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A Meta-Analytic Review: Teachers' Attitudes Toward Students with Disabilities

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Abstract

A meta-analytic review of published and unpublished intervention studies to change teachers' attitudes and behaviors toward students with disabilities was conducted in order to clarify the concepts of exceptionalities, attitudes, and change. The second objective of this study was to examine the moderating variables that may account for disparate results. The moderators that were examined were the level of intentionality of teachers at the beginning of the interventions, intervention characteristics, measurement characteristics, and teachers' specialization (regular vs. special education). The findings showed that lectures that used an indirect approach to attitude change and that were accompanied by field experience resulted in more change in attitudes. In addition, those studies that used self-report questionnaires showed more attitude change than the studies that used observational measures. Teachers' expectations and beliefs were easier to change than their behaviors and emotions. Conclusions and implications of the findings are discussed.

Introduction

Teachers' attitudes are important factors in successful inclusion of students with disabilities (Duquette & O'Reilly, 1988; Kunzweiler, 1982). Teachers' attitudes are not only related to their behaviors toward students with disabilities (Elik, 2002; Sharan & Hertz-Lazarowitz, 1980; Stanovich, 1994; Stanovich & Jordan, 1998), but also influence other students' acceptance of learners with disabilities and the academic self-concept of students with and without disabilities (Stanovich & Jordan, 1998).

The linkage between teachers' attitudes and behaviors toward students with disabilities has led researchers to design interventions to change teachers' or prospective teachers' attitudes toward these students (Finlayson & Appleton, 1972; Leyser & Abrams, 1983; McDaniel, 1982; Pinckney, 1962). These studies provide conflicting results on the effectiveness of different interventions. Although there are two related reviews that provide useful guidelines (Colosimo, 1984; Stern & Keislar, 1977), there has not been any systematic review of the intervention studies conducted to change teachers' attitudes toward students with disabilities. For this reason, a meta-analytic review of interventions to change teachers' attitudes was conducted.

Specifically, this study has two objectives: (1) clarification of the concepts and terms used in the teacher attitude change literature regarding learners with disabilities, and (2) examination of the moderating variables that may account for disparate results.

Theoretical Framework

Interventions to change teachers' attitudes employ various techniques including providing information on disabilities (Niertsheimer, Hopkins, Dillon, & Schmitt, 2000), supervised practice teaching (Niertsheimer et al., 2000), showing videotapes of students with disabilities (Dailey & Halpin, 1981), reading stories about children with disabilities (Marlowe & Maycock, 2001), and reflecting on teachers' beliefs and behaviors (Brownlee, Purdie, & Bouton-Lewis, 2001). Evaluations of some of these interventions showed an improvement in teachers' attitudes (Siperstein & Goding, 1985); some showed no positive effects (Lewin, Nelson, & Tollefson, 1983; Leyser & Abrams, 1983); and others showed a decrease in teachers' positive attitudes after intervention (Castoria, 1986; Oelke, 1956; Saglio, 1993). These findings raise many questions regarding the moderators that account for the differential effectiveness of interventions in changing teachers' attitudes toward students with disabilities. Before examining possible moderators, it is important to define the main concepts of disabilities, attitudes, and change.

Disabilities/Exceptionalities/Special Needs

This study examined disabilities and disorders that different studies perceive as a form of disability or special need. In addition, studies were compared across different types of disabilities to examine the effect of type of student behavior on the amount of change in teachers' attitudes and behaviors.

Attitudes

Allport (1967) provided two definitions of attitudes: (1) a subjective or mental state of preparation for action, and (2) the outward manifestation or visible posture (the bodily position) of a figure in statuary or painting. These definitions have been translated in psychology into mental attitudes and observable behaviors (Allport, 1967). However, attitudes are not limited to beliefs and behaviors. They also have an affective dimension, in that they involve the affect for or against a psychological object that determines potential action (Ajzen, 1988, 1991; Blackburn, 1996; Thurstone, 1967). Studies on teachers' attitudes usually do not specify their definition of attitudes. Most studies measure general beliefs as indicators of teachers' attitudes. Observable attitudes, that is, reactions and behaviors, also remain undefined. Definitions of observable attitudes include immediate reactions, like giving the child a timeout, or planned behaviors such as modifying instruction (Elik, 2002). Therefore, it is important to explicate the term "attitude" across different studies. In addition to providing descriptive data on the definition of attitudes, this meta-analysis compared research in terms of the amount of attitude change that occurred as a result of the intervention based on the dimension of the attitude being assessed (i.e. beliefs, attributions, emotions, reactions, or behaviors).

Individual differences among teachers in terms of their beliefs toward students with special needs have been conceptualized along the pathognomonic-interventionist (P/I) continuum (Jordan & Bierma, 1995; Stanovich & Jordan, 1998). Teachers at the pathognomonic (or restorative) end of this continuum believe that there is a specific disease entity that exists within students with disabilities. At the other end of the continuum is a group of beliefs identified as "interventionist" (preventive). Teachers holding these beliefs assume that their students' learning problems result from the interaction between the student and the instructional environment. In the remainder of this paper, teachers' attitudes and behaviors will be referred to in terms of an adapted version of the P/I continuum, called the interventionist continuum (Elik, 2002), which describes teachers' attitudes and behaviors toward learning and behavioral problems in students. In Elik's (2002) version of the interventionist

continuum, attitudes refer not only to cognitions, such as beliefs (Allport, 1967; Ajzen, 1991) and attributions (Weiner, 1985), but also to emotions (Ajzen, 1988, 1991; Blackburn, 1996; Thurstone, 1967; Weiner, 1985). Teachers' behaviors include instant reactions such as sending the student to the principal's office for misbehaving, as well as reflective (or planned) behaviors, such as modifying instruction.

Change

Intervention study reports usually do not include even a brief discussion about what "change" means and they all assume that change is positive (results in more positive attitudes). Change can be considered in at least four different ways. The first meaning of change corresponds to radical conceptual change in science (Kuhn, 1996) and science learning (diSessa & Sherin, 1998; Sinatra & Pintrich, 2003). Radical conceptual change refers to a situation where one conceptual framework is replaced by a completely new framework, as in the case of replacing the view that the earth is flat with the view that the earth is round (Sinatra & Pintrich, 2003). The second meaning of change is as conceptual capture (Hennessey, 2003), which refers to an increase or decrease in amount, like adding new pieces of information to your existing conceptual framework, such as learning more details about the earth and its shape. This meaning of change corresponds to weak conceptual change, or regular learning (Carey, 1991; Chi, 1992; Thagard, 1992). In addition to the weak-radical change dimension, conceptual change can be considered along a positive-negative dimension. Change can be flawed (Ferrari & Elik, 2003), such as when a student teacher starts to have unfavorable attitudes toward students with exceptionalities after starting teaching (Colosimo, 1982).

In this meta-analysis, the meaning of "change" was examined by coding the studies as resulting in radical positive change, weak positive change, radical flawed change, weak flawed change, or no change. Variables that may account for different kinds of change were investigated by comparing studies based on the four kinds of change. A review of the literature suggests a number of moderators that may account for the differential effects of treatments to change teachers' attitudes toward exceptional students. Four moderators were considered in this study: intentionality, intervention characteristics, measurement characteristics, and teacher specialization.

Intentionality

Intentionality is considered in the teacher attitude literature through discussion on direct and indirect approaches to attitude change (Ducote, 1980). The traditional (indirect) approach attempts to facilitate attitude change in teachers by having them learn about disabilities and effective instructional techniques for students with disabilities (Ducote, 1980). This approach to attitude change corresponds to unintentional learning. The direct approach for changing teachers' attitudes toward students with disabilities attempts to facilitate change by asking teachers to reflect on their attitudes (Brownlee & Carrington, 2000). Other examples of direct approaches to attitude change include any kind of consultation or workshop that includes reflection (in the form of making teachers think about and/or give them feedback on their attitudes and behaviors). This approach corresponds to intentional conceptual change in attitudes. Direct approaches have been found to be more effective in changing teachers' attitudes toward students with disabilities (Ducote, 1980).

Intervention Characteristics

Interventions to change teachers' attitudes usually include a course or lecture and/or field experience. Some of the interventions that included only didactic lectures reported no attitude change (Tait & Purdie, 2000). It is expected that when lectures are combined with a practicum, teachers will show more positive attitude change. In addition, characteristics of the contact or practicum were examined in relation to attitude change in teachers.

Measurement Characteristics

In their meta-analytic review of interventions to change mental health employees' attitudes toward people with psychiatric conditions, Kolodziej and Johnson (1996) found that attitude change was smaller when the evaluative measure described a group with mental illness rather than specific individuals. This was presumed to be because specific measures are more likely to correspond to person-specific information (Fishbein & Ajzen, 1981; Sears, 1983). Therefore, it is expected that studies, which use specific attitude measurement tools (e.g., vignettes, asking questions about specific students) will show more attitude change in teachers than those studies that use general attitude measurement scales. In addition, observational or objective data (e.g., measuring pulse) has been found to conflict self-report data (Gargiulo & Yonker, 1983). It is expected that more positive attitude change will be found when self-report questionnaires are used than when objective data (i.e. observation of teachers' behavior) is gathered.

Teachers' Specialization and Status

Differences in the amount of attitude change between general education and special education teachers were examined. In addition, differences between preservice and practicing teachers in terms of attitude change were examined.

Method

Meta-analysis involves determining the difference between experimental and control (or comparison) group mean scores in standard deviation units (called an effect size, ES, or Δ ; Lipsey & Wilson, 2001). If there is no control group, an effect size is estimated by comparing the mean after treatment with the pretreatment mean, and dividing by the pretreatment standard deviation. Average effect sizes then are converted to standard score units to examine efficacy of a particular treatment across studies (Lipsey & Wilson, 2001). All effect sizes (d) were calculated by the computer program developed by Wilson (see Lipsey & Wilson, 2001). The d 's were converted to product moment correlation coefficients (r 's), using the same computer program. This was done because the data in the studies reviewed were continuous (interval or ratio), and r provides an interpretable and flexible method of presenting statistics that are based on these relations (Cook, Cooper, & Cordray, 1992). The mean r values were compared across different categories of descriptive and moderator variables.

Literature searches were conducted to retrieve relevant studies conducted prior to January 2006. The primary sources of articles were the following computerized databases: PsycINFO (Psychological Abstracts), 1860-2006; ERIC, 1966-2006; MEDLINE (Medical Abstracts), 1959- 2006; and Dissertation Abstracts-Dissertation Abstracts International (1861-2006). Combinations of the following keywords were used in the computer search: teachers, attitudes, beliefs, change, intervention, exceptional, special education, disability, ADHD, Oppositional Defiant Disorder (ODD),

and Learning Disabilities (LD). The search resulted in 178 studies. In addition, reference lists of located intervention and review studies were checked to identify any studies not found in the computerized search.

Among these studies, although 50 of them met the following criteria, only 34 studies possible to locate within the time constraint and availability. The criteria were: (1) inclusion of both an experimental and control group or inclusion of pre and post intervention assessment of teachers' attitudes; (2) provision of necessary statistics reported or archived to be usable in the meta-analysis, and (3) attrition between pre and post measurements of less than 10 percent of the sample. The study authors were contacted when necessary to retrieve archived data that was not reported as summary statistics. If the authors could not be reached, the study was removed from the sample. For those studies that only indicated non-significant effects, the effect sizes were coded as zero (using the procedure recommended by Lipsey & Wilson, 2001). The studies yielded a total of 116 effect sizes. The authors of this paper coded 14 studies (44 effect sizes) independently. Of the 34 studies located, 27 of these studies were journal articles, 5 of them were conference papers, and 2 of them were technical reports. The publication year for the studies ranged between 1962 and 2005. A list of the studies that were included in this meta-analytic review and a summary of their characteristics can be seen in [Appendix A](#). Other unpublished studies (14 dissertations) were not possible to access due to unavailability. The mean r was higher for the journal articles than for the conference papers (see [Table 1](#)). Reports had the lowest effect sizes.

Results

Interrater Agreement

The mean agreement between the two coders for 14 studies and 44 effect sizes was 96 percent (range: 84-100%). [Table 2](#) illustrates the interrater reliability in terms of percentages and Cohen's kappa for the variables included in the analyses. Cohen's kappa ranged between 0.84 and 1, with a mean of 0.97, for those studies it was possible to compute it for.

Definitions

Disabilities/Special Needs/Exceptionalities

Of 34 studies, 21 of them did not specify any kind of disability, and assessed teachers' attitudes toward students with special needs in general (see [Table 1](#)). Those studies that tried to change teachers' attitudes toward students with LD and students without disabilities were the ones that showed the most change. Teachers' attitudes were also easily changed for students with severe disabilities (these were mostly physical disabilities). Teachers' attitudes were harder to change about students with Attention Deficit Hyperactivity Disorder (ADHD) and emotional and behavioral problems. Other exceptionalities that were studied were developmental disabilities, physical disabilities, disabilities, "disabled, minority and disadvantaged," and speech impairment.

Attitudes

There were more studies (68 ESs) that aimed to change teachers' beliefs than attributions (1 ES), expectations (2 ESs), behaviors (8 ESs), or emotions (6 ESs; see [Table 1](#)). Studies that examined teachers' immediate reactions looked at teachers' interactions with students. However, they did not specify whether those interactions involved teaching behaviors or responses to students' misbehavior. Although teachers' behaviors were the hardest to change by themselves, they were easier to change

when accompanied by interventions that aimed to change teachers' beliefs. Similarly, teachers' emotions were difficult to change when considered alone. In combination with beliefs, it was possible to show a moderate amount of change emotions after the interventions. Other dimensions of attitudes that were studied were expectations, social distance, and rating of student behaviors by teachers. In sum, attitude change was easier to accomplish when interventions targeted different attitude dimensions (i.e. beliefs, emotions, and behaviors) at the same time.

The amount of change in teachers' attitudes was evaluated based on the criteria that the studies used for positive and negative attitudes. The amount of change for different criteria corresponded to dimensions of attitudes, in that when the criteria were about teachers' interactions with children, there was a smaller amount of change. Teachers' expectations were easier to change than other dimensions of attitudes. Therefore, it can be concluded that it is easier to change teachers' self-reported attitudes than their observed behaviors. When the studies measured general attitudes without specifying any dimension, the amount of change was very small. See [Table 3](#) for the criteria that studies used to evaluate positive and negative attitudes.

Change

Evaluation of the change that the interventions accomplished was done based on the quality of change, rather than the amount of change between pre and post (or experimental and control) test differences. Most studies resulted in normal positive change (80 ESs; see [Table 1](#)).

There were also a few studies that resulted in radical positive change (30 ESs). As expected, those studies that resulted in radical positive change had higher effect sizes (r) than those resulted in normal positive change. There were also some studies that resulted in no or flawed change (3 ESs each).

Moderators

Intentionality. When teachers' intentionality was not supported (81 ESs), there was a smaller amount of change in attitudes than when intentionality was supported (35 ESs). However, this difference was very small (see [Table 1](#)). In order to further evaluate the impact of intentionality on attitude change, the characteristics of the lectures and workshops were evaluated based on direct and indirect approaches (see Table 1). When direct approaches were used (i.e. talking about attitude change directly; 20 ESs), there was slightly more attitude change than with indirect approaches (i.e. increasing teachers' knowledge; 83 ESs) and combinations of direct and indirect approaches (2 ESs). However, direct approaches were not effective when used in the context of asking teachers to reflect on and change their behaviors (6 ESs). Consultations (2 ESs) with teachers that focused on helping them deal with students' misbehavior resulted in less change than lectures that employed direct and indirect approaches.

Intervention Characteristics. Interventions typically involved lecture with or without a component of field experience or another kind of contact with the students or people with disabilities (see [Table 1](#)). Other interventions were workshops/seminars, in-service training (courses for practicing teachers), one-to-one consultation, or field experience alone. Workshops and seminars resulted in the most change in attitudes, followed by lectures without a practical or contact component. When the intervention included face-to-face contact without a supporting lecture or consultation, teachers' attitudes changed negatively (1 ES). When teachers had contact with students with disabilities, the attitude change was smaller than when they did not have any contact. This suggests that teachers may have unrealistically high evaluations of students with disabilities when they do not have any experience with them.

When the contact characteristics were evaluated, face-to-face contact with a specified group of students (rather than general classroom) was most effective in changing teachers' attitudes (see [Table 1](#)). Contact in the form of videotapes or reading stories was less effective than face-to-face contact. In sum, the results suggest that teachers' attitudes change more when the intervention is a workshop or seminar, or when the field experiences were supported by lectures.

Measurement Characteristics. Self report measures (107 ESs) showed more change than observational measures (7 ESs; see [Table 1](#)). When the self-report measure was a student behavior checklist (2 ESs), the effect size (r) was higher. This may be related to the fact that the study that asked teachers to fill out a behavior checklist included an intervention to change students' behaviors as well. Therefore, the change in teachers' ratings may have been a function of the change in student behaviors as well. Within the self-report measures, those that measured teachers' attitudes toward specific students or vignettes of students showed more attitude change than the questionnaires that assessed teachers' attitudes with general statements.

Teachers' Specialization and Status. Special education teachers had more positive attitudes than regular education teachers (see [Table 1](#)). The amount of attitude change was higher when the interventions targeted special education teachers than when they aimed to change attitudes of general education teachers. When interventions included general and special education teachers in their sample, the amount of change was smaller than with special education teachers or general education teachers alone. Vocational teachers showed the least amount of change in their attitudes. Also, practicing teachers showed more attitude change than preservice or teacher candidates.

Conclusions and Implications

Given the empirical evidence that teachers' attitudes and behaviors influence successful academic and social-emotional inclusion of students with special needs in general education classrooms, it is important that teachers have positive attitudes and behaviors toward students with disabilities. This is a pressing issue for the ethical treatment of learners (Foucault, 1982, 1988) and for improving teachers' job satisfaction and competence (Kremer-Hayon & Tillema, 1999; Stanovich, 1994).

Teacher education programs strive to prepare teachers for the challenges of working with children with disabilities by increasing their knowledge of subject areas (e.g., math and science) (Tillema, 2000), disabilities (Minner & Prater, 1984), instructional methods (Mergendoller, Maxwell, & Bellisimo, 2000), and improving their attitudes about learners with disabilities (Brownlee & Carrington, 2000; Shechtman, 1994).

The most effective interventions for changing teachers' attitudes toward learners with disabilities are workshops, seminars, and lectures. When lectures are combined with a field experience or another kind of contact, the change in attitudes is less; however, field experiences help teachers to develop realistic expectations and attitudes.

