will be times of doubt, but with commitment and the desire inclusion can and will work in any classroom. The educators involved in the inclusive classroom have to take ownership in the development and have an ongoing commitment to maintain success. “However enthusiastic you might be as a head teacher to introduce more inclusive practices in your school, it is vital that you have the support of your staff and your governors, even if this means going more slowly that you might otherwise prefer” (Lorenz p 41). There needs to be community that believes in the goal. The idea of inclusion is not always thought highly of. For inclusion to work the first step is to change the minds of the staff within a school. I believe that the most powerful way of changing any ones mind is by showing them the success. If this means that you will have little support than your commitment must be that much stronger.

“In creating an inclusive culture, it is important that everyone is made to feel welcome be they visitors, staff or students” (Lorenz 39). *“In the inclusive school, students help each other and collaborative working is encouraged. Bullying and name calling are dealt with effectively and students feel that they will be listened to and believed if they report concerns. This is particularly important for disabled students who may find it difficult to articulate their worries and need friends who can support them in seeking adult help”* (Lorenz 39). *“High expectations of all students are the key to successful inclusive practices”* (Lorenz 39). *“Inclusive classrooms look different all the time because the environment is created by whatever interactions the*

teacher and students have as a group or as individuals in the group. It's a lot of students doing things with people helping them, students moving from one environment to another. It's also a classroom where everybody is smiling, the students are actively engaged, and the teacher is delighted to be there" (www.uni.edu/coe/inclusion/).

Philosophy of Inclusion

For inclusion to be successful there has to be a commitment to do whatever it takes to provide for each student. There has to be a change in the philosophy and belief about inclusion. Inclusion is an attitude not an action. Every child has unique contributions to offer to the community of learners. The right to belong does not have to be earned it is a right. All teachers and staff have to take ownership for all children because real learning results from collaborative efforts. As an educator you have two choices when a student is having a difficult time learning the material taught. You can either teach the material the same way and hope that they will understand or change and adapt the way you deliver the material.

Research Design

For this action research paper I have decided to develop a plan to conduct the research based on the qualitative approach. I feel that using the qualitative approach will allow the researcher to gather information first hand within the walls of a school. "The power of qualitative research is in its ability to enrich our understanding of a given phenomenon" (Jeffery Glanz 92). I chose this approach because "The value of qualitative approaches is that they provide rich detail and insight often missing from qualitative studies" (Glanz 92). This research will examine how the working relationship between the general and special needs educators in the inclusive setting affect learning in the classroom.

This study will be done in an elementary school in Middlesex County New Jersey. The elementary school consists of 17 teachers and a student body of approximately 300 children in grades K-5 located in an affluent area of New Jersey. The research will be conducted with a sample of 25 first grade students and 2 classroom teachers. 1 student is classified as learning disabled, 1 student is classified as having Attention Deficit/Hyperactivity Disorder (ADHD), and 3 students are currently being evaluated for learning disabilities. Children enter the first grade with a vast range of ability levels. First grade is typically where disabilities are noticed, services and modification are put into place and the process of evaluation begins. Based on these facts the typical first grade classroom is an inclusive setting. This research will be conducted over the course of one school year.

The research questions that will be sought out are "How can the inclusive setting succeed? What training for educators can benefit their understanding of inclusion? What support can the administration and school staff offer the inclusion team teachers? How can the working relationship positively benefit the inclusive setting? How can the team maintain a positive working relationship? What techniques/strategies can the team teachers utilize for the benefit of the inclusive setting? Can inclusion succeed in all aspects of the classroom?

The materials that will be used for this study include workshops, videos of successful inclusion stories, literature of successful inclusive classrooms, interviews, observations and a survey on inclusion. The workshops, videos and literature will be used to aide in the understanding of and

development of the inclusion classroom. The inclusion staff and parents will be interviewed four times over the course of the school year. The observations will take place throughout the course of the school year. The first survey will be distributed at the first staff meeting to gather information on the beliefs about inclusion. The second survey will be distributed at the last staff meeting of the school year to gather information and ideas for improvement of the inclusion classroom.

The procedures for this study will consist of the following:

- (a) Comprehensive review of related literature/websites
- (b) Staff workshop to review literature
- (c) Attendance to staff development workshops on successful inclusion strategies
- (d) Staff meetings during the summer to review the philosophy of inclusion and the structure of the inclusive setting
- (e) School staff meeting to introduce the inclusive philosophy
- (f) Staff meetings scheduled once a week to review strategies that work and brainstorm new ideas
- (g) four scheduled interviews throughout the school year of parents and inclusion staff
- (h) Strategies that will be initiated during this research include:
 - Structured, consistent, predictable classes with schedules and assignments posted and clearly explained
 - Information presented visually as well as verbally
 - Use of activities and materials that are interesting and motivating
 - Provide choices in activities, location, and/or materials
 - Actively engage students as much as possible
 - Students work in small cooperative groups
 - Provide opportunities to interact with non-disabled peers who model appropriate language, social, and behavioral skills
 - Reduced class size and appropriate seating arrangement
 - Use a combination of positive behavioral supports and other educational interventions
 - Frequent and adequate communication among teachers and parents