The greatest amount of attitude change is achieved when different components of attitudes are targeted at the same time, rather than separately. Teachers' emotions and behaviors are the hardest to change in isolation. Teachers need support in the form of lectures, workshops, or consultation when they have face-to-face contact with learners with special needs. If they do not have the necessary support, their attitudes become more negative after intervention.

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Table 1 Mean r values (the effect size measure) for descriptive and moderator variables

Intervention Characteristics	Mean r	N
Workshop/Seminar	0.41	8
Lecture	0.38	19
Face-to-face and feedback	0.34	8
Lecture, face-to-face, stories	0.29	2
In-service training	0.23	6
Workshop and videotape	0.23	5
Lecture and face-to-face	0.23	24
Lecture, community	0.23	10
Lecture and videotape	0.19	8
Lecture and stories	0.15	4
One-to-one consultation	0.13	13
Lecture, face-to-face, videotape	0.04	8
Face-to-face contact	-0.09	1
		116
Specialization of the Teachers	Mean r	N
Special and General education contrasted	0.54	5
Special education	0.31	8
General education	0.26	48
Special and General education combined	0.20	29
Unspecified	0.19	25
Vocational teachers	0.06	1
		116
Status of the Teachers	Mean r	N
Practicing teachers	0.42	20
Teacher candidates	0.21	96
		116
Type of Disability	Mean r	N
L.D and students without disabilities	0.52	1
Learning Disabilities (L.D)	0.38	5
Severe disability	0.37	4
Emotional and behavioral problem	0.34	8
Emotional problems	0.34	2
Other (Ed. Psy. course)	0.30	2
Students with disabilities – general	0.24	69
L.D, physical, and developmental disabilities	0.24	2
“Disabled, minority and disadvantaged”	0.19	6
Emotional, physical, developmental disabilities and speech impairment	0.18	6
Attention Deficit/Hyperactivity	0.09	8
Behavioral problems	0.00	2
		115
Lecture Type	Mean r	N
Direct approach (about attitudes)	0.28	20
Indirect approach (knowledge)	0.26	83
Direct and indirect	0.24	2
Consultation and student behavior (indirect)	0.17	4
Feedback on teacher's behavior	0.00	6
Contact Type	Mean r	N
Face-to-face contact with specific students	0.33	21
(Practice) teaching unspecified students	0.25	18
Observation of students with disabilities	0.23	3
Interviewing community	0.23	10
Watching videotape	0.18	19
Reading stories	0.15	4
Instructor has a disability + videotape	0.10	4
One-to-one contact with one student	0.07	10
Instructor has a disability	-0.09	2
		91
Intentionality	Mean r	N
Intentionality supported	0.26	35
Intentionality not supported	0.23	81
		116
Assessment Technique	Mean r	N
Behavior checklists about students	0.35	2
Self-report questionnaires about attitudes	0.25	107
Observation of teachers' behavior	0.07	7
		116
Attitude Dimension	Mean r	N
Expectations	0.53	2
Emotions and beliefs	0.49	1
Beliefs and social distance	0.39	11
Beliefs	0.25	68
Attributions	0.22	1
General attitudes	0.21	14
Teachers' description of student behaviors	0.15	5
Emotions	0.11	6
Teachers' behaviors	0.11	8
		116
Change	Mean r	N
Radical positive change	0.35	30
Normal positive change	0.22	80
No change	0.03	3
Normal flawed change	-0.13	3
		116
Type of Publication	Mean r	N
Journal article	0.25	102
Conference paper	0.22	10
Report	0.20	4
		116

Table 2

Interrater agreement for 14 studies (out of 34) and 44 effect sizes (out of 116)

	Percent	Kappa
Definitions		
Type of disability	84	
Attitude dimension	98	0.97
Criteria for positive attitudes	95	
Criteria for negative attitudes	95	
Change	98	0.9
Moderators		
Is intentionality measured?	98	
Is intentionality supported?	84	
Type of intervention	95	
Lecture characteristics	89	
Contact characteristics	91	
Assessment technique	100	1
Specificity of evaluation	98	
Teachers' specialization	89	0.84
Variables Related to Effect Size calculation		
Success direction of the groups	93	
Treatment group sample size	100	1
Control group sample size	100	1
Single group sample size (pre)	93	
Single group sample size (post)	91	
Treatment group mean	98	
Treatment group standard deviation	100	1
Control group mean	98	
Control group standard deviation	100	1
Pre-test mean	95	
Pre-test standard deviation	98	
Post-test mean	95	
Post-test standard deviation	98	
T value	100	1
F value	100	1
Chi Square value	100	1
Agreement Mean Value	96	0.97

Table 3

Evaluation of positive and negative attitudes that are investigated in the studies

Positive Attitudes	Negative Attitudes	Mean <i>r</i>	N
Higher expectations	Lower expectations	0.53	2
Less social distance and general education placement	More social distance and special education placement	0.36	14
Seeing behaviors of students as less severe and positive interactions	Seeing behaviors of students as more severe and negative interactions	0.34	10
Favoring general classroom placements	Favoring special classroom placements	0.26	40
Using less negative/more positive adjectives in describing students	Using more negative/less positive adjectives in describing students	0.22	12
Agreement with clinicians in ranking behavioral problems	Disagreement with clinicians in ranking of behavioral problems	0.19	3
Seeing disability similar to ability	Seeing disability different than ability	0.16	9
Positive interactions and beliefs	Negative interactions and beliefs	0.14	17
General (higher scores on the measure)	General (lower scores on the measure)	0.06	7

116

Appendix A.

Appendix A. List of studies included in the meta-analysis and their characteristics

First Author	Pub. year	Pub. type	Teachers' status	Teachers' specialization	N	# of ESs	Intervention	Disability	Lecture	Contact	Intentionality	Change	Mean <i>d</i>
Beattie, JR	1997	Article	Teacher candidates	Special and General combined	433	8	Lecture and contact	Exceptional Children-General	Indirect approach	Videotape	Not supported	Normal positive change	.08
Brooks, BL	1971	Article	Practicing teachers	General	30	3	Workshop/Seminar	Exceptional Children-General	Indirect approach	Observation	Supported	Radical positive change	.49
Campbell, J.	2004	Article	Teacher candidates	Unspecified	274	10	Lecture and contact	Exceptional Children-General	Indirect approach	Interviewing community	Supported	Radical positive change	.47
Cardona, C	1997	Conference paper	Practicing teachers	General	22	2	One-to-one consultation	Learning Disabilities	Indirect approach	Contact with a group of specific students	Not supported	Normal positive change	.50
Dailey, IL	1981	Article	Teacher candidates	Special	52	8	Lecture and contact	Emotional problems, physical disability, developmental disabilities, speech impairment	Indirect approach	Videotape	Not supported	Normal positive change	.38
Dickens-Smith, M	1995	Report	Practicing teachers	Special	200	2	Workshop/Seminar	Exceptional Children-General	Indirect approach	Contact with a group of specific students	Not supported	Normal positive change	1.04
Drake, GA	1977	Conference Paper	Teacher candidates	Special and General combined	86	1	Lecture	Exceptional Children-General	Indirect approach	Not applicable	Not supported	Normal positive change	.54
Dunson, RM	1994	Article	Teacher candidates	General	20	10	One-to-one consultation	Attention Deficit/Hyperactivity Disorder	Indirect approach	One-to-one contact with one child	Not supported	Normal positive change	.20
Dworkin, NE	1979	Article	Practicing teachers	General	32	2	Workshop/Seminar	Learning Disabilities	Indirect approach	Contact with a group of specific students	Not supported	Normal positive change	1.26
Eichinger, J	1991	Article	Teacher candidates	Special and General contrasted	102	2	Lecture and contact	Severe Disability	Direct approach	Practice teaching	Supported	Radical positive change	.60
Hastings, RP	1996	Article	Teacher candidate	Unspecified	100	2	Lecture	Emotional and behavioral problems	Indirect approach	Contact with a group of specific students	Supported	Normal positive change	-.01

First Author	Pub. year	Pub. type	Teachers' status	Teachers' specialization	N	# of ESs	Intervention	Disability	Lecture	Contact	Intentionality	Change	Mean <i>d</i>
Herr, DE	1979	Article	Teacher candidates	Special and General combined	60	8	Contact and feedback	Disabled, minority and disadvantaged	Direct approach	Contact with a group of specific students	Not supported	Radical positive change	.074
Johnson, AB	1991	Article	Teacher candidates	General	84	6	Lecture and contact	Learning Disabilities	Indirect approach	Contact with a group of specific students	Not supported	Normal positive change	.42
Krause, K	1981	Article	Practicing teachers	Unspecified	76	1	Workshop/Seminar	Exceptional Learners-General	Indirect approach	Contact with a group of specific students	Not supported	Normal positive change	.80
Larrivee, B	2001	Conference paper	Practicing teachers	General	107	3	Workshop/Seminar	Exceptional Learners-General	Indirect approach	Videotape	Not supported	Normal positive change	.48
Lazar, AL	1973	Article	Practicing teachers	Special	20	2	Lecture	Behavioral problems	Indirect approach	Not applicable	Not supported	Normal positive change	1.20
Lewin, P	1983	Article	Teacher candidates	General	39	1	One-to-one consultation	Exceptional Learners-General	Indirect approach	One-to-one contact with one student	Not supported	No change	.00
Leyser, Y	1985	Article	Teacher candidates	General	253	10	Lecture and contact	Exceptional Learners-General	Indirect approach	Practicing teaching	Not supported	Normal positive change	.47
Leyser, Y	1983	Article	Practicing teachers	General	230	3	Lecture and contact	Exceptional Learners-General	Indirect approach	Practicing teaching	Not supported	Normal positive change	.29
Leyser, Y	1982	Article	Teacher candidates	Special and General contrasted	51	3	Lecture and contact	Exceptional Learners-General	Indirect approach	Practice teaching	Not supported	Normal positive change	1.82
Marlowe, M	1997	Article	Teacher candidates	Special	62	2	Lecture and reading stories	Emotional problems	Direct and indirect	Stories	Supported	Radical positive change	.77
Marlowe, M	1996	Article	Teacher candidates	Special and General combined	38	2	Lecture and reading stories	Exceptional Learners-General	Direct approach	Stories	Supported	Normal positive change	-.08

First Author	Pub. year	Pub. type	Teachers' status	Teachers' specialization	N	# of ESs	Intervention	Disability	Lecture	Contact	Intentionality	Change	Mean d
McGettigan, JF	1985	Article	Teacher candidates	Vocational teachers	80	1	Workshop/Seminar	Exceptional Learners-General	Indirect approach	Videotape	Not supported	Normal positive change	.13
Parish, TS	1977	Article	Teacher candidates	Special and General contrasted	45	2	Lecture and videotape	Developmental, physical, & learning dis.	Direct and indirect	Videotape	Supported	Normal positive change	.52
Parish, TS	1982	Article	Teacher candidates	Unspecified	53	5	Workshop/Seminar	Exceptional Learners-General	Direct approach	Videotape	Supported	Radical positive change	.49
Pinckney, GA	1962	Article	Teacher candidates	Unspecified	203	3	Lecture	Other	Indirect approach	Not applicable	Not supported	Normal positive change	.53
Sanche, RP	1976	Article	Teacher candidates	General	106	1	Lecture	Exceptional Learners-General	Indirect approach	Not applicable	Not supported	Radical positive change	.34
Shaw, SF	1975	Article	Practicing teachers	General	35	4	Lecture	Exceptional Learners-General	Indirect approach	Not applicable	Not supported	Normal positive change	2.44
Siperstein, G	1985	Article	Practicing teachers	General	8	1	One-to-one consultation	Learners with learning dis.	Direct approach	Contact with a group of specific students	Supported	Normal positive change	1.23
Stainback, S	1983	Article	Practicing teachers	Special and General combined	74	4	Workshop/Seminar	Severe disability	Indirect approach	Not applicable	Not supported	Normal positive change	1.02
Stainback, S	1982	Article	Teacher candidates	General	31	1	Lecture	Exceptional Learners-General	Indirect approach	Not applicable	Not supported	Normal positive change	1.71
Tait, K	2000	Article	Teacher candidates	General	480	3	Lecture and contact	Exceptional Learners-General	Indirect approach	No information	Not supported	Normal positive change	.15
Wasiesko, MM	1981	Article	Teacher candidates	Unspecified	28	4	Lecture and contact	Exceptional Learners-General	Indirect approach	Practice teaching	Not supported	Normal positive change	.20
Winzer, M	1984	Article	Teacher candidates	Special and General combined	75	1	Lecture	Exceptional Learners-General	Indirect approach	Not applicable	Not supported	Normal positive change	.78

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Recruitment and Retention of Assessment Personnel

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Abstract

With a national shortage of special education personnel, including assessment personnel (Caranikas-Walker; Shapley, Cordeau, 2006; Karr, 2005), rural communities face serious challenges in retaining and recruiting highly qualified special education staff due to limited access to university training programs (Hausman & Hausman, 2003; Knapczyk, Chapman, Rodes, & Chung, 2001). This article presents research-based methods that rural school districts can use to recruit and retain assessment personnel. Many of the steps that are helpful for recruiting and retaining assessment personnel are either not utilized or underutilized (Caranikas-Walker et al.; Simpson & Lynch, 2005). Factors for assessment personnel that influenced their decision to accept a position and to stay in their positions are discussed.

Introduction

Federal mandates, such as IDEA 2004 and No Child Left Behind, have led to dramatic changes in the breadth and scope of the educational system serving children with disabilities. Educators have found themselves faced with higher accountability measures and the need to implement research-based teaching methods. Such transformations have broadened the role of diagnostic personnel. The evolution of the role of assessment personnel now extends beyond the sheer act of testing and incorporates a role that includes consultation, establishing eligibility, administrative responsibilities, including an endless array of paperwork, and conducting numerous IEP meetings (Texas Center for Educational Research, 2001). The already large caseloads of assessment personnel present additional challenges as their jobs expand. The increases in the responsibilities in the profession have also led to an increase in the number of qualified and experienced diagnosticians leaving the field due to early retirement or simply a desire to change professions (Caranikas-Walker, Shapley, & Cordeau, 2006). Increasing the supply of qualified assessment personnel allows for effective evaluations and services to those children on their caseloads. While the number of children being referred for special education services is increasing, the supply of assessment personnel is declining. Such decline has contributed to diagnostic staff being ranked as the fourth highest area of need (Hausman & Hausman, 1999).

Critical Role of Assessment Personnel

Special education administrators in rural areas are faced with the continuing challenge of filling vacancies with highly qualified staff in a time when there is a critical shortage of certified special educators and assessment personnel (Caranikas-Walker et al., 2006; Karr, 2005). The current shortage of special education personnel has been documented for a number of years, with 80% of the nation's largest schools reporting a need for additional special education personnel in 1998 (Recruiting New Teachers, 1998). In 1995, the U.S. Department of Education estimated that by the next decade an additional 267,000 special education personnel would be needed to serve the national special education population. Silvestra (as cited in Whitworth, 2000) estimated that the demand for special education professionals would increase the total number of professionals from 338,000 in 1994 to at least 545,000 by 2005. He further stated that the number of special education personnel needed could rise to as high as 648,000 by 2005. McLeskey, Tyler, & Flippin (2004) contended that with the current problem of retaining and recruiting special education personnel, the educational system must focus on ideas to attract people into the field. The researcher added that schools are having a difficult time finding personnel because there are only a limited number of new graduates in the field of special education each year. These factors present a particular challenge for rural communities where educators face difficulties becoming fully certified due to their inaccessibility to university training (Hausman & Hausman, 2003; Knapczyk, Chapman, Rodes, & Chung, 2001; Rosenkoetter, Irwin, & Saceda, 2004).

Hausman and Hausman (1999) studied the needs for special education personnel in rural communities and contended that the ongoing shortage for qualified personnel in the special education field should be declared a national emergency. In their report, diagnostic staff ranked as the fourth highest area of need. As the demand for accountability for student learning has increased in recent years, there have been increasing numbers of referrals for special education services, resulting in a growing need for educational assessment personnel (National Clearinghouse for Professions in Special Education, 2000).

The roles and responsibilities of assessment personnel differ from state to state, and even the professional title given to such personnel varies among states, based on certification and licensure standards. Some titles associated with the assessment role include educational diagnostician, psychometrician, psychometrist, or educational evaluator (Sutton, Elksnin, Layton & McElroy, 2003). The National Clearinghouse for Professions in Special Education (2005) reported that the heavy demands placed on general and special education personnel will further expand the role of diagnostic personnel. Some believe that the job outlook for diagnostic personnel is quite promising because the need for evaluations will continue to increase, as well as the importance placed on the role of assessment personnel (National Clearinghouse for Professions in Special Education).

In order to address the shortage and increasing need for diagnostic personnel, Hausman and Hausman (1999) recommended that studies investigate the factors influencing the recruitment and retention of assessment personnel. The analysis of both retention and recruitment of assessment personnel has important implications for the future of special education programs and the individuals served in these programs. Only if these factors are identified and implemented will the field of education continue to progress to meet the needs of individuals with significant educational needs.

Investigating Factors Promoting Recruitment and Retention

Although the research examining the supply and demand for special education teachers continues to grow (see McLeskey et al., 2004; Billingsley, B.S., 2004 for reviews), research investigating assessment personnel is limited. Two studies were identified that examined the recruitment and retention of assessment personnel in rural areas (Caranikas-Walker et al., 2006; Texas Center for Educational Research, 2001), however, data on the assessment personnel could not be disaggregated.

In a 2005 study, Simpson and Lynch examined special education directors' perceptions of the effectiveness of recruitment and retention methods for assessment personnel. In addition, the study investigated whether school districts were implementing those strategies that special education directors perceived as most important. Since assessment personnel are certified under the title of "educational diagnostician" in the state where the research was conducted, this descriptor was used in the study. This study used a questionnaire as the primary instrument for data collection in the survey. Item content for the survey was developed through a review of current literature and current legislation. A panel of experts consisting of special education directors, university professors, and certified educational diagnosticians established content validity by reviewing the instrument. In addition, a field test involving a panel of knowledgeable professionals in the area of special education and assessment was conducted primarily for wording and coherence as well as to review and critique the rating scales.

Surveys were mailed to all special education directors in Texas public schools (n=475). The survey consisted of three sections. The first section addressed demographic information including years of experience as a special education director and whether or not the respondents had worked in the position of an educational diagnostician. It also requested information pertaining to the number of educational diagnosticians employed in the district, educational diagnostician's caseload, and the current number of educational diagnostician vacancies.

The second section contained closed-ended questions consisting of a five-part Likert-type response pertaining to recruitment and retention methods. This section required the participants to note whether or not the specified recruitment or retention strategies were currently used by their districts, and to rate the perceived importance of each factor on a scale from 1 (not important) to 5 (very important). The last section of the survey provided the opportunity for the respondents to make suggestions for specific recruitment and efforts that have proved successful in their district.

A total of 475 surveys were mailed through the United States Post Office. Of these, 360 questionnaires were returned for a response rate of 76%. All data were recorded, proofed for errors, and analyzed. The data were analyzed using descriptive statistics to determine which methods of recruitment and retention for educational diagnosticians were being used in Texas public school districts. The data also indicated which factors were perceived as having greater influence on the recruitment and retention process.

Recruitment Factors

Results of the investigation indicated that special education directors perceived salaries, administrative support, caseload, and benefits as having the most potential in influencing educational diagnosticians to accept positions within their districts. Each of these factors fell within the range of means from 4.1

to 4.3. Special education directors perceived salary as being most influential with a mean of 4.3. A large percentage (82.22%) of special education directors strongly agreed/agreed that salary served as a recruitment factor for educational diagnosticians. A similar percentage (82.20%) of the respondents strongly agreed/agreed that administrative support served as a recruitment factor while approximately 80% (80.28%) of the respondents strongly agreed/agreed that caseload served as a recruitment factor for educational diagnosticians. Slightly over three-fourths (76.39%) of special education directors strongly agreed/agreed that benefits served as a recruitment factor for educational diagnosticians. The factors that were found to be effective for recruiting assessment personnel and their ratings are found in Table 1.

Table 1

Importance Ratings of Recruitment Factors

Recruitment Factors	Frequency	Percent	Mean Rating
Salary	290	80.56	4.3
Administrative Support	278	77.22	4.3
Benefits	274	76.11	4.2
Computer Generated report writing/scoring	261	72.50	4.1
Caseload	235	65.28	4.0
Clerical Assistance Staff	234	65.00	4.0
District Size	233	64.72	3.9
Job Responsibilities	205	56.94	3.9
Location of School/District	204	56.67	3.9
Induction/Support/Mentoring Programs	191	53.16	3.9
Stipends	142	39.44	3.8
Contributions to School and Society	127	35.30	3.8
Needed a Job	118	32.78	3.5
Hiring/Signing Bonus	37	10.28	3.4

Retention Factors

Results of the survey indicated that special education directors perceived job satisfaction, administrative support, salary, professional development, job security, being part of the decision making process, benefits, and caseload as having the most potential in influencing educational diagnosticians to remain in their current position as an educational diagnostician. The means of each of these factors fell between 4.1 and 4.4. The overall mean for retention factors was 4.0. Special education directors perceived job satisfaction and administrative support as being most influential with a mean of 4.4. Based on the data collected, 77.23% of special education directors strongly agreed/agreed that job satisfaction served as a retention factor for educational diagnosticians while slightly over 87% (87.77%) of the respondents strongly agreed/agreed that administrative support served as a retention factor for educational diagnosticians. The next most influential factor was salary, with a mean of 4.3. According to the respondents, 81.11 % strongly agreed/agreed that salary served as a retention factor for educational diagnosticians. Special education directors also responded that being part of the decision-making team, professional development, job security, and caseload were important factors in retaining educational diagnosticians. These factors carried means of 4.2. The factors influencing perceived effectiveness in retention or recruitment of assessment personnel are reported in Table 2.

Table 2

Importance Ratings of Retention Factors

Retention Factors	Frequency	Mean Rating
Job Satisfaction	238	4.4
Administrative Support	269	4.4
Salary	255	4.3
Part of the Decision making Process	258	4.2
Professional development	259	4.2
Job Security	245	4.2
Caseload	231	4.2
Benefits	254	4.1
Stipends	126	3.9
Induction/Support/Mentoring	177	3.9
Location of School/District	195	3.9
Clerical Assistance Staff	211	3.9
Technology Usage in IEP Meeting	222	3.8
Career Advancement Opportunities	108	3.6
Contributions to School and Society	158	3.6
Retention Bonus	32	3.5

Respondents also identified additional recruiting and retention strategies that were not addressed in the survey instrument. Rather, these strategies were offered in the open-ended questions on the survey. These factors included holding job fairs, extending recruitment areas, posting vacancies on the Internet, providing internships, using current staff to recruit, advertising with universities, offering flexible work times, “grow your own” programs, and contracting with retired diagnostic personnel. Other strategies involved collaborating with regional service centers, networking through professional organizations, and using staff in other departments to recruit assessment personnel. Based on the strategies reported, school districts were using a variety of creative and unique methods to improve the recruitment and retention of assessment personnel. Further data are reported on Tables 1 and 2.

Summary and Conclusions

Based on the findings from the reported study, five strategies were identified that were considered important for both recruitment and retention efforts. These strategies included providing administrative support, an adequate salary, sufficient benefits, manageable caseloads, and effective mentoring. It may be that this information can assist rural administrators and school boards in developing a better understanding of recruitment and retention strategies that can be utilized in order to fill vacancies with highly qualified assessment personnel. Subsequently, administrators can develop strategies and solutions that can be incorporated into strategic planning. Administrators in rural areas would be remiss not to take advantage of the opportunity to improve recruitment and retention strategies, especially when improvements contribute directly to providing highly qualified staff to support the achievement of students with disabilities in an age of accountability.

It is also evident that a major limitation to this research was the reporting of data based on one study in a single state. However, Texas is a large and diverse state with a high number of school-age children. Texas has 1,031 schools districts, two-thirds of which are located in rural areas or small towns; about

half have enrollments under 700 (Rural School and Community Trust, 2006). Thus, the results of this study have direct application to many educators in rural school districts. Administrators in other states with similar shortages in special education personnel may well benefit from using the strategies that were identified as being effective in recruiting and retaining staff in an era of shortages. Clearly, additional research is needed at many levels – local, state, and national, in order to fill the ever-growing demands of assessment personnel in this age of accountability.

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Paving the Way for Women with Asperger Syndrome

Karen Hurlbutt

Abstract

More information is becoming available about Asperger Syndrome (AS), especially regarding the educational needs of children. There is a lack of available information, however, regarding adults with AS, particularly women. Five women with AS participated in this qualitative research study over a two-year period. The purpose was to investigate and describe their perceptions of their experiences about being a woman on the autistic spectrum. Methods included conducting initial and follow-up interviews via telephone and email. It was determined that the women with AS perceived their interests when growing up as being atypical, struggled with the diagnosis process and with relationships with males, and experienced difficulty with employment. Recommendations to parents and professionals involved in working with girls/women with AS are provided.

While more and more information is becoming available regarding Asperger Syndrome (AS) in general, and specifically regarding children with AS, there is not enough information available regarding adults with AS. Information about women with AS is even less scarce, although a few books have been written by these women to help parents, teachers, and professionals learn more about them (Grandin, 1986; Grandin, 1995; Grandin & Duffy, 2004; Holliday Willey, 1999; Miller, 2003; Williams, 1992).

These authors are well-known in the autism community and are typically considered to be “successful” women. One of the best ways to learn more about the lives of women with AS, especially those who may not be considered “successful” by others (i.e., who have not published books or other written material), is to talk to these women and allow them the opportunity to share their stories and perceptions of their own lives. The purpose of this preliminary study was to provide an opportunity for women with AS to share their perceptions of their life experiences of being a woman with Asperger Syndrome.

Procedures

In this study, five women with AS were interviewed over a two-year period and their comments were analyzed and coded using qualitative research methods. The researcher had previously met the first participant at a national conference on autism and the other four women were contacted using a networking, or snowballing, approach by word-of-mouth through known individuals with AS, as well as through AS chat support groups. Interested women were asked to contact the researcher. Participants were selected by self-disclosure of an official diagnosis of Asperger Syndrome by a licensed professional, and by their willingness to participate via phone conversations and email contacts. All five participants were informed of their right to terminate participation in the study at any time.

Initial interviews were conducted over the phone for the purposes of getting to know each other, obtaining background information, and allowing time for questions pertaining to the study. After these initial visits, the actual interviews began. Two follow-up interviews were conducted via phone and email with all five participants for the purpose of asking questions, clarifying previous information, and obtaining additional information regarding their perceptions of, and experiences with, being a woman with AS. Generally, one to three questions were asked during each session.

During the initial and each of the subsequent interviews, the five participants were asked the same specific question or set of questions (see Appendix A for samples of the interview questions). Each phone interview was audiotaped while handwritten notes were taken. After each interview session, the researcher reviewed the recorded information, transcribed the sessions, and made anecdotal notes regarding the conversations and email responses. The responses and notes were read after each session and recurring ideas were documented. Emerging patterns were noted by the researcher. Two times throughout the data analysis process, the researcher utilized a peer audit with an outside party who was familiar with qualitative research methodology, as a way to ensure reliability and validity of the data.

Data were analyzed using an open coding procedure. At the beginning of the coding procedure, coding was done by paragraph and/or main idea. Throughout this process, a word or phrase that identified the main idea of the paragraph was written down by the researcher. Patterns and codes were identified by isolating concepts and counting the number of times they occurred in the data. Examples of identified codes include: communication, social expectations, academics, ridicule, employment, divorce, diagnosis, friends, and personal safety.

Two times throughout the coding process, a peer of the researcher made randomly selected checks of the data by coding sample paragraphs. This did result in a high percentage of agreement (87% and 91%). After all the data were coded, the next step involved identifying concepts. The researcher grouped the concepts together and then collapsed them into categories or themes (e.g., family, social and behavioral expectations, diagnosis, and employment).

Twice during the coding process, the researcher utilized member checks as a way to ensure validity, once halfway through and once at the end of the process. This strategy involved taking the analysis of the data and the conclusions back to the participants so they could provide comments and clarification if needed. The member checks were utilized after all of the data had been collected and analyzed. Care was also taken to ensure reliability as well by creating as much similarity as possible. The procedures of the study were explained the same way to all participants, all participants were asked the same questions within the same time frame, all interviews were recorded and reviewed immediately after interview session, and the same information regarding the proposed conclusions of the study was shared with all five participants.

This study was conducted over a two-year period of time due to personal and time constraints of the participants and to allow them sufficient time to reply to each of the questions. For the majority of interview sessions, only one to three questions were asked so as to not overwhelm the participants but to give them the opportunity to thoroughly reply and share what information they wanted to.

With the identification of the four themes, an overarching theme was identified. The voices of women with Asperger Syndrome are rare in the professional literature on autistic spectrum disorders and the women themselves want to be a part of the growing body of knowledge on this subject.

Participants

The participants were selected from the high-functioning end of the autistic spectrum, having a diagnosis of Asperger Syndrome. The names in this study are pseudonyms which were chosen by the participants. The following vignettes include summative and descriptive information on each of the participants from the information they shared with the researcher. This information was included to provide the reader with a glimpse into the lives of each of the five participants.

Xenia: Xenia is a 40-year-old woman with a diagnosis of AS who is divorced and lives alone with her two cats in the Midwest. When she was very young, her IQ was tested as being 48, she did not play with toys, and she did not talk until she was 4 years old. Her father used to place a can of Coke in front of her and made her say “Coke” before he gave it to her. She now says “I’ve been addicted to Coke ever since!” He also required her many siblings to spend 15 minutes each day to help her learn social skills. In elementary school, Xenia received services for students with learning disabilities but had no adaptations of material or assignments. In her secondary school years, she received no services and was included in all general education classes. She was diagnosed with AS by a licensed professional at the age of 19. Xenia has an undergraduate degree in Political Science and shared that she received good grades in college in those courses. Xenia has always been very interested in countries. She collects flags and bus schedules from different cities and countries she has visited. Xenia has struggled with obtaining and maintaining employment and has held many different jobs in her life. Her current job is a respite caregiver for a teenager with autism which she has held for four years now and she does enjoy it. Xenia described herself as being friendly, talkative, open-minded, and committed to the cause of autism.

Rosalind: Rosalind is a 45-year-old woman with a diagnosis of AS who is divorced and lives on the East coast with her teenage son who is also on the autistic spectrum. Rosalind described herself as being intelligent, unorganized, and messy, and had passionate interests in Ancient Egypt, Japanese culture, and science fiction when she was growing up. Now that she and her sister are adults, they get along better but there was a great deal of competition between them when they were growing up. Rosalind shared that she was the “smarter one” and her sister was the more “social one.” Rosalind has held a number of jobs in her lifetime, mostly menial, entry-level jobs. She successfully held a job working in a preschool for children with special needs, but that job, too, was recently cut, due to funding. She was diagnosed with AS by a licensed professional at the age of 39. Rosalind has recently become more active in public speaking about autism and was recruited to become a member of an autism advisory board in her community.

Judith: Judith is 35 years old and has a diagnosis of AS. She was married for the first time at a young age and has a 12-year-old daughter who is diagnosed as having high-functioning autism. Judith’s official diagnosis of AS, by a licensed professional, was made a couple of years after her own daughter was diagnosed. She has since remarried, moved to the Midwest, and recently had a baby boy. Judith came from an abusive and dysfunctional family from whom she is now estranged. She was physically, verbally, and sexually abused by her father and brother, and her mother defended them. When she was growing up, her brother teased and humiliated her often and encouraged his friends to do so as well. She did well academically, however, and loved math, science, and art the most. She did not receive any special services during her school years, and received mostly all A’s and B’s. She struggled with the organization of homework in junior high but knew, by high school, that she needed to improve her grades in order to attend college. She graduated from college with a bachelor’s degree in Art, Magna Cum Laude. She does not see her daughter very often because she left her with the girl’s father when

she moved far away from her family. She has held many jobs in her life, everything from being an email tech to an office assistant to working in quality management. She now does temporary administrative work and is happier with her new life now.

Marie: Marie is a 58-year-old woman with AS who lives on the East coast in a big house she inherited from her parents. She is divorced and has a 20-year-old son who has some traits of autism but is “mostly NT” (neurotypical - person without autism). She herself was officially diagnosed with AS by a licensed professional at the age of 53. She described herself as being a little eccentric and a “techie.” Marie was teased a great deal when she was growing up and had to develop defense mechanisms in order to survive.

She was not interested in what other girls did. She was not into fashion or clothes but now enjoys getting clothes from other countries because “it’s cool.” In high school, Marie received grades of B+ and A- in most subjects and was excellent in art. She attended college for two years and was asked to leave by the Dean of Students and was told that she was “just not the type of person” they wanted at their college. She then attended a film school at a large city university and felt more accepted there. She has been a secretary for 36 years but has held many different secretarial jobs over the years. The longest period of time she ever held one job was for five years in a one-person law firm. She is currently working on making a film and would be a “big cheese Hollywood director” if she could. She stated that the autism society is now becoming “a voice to be reckoned with.”

Erin: Erin is 41 years old with Asperger Syndrome. She was previously married and has a son with a diagnosis of Pervasive Developmental Disorder. She has fibromyalgia which severely affects her life. She currently is in a “serious relationship” with a male who has been diagnosed as having high-functioning autism. She was diagnosed as having AS at the age of 36 and it was that psychologist who suggested that she and her son live in a different house than her significant other. Life is calmer for her when her partner is able to leave and go to his home when needed. When all three live together, her son “gets wound up and starts freaking out,” her partner starts “to stim,” and she finds herself desperately needing “a break”. Erin had been going to college to become a social worker or perhaps a psychologist; however, she discontinued college when she realized that her fibromyalgia was interfering with her ability to continue schoolwork and care for her son. At this time, her job involves helping people who need help with housing and food, etc. She feels connected to the Mother Earth and shared that the “elements of the sun, moon, and the tides connect me to the earth.” Erin’s life is chaotic and stressful and she tries very hard to survive “in spite of it all.”

Results and Discussion

This study provides insight into an important, and rarely heard viewpoint. During data analysis, four subthemes were identified. The following is a discussion of the themes that emerged from the data.

Consciousness of Atypical Interests

These women with AS perceived themselves as different from other girls as they grew up. They did not have the same interests as neurotypical girls and they had unusual interests. They were not into typical girl things, although they did try and fit in. Xenia described how she tried to be like her female peers when she was growing up but she felt as though her interests were not the same as her peers. While they seemed more interested in music, sports, rock singers, and the opposite sex, she was interested in numbers, rocks, Indians, communism, and her biggest passion which was South America. She shared that she used to jump rope with tunes she made up using the names of various

countries in South America. She recited one such tune as “Venezuela, Columbia, Ecuador, Peru, Chile, and Argentina.” She said that “it’s hard to stifle what you like because you are trying to fit in!”

Rosalind shared that “as a teenager, I experimented with makeup and hairstyling, though, but didn’t get it right. I didn’t care and no one showed me! I never have been a typical woman interested in doing the typical girlie thing that others do. In high school, I was the only girl in the Electronics Club!” Judith also described her attempts to fit in with other girls but that she “wasn’t into the mall-shopping, gum-popping, chit-chatty stuff. I was not one of the popular girls, although I tried.”

Marie stated that she never was into jewelry or fashion and still is not. When she was growing up, she said that “the cliques and fashion didn’t make any sense to me. Girls like to wear jewelry but I missed the point of jewelry entirely. They seem like small sculptures to me. I look at the stones and try to figure out what is so interesting but some of it just gives me the creeps!” Marie was in an all-boys’ club, the Chess Club. She shared that she was a good chess player “but the boys would gang up on me, tease me, and move the pieces around while I wasn’t looking.”

The participants expressed that they have achieved success in certain areas of their lives, which has been important to them, but not in the way that they perceive to be of the NT world which include work, earning capacity, and relationships. For the most part, the women are happy with who they are now even though the journey has not been easy. For example, Erin shared that she defines success as “finding a way to accept yourself and to be happy with who you are, but for someone with AS, accepting yourself has to be an act of rebellion, and therefore, an AS person’s idea of success may be viewed negatively by an NT person or society. I know that I have my own normal now.”

Xenia felt that defining success will vary from person to person, and for her, she felt that she is successful because she has a college education, has been married, and lives independently. She stated that while some adults are successful “from the eyes of the Anglo-American culture, which includes enough money, good jobs, and nice houses,” from the eyes of her Greek Orthodox Christian lifestyle, she does not know that they are more successful than she is.