The first step in the procedure is designed to inform the staff of literature based on inclusion. Literature of successful inclusion practices and inclusive classrooms will be assigned to read during the summer, followed by the second step where staff will join to review. The third step in the procedure will be the attendance of a staff development workshop based on successful inclusion strategies. This workshop will be held in August prior to the first day of the school year. The fourth step in the procedure will be a staff meeting to review the philosophy and structure of the inclusion classroom. This meeting will be designed to allow the team teachers to voice concerns and strategize the teaching approach. The fifth step in the procedure will take place during the first staff meeting of the school year. This step is designed to inform the school staff of the inclusion philosophy allowing time for questions. Step six will continue throughout the school year. There will be weekly staff meetings held in the morning to review strategies, voice concerns and brainstorm ideas. The seventh step in the procedures will take place over the course of the school year. There will be four scheduled interviews conducted of the parents and staff members. Each interview will take place with the researcher and a Child Study Team member. The final procedure will consist of strategies that will be initiated during this research. These strategies will continue to develop throughout the school year.

The researcher will accompany all of the staff scheduled meetings to observe the development of the inclusive setting. The researcher will meet once every other week to discuss with the teachers any problems they feel there are. The researcher will continue to observe the working relationship of the team teachers making notes on the positives and negatives of the relationship. All aspects of the inclusive setting will be observed. The researcher will take notes on the opinions of the staff members of the elementary school and parents of the children of the inclusive setting.

All of the information collected during this study will be compiled into a thesis paper to describe the development, implementation and success or failure of the inclusive setting. The researcher will focus his concerns on the working relationship of the team teachers. This relationship will be analyzed looking for areas of success and areas of improvement. The researcher will be mostly concerned with the areas that affect the learning in the classroom. These areas will be reviewed, analyzed and described with the hope to improve the working relationship between the general and special needs educators in the inclusive setting.

Limitations of the Study

The limitations of this study are parental agreement for their children to be assigned to an inclusion classroom. Other limitations could consist of the support from administration, child study team and school staff which can greatly affect the success of the inclusion classroom. Without the support of the school and staff members the philosophy of inclusion will be broken. The school has to embrace this philosophy to create a unified belief that everyone belongs. Time is the final foreseen limitation to this study because it will only be conducted over the course of one school year.

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ESSAY - Strategies for Differentiated Instruction

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Abstract

How literacy develops has been of interest to scholars and practitioners of literacy for at least the past century. The Vygotskian perspective of literacy emphasizes social interaction but places less emphasis on stages of behavior. Children build new concepts by interacting with others, such as teachers, who either provide feedback or help them accomplish a task. Based on this knowledge, differentiated instruction applies an approach to teaching and learning that gives students multiple options for taking in information and making sense of ideas. Vygotsky realized this over a hundred years ago and did studies on what a child can do on their own and what they can do with guidance. This is the same model of differentiated instruction. In a differentiated classroom teachers are guiding their students as they work in groups or on activities. Students are allowed to learn at their own pace and learn in a variety of ways. The challenge comes in when teachers are preparing activities to meet these needs. These activities include individual, small group and whole group.

Strategies for Differentiated Instruction

To differentiate instruction is to recognize students' varying background knowledge, readiness, language, preferences in learning and interests, and to react responsively. Differentiated instruction is a process to teaching and learning for students of differing abilities in the same class. The intent of differentiating instruction is to maximize each student's growth and individual success by meeting each student where he or she is, and assisting the learning process. Not all students are alike. Based on this knowledge, differentiated instructions applies an approach to teaching and learning that gives students multiple options for taking in information and making sense of ideas.

Differentiated instruction is a teaching theory based on the premise that instructional approaches should vary and be adapted in relation to individual and diverse students in classrooms. According to Vygotsky's theory and notion of Zone of Proximal Development (ZPD), there is a gap between a learner's current or actual development level, which is determined by independent problem-solving and the learner's emerging or potential level of development.

A classroom that include this theory and makes the best use of its students' ZPD should remember the following guidelines.

- The teacher should act as a scaffold, providing the minimum support necessary for a student to succeed.
- The teacher should, without denying the student's needs to build his or her own foundation.

- Find the optimal balance, which is challenging, between supporting the student and pushing the student to act independently. The teacher should stay one step ahead of the student.
- To effectively scaffold students, a teacher should also have an awareness of the different roles students and teachers assume throughout the process.