Judith shared that she had been told repeatedly by her parents that she was “stupid and an embarrassment,” but she has “learned from those experiences and from other things in life that success for an individual can’t be defined by anyone else for that person.” She now feels as though she is successful and happy. “I believe that in this world, perfection isn’t possible, but progress is, and in that respect, I am successful.”

Rosalind stated that she has come to terms with the way her life is and the traditional “life in the suburbs with a husband, a house with a white picket fence, 2.3 kids, and a cat and a dog, and a career that pays well is not available to me now and probably never was.” She said that she used to compare herself to her “NT sister” but knows that she does not like “the stuff that goes along with that kind of life anyway.” She felt that she is successful with who she is now and she is “pleased with the fact that I get recognition from my public speaking and I also feel good about being so involved with my adult support group. I never miss meetings and I bring the refreshments!”

Marie was very descriptive about her feelings of success and where she is at in her life now. She stated that she has succeeded at being an artist who can “develop and communicate one’s vision, or at least to seem to communicate it.” She expresses frustration, however, with being an “Aspie woman artist” which she felt has held her back and that her “ability as an artist is irrelevant,” which she was “made to

know early on.” She explained that “there was an inability of people to relate to me or for me to relate to people in a socially acceptable female way.”

Difficulties with Male Relationships

The five women with AS expressed having difficulty with their relationships with males. All five of these women have been married and divorced. One has remarried and another has a partner, and the other three have remained single. All five of them have struggled with maintaining relationships. Some of them felt that because of their upbringing and society influences, they have felt a need to be married in order to have a full and satisfying life. Women in general may feel this way because of societal and family pressure but in women with AS, their struggles may be magnified by their very traits of autism.

Marie’s explanation of this struggle is that “ultimately, we will either not be able to satisfy an NT partner and will get tired of trying or maybe just our solitary nature will reassert itself. Aspie marriages, when both are aspies, are better when there is an interest in common. Since for us, the sentimental romantic stuff doesn’t exist, marriage and all relationships have to be based on things.”

Rosalind explained why she thinks women with AS end up in bad relationships by stating “young women with AS struggle with personal safety because they don’t understand what is happening and don’t have boundaries. They end up being unwilling partners and at risk for abuse.” She shared that, during adolescence and into her early 20’s, she did not “know about” personal safety and this “became an issue for her.”

In her atypical living arrangements, Erin expressed that her life is calmer and less chaotic. However, she continued to struggle with it not being what she thinks she wants.

“I sometimes wonder how long I can be happy with a relationship that doesn’t look like what I want. Lately, though, I have examined the reason I feel the relationship is incomplete and I really think it is because society tells me that to be complete, I need to be in a stable, married-type relationship.”

The Process of Diagnosis

Women with AS have oftentimes not been properly and accurately diagnosed until they seek out the diagnosis themselves. This was a major concern for all of the women and they shared a great deal of information about what it was like for them growing up and in school, what they read about autism when they were younger but not yet diagnosed, and how others led them to understanding that they, as most of these women stated, “probably have it.” Several of them were led to this understanding by having their own children diagnosed as being on the spectrum first and how it was like “looking in a mirror,” said Judith. Four of the five women have children, and each of those four children has been diagnosed as being on the autistic spectrum. Even though they may have read about ASD or had recognized traits in their own children, the women did not pursue their own diagnosis until they had the experiences with their children.

Rosalind shared that “I had begun to see myself as exhibiting the same problems as my son, not just in the present but all through my school years. Somebody had mentioned AS to me a year earlier and I investigated it. I began to realize that I probably had it although I didn’t want to admit it at first.” She

also shared that she wished she had “known about my diagnosis earlier - it would have changed how I kept trying to fit in and what my vocational expectations were. I would have been myself earlier!”

Marie had read about autism many years earlier but noted that the children in the stories had language difficulties that she did not have herself. However, as she started noticing things about her son, “who is a little bit aspie,” she pursued a diagnosis that she knew was “perfectly obvious” that she had.

Judith, too, noticed traits in herself after her daughter was diagnosed as having AS. She believed that her daughter has taught her a great deal about herself, especially giving her courage to pursue her own diagnosis. “Watching her struggle and respond to her environment in so many of the same ways I did at her age, seeing her develop similar interests, persevere, even talk to herself...it was like looking in a mirror. I would ask her to describe to me what she was feeling or why she would do something and her reasons were similar to what I would have done.”

While talking about the diagnosis process itself, the women voluntarily shared their opinions on being compared to men with AS. Rosalind talked about other women with AS whom she has known and about some of their experiences. She has heard that “they know they have AS, too, but they just cannot get the official diagnosis. Many male shrinks like to use the personality disorder label, especially the borderline one, for women with AS.”

Xenia shared her thoughts about other diagnoses women are given first and why she feels girls are not diagnosed right away. “Women have a tendency not to act out and if a woman is eccentric, people don’t feel as threatened, so therefore, it does not get diagnosed. Also, we may get diagnosed with more things like depression and some type of personality disorder if we do get diagnosed.”

On this topic, Judith shared her thoughts about how women should be compared and why. She stated that “AS looks very different in women and we must be compared to NT women, not AS men.” Rosalind had made a similar statement and explained it further by saying that she thinks that women with AS are compared to men, women look “okay” in the social department so that is why women with AS need to be compared to NT women. She emphasized “and that is where I stick out like a sore thumb.”

This issue is echoed by Faherty (2002, p. 9) when she wrote about the women with AS in her women’s group. She wrote that they are “doubly challenged by the added assumptions that society places on the female gender” because they are supposed to relate to society in a certain way, and are supposed to have a “natural empathy towards others.” Lawson (2003) pondered that perhaps being odd may be more obvious because women with AS may not fit how society views traditional roles and rules in her article about being a woman with AS.

It is noteworthy that the children of the women in this study all have been diagnosed as being on the autistic spectrum. This may correlate with increased claims of autism as being genetic, of autism running in families, but may also be related to the gene-environment interaction model as described by Herbert (2006). This model supports the idea that “genes related to autism may not so much cause autism as set some people up to have greater vulnerability to factors that can trigger autism” (Herbert, 2006, p. 20).

Employment Difficulties

Women with AS, like most adults with AS, frequently experience un- and underemployment. All five women have had difficulty with obtaining and maintaining meaningful and satisfying employment. They have all held a great number of jobs in their lifetimes and have lost many jobs for one reason or another. This was an area the participants discussed at length which demonstrated their frustration with this part of their lives. They shared their experiences with trying to obtain and maintain meaningful employment. They encountered difficulties with getting along with co workers and supervisors, and they ended up working in entry level positions for short periods of time. They did not feel as though their experiences were unique to them as women but rather very typical for most adults with AS. Each of them shared a brief summary of their job experiences.

Xenia expressed frustration in what her job experiences have been like. “I have a degree in Political Science but have never worked in this area. I am just trying to get a decent job with decent pay and benefits. I have cleaned cat cages, done janitorial work, office work at the VA, I have been a telemarketer and have done data entry work, and I worked in a group home on the early morning shift. I now work as a respite caregiver for a teenager with autism.” Xenia is a strong advocate for affirmative action as a way to provide meaningful employment for adults with AS.

Rosalind lost another job during the course of this study and it had been a successful one for her, one in which she felt valuable, with children with special needs.

She shared these thoughts: “I had to take whatever job I could get, whatever was offered to me. I have had basically entry level jobs that don’t require a college degree (I don’t have one) or fast food restaurant jobs. I don’t think I’ve ever lasted more than one year at any of those jobs. I was working part-time after a lifetime of failed employment attempts at a preschool for children with special needs but was just let go because of funding cuts.”

Marie has been a secretary for 35 years but has had many different jobs within this field. The longest she has worked at a job was for five years, in a one-person law firm. She shared these comments. “I have had so many jobs in my lifetime. Whenever I work for a large law firm, soon the NT secretaries and other NTs will feel uncomfortable and try to get rid of me. Their problem is that I work very hard, accurately and intelligently. I try to make it as difficult as I can for them to find an excuse to get rid of me.”

Judith met her current husband at one of her many jobs but has been very unsuccessful with being able to maintain any as well. She said “I think the longest I ever held a job was for two years and even then, I juggled a few times within that department. I have been an office assistant, an email tech writer, worked in a pizza place and a clothing store, and tried to run my own crafts business. I mostly did administrative temp work for awhile. At this time, I am not working.”

Erin has many dreams for herself for future employment and enjoys being in the academic setting of college. She shared that “At my current rate of study, I will be a student forever! I wanted to get a Bachelor’s degree in Social Work and go into Psychology after that. I had hoped to have my own private practice someday” but the rigorous schedule of school was difficult for her because of her fibromyalgia and caring for her son, who is on the autistic spectrum as well.

Each of the women was able to explain why she had difficulty in the workplace.

Xenia shared that even though she likes people and gets along well with others, it is easier for her to work in a 1:1 situation. “I don’t do well with working with groups of people.” Judith has changed jobs many times in her life for a variety of reasons. Some of the jobs were “dead-end” and in others, the expectations were not made clear to her. She shared that “I didn’t understand what was expected of me and as usual, I expected myself to just figure it out on my own rather than ask questions.” Marie felt that co-workers became uncomfortable soon after starting a new job and tried to get rid of her. She stated that “I have no trouble doing the work, that isn’t the problem. I really understand the stuff and their problem is that I work so very, very hard” but as one supervisor told her, she didn’t have the “right emotions.” Rosalind shared that her son and sister have told her that she is “negative” and doesn’t “do well” in interviews. She has had to take whatever job was offered to her. If an employer went only by the interview, she “didn’t do well” and was not usually offered the job. She expressed that the job expectations are not always clear to her but when she has told her supervisors that, “they usually make adjustments.” Each of the women felt that if they had better support on the job, if expectations were made clear, and if adaptations were made, they could be very successfully employed.

Recommendations

The women described their struggles with trying to fit in with their peers at school.

One recommendation is to start at a young age to help girls with AS develop skills and self-esteem to be better prepared as adults. Parents and school personnel should encourage girls with AS to join a special interest group, club, or extra-curricular activity in order to be with peers who have similar interests. These may include, for example, the math club, a poetry group, a horse-riding club, the drama club or debate team, a ceramics club, or designing sets for school plays. Participation in groups and organizations can help develop academic and social skills as well as provide opportunities for girls with AS to feel successful and build on their strengths. Being a part of these groups at school can help a girl with AS to develop a higher self-esteem and feel like she is a part of a group, and more able to fit in. Another important issue to address is the direct teaching of social and relationship skills so they can learn how to cope, interact, improve their self-esteem, expand their minds, and utilize their strengths and passions. This can be done through social skills groups, role play situations, social stories, and workshops in high school or college such as anger management, healthy relationships, dealing with a difficult boss (or co-worker), overcoming test anxiety, and stress management.

The difficulties these women have faced regarding employment are not unique to many adults with AS (Hurlbutt & Chalmers, 2004). Information regarding strategies and programs that can help them be more successful in the workplace are becoming more available. Recommendations include the use of the supported employment model, community-based instruction, career-planning, and the master apprentice model (Attwood, 1998, Meyer, 2001; Wehman & Kregel, 1997). It is important to remember to find a good match with the individual’s strengths, abilities, interests, and needs, as well as providing a structured environment with clear expectations, rules, and assignments (Meyer, 2001). Grandin & Duffy (2004) had several recommendations for helping adults on the autistic spectrum be more successful on the job. These included developing a person’s specific talents to help find a job that would make a good fit, controlling and minimizing sensory difficulties, developing social skills to help the individual have more positive interactions with co-workers, and utilizing a mentor to help learn the social rules in the work environment. It is also important to analyze work environments, with regard to specific job requirements and necessary social skills to match the individual’s preferences,

strengths, and unique needs (Hurlbutt & Chalmers, 2004). Other professional support services should also be available for adults with AS to help them cope with the social aspects of the job that may be difficult for them. These services may include psychiatric services, including medication, or psychological, including counseling.

The participants in this study served as a “voice” for women with Asperger Syndrome, an opportunity to hear from some women with AS who have not achieved the successful status as the ones who have published their life stories, those who have not achieved notoriety and fame. However, the results should be interpreted with caution. This study was confined to five women with AS who responded to requests for participants by word-of-mouth and who provided self-disclosure of a formal diagnosis of AS. Therefore, the results of this study are limited to these five specific participants.

The findings and recommendations in this preliminary study contribute to the literature regarding women with AS, a relatively new area to study. It may also contribute to current research on genetics and the role of the environment as related to the diagnosis of autistic spectrum disorders.

APPENDIX A

Sample interview questions

1. Please tell me about your life as a child and growing up in your family.
2. When did you receive an official diagnosis of Asperger Syndrome?
3. What was it like for you in school? Did you receive support in school?
4. What are some of the jobs you have held? What are your experiences on the job?
5. Did you disclose your diagnosis of Asperger Syndrome? What were your relationships like with your co-workers? Your bosses?
6. What would your ultimate job be if you had the chance?
7. Who are the most important people in your life and why?
8. Are you happy with your life right now?
9. What kinds of relationships and experiences have you had with males?
10. Do you feel women with AS are different from men with AS? Why or why not?

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No Child Left Behind and Paraprofessionals Are They Perceived To Be Highly Qualified?

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Abstract

The No Child Left Behind Act (NCLB) of 2001 introduced new requirements for paraprofessionals, specifying criteria for them to achieve “highly qualified” status. This article describes a study which explored the perceptions of teachers and paraprofessional teams as to whether the paraprofessionals would be considered “highly qualified” and more specifically whether they were trained for and competent in carrying out various instructional duties. The results of the study suggest that the NCLB requirements may be poorly understood; even by some of those who already meet the requirements. Furthermore, results indicate that teacher-paraprofessional pairs do not necessarily agree on the extent to which the paraprofessionals are considered trained and competent.

Paraprofessionals and NCLB: Are They Perceived To Be Highly Qualified?

With Public Law 107-110 or the No Child Left Behind Act of 2001 (NCLB) the federal government for the first time set hiring requirements for paraprofessionals working in federally funded schools (Magnuson, 2003). NCLB specified that all instructional paraprofessionals, except those working as translators or solely in parent involvement activities, must be able to demonstrate that they are “highly qualified to assist in teaching reading, writing and math. Three routes to “highly qualified” status are offered: completion of at least two years of post-secondary education; holding an associate degree, or higher; or be able to demonstrate through a rigorous assessment the knowledge and ability to assist in teaching reading, writing, and math. These requirements took immediate effect for new hires; those already in post had until July 2006 to comply.

Although the federal government set the requirements, it is the responsibility of the States to develop and implement an accountability plan certifying the intersection of federal and state standards. School principals operating a program under NCLB sections 1114 and 1115 must submit written notice of compliance to the federal government. However, this method of data collection only measures compliance, and does not indicate whether paraprofessionals truly are adequately prepared (highly

qualified) to assist in instruction. Congress acknowledged the insufficiency of this type of data in the 21st Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (2003):

- *Lack of accurate data affects the capacity of State Education Agencies Local Education Agencies to plan and implement policies and systems to improve the quality of paraeducator performance and to develop comprehensive cost-effective education programs for their paraeducator workforce that recognize the similarities in the skills required by all paraeducators. (sec. III)*

Although the NCLB requirements apply firstly to paraprofessionals working in Title I programs, they also apply to all paraprofessionals working in Title I funded programs, whether they have been hired and funded by Title I or not. Thus, for example, paraprofessionals working in Title I school-wide programs (but employed in such programs as special education) must meet the same requirements as those hired and funded through Title I.

This article summarizes the results of a study examining the perceptions of a group of teachers and paraprofessionals relative to the paraprofessionals' qualifications and skills, and in light of the NCLB requirements. The broad questions asked were:

1. Do paraprofessionals meet the requirements of NCLB for "highly qualified" status? (or are they working towards that status?)
2. Have paraprofessionals received training in various aspects of instruction (related to the roles specified as appropriate in NCLB)?
3. Do paraprofessionals have the knowledge, understanding and skills to carry out a variety of instructional tasks relative to the NCLB approved roles?

More specifically, the study investigated teacher and paraprofessional perceptions of whether the paraprofessionals met the requirements of NCLB, had received relevant training, and had the requisite knowledge and skills to carry out assigned tasks. The results of the survey are reported in the context of the several ways in which States have elected to comply with the NCLB requirements for paraprofessionals. Results are also linked to the standards that the Council for Exceptional Children (CEC) has set for paraprofessionals, as these are consistent with the NCLB listing of appropriate roles for paraprofessionals: one-on-one tutoring, assisting with classroom management, and providing instructional services to students under the direct supervision of a highly qualified teacher (NCLB, 2001).

State compliance with the NCLB requirements for paraprofessionals

According to NCLB, paraprofessionals should have at least an associate degree. All States recognize as highly qualified those paraprofessionals who have obtained an associate degree (or higher) or accumulated the requisite number of hours for two years of higher education credit. This route to compliance is relatively uncomplicated, the only potential difficulty for paraprofessionals being the differing number of credit hours equating with two years of college in different States. However, lawmakers apparently recognized that not all paraprofessionals would be able to meet the higher education standard, particularly in the stated time frame, and offered the third option of a "rigorous assessment" to measure the paraprofessional's ability to assist in instruction. NCLB allowed the assessment to be locally developed, but stipulated that it had to be valid and reliable. The decision as to the assessment to be used could be made at State level, or States could allow school districts to make the choice. The focus of debate in State departments of education since the enactment of NCLB

has been on which “rigorous assessment” should be adopted under the third option. We first look at the various assessments that have become available for paraprofessionals, and then provide some detail of which of these assessments (or other alternative) States have selected.

Assessments

When NCLB was first enacted in 2001, no formal validated test existed specifically to measure paraprofessionals’ competence in instructing reading, writing, or math. In short order, however, three paper and pencil assessments were developed:

- WorkKeys Proficiency Certificate for Teacher Assistants. Developed by the American College Testing Program (ACT) WorkKeys for Teacher Assistants is an adaptation of ACT’s WorkKeys job profiling measure, with a broad skill base suited to career and educational decisions. ACT added Reading for Information, Writing or Business Writing, and Applied Mathematics to the basic test battery, reflecting NCLB’s focus on numeracy and literacy. Unique to WorkKeys is a supplementary structured observation to be completed by a “knowledgeable observer,” assessing the paraprofessional’s instructional skills in an education setting.
- The ParaEducator. Created by the Master Teacher ParaEducator Learning Network, the ParaEducator consists of two modules. Module 1 provides training and assessment material, and Module 2 (which is optional) contains course work that can be downloaded from the internet and placed into a portfolio. Module 1 is subdivided into Instructional Support, and Knowledge and Application.
- ParaPro. Developed by Education Testing Services (ETS), ParaPro is an extension of the Praxis I, designed for use with college students, and measures reading, writing and math skills. ParaPro was developed specifically for paraprofessionals and therefore aims to measure both the paraprofessional’s knowledge base and his or her ability to implement that knowledge in an instructional setting. The ParaPro is taken as a paper and pencil test, or can be taken on computer. Some States have opted to use the basic Praxis rather than ParaPro.

Table 1 provides a comparison between the basic elements and features of ParaPro, WorkKeys and ParaEducator assessments.

Table 1

Content of the Paraprofessional Assessment

Section	Contents	Detail
I	Demographics	Age, gender, ethnicity, level of education, years of experience, classroom and school setting, class size, enrollment in professional organizations
II	NCLB Compliance	Understanding of and compliance with requirements of NCLB
III	Instructional Ability	Statements relating to CEC performance based standards 1, 4, 5 and 7: training, instructional knowledge and applied skills.

As of 2005, thirty-seven education authorities (at state or school district level) had adopted ParaPro, and in-line with NCLB Non-Regulatory Guidance established a minimum cutoff score. These scores range from 450 to 467.

Other assessment interpretations

Four states chose to use locally developed assessments under the third option offered by NCLB:

- Florida opted to use the Florida Teacher Certification Examination Knowledge Test (FTCE)
- Kentucky opted for its own paraprofessional assessment - the Kentucky Paraprofessional Assessment, already in existence
- Michigan opted for the Michigan Test for Teacher Certification - Basic Skills (MTTC)
- Oklahoma opted for the Oklahoma General Education Test (OGET).

Six States-Maine, Massachusetts, Minnesota, New Jersey, New Mexico, and Utah—opted to measure paraprofessionals' skills and knowledge through the presentation of a portfolio, an interpretation allowed by NCLB. The States that chose the portfolio as an assessment have developed their own criteria and standardized guidelines to ensure fairness and rigor in portfolio presentation and approval. Note that Utah – the state in which the reported study was conducted – has approved portfolios as a viable third option for paraprofessionals who were employed before the enactment to show highly qualified status.

CEC Standards for Paraprofessionals

The Council for Exceptional Children (CEC) has long recognized the need for standards for the work of paraprofessionals in special education settings. In conjunction with the National Resource Center for Paraprofessionals (NRCP), CEC developed, validated, and approved the first set of national guidelines for paraprofessionals in 1998. Each of the ten CEC standards outlines the knowledge, content, and skill applications needed for paraprofessionals to a) assist in the instruction of students with exceptionalities, and b) work with instructional team members (teachers, therapists, consultants, and administrators).

The CEC standards refer to the following:

1. State core curriculum, and education foundations
2. the development and characteristics of learners
3. individual learning differences
4. instructional strategies
5. learning environments and social interactions
6. language
7. instructional planning
8. assessment
9. professional and ethical practices
10. collaboration

(See also [Figure 1.](#))

Standards 1, 4, 5, and 7 (Foundations, Instructional strategies, Learning environments/social interactions, and Instructional planning, respectively) focus on the knowledge and skills paraprofessionals need in order to assist a teacher in the instructional process. These four standards are consistent with the NCLB listing of appropriate roles for paraprofessionals: one-on-one tutoring, assisting with classroom management, providing instructional services to students under the direct supervision of a highly qualified teacher (NCLB, 2004).

Figure 1

CEC Standards for Paraeducators	
Standard*	
Knowledge	Skills
Standard 1: Foundations	
1. Purposes of programs for individuals with exceptional learning needs 2. Basic educational terminology regarding students, programs, roles and instructional activities	None in addition to the Common Core
Standard 2: Development and characteristics of learners	
Standard 3: Individual learning differences	
Standard 4: Instructional Strategies	
1. Basic instructional and remedial strategies and materials 2. Basic technologies appropriate to individuals with exceptional learning needs	1. Use strategies, equipment, materials and technologies, as directed, to accomplish instructional objectives. 2. Assist in adapting instructional strategies and materials as directed. 3. Use strategies as directed to facilitate effective integration into various settings. 4. Use strategies that promote the learner's independence, as directed. 5. Use strategies as directed to increase the individual's independence and confidence.
Standard 5: Learning Environments/Social Interactions	
1. Demands of various learning environments. 2. Rules and procedural safeguards regarding the management of behavior of individuals with exceptional learning needs	1. Establish and maintain rapport with learners. 2. Use universal precautions and assist in maintaining a safe, healthy learning environment. 3. Use strategies for managing behavior as directed. 4. Use strategies as directed in a variety of settings to assist in the development of social skills.
Standard 6: Language	
Standard 7: Instructional Planning	
None in addition to Common Core	1. Follow written plans, seeking clarification as needed. 2. Prepare and organize materials to support teaching and learning as directed.
Standard 8: Assessment	
Standard 9: Professional and Ethical Practice	
Standard 10: Collaboration	

* Note: Details of knowledge and skills are given here only for the four standards addressed in this study (1, 4, 5 and 7).(Council for Exceptional Children, 2004.)

Method

Instrumentation

Two survey instruments were created to collect data samples of teachers and paraprofessionals relative to the paraprofessionals' knowledge and skills. Survey items targeted:

- Demographic data (section I)
- Perceptions of paraprofessionals' compliance with NCLB requirements for paraprofessional qualifications (section II)
- Perceptions of paraprofessionals' ability to assist in providing instruction (section III - see also Table 1).

Surveys were completed by paraprofessionals and their supervising teachers, which questioned the individual paraprofessional's qualifications and skills, rather than asking for general perceptions of paraprofessional qualifications and skills. This allowed for comparisons between individual teachers and their paraprofessionals, as well as group trends. Comparisons were also made between responses from paraprofessionals with two years or more of higher education, and those with only a high school diploma or equivalency.

The two instruments were essentially the same, except that one asked for the teacher's opinion of the paraprofessional's compliance and abilities, and the other investigated the paraprofessional's opinion of his or her own compliance and abilities. For example, where the teacher responded to the statement, "The paraprofessional I supervise implements lesson plans with the guidance of a teacher," the corresponding statement for paraprofessional response was phrased as, "I implement lesson plans with the guidance of a teacher." Tables [2](#) and [3](#) detail sections II and III of the survey (paraprofessional version), which address these perceptions. Responses to items in these sections were based on a Likert-type scale. However, a 4-point rather than the usual 5-point scale was used, to force respondents to choose on one side of the question or the other. Each item was a statement, and the four response options were Agree, Partial agree, Partial disagree and Disagree. There were no open-ended responses.

Table 2

Survey Items, Section II (Paraprofessional Version)

Section II. Defining highly qualified paraprofessionals			Yes	No
12*. I understand the requirements for me to be considered highly qualified as a paraprofessional according to the No Child Left Behind Act of 2001				
13. I am highly qualified according to the No Child Left Behind Act of 2001	Agree	Partial Agree	Partial Disagree	Disagree
If you answered YES to question 13 skip questions 14 and 15.				
14. If no, I am working on meeting the highly qualified requirements according to the No Child Left Behind Act of 2001.				
15. I agree/disagree with No Child Left Behind paraprofessional requirements. (Mark the box that fills in the blank)				
16. I am working on the following requirements to meet the No Child Left Behind paraprofessional requirements.	ParaPro	Portfolio	Associate Degree / 2 Years Higher Education	

*Numbering matches the survey given to teachers and paraprofessionals.

The five items in Section II examined perceptions of whether the paraprofessional was highly qualified (or working towards that status). The twenty-one items in Section III explored perceptions of whether paraprofessionals had received training in the various areas covered by the four CEC standards, which were the focus of the section. For each area, there were questions on:

- whether training had been received
- whether the paraprofessional had sufficient skills, knowledge or understanding in that area
- whether the paraprofessional was able to implement appropriate strategies or demonstrate appropriate behaviors in that area.

Questions relating to any one area were intermingled with questions from other areas rather than group together.

Table 3

Survey items, Section III Paraprofessional Version)

Section III. Roles and responsibilities
17. I have received training in how to implement curriculum programs and instructional activities for students with special needs
18. I implement lesson plans with the guidance of a teacher.
19. I have the skills to use instructional strategies to increase the individuals' independence and confidence.
20. I have a basic understanding of the educational programs and instructional activities utilized during instruction.
21. I feel that I have adequate knowledge of the subject matter to assist in instruction.
22. I have received training in basic instructional and remedial strategies, materials, and technologies to assist in the instruction of students.
23. I prepare and organize materials to support teaching and learning as directed by a teacher.
24. I have the skills to assist in adapting instructional strategies and materials as directed by a teacher.
25. I have been trained in how to follow lesson plans and how to prepare and organize materials to support teaching and learning.
26. I have the skills to use instructional strategies to integrate the instructional objectives into various settings.
27. I have adequate knowledge of the curriculum to assist in instruction.
28. I plan and arrange lesson materials as directed by a teacher.
29. I have the skills to apply behavioral strategies in managing student behavior.
30. I have received training on the rules and procedural safeguards regarding the management of behaviors of individuals with exceptional learning needs.
31. I have the skills to use instructional strategies that promote the learner's independence.
32. I have received training on implementing strategies to assist in the development of social skills in various learning environments.
33. I have the skills to promote social skills in a variety of settings.
34. I have the skills to implement behavioral strategies to maintain a safe, healthy learning environment for students.
35. I have the skills to use instructional/remedial strategies in adapting instructional objectives as directed by a teacher.
36. I follow written lesson plans and seek clarifications from a teacher as needed.
37. I have the skills to use strategies in a variety of settings, to assist in the development of social skills as directed by a teacher.

Initially, each instrument was field-tested with paraprofessionals and teachers who were not included as part of the data collection phase of the study. Feedback received from the first field-test indicated that only a few minor changes needed to be made to add clarity. First field-test surveys were also

examined for agreement between responses from teacher-paraprofessional pairs. Agreement was at a 70% level or higher, which was felt to be a sufficiently rigorous standard to assume clarity of intent for each question. A second field test with the revised survey confirmed the results from the first field test and allowed an estimate to be made of average completion time: eight minutes.

Participants

Participants were selected from a list of 225 Title I schools in Utah. These were school-wide Title I programs (TI-SWP), with forty percent or more of students qualifying for free or reduced school lunch, as per Title I requirements (Title I, sec. 1114). Within these schools, all students - regardless of socio-economic status - are eligible for Title I services. A stratified random sample generated twelve TI-SWPs, six elementary and six secondary. Within each of those schools, participants were selected who worked in a variety of special education settings (resource, self-contained, inclusion, or general education with special education support). This totaled thirty participants (fifteen paraprofessionals and their fifteen supervising teachers). Participant demographics are displayed in Table 4.

Table 4

Demographics of Survey Respondents

	Number of teacher respondents	Number of paraprofessional respondents
Gender		
Male	2	2
Female	13	13
Ethnicity		
Caucasian	15	14
Hispanic	0	1
Age range		
18 - 35	7	4
36 - 55	7	7
56 or older	1	4
Highest level of education		
High School Diploma/equivalent		9
2 years of higher education*		2
Associate degree	15	1
Bachelor degree or higher (Masters degree)	(5)	3
Years of classroom experience		
0 - 5 years	6	7
6 - 10 years	3	2
11 or more years	6	6
In-service training per school year		
0 - 10 hours		4
11 - 20 hours		8
21 or more hours		3
Training received as supervisor of paraprofessionals		
Yes	13	
No	2	

* defined as 48 semester credit hours in Utah.

Table 5

Understanding of and Compliance with the Paraprofessional Requirements of NCLB

Question 12. Respondent understands NCLB requirements				
	Paraprofessional Group 1	Supervising Teacher (Group 1)	Paraprofessional Group 2	Supervising Teacher (Group 2)
Yes	4 (45%)	6 (67%)	5 (83%)	4 (67%)
No	5 (55%)	3 (33%)	1 (17%)	2 (33%)
Question 13. Paraprofessional is highly qualified				
Yes	3	3*	5	4
No	6	5*	1	2
Question 14. Paraprofessional is working towards meeting highly qualified status				
Agree	5	4		
Partial Agree	0	1		
Partial Disagree	1	1		
Disagree	0	0		
Question 15. Respondent agrees with NCLB requirements for paraprofessionals				
Agree	1*	0*		
Partial Agree	3*	5*		
Partial Disagree	1*	0*		
Disagree	1*	1*		
Question 16: Route selected by paraprofessional to meet highly qualified status				
ParaPro	2*	1*		
Portfolio	4*	4*		
Associate degree/ 2 yrs of higher ed.	2*	1*		

- Where the number of responses to any one item does not add up to the expected figure, this denotes instances of "no response" or multiple responses.

Results

Section 2: Compliance with NCLB

The participating paraprofessionals were divided into two groups according to the level of their qualifications: Group 1 - High School diploma or equivalency; and Group 2 - at least 2 years of higher education. This allowed examination for possible differences in perception between groups of paraprofessionals according to levels of qualification. Four questions in this section of the survey queried the paraprofessional's current status in relation to NCLB (see [Table 5](#)).

As table 5 shows, approximately half of Group 1 paraprofessionals and all but one of Group 2 paraprofessionals felt that they understood the requirements of NCLB (Question 12). Teachers in Group 1 were somewhat more confident of their own understanding than that of their paraprofessionals; those in Group 2 somewhat less confident than their paraprofessionals. This difference would have been masked the results if they had been combined and reported for Groups 1 and 2.

With regard to whether the paraprofessional would be considered “highly qualified” according to NCLB requirements (question 13), thirty-three percent of both teachers and paraprofessionals in Group 1 perceived the paraprofessional to be highly qualified. In Group 2, the majority of paraprofessionals and two-thirds of teachers saw the paraprofessional as highly qualified as per NCLB.

Questions 14 to 16 were to be answered only by those who considered that the paraprofessional did not meet the requirements for highly qualified status. Of the six paraprofessionals in Group 1 who responded in this way, five stated that they were working towards status (Question 14), as did four of their teachers. Question 15 asked respondents whether they agreed with the requirements of NCLB. The majority of paraprofessionals (67%) in Group 1 did agree, although this agreement was largely “partial;” eighty-four percent of their teachers also expressed partial agreement with the NCLB requirements.

The last question, question 16, in this section asked Group 1 participants which route they were using to meet highly qualified status. Of the paraprofessionals who responded, four stated that they had opted for the portfolio, and two each for the Parapro test, and the higher education route. Thus, some respondents were using more than one route. Of the teachers who responded, four stated that their paraprofessional had opted for a portfolio, one that the paraprofessional had opted for the ParaPro, and one for the higher education route.

Section 3: Instructional abilities

Responses to items in this section were all on a 4 point Likert-type scale (Agree, Partial agree, Partial disagree, Disagree). Results for section 3 items report the agreements between paraprofessionals and their supervising teachers. To measure agreement between teachers and paraprofessionals in the sample, responses were subjected to the following formula: $\text{agreements} / (\text{agreements} + \text{disagreements}) \times 100$. However, percentage agreement is calculated for pairs (a paraprofessional and his or her supervising teacher). [Table 6](#) shows the percentage agreements for each of the items in this section.

Table 6

Percentage agreement between teachers and their paraprofessionals on items in Section III

Survey questions and CEC standards	Agreement between teacher and associated paraprofessional
Standard 1: Foundations	
17. Training on how to implement curriculum programs and instructional activities	60%
21. Has knowledge of subject matter	60%
27. Has knowledge of curriculum,	66%
Standard 4: Instructional strategies	
22. Training in basic instructional and remedial strategies	33%
26. Use instructional strategies to integrate instructional objectives into various settings	46%
31. Use instructional strategies to promote learner independence	33%
19. Use instructional strategies to increase learner independence	73%
35. Use instructional/remedial strategies to adapt instructional objectives	66%
24. Assist in adapting instructional strategies	60%
Standard 5: Learning environments/social interactions	
32. Training on implementing strategies to assist in the development of social skills	53%
30. Training on the rules/ procedural safeguards re. the management of behaviors	26%
33. Promote social skills	73%
37. Use strategies to develop social skills	73%
34. Implement behavioral strategies	60%
29. Apply behavioral strategies	40%
Standard 7: Instructional planning	
25. Trained in how to follow lesson plans and how to prepare and organize materials	60%
18. Implement lesson plans with guidance of a teacher	
36. Follow written lesson plans and seek clarification	80%
23. Prepare and organize teaching materials	66%
28. Plan and arrange lesson materials	80%
	73%

Of the twenty statements to which paraprofessionals and their supervising teachers responded on the 4-point Likert-type scale, 70% agreement or higher was evident for only 6 of the pairs' responses. Four of these represented two sets of paired questions (i.e. questions that investigated the same issue but were phrased differently): one relating to promoting social skills, the other relating to the preparation of lesson materials. The other two responses that met or exceeded the 70% level related to two separate issues, i.e. the level of agreement between teachers and their paraprofessionals was inconsistent on these issues, with 70% or higher for one of the paired questions but lower for the associated paired questions. Thus, although agreement on responses to question 19 (use of instructional strategies to promote learner independence) exceeded the 70% level, agreement for its partner question (31) was only 33%. Likewise, although agreement for question 18 (implement lesson plans with guidance of a teacher) was at 80%, agreement for its partner question (question 36) was only at 66%. Responses to questions relating to CEC Standard 1 (Foundations) all failed to meet the 70% level.

Discussion

The questions of broad interest for this study were:

1. Do paraprofessionals meet the requirements of NCLB for "highly qualified" status? (or are they working towards that status?)
2. Have paraprofessionals received training in various aspects of instruction?
3. Do paraprofessionals have the knowledge, understanding and skills to carry out a variety of instructional tasks?

These questions were translated into a survey investigating the perceptions of paraprofessionals and their supervising teachers, as to whether the individual paraprofessionals met the requirements and had the necessary training and skills. Of particular interest was the level of agreement between teachers and paraprofessionals on these points. We will discuss each of the sections of the survey in light of the reported results and the issues they raise.

Section 1: Demographics

Gender and ethnicity distribution for survey respondents present few surprises as the majority of paraprofessionals in the US are female, and in Utah, as with all states, few ethnic minority groups are as yet represented in the teaching profession despite a growing minority population. In these aspects, this sample can therefore be taken as representative of the larger population of teachers and paraprofessionals in Utah.