The following strategies could be implemented in a classroom which is supporting the theory of differentiated instruction. Activities include individual, small group and whole group. The activities are also targeted for students who show a need in phonemic awareness, phonics, vocabulary, comprehension, fluency, and writing.

Individual

The student will participate in an active hands-on manipulative activity where he or she will discover sound-letter relationships and learn how to look for patterns in words. They also learn that changing just one letter or even the sequence of the letters changes the whole word. The procedure is as follows: Create various word lists and write the words on index cards from shortest to longest. The large letter cards will be placed in a pocket chart. Then hold up and name the letters on the large letter cards as the student holds up theirs matching small letter cards. The student will then be directed to take two letters and make a new word. The student will use the word in a sentence after the teacher and student say the word together.

Small Group

To best fit the needs of students in a small group setting, Create centers through which each group will rotate. Although the students will participate in the same centers, each group will have the opportunity to be working at their ability level for each activity. For example, each group will use books, vocabulary lists, and skills from their ability level.

Students will participate in the following centers: guided reading, writing center, browsing boxes, listening center, overhead center, game center, ABC center, and the computer center. The classroom teacher will participate in the guided reading center with the students. It is the students' responsibility to remain on task at the centers while using their peers for support while being supervised by classroom aides, volunteers, or parents.

Guided Reading: Students join the instructor for a variety of literacy activities. The activities chosen provide instruction to the group's challenging areas. The skills may vary from reading activities to addressing skills using phonics and phonemic awareness.

Writing Center: Students write at least one sentence and illustrate it. The sentence must contain at least one vocabulary word from their group's vocabulary list.

Browsing Boxes: Books below, on, and above grade level are separated by group ability into five separate boxes. Using the browsing box designated for their group, students will browse through the books and determine which book they would like to buddy read into a tape recorder to practice fluency.

Listening Center: Again, using an audio book designated for their group level, students will listen and track a story. When the story is finished the students complete a worksheet in regards to the book provided which includes their ability level of vocabulary.

Overhead Center: Students write at least six of their given vocabulary words for the week and repeat them to an adult.

Game Center: Students use their given vocabulary words to make a complete sentence. If they are correct, they have the opportunity to roll a dice and move forward on a game board.

ABC Center: Students work on a specified letter sound (phoneme). They must come up with at least six words using that sound.

Computer: The students are each allowed ten minutes to work on a program working with phonics practice such as beginning and ending consonants.

Whole Group

“Radio Reading helps children focus on communicating a message so it can be understood by listeners” (Greene, 1979). There may be some miscues in the reading, but listeners respond to the reading by discussing it, restating the basic message, and evaluating how the message was delivered. Bring a radio to class and have children listen to it for a few minutes. You should preview a station to identify content that would be appropriate for your class. Before asking children to listen, tell them that they will discuss the message after listening. After listening to the radio for a minute or two, turn it off and invite children to share what was heard. Focus on the message and clarity of what was said. Relate the children’s listening to the radio to the strategy called Radio Reading. Tell children that they will have an opportunity to listen to classmates read a brief selection.

The material selected for reading should be a paragraph or two at an appropriate level of difficulty. The goal is to communicate meaning. Select an appropriate passage for a child to read. Stress that the goal is to communicate the meaning of the passage to the other children in the classroom. If a word is unknown during reading, the child should merely point to the word and ask, “What is that word?” You immediately tell the child the word so the reading can proceed with limited interruption. The other children serve as listeners, and they do not have a copy of the passage. After the passage is read, invite the children who were the listeners to discuss the message that was conveyed. The intent of this discussion is to confirm that an accurate message was sent and received. The reader is responsible for clearing up any confusion by the listeners by rereading selected portions of the passage. In some cases, misread words may cause confusion. In such cases, the listeners must raise questions about the clarity of the content presented. Remember that the basic goal in Radio Reading is to present a message clearly; moreover, it is the goal of the listeners to evaluate the clarity of the message and to help resolve any misunderstandings.

Understanding the value of diversity as well as the value of differentiated instruction, teachers will strive to broaden instruction in their differentiated classrooms so that all students can succeed and can develop to their full potential.

Rather than trying to get all students to fit a standard mold, differentiated classroom teachers tend to value different learning perspectives and have classrooms that are alive with authentic learning. Students are encouraged to participate alone, in small groups, or in whole groups. Since the activities and assessments attempt to meet each student's preferred ways of learning within their individual learning styles, students are exceedingly motivated.

Differentiated instruction is a pivotal element in any classroom. Ideally all classroom instruction should be differentiated and student specific in order to meet the needs of students. Albeit time consuming, differentiated instruction is effective and undeniably worth every effort!

References

Greene, F. (1979). Radio Reading. In C. Pennoch (Ed.), Reading comprehension at four linguistic levels (pp. 104-107) Newark, DE: International Reading Association.

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