Section II: Defining highly qualified paraprofessionals

In Table 6, thirty-three percent of both teachers and paraprofessionals in Group 1 perceived the paraprofessional to be highly qualified according to NCLB requirements. This is a direct contradiction to their placement in Group 1, and to the NCLB "highly qualified" standards. They were placed in Group 1 because they had no post-secondary education (although this grouping was of course unknown to them and only used for data analysis). In Group 2, only two-thirds of teachers and not all paraprofessionals considered that the paraprofessional met the NCLB requirement even though all of these paraprofessionals had at least two years of higher education (the requirement for highly qualified status as well as the criterion for being included in Group 2). Of course, responses to Question 12

provide a context for these and other questions relating to NCLB. Only 45% of Group 1 paraprofessionals and 67% of their teachers claimed to understand NCLB; paraprofessionals and teachers from Group 2 were more optimistic about their understanding. However, for both groups this understanding must be questioned, given their responses to the question of whether the paraprofessional met the requirements.

Responses to question 14 suggest that teachers may not be aware of steps which their paraprofessionals may be taking to enhance their qualifications and status. This is supported by the differential responses to Question 16, regarding the methods that the paraprofessionals were using to try and meet NCLB requirements. If a paraprofessional is working on a portfolio, it is likely to be quite evident to the supervising teacher, as the paraprofessional would be collecting physical evidence from her work in the classroom, and would need the teacher's input for items such as evaluations and work samples. However, if the paraprofessional were attending college classes in the evenings, this would not be as obvious to her supervising teacher. It is interesting to note that the paraprofessional respondents appear to be hedging their bets by pursuing more than one option. This may reflect indecision in relation to career paths, or a lack of confidence in their ability to meet a particular requirement within the given period. The large proportion of respondents using the portfolio route may presumably be explained by the fact that Utah recognizes the portfolio as a valid option for meeting NCLB, with the ParaPro test also being considered a valuable portfolio item.

Question 15 – limited to Group 1 respondents – investigated whether respondents agreed with the requirements of NCLB, although the word “agree” was open to interpretation. The majority of paraprofessionals did agree, but not whole-heartedly; the teachers who agreed were more numerous. The publication of NCLB requirements in 2001 caused considerable consternation among paraprofessionals and school administrators because of the practical difficulties inherent in requiring a low-paid workforce, often with family responsibilities, to pursue higher education, largely at their own expense. Although the third option of a “rigorous assessment” was allowed, the fact that no such assessment existed for paraprofessionals when NCLB was enacted did not appear particularly helpful. The swiftness with which several such assessments were produced and the extent to which States have adopted them is indicative of the perceived difficulty of meeting NCLB requirements in any other way. We speculate that the lack of full agreement with NCLB may be due to the related difficulties, as research evidence suggests that paraprofessionals were anxious to increase their skills and knowledge prior to the enactment of NCLB requirements and with little or no monetary incentive, (Morgan, Ashbaker and Allred, 2000)

Section III: Roles and responsibilities

Survey items in this section were based on the CEC Standards for Paraeducators, in particular standards 1,4, 5 and 7 which deal with Education foundations, Instructional strategies, Learning environments and social interactions, and Instructional planning. Results were reported in terms of agreement between individual teachers and their paraprofessionals on each of the items. Teachers and paraprofessionals typically work closely together, and all respondents worked in some form of special education setting, although these did range from self-contained units to support given in general education classrooms. Thus, not all pairs will have been working in close physical proximity. Percentage agreement on items in this section ranged from a low of twenty-six percent to a high of eighty percent, although as Table 6 shows a full two-thirds of items have an agreement rate of sixty percent or more.

Each item in Section III related to one of the four CEC Standards, but the several items associated with any one Standard were intermingled with items relating to other Standards. This allowed the researcher to address issues more than once, and to verify understanding by asking what was essentially the same question—re-phrased. Thus the five questions relating to Standard 7 (Instructional planning), for example, do not appear consecutively in the survey (being questions 18, 23, 25, 28 and 36). Within this group, the questions are also paired, with 18 and 36 relating to implementation of lesson plans, 23 and 28 relating to planning and organizing lesson materials. This pairing however is not evident from the percentage agreements between teachers and paraprofessionals on the extent to which the paraprofessionals meets the standard.

The items for which there is the closest match between agreements on such paired questions relate to the paraprofessional's ability to promote or help students develop social skills. Indeed, the percentages are not only identical but relatively high at seventy-three percent. Helping students to develop social skills is often an area of emphasis in special education settings, and some paraprofessionals may spend almost as much time on this as on their strictly instructional duties. This may account for the consistency and extent of agreement between teachers and their paraprofessionals. The paired questions with the largest discrepancy in agreement levels are those relating to the paraprofessional's ability to use instructional strategies to promote learner independence (questions 19 and 31). This can be tricky for paraprofessionals, whose work is based on the concept of supporting student learning. The extent to which they succeed in supporting the learning process without over-supporting the student (and therefore maintaining student dependence) naturally varies, as does the extent to which student independence is promoted and valued by individual teachers and paraprofessionals.

Of particular interest are the percentage agreements between teachers and their paraprofessionals on whether the paraprofessionals had received training in the various areas addressed by the four CEC standards:

- how to implement curriculum programs and instructional activities - 60% agreement
- basic instructional and remedial strategies - 33% agreement
- implementing strategies to assist in the development of social skills - 53% agreement
- rules and procedural safeguards regarding the management of behaviors - 26% agreement
- how to follow lesson plans and how to prepare and organize materials - 60% agreement.

This re-visits an issue which has been raised elsewhere (Morgan and Hofmeister, 1997): that administrators must make training for paraprofessionals obvious and transparent, not only in terms of content, but also in the fact of its having taken place. Too often paraprofessionals receive mentoring or other on-the-job training from a teacher or other professional, and accord it little credibility, recognizing only off-site, formal training events as worthy of note. In light of the increasing number of due process hearings and OCR investigations relating to the adequacy of paraprofessional training and supervision (see Ashbaker & Minney, 2005) and the potential dire consequences to school districts and their students of complaints being upheld, paraprofessionals must be taught to recognize training when it is given. The true extent of the training received by these respondents was not ascertained. Nevertheless, the fact that they and their teachers could not agree on whether they had been trained or not should be of concern, particularly in these areas that are typical of the paraprofessional role. Of especial concern is the very low rate of agreement (26%) on whether the paraprofessional had received training in rules and procedural safeguards, a critical area for paraprofessionals working in special education settings.

Conclusion

The re-authorization in 2001 of the Elementary and Secondary Education Act, known as the No Child Left Behind Act of 2001, while not primarily focused on the qualifications of paraprofessionals, nevertheless included new and significantly higher levels of qualification for paraprofessionals working in Title I programs and schools. With No Child Left Behind Act of 2001, the federal Government has for the first time set hiring requirements for paraprofessionals working in Federally funded schools. Paraprofessionals already employed prior to NCLB requirements were given until July 2006 to comply with the aforementioned requirements. The aim of this study was to investigate whether paraprofessionals do, indeed, meet the “highly qualified” status; are working towards such status; have received training in various aspects of instruction; and whether such paraprofessionals have the knowledge, understanding and skills to carry out a variety of instructional tasks. Furthermore, the study investigated the perceptions of teachers and paraprofessionals in order to ascertain whether they felt that they met the requirements of NCLB; whether they had received relevant training; and whether they felt they had the knowledge and skills requisite to carry out their assigned tasks.

The results of the study found that; paraprofessionals and teachers alike are unclear in their understanding of the requirements of NCLB; not all teachers and paraprofessionals agree with the requirements set forth by NCLB; not all paraprofessionals meet the requirements for ‘highly qualified’ status; some paraprofessionals are still working towards achieving such status; some paraprofessionals are utilizing more than one route to enable them to qualify; some teachers may not be aware of the steps which their paraprofessionals may be taking to enhance their qualifications; there is discrepancy between some teachers and their paraprofessionals as to whether paraprofessionals are, indeed, “highly qualified” or not; and there is a discrepancy between teachers and paraprofessionals as to the instructional abilities of paraprofessionals.

The implications of these findings are, firstly, that there is clearly confusion between teachers and paraprofessionals as to what the requirements entail, exactly. Furthermore, there is discrepancy as to how to go about attaining the standards set forth by the Federal Government. Also, there is discrepancy between teachers and paraprofessionals as to how qualified the paraprofessionals actually are at present. In addition, most schools and school districts may not even be aware that their paraprofessionals may still need additional training. Indeed, some paraprofessionals did not know about the law to begin with.

Although, in accordance with NCLB, the time limit of July 2006 for paraprofessionals to be fully qualified has expired, the fact remains that the status of most paraprofessionals currently remains the same as before the NCLB law was enacted. Much confusion still remains as to the status of paraprofessionals with regards to their preparation and completion of the aforementioned requirements. Moreover, there does not seem to be a governing body responsible for ensuring that paraprofessionals are working towards, or, indeed, have completed the requirements.

Most paraprofessionals did not know about the law and few actually met the requirements to be considered under the appointed ‘highly qualified’ status – neither did they have sufficient time to meet such qualifications within the allotted timeframe. Clearly, many paraprofessionals are still struggling to qualify. Moreover, they are unsure as to whether they are on the right track in doing so. Teachers themselves are unclear as to the status of their paraprofessionals, thus, the question begs as to what is to be done to remedy this situation.

What does remain clear is the fact that much confusion still abounds between teachers and their paraprofessionals. Clearly, there should be a governing body accountable to see that the necessary requirements are met. Furthermore, that such a body should also be available to address, and to clarify for teachers and paraprofessionals any questions pertinent to qualification status.

Indeed, every effort should be made to assist paraprofessionals in their endeavour to meet the requirements necessary. Paraprofessionals are often unsung heroes who, while in the shadow of the teacher, are the teacher's eyes, ears and right hand. They are in the classrooms, alongside the teachers, rendering essential and valuable assistance and support to both teachers, and their students.

The ultimate goal of schools is to provide a superior quality of education for all children and to prepare them to enter the wider world equipped with the knowledge and skills necessary to sustain themselves and their families, and to be productive and contributing members of society. This is a lofty goal, thus, every effort should be made to ensure that all school personnel are fully qualified to assist in this noble endeavor. Priority, therefore, must be given to the training and support of all personnel.

For the scope and purpose of this study, we present the needs of paraprofessionals. It is our hope that, as a result of this study, more assistance may become available for, and that better clarity will ensue for paraprofessionals. Failing this, we suggest that more research needs to be done in order to determine what is being done to assist paraprofessionals meet their training obligations. In addition, research needs to be done as to whom paraprofessionals should be accountable to, and, to whom they can turn for guidance and assistance in their training, and in reporting their progress.

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Using a Checkbook Management System to Decrease the Inappropriate Speaking-Out Behaviors of a 14-Year-Old Special Education Student

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Abstract

The authors utilized Applied Behavior Analysis to examine the effects of using tokens with response cost (the Checkbook Management System) on decreasing the inappropriate speaking-out behaviors of a 14-year-old special education student. After functional behavior analysis indicated that the most likely function of the behavior was attention seeking, an intervention was designed to provide attention and tokens contingent upon the performance of the functional alternative behavior of hand-raising and waiting to be called on. Results showed a 67 % decrease in the mean target behavior from baseline to intervention conditions.

Introduction

The act of constantly blurting-out inappropriate comments during classroom instruction is a common behavior that can be very disruptive not only to the teacher and students, but to the educational process as a whole. Many teachers attempt to change these behaviors by punishing, threatening, blaming, and criticizing students, but these methods either do not work or work only on a short term basis (Brock, 1998). Often, when the punishments are removed, students will revert to their former inappropriate blurting out. Teachers are often unfamiliar with the methodology involved in creating and implementing successful interventions, and the need for the design of teacher friendly, effective, and enduring interventions to deal with disruptive classroom behavior is obvious (Kehle & Bray, 2000). One research proven intervention that is relatively easy to implement in a special education classroom is the token economy system with response cost.

The effectiveness of token economy systems is well documented. Token economies involve giving tokens to students for appropriate behaviors. Students collect the tokens and trade them in for items that they find reinforcing. Many researchers agree that the token economy system, if used correctly, is very effective for students who are resistant to other types of motivational or behavior management techniques (McIntyre, 2005). In some cases, however, reinforcement alone is not enough to modify a behavior. In those cases some form of punishment, most commonly a verbal reprimand, may be utilized. However, many researchers agree that although verbal reprimands are sufficient for some students, more powerful consequences, such as response cost programs, are needed for others (Brock,

1998). Response cost allows the removal of previously awarded reinforcers as a penalty for inappropriate behavior (Utah State Office of Education).

At least one study (Oosterlaan & Sergeant, 1998) found no difference between the effects of reward and punishment on the behaviors of adolescents with AD/HD, however, that study had a small sample size. Conversely, many other studies suggest that response cost and other negative consequences are even more important and effective for changing the performance of children with attention deficit/hyperactivity disorder (AD/HD) than for changing the behaviors of other children. (Abramowitz, O'Leary, & Rosen, 1987; Acker & O'Leary, 1987; Douglas, 1985, 1989; DuPaul, Anastopoulos, Shelton, Guevremont, & Metevia, 1992; Haenlein & Caul, 1987; Newman & Wallace, 1993; Pfiffner & O'Leary, 1987; Quay, 1988a, 1988b, 1997; Rapport, Murphy, & Baily, 1982; Rosen, O'Leary, Joyce, Conway, & Pfiffner, 1984; Wender, 1972). Combined, token economy and response cost have been shown to be quite effective in reducing noncompliant and disruptive behaviors (Musser, Kehle, Jensoiv, & Bray, 2001).

In the literature reviewed, numerous teachers and researchers indicated that desired behaviors increased and inappropriate behaviors decreased after a token economy system with response cost was applied (Brock, 1998; Cullinan & Cruz, 2001; Pelham & Fabiano, 2003; Musser, Kehle, Jensoiv, & Bray, 2001; Utah State Office of Education, 2005). Another reason that token systems are very successful and are widely implemented is because they are relatively easy-to-use interventions that effectively manage students' behavior and motivate learning. Unfortunately, studies show that although many teachers are familiar with behavior modification programs, many do not know how to implement them into their classrooms (Pelham & Fabiano, 2003). However, O'Leary and Drabman (1971) found that teachers using the token economy program with response cost do not need much training in behavioral principles in order to implement the programs successfully.

One example of a token economy system involving response cost is the checkbook behavior management program (Siegel, 1995). Studies have shown that money can be an effective motivator for behavioral change (Braksick, 2000; Daniels, 1989). In the checkbook management program, students have the opportunity to earn token "money" for appropriate behaviors. In addition, fines are implemented for inappropriate behaviors. With the teacher facilitating, students contribute to developing a list of appropriate and inappropriate behaviors that are tracked and rewarded or fined. Students also come to an agreement regarding how much "money" can be earned for appropriate behaviors, and how much of a fine they will pay for inappropriate behaviors. Lists of behaviors and associated costs are created and posted prominently in the classroom. Students are given checkbook registers to track their account balance by depositing any "earnings" and subtracting checks that they write to pay any penalties. At specified times, students have the opportunity to shop and spend their money on items they themselves have identified as rewarding. This strategy meets many of the requirements noted to be effective in producing behavioral change including:

- 1) individualized reinforcement
- 2) clearly defined behaviors
- 3) consequences contingent upon the behavior
- 4) consequences applied as soon as possible (Braksick, 2000; Daniels, 1989).

Method

The purpose of this study was to determine if a checkbook management system would decrease the inappropriate blurting-out behaviors exhibited by a 14-year-old male special education student. Blurting-out of inappropriate comments was defined as the shouting-out or speaking-out of comments that have nothing to do with the material being taught or task at hand during direct instruction or independent seat work. The dependent variable for the study was blurting-out inappropriate comments during class. The independent variable for the study was the token economy system with response cost (Checkbook Management System).

Subject and Setting

The subject is “Ken”, a 14 year 5-month-old African American boy with the classification of specific learning disability who was in an eighth-grade special education classroom. Although Attention Deficit Hyperactivity Disorder (ADHD) was suspected, Ken's mother indicated that she never had him tested for the condition, and he was therefore not medicated. Ken’s off-task and inappropriate blurting-out behaviors were extremely disruptive to the learning process within the class.

The investigation took place in a special education resource language arts classroom. The public junior high school followed a block schedule format for language arts, and these classes were longer in time than the typical class period. The classroom consisted of 4 girls and 7 boys, and instruction was provided by the special education teacher who was assisted by one paraprofessional. The students’ disabilities ranged from specific learning disabled to other health impairments, with one student identified as emotionally disturbed. Ken's teacher used a traditional classroom format which consisted of daily oral language, homework check, direct instruction, independent practice, sustained silent reading, and review. The teacher was prepared with materials and lessons daily.

Research Design

An AB teaching design was used to determine whether the use of positive attention and the checkbook system decreased Ken's blurting-out of inappropriate comments. This design was chosen for its simplicity, and ease of use. This design gave the teacher an immediate means of comparing Ken's "before" and "after" blurting-out behaviors.

Baseline

A scatter plot analysis was completed in the language arts classroom during direct instruction and independent seat work. Based on the data collected, it was determined that Ken’s inappropriate blurting-out behaviors were exhibited more frequently during the direct instruction portion of the class. On one occasion, the teacher was leading a class discussion on pronouns, and Ken yelled out, "Hey, did anyone see Survivor last night?" When the inappropriate behavior occurred, the teacher usually ignored the student, turned to look at him, or snapped her fingers at him. On the occasions when Ken exhibited the inappropriate behavior numerous times during the same class period, she gave him lunch detention or punish work that consisted of copying definitions from the dictionary.

Due to the frequency of Ken's inappropriate blurting-out behaviors, and the fact that the behaviors were discrete, event recording was used to collect data. This method of data collection is also considered the most accurate method (Alberto & Troutman, 2006). An event recording data sheet was

used to record the amount of times the target behavior was exhibited. Data was expressed in terms of rate because the length of time devoted to the class varied from day-to-day. Every time Ken would blurt-out an inappropriate comment, the researcher would record a tally mark on the data sheet. During baseline data collection, Ken exhibited the inappropriate blurting-out behavior an average rate of .37 per minute. The goal set for intervention was for Ken was to decrease his blurting out behaviors in language arts resource by 75% by the end of the study (or down to a rate of .0925 times per minute). In order to make this goal more attainable, the researcher broke the goal down into smaller objectives that he could achieve. The first objective was to decrease the target behavior by 25% to a rate of .28 times per minute. The second objective was to reduce the target behavior by 50% to a rate of .18 times per minute.

During baseline and throughout the study, an independent observer assisted in data collection 10 out of the 20 times that Ken was observed. Both observers used identical data collection procedures, and interobserver reliability was calculated at 85%. According to Alberto & Troutman (2006), “Applied behavior analysts aim for a reliability coefficient of around 90%. Anything less than 80% is a signal that something is seriously wrong” (p. 92). Interobserver reliability was calculated by dividing the smaller amount of tallies observed by the larger number of tallies observed, then multiplying by 100 to derive the percentage of agreement. Data collection procedures remained constant throughout the study both during baseline and throughout the investigation.

Intervention Plan

The only change from the baseline condition was the introduction of positive attention and the checkbook system. To determine the function of the behavior, a Functional Behavior Assessment involving both direct observation and indirect assessment was completed with the assistance of all of Ken’s teachers. The antecedents and consequences surrounding the behavior were recorded and analyzed. From the results, it was determined that Ken’s inappropriate behaviors occurred primarily in the classroom during the direct instruction portion of the class, and that he gained positive peer attention as a result of the behavior. Based on these results, it was hypothesized that the function of Ken’s behavior was to gain attention from his peers and teacher. Based on the hypothesized function, the intervention was designed to teach Ken the functional alternative behavior of raising his hand and waiting to be called on in order to receive both teacher and peer attention. Differential reinforcement of alternate behavior (DRA) was used by giving Ken attention only when he raised his hand and waited to be recognized before speaking out. In addition to recognition, the checkbook management system was chosen as an additional method of giving Ken attention and reinforcement when he was not blurting out.

The investigator chose to introduce the checkbook system to the entire class. Although the entire class participated in the intervention, data was only collected on the subject of the investigation. After five days of baseline that met the criteria for stability were collected, the teacher introduced the students to the intervention. She began with a whole class discussion about appropriate and inappropriate behaviors, then instructed the students on hand-raising rather than blurting-out during direct instruction and independent seat work. The teacher modeled the procedures for the students and then had them role-play the replacement behavior. Students were told that they would soon be participating in a new system that was intended to reward them for appropriate behaviors and have them pay a consequence for inappropriate behaviors. Students were also told that this new system simulated real-life and they would be writing checks and balancing checkbooks such as is done in real-life. Students

were told that they would be taught how to write checks, maintain a ledger, and balance checkbooks prior to beginning the intervention.

Three days prior to beginning the intervention, the teacher held a mini-lesson on check writing. Students were given computer generated blank checks and copied the instructor as she modeled the correct way to complete a check. Students were then given purchasing scenarios and were given the opportunity to write checks independently. Students and teacher also worked together to come up with a list of behaviors that they felt were appropriate for "rewards" and to assign a "price" to each reward. The following day, the teacher held a mini-lesson on maintaining a ledger and balancing a checkbook. Again, purchasing scenarios were given and students were assisted in check writing, transferring amounts to a ledger, and adding or subtracting the amounts. Once this lesson was completed, the students and teacher worked together to create a list of behaviors that they felt were inappropriate, and assigned a "cost" to be used as a consequence to each of those behaviors.

On the day prior to beginning the intervention, the teacher and students again came together as a whole group and discussed the "store." The teacher and students decided that the store would be open on Fridays and the students submitted a list to the teacher of items that they would like to see in the store and price values of each item. Students were told that initially the costs and rewards could be used in the store at face value. Students were informed that the reward system would change to become more challenging as time went on to teach them more about the realities of life. For instance, at some point in time rent and sales tax would be charged, inflation would occur, and alternate rewards in the store as well as costs and reward dollars could be added or subtracted. Students were also told that audits would occur from time to time to ensure that ledgers were being maintained appropriately, and they would incur charges if the ledgers did not balance. Because of time constraints, data was only taken for a four week period, however, the intervention was kept in place after the study concluded.

On the day that the intervention began, the teacher handed folders containing the checkbooks and ledgers to students as they entered the class. Students were reminded that the intervention was in effect. The instructor maintained a tally form on a clipboard with her at all times. The tally form contained the names of all the students in the class. The teacher marked appropriate and inappropriate behaviors during direct instruction and/or independent seat work. At the end of each day the teacher transferred the data for Ken from the class tally sheet to an event recording data sheet.

Fifteen minutes prior to the end of the class period, the teacher called each student one at a time to her desk to discuss his or her cumulative total for the day. Students were then asked to return to their desk to record their totals in the ledger. If students lost money due to infractions, they were asked to write checks to the teacher for that amount, noting the infraction on the check, and the teacher wrote checks to students who earned reinforcement. This was continued on a daily basis. During the third week of data collection, rent was added and occasional audits were made. The teacher randomly selected one ledger each day to be audited. Students whose ledgers did not balance were imposed a fine and sent back to their desks to correct the errors.

On Fridays, the teacher completed instruction earlier than usual in order to allow students time to visit "the store." The teacher posted the items available in the store and the price associated with each item. Students were then asked to decide what items they wanted to purchase, to write a check for the amount of purchase, and subtract the total from their ledgers. Each student was then given the opportunity, one at a time, to enter the store area, select an item, and pay the teacher for his or her

purchase. Students were then given the remainder of the class period (10-15 minutes) to enjoy their purchases.

Results

Baseline data demonstrated that Ken's blurting-out of inappropriate behaviors were occurring at an average rate of .37 times per minute, ranging from a high of .50 times per minute to a low of .27 times per minute (Figure 1). The average rate of blurting-out inappropriate comments for the three week intervention period was .13 times per minute. During the first week of intervention, Ken's rate of blurting-out decreased to an average rate of .11 times per minute. Data collected during the second week of intervention showed that Ken's average rate of blurting-out inappropriate behaviors for that week were also .11 times per minute, and the average rate of blurting-out inappropriate comments during the third week of intervention was .17 times per minute.

On the first day of intervention, the rate of Ken's behavior dropped from .43 times per minute on the last day of baseline to .14 times per minute, a percentage decrease of 67%. From session 6 to session 12, the trend was slightly down, but began climbing slightly from session 13 to session 20. There was only one crossover point, resulting in a percentage overlap of 6.7%.

Discussion

Although the investigation lasted only twenty sessions (five of which were for baseline data collection), or for a total of four weeks, the results were promising. The data collected suggested that the intervention was effective ([Figure 1](#)). Ken did meet objective #1 and objective #2 (25% and 50% respectively). However, he did not meet the terminal goal of reducing his target behavior by 75%. Although Ken's teacher was very pleased with outcome of the investigation, she would have liked to have seen Ken achieve his goal of decreasing behaviors by 75%. In addition, as evidenced by the data illustrated in the graph, Ken's rate of blurting-out behavior appeared to slightly increase towards the end of the study. This may be due to the fact that Ken's finances fell into the negative range after "rent" was added in the third week because he was very prompt in spending any money that he earned. Therefore, it was not long before Ken had used all of his money and was no longer able to purchase items on Friday. The researcher believes that because the incentive to purchase items on Friday was no longer available for Ken, this was the reason that Ken's rate of blurting-out behaviors began to increase. One idea to avoid this situation in the future is to require students to place a certain percentage of their earnings into a "savings" account in lieu of allowing them to spend it all at one time. One other possibility is that the additional cost of "rent" may have been applied too quickly, and that more time in the intervention should be allowed before adding additional costs.

Limitations of the study include the fact that the AB design does not allow for the determination of a functional relationship because this research design does not provide for replication. In addition, due to time constraints data was only collected for a four-week period.

The results of this study imply that using positive attention along with a checkbook management program can successfully reduce the blurting out behaviors of a 14-year-old male special education student. Similar studies should be conducted to determine the value that this approach can have for modifying the behavior of students of various ages and developmental levels. These studies should

include the collection of maintenance data so that a functional relationship may be established between the intervention and any change in behavior.

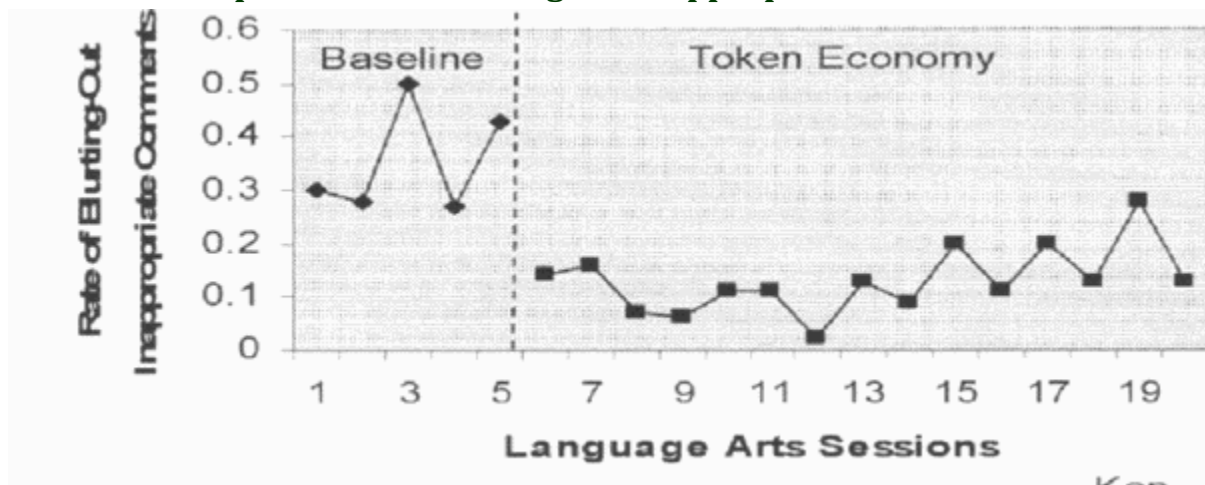
Table 1

Data Table of session dates and occurrences of target behavior

Date	Session	Baseline	Rate of Occurrences
10/03/05	1	.30	
10/04/05	2	.28	
10/05/05	3	.50	
10/06/05	4	.27	
10/07/05	5	.43	
10/10/05	6		.14
10/11/05	7		.16
10/12/05	8		.07
10/13/05	9		.06
10/14/05	10		.11
10/15/05	11		.11
10/16/05	12		.02
10/17/05	13		.13
10/21/05	14		.09
10/22/05	15		.20
10/25/05	16		.11
10/26/05	17		.20
10/27/05	18		.13
10/28/05	19		.28
10/29/05	20		.13

Figure 1

Graph of rate of blurting-out inappropriate comments



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The Section 504 Process in Middle School

Perspectives of Parents, Teachers and Section 504 Coordinators

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Abstract

This phenomenological study investigated the perceptions of three teachers, four parents, and three Section 504 coordinators regarding the development and implementation of the Section 504 process for children in middle schools who have attention deficit disorder, attention deficit hyperactive disorder, or central auditory processing disorder. Analysis of the data gathered revealed that parents and teachers lacked a clear understanding the Section 504 process and often felt frustrated during the development, implementation, or review of a student's Individual Accommodation Plan (IAP). Furthermore, lack of time within a teacher's schedule was a major barrier to collaboration and communication with parents. Based on the findings of this study, the authors make specific recommendations to educators and parents for improving the Section 504 process so that students will receive the greatest benefit.

Introduction

Section 504 of the Rehabilitation Act of 1973 is a federal anti-discrimination statute protecting the civil and constitutional rights of persons with disabilities (29 u.s.c. 794 (a), 1998). Under Section 504, one might expect accommodations to be made in the school setting for such diseases, conditions, and disabilities as attention deficit disorder with or without hyperactivity, anxiety, asthma, behavioral difficulties, central auditory processing disorder, cerebral palsy, communicative diseases, conduct disorder, depression, drug/alcohol addiction, eating disorders, medical conditions (e.g., allergies, diabetes, heart disease, cancer, hemophilia), obesity, posttraumatic stress syndrome, and temporary illness (Miller & Newbill, 2006).

Interpretation and understanding of the mandates set forth by Section 504 for eligible students continue to evolve in the field of education. For more than 20 years, Section 504 was virtually ignored by many public schools because many administrators assumed that meeting the needs of students with disabilities under P. L. 94-142 was all that was required (Council of Administrators of Special Education, 1992). School district administrators perceived their main obligation under Section 504 as ensuring physical access to public buildings (i.e., ramps were installed, curbs were cut, elevators were added to multi-story buildings, etc). As parents and advocates for children with disabilities learned more about Section 504, schools were required to respond to requests for protections and services under this law (Smith, 2002).

In 1991, a joint policy memorandum from the Department of Education and Office of Civil Rights (OCR) brought Section 504 legislation into the forefront and initiated widespread discussions about its implementation in public schools (Davila, Williams, & MacDonald, 1991). The Department of Education and Office of Civil Rights have become active in assisting school district personnel to broaden their understanding of “equal access” to include classroom accommodations and modifications through individual accommodation plans for students with special needs.

The individual accommodation plan is a document developed by a team of individuals who know the student. It describes the student’s disability and outlines the accommodations and modifications that will be made by the general education teachers and other school staff. Individual accommodation plans are developed and implemented so that students can be successful in their educational programs (Conderman & Katsiyannis, 1995; deBettencourt, 2002). Section 504 individual accommodation plans are intended to “level the playing field” so that students with disabilities have equal opportunities (Miller & Newbill, 2006; Smith, 2002).

Smith (2002) stated that Section 504 is not the responsibility of special education; rather, it is the responsibility of general education and all institutions receiving federal financial assistance must comply with Section 504. Therefore, it is especially critical for general education teachers to understand the educational implications of Section 504 as it relates to students in their classrooms. In the early 1990’s, a high school social studies teacher was sued by a students’ parents for refusing to provide oral testing, an accommodation listed on the student’s individualized education program. The teacher lost the case and was required to pay \$15,000 in punitive and compensatory damages as well as attorney fees (Zirkel, 1997). Even though the accommodation was listed on an individualized education plan rather than an individualized accommodation plan, the ramifications for general educators who do not comply with the law are becoming evident in the courts.

The current research on Section 504 primarily addresses the legalities of the Section 504 process; comparisons of the Individuals with Disabilities Education Act to Section 504; the Americans with Disabilities Act; and specific accommodations and modifications that may be incorporated into a student’s individual accommodation plan. There is a limited amount of research available that addresses the perceptions of the stakeholders involved in the Section 504 process. The purpose of this research study was to extend what is known about Section 504 and its implementation in middle schools from the perspective of teachers, parents, and Section 504 coordinators.

Method

Participants and Setting

This was a qualitative study of 10 individuals (four parents, three teachers and three Section 504 Coordinators) who had direct experience with the Section 504 process in the middle school setting. The participants were selected using purposeful sampling procedures (Miles and Huberman, 1994; McMillan and Schumacher, 2006).

The parents were selected for the study based on three criteria. First, their child had to be diagnosed with a disability such as attention deficit disorder, attention deficit hyperactive disorder, or central auditory processing disorder. The reason for choosing the diagnoses of attention deficit disorder, attention deficit hyperactive disorder, and central auditory processing disorder was that these conditions are often considered to be “hidden disabilities” and accommodations are directly related to

the child's ability to learn. The second selection criteria was that the children of these parents were of middle school age and were currently in the sixth, seventh, or eighth grade. The final selection criteria were that an individual accommodation plan had been written for their child while in middle school. Two of the four parent participants were chosen from the state Parent to Parent network. During the initial interviews with these two parents, they identified two other parents who had children that met the criteria. One of the parent participants had a son who was diagnosed with attention deficit disorder and fine motor difficulties, two parents had sons who were diagnosed with attention deficit disorder, and one parent had a daughter who was diagnosed with central auditory processing disorder.

Teacher participants were selected from a list provided by the school principals. Three criteria were used to select three teachers for this study. First, they needed to have at least five years of teaching experience in the middle school setting. Second, teachers were chosen who had experience with the Section 504 process and had taught students with a variety of disabilities (including those with attention deficit disorder, attention deficit hyperactive disorder, and central auditory processing disorder). Third, the teachers chosen for the study had experience teaching at different middle grade levels. All of the teachers chosen for this study had over 20 years of teaching experience with experience teaching at the elementary level as well as the middle school level.

Three Section 504 coordinators were selected based on two criteria. First, they needed to have had at least five years experience completing the duties as a Section 504 coordinator; second, they had to be currently serving students at different middle schools in the school district. All of the Section 504 coordinators were also school counselors for different middle schools in the district where the study was conducted. Two of the counselors had previous teaching experience at the middle school level.

The setting for this study was a community in the Midwest with a population of approximately 49,000 that housed four middle schools. Each of the four middle schools had a designated 504 coordinator.

Analysis

This study implemented design and analysis methods described in Creswell (2002), Lincoln and Gruba (1985) and Miles and Huberman (1994). Interviewing was the primary means of collecting data for this study. To gain information from the participants, an interview guide containing open-ended questions was developed and used for each group of participants (Kvale, 1996). The interview guide was used as a tool during the interview process as well as a means for taking and organizing field notes. Questions from the interview guide ranged from demographic information about the participants to knowledge of and experience with the Section 504 process. Samples of interview questions included:

1. What is your understanding of a Section 504 individual accommodation plan?
2. What do you see as the (teacher's role, parent's role, Section 504 coordinator's role) in developing and implementing the individual accommodation plan?
3. How does the team share information about children on individual accommodation plans?
4. Can you describe how the individual accommodation plan is reviewed?
5. How do you know if the plan is working?

6. How would you respond to the following statement “A major purpose of Section 504 individual accommodation plans is to level the playing field for students with disabilities?”
7. As a (parent, teacher, Section 504 coordinator), what would make the Section 504 process easier for you?
8. On a scale of 1-10 (1 being very comfortable and 10 being not comfortable at all) what is your comfort level of teaching students with the following disabilities: ADD/ADHD, CAPD?
9. What are your experiences about communication between you and others regarding individual accommodation plans?
10. In your opinion do you feel that Section 504 plans are effective? Why or why not?

After obtaining written permission from the participants to audiotape, each participant was interviewed on two separate occasions with each session lasting 50-90 minutes. Field notes were also taken during the interviews. During the first interview session, participants were asked to describe their personal histories and to describe their experiences with the Section 504 process. During the second interview, clarification of data from the first interview was gathered and additional questions not covered during the first interview were posed (Seidman, 1998). The researcher transcribed each interview verbatim.

In addition to the interview data, two of the four parent participants provided copies of their child’s individual accommodation plan for analysis. Three of the four parents also provided copies of correspondence (e.g., hand written notes, email, formal letters) they had received from the school. Analysis of the correspondence included two hand-written notes from teachers, a copy of one electronic mail and one formal letter. Available correspondence between school personnel and parents and available copies of individual accommodation plans were used to verify that the information shared in the parent interviews was accurate.

Using the Ethnograph v5.0 for Windows™ program, text segments from the transcripts were coded and categorized using analytic induction and constant comparative procedures as described in Creswell (2002) and Lincoln and Guba (1985).

Validity in the data collection data analysis was achieved through utilization of several strategies. Interviewing individuals representing the three different groups (e.g., parent, teacher, and Section 504 Coordinator) to gain a broad perspective of the Section 504 process was a key aspect to obtaining multiple perspectives. During the interviewing process, clarification techniques were implemented (Strauss & Corbin, 1998), and participants were asked to review their interview transcripts for accuracy (McMillan & Schumacher, 2006). In addition to the interview data, available correspondence documents between school personnel and parents and individual accommodation plans were used to verify that the information obtained in the interviews was accurate.

An audit trail outlining the research process and the development of codes, categories, and themes was maintained (Miles & Huberman, 1994). The audit trail for this study consisted of chronological research activities, identifying the researchers’ pre-conceptualizations, interviews, initial coding efforts, and analysis of data.

Results

Once the interviewed data was analyzed, seven themes emerged that fell under three broad categories:

- a) Understanding of the Section 504 Process
- b) Inconsistency of Section 504 Implementation
- c) Barriers to Collaborative Efforts. Each of the seven themes will be discussed under its related category, along with the interview data supporting it.

Understanding of the Section 504 Process

The following three themes related to understanding of the Section 504 process:

1. There is a lack of understanding of the roles and responsibilities of the Section 504 Coordinator.
2. Parents know their child best.
3. Teachers have had little to no training on the Section 504 process.

Theme One: *There Is a Lack of Understanding of the Roles and Responsibilities of the Section 504 Coordinator.* According to Richards (1994) the Section 504 Coordinator should be responsible to develop and maintain a Section 504 program, distribute the necessary documentation and information to all campuses, and oversee the progress of all Section 504 committees. Additionally, Section 504 Coordinators should provide training to school personnel who are involved in the process of designing and implementing the individual accommodation plan for students. They should also keep current on the legality issues regarding Section 504 and handle parent complaints, coordinate responses to the Office of Civil Rights and make necessary arrangements for due process hearings. The research data revealed that the parents and teachers did not have a clear understanding of the roles and responsibilities of the Section 504 Coordinator in the development and implementation of individual accommodation plans.

One parent shared his perception about the role of the Section 504 coordinator by saying, *“I thought he was going to monitor Jason’s progress or make some recommendations as to what would help him. Of course, we never heard anything. The only interaction we had was when we initiated it”*.

In a separate interview, one teacher shared her thoughts about the role of the Section 504 coordinator. She stated, *“All he does is gives us the copies of the 504s at the beginning of the year and he takes them back at the end of the year”*. Another teacher talked about the role of the Section 504 coordinator at her school by saying, *“The counselor for sixth grade would be our 504 coordinator. I think that their only role is to get all the papers and divide them up into the classroom. I think that is all that they do is to make sure that 504s are separated between the classrooms and that they are all even....”*

Two out of the four parents and one of the three teachers did not know who the Section 504 coordinator was for their middle school. When asked who was the Section 504 coordinator for her

school, one teacher replied, *“Oh, I don’t know who that is. As far as I am concerned, it is all on my back”*.

Theme Two: Parents Know Their Child Best. Research has shown that parents are considered to be “experts” about their children and want to do what is best for them (Friend & Cook, 2003; Turnbull & Turnbull, 2001). Parents of children with disabilities have an understanding of the accommodations and modifications that have and have not worked in the past and want to take a proactive approach by communicating the strengths and needs of their child to the teachers.

The data from the interviews revealed that parents were able to identify areas of concern about their child’s ability to learn. They described the potential academic challenges or problems that their child most likely would face during the school year. One mother stated the following about her son, *“He is very aware of himself and not aware of others socially...he doesn’t notice any cues from other people and he has been invasive and impulsive. If he sees something that he wants, then he touches it”*.

At the beginning of the school year, one parent wrote a letter to her child’s teachers outlining the strategies that have worked in the past. She gave each teacher a copy of the letter at the meeting to discuss her son’s individual accommodation plan. She stated, *“In seventh grade, I wrote a letter to his teachers. I wrote...this is what you can expect from my child and these are the ways that I’ve learned are efficient in dealing with him. Like when you can’t get his attention, tap his desk or touch him on the shoulder. It’s unobtrusive and it works. Most of the teachers that were there just smiled, nodded, and set it aside. I had one teacher who sat there during this meeting and read the entire letter. You know, he aced that class...he flunked the other classes. I don’t think they really understand the condition...I don’t think they take the time to learn about it”*.

Theme Three: Teachers Have Had Little to No Training on the Section 504 Process. The third theme that emerged related to understanding addressed the issue of training on Section 504. The three teachers and three Section 504 coordinators reported that they received no training on the Section 504 process in their pre-service teacher preparation programs. One teacher stated, *“I don’t even remember hearing about those [referring to 504 individual accommodation plans].”* A Section 504 coordinator shared his thoughts on the pre-service training he received regarding Section 504. He stated, *“When I graduated, I never heard the word 504 out there [referring to the university’s education and counseling programs]”*.

The data also revealed that the teachers were expected to execute the case management duties for a student on an individual accommodation plan; however, they received little to no training on the process. One teacher stated, *“The most that we have gotten is a new 504 plan form, a new 504 template. I haven’t had any training on it at all. I think I knew more about it in elementary school when I was on the TAT...but that’s 10 years ago. I haven’t seen anything on 504s in middle school”*. One of the three teachers reported that several years earlier, she had the opportunity to attend a district sponsored in-service training on Section 504. She shared her thoughts about the training she received, *“There were just a few of us that were chosen to go. And then no follow-up, so I have lost all of that information. Good meeting; but now that I have been here longer, it would mean a little more to me. I would have more to connect it to. I wish I could go back to it. Boy, there were some things that we should have known and we didn’t. Not only because it is the law but just who should be at the 504 [meeting] and who shouldn’t”*.

In contrast, all three of the Section 504 coordinators shared that they attended several Section 504 training sessions. One Section 504 Coordinator stated, *“I’ve probably attended three or four different trainings. The Office of Civil Rights out of Denver sent someone here. I went through three or four of those where it was a day-long training. They go through the whole process. They went over everything from how it differs from 94-142 to what qualifies for a 504. We were given an issue and then expected to write up a 504 plan”*.

The need for on-going training opportunities on the Section 504 process supported the findings of Miller and Newbill (2006) and Blazer (1999). Reid, Maag, Vasa and Wright (1994) concurred that to meet Section 504 mandates, general education teachers need access to ongoing training opportunities on the Section 504 process and the development of appropriate accommodations for students who have attention deficit disorder.

Inconsistency of Section 504 Implementation

Two themes emerged related to inconsistency of Section 504 implementation.

1. The development, implementation, and periodic review of individual accommodation plans are inconsistent.
2. Transition of students on individual accommodation plans from one grade to another is often problematic.

Theme One: *The Development, Implementation, and Periodic Review of Individual Accommodation Plans Are Inconsistent.* The data from the study revealed that the elements of the Section 504 process varied greatly depending on the student needs, level of parent advocacy, middle school procedures and the grade level team. One mother shared her experience when an individual accommodation plan was written for her son midway through the first half of the sixth grade semester. She stated:

“Sixth grade was his first year on a 504. They [sixth grade teachers] had decided that he had really lost control and put him on a 504. I learned after the fact that they put him on a 504. There never was a meeting; it was just the teachers. I think it is a systems issue. It’s put on teachers’ laps and they are told to deal with it. They have no training and they don’t know what they are doing. It comes across as a real bother to them”. Another mother talked about her experience at an individual education plan (IEP) meeting when her daughter was moved from an IEP to an individual accommodation plan. She stated, *“They said to me that, based on the results of the tests, we are going to move her to a 504. She [the case manager] said basically it is the same thing. They told me that because she did so well she no longer could be on an IEP. It’s a regulation kind of thing. It [the individual accommodation plan] was already typed up, they handed it to me, and I signed it. I wished I had never signed it”*.

Typically, the teacher who assumes the case management responsibilities for the individual accommodation plans are responsible to rewrite an existing plan. The data revealed that the periodic review of the individual accommodation plan in the school district was completed in a number of ways. Some middle school teams review the plan within the first month of the beginning of school, some teams review the plan at fall parent teacher conferences, some teams update the plan and mail it to the parents for their signature and some teams review the plan on the anniversary date of the original plan. One of the teachers stated, *“We don’t really rewrite, we revisit [the individual accommodation plan] at the first conference time. We pull it out and visit with the parent and double check. Are you still doing this? Does this seem current? We update the medicine if there is*

medicine...and if they [the parents] think that the 504 plan is still correct for their child, we'll check continuation and have them sign off on it". Another teacher described how she updates the individual accommodation plan. She stated, "We have to review every 504 in the fall and make any modifications as necessary or to say as is but we do a formal review. There's a form that you fill out and we go through the form step by step. Go over all of the accommodations. I like to wait a good month before we do this so we get to know the child a little bit in the classroom. We just go over how they are doing, what kind of challenges they are having and most of the time there are modifications and we work toward student responsibility".

The level of input from parents also varies depending on the team. One mother stated, *"On February 20, 2003, I got a copy of a revised 504 plan in the mail. Nobody had ever contacted me or talked to me about it other than at conferences".* Another parent stated, *"They [referring to the team members] wrote down the accommodations but I didn't have any input".*

Theme Two: Transition of Students on Individual Accommodation Plans From One Grade to Another Is Often Problematic. The transition to middle school can be a source of concern for all parents. During the adolescent years, teens are dramatically changing physically and emotionally. They begin to spend more time with their peers, they want less guidance from adults, they increase their interactions with opposite sex peers, and they place more importance on participation in large social groups (Cole & Cole, 1996). During this time, parents often find themselves in a quandary about finding the balance of providing support to their child and encouraging independence (Felber, 1997; Tubman & Lerner, 1994). The concerns of parents who have students with a disability are exemplified during the transition process. At the middle school level, there is a wider variety of staff to work with, students are expected to change classes, contact time with teachers decreases dramatically, and parents may be unsure of whom to contact with concerns about their child (O'Shea et al., 2001).

The data from the study revealed that parents and teachers share similar concerns about transferring individual accommodation plans during the transition process. This process may be from elementary school to middle school, from grade to grade, or from middle school to high school. One mother stated, *"We thought it (Section 504 individual accommodation plan) would transfer from one grade to another. That's what surprised us. I guess we never pushed it in seventh grade. The 504 plan didn't do much in sixth grade. We didn't see much happening with it so we just individually talked with the teachers".* Another mother shared her thoughts about the transition to the next grade level and teachers following through with providing accommodations for her child. She stated, *"Usually in the fall right after school starts they review the 504. I don't know if it is school specific because this is not the way it went in elementary school. At the end of seventh grade, someone came up with a really good idea that they have one of the paras check his planner at night and make sure that he had his assignments written down and that he had everything that he needed to do his homework. That came to work better. Before the beginning of the next school year, I asked the team to do the same thing as last year and I was told no; they couldn't do that. They didn't have the manpower to do that and it took too much time out of their day....".*

One teacher shared that the transition of students on individual accommodation plans from elementary to middle school is not a smooth process. She stated, *"It's not a real smooth process, to be honest with you, coming from elementary to middle school. Oftentimes it's like there is nobody in charge of these 504 kids. The classroom teacher is really the case manager for them but they sometimes get lost in the shuffle during the transition from elementary to middle school".* Another teacher shared that she did not know, until after fall parent teacher conferences, that one of her students had ADHD and an

individual accommodation plan. After talking with the parents about the difficulties the student was having in the classroom with work completion, the parents shared several of the accommodations that were written the previous year.

Barriers to Collaborative Efforts

For the purposes of this study, collaboration referred to the beliefs and attitudes of parents, teachers, and Section 504 coordinators as well as the written and oral communication between those involved in the Section 504 process. Two themes emerged under this category:

1. Barriers to collaborative efforts between parents and teachers exist.
2. Communication between parents and teachers.

Theme One: Barriers to Collaborative Efforts Between Parents and Teachers Exist. Two primary barriers to collaborative efforts between parents and teachers emerged from the data. These barriers are perceptions of students with disabilities and lack of time. Research has shown that collaboration and communication between parents and teachers at the middle school level are critical elements to the success for all students (Brost, 2000; Clark & Clark, 1996; George & Shewey, 1994; Jackson & Davis, 2000). This is even more crucial when students are known to have a disability. A collaborative orientation implies that no one operates in isolation. Teachers who espouse a collaborative philosophy are sensitive to the family's needs and strengths, teach based on what they know about their students, and encourage learning in the general education classroom (O'Shea et al., 2001). The time needed for teachers and parents to collaborate is often seen as a barrier and needs to be supported by the school administration (Friend & Cook, 2003).

All participants were asked to respond to the following statement: *"A major purpose of Section 504 is for teachers to level the playing field for students with disabilities."* Nine out of the 10 participants generally agreed with the statement. One mother stated, *"We don't necessarily need to make things easier for these kids but we need to make it possible. They need to learn how to deal with their disabilities because it is a life-long thing for most of them. You are not doing them any favors by giving their education to them but you have to make it possible for them to succeed at least partially"*.

After some thought, one teacher disagreed with the statement and explained her position by saying, *"Kids are not all the same...I think it is about helping them to be as successful as they can be...so that is not level. It's not about teaching to the middle; it's not about this one level and that everybody is at it and you are trying to get everyone to it. People are all over the place and, to me, it is about helping them to be the best that they can"*.

Parents and teachers reported that it is challenging to identify the appropriate accommodations that will assist the student in the school environment. They struggle with finding the balance between assisting and enabling. One teacher stated, *"Probably the biggest challenge is with parents. I am thinking of a specific child now. Parents who want to do the work for the child, who use the disability as a crutch and excuse...the challenge is how much is disability and how much is enabling, and communicating that to the parents"*.

Parents, teachers, and Section 504 coordinators reported that the accommodations and modifications made for students with these diagnoses are often very basic. Examples of accommodations or

modification included: takes medication, has preferential seating, is placed in a classroom with a sound system, has tests read, or is provided modified assignments. This “cookbook” approach in the development of individual accommodation plans for students does not provide the opportunity to really understand the learning needs of the student. In some situations, the emphasis is placed on completing the form rather than problem solving and figuring out what will truly help the student succeed. Conderman and Katsiyannis (1995), and Stainback, Stainback, and Forest (1989) caution those who are involved in the development of individual accommodation plans to determine appropriate accommodations and services based on the student’s educational needs and not on the student’s label.

The issue of lack of time was another barrier that emerged from the data. Parents shared that they were told that there simply was not enough time in a teacher’s schedule to provide some of the accommodations that were suggested. One parent talked about having her daughter’s planner signed by the teachers. She stated *“I have a friend who lives in another city and at the end of the day the teacher goes through and checks everything that should be done in the planner. If it is not done then there is a big red stamp that is put on the planner. I have asked for that and the teachers said that would be a lot of trouble for them to do that; but, on the other hand, when I go to meetings, they know exactly what is missing. Can’t they send something home? When they know someone is struggling, can’t they do something? I called a meeting a few times. I called once but nobody could get together and nothing ever happened. I asked for one toward the end of the semester”*.

All teachers and Section 504 coordinators spoke about the lack of time available to complete all of the school related tasks required of them. One teacher suggested that one person needs to be allotted time to follow through with the responsibilities for the Section 504 process at each grade level. She stated, *“Have one person that is in charge of all of them. It would kind of take the headache off all the extra paperwork of the teachers. If you had one person who was in charge of all the sixth grade 504s, seventh grade 504s, and eighth grade 504s, they could be in charge of making sure that they are rewritten...talk to the parents...make the contacts...follow up on the kids. [This person] could meet with the kids to see how things are going. It would be nice if there could be just one person to check on those kids because they are the ones that fall through the cracks. They’d have to have the time and they would need be trained in what to do”*.

Theme Two: Communication Between Parents and Teachers. The data revealed that parents were discouraged about the meetings that were held regarding their child’s performance. One parent stated, *“The meeting itself is kind of overwhelming because you are with all of these people. It is not like in elementary school where everything stays pretty much the same in the classroom. I can’t tell them what to do. I can only listen to them tell me. We have such a short period of time because they always have to get to the next class”*.

Parents consistently reported that ongoing communication throughout the school year with their child’s teachers is inconsistent and they often feel “out of the loop”. They are unsure about assignment completion, upcoming projects, and grades received for work and tests. All of the parents in this study reported that, unless they take the initiative to contact the teachers, the only time teachers communicated with them is during parent teacher conferences or if there was a major behavioral incident involving their child. One parent stated, *“I’ve never had a note; I’ve never been called this year. We wouldn’t have been called except for that weird incident”*.

Teachers also described their concerns about communication with parents. One teacher talked about a situation when the parents decided to take their daughter off medication for attention deficit disorder and anxiety without telling the teacher. She stated, *“They [the parents] let us know a month and a half later. We could notice it and we knew that something was different. She was a little more energetic, a little more outgoing, and also a little more defiant. We brought it up at conferences. It was oh, well, we decided we would try it without medicine. It would have been nice to know. I hate it when they don’t tell us. Sometimes they’ll say we just wanted to see if you’d notice”*.

Both teachers and Section 504 coordinators expressed their concerns about parents who attend meetings with a long list of accommodations that the teachers are expected to make for the student. One Section 504 Coordinator stated, *“Some parents will call with a very unreasonable request. Well, we don’t have to honor it just because a parent wants it. I mean 504 is a team. It’s the teachers and a parent. If the parent wants it and five teachers say no, it’s not going to happen”*. One teacher shared one experience she had with a parent. She stated, *“Some of them come in with a laundry list. This one parent had it all typed up. In the form of a 504, just like we were going to adopt her list and that is inappropriate. To me, that is aggressive. We took each point and talked it over and talked to the student. We took a piece of hers and tried to use her language and then tried to make something we could live with and that we were comfortable with...it was a very tense meeting”*.

Implications

Results of this investigation provide some insight into the development, implementation and review of a Section 504 individual accommodation plan. School district administration needs to better define system-wide policies and procedures regarding the steps in the Section 504 process, the roles and responsibilities of those involved in the process, and procedures to transition students from one grade to another. To promote communicative efforts, parents need to be updated on the Section 504 policies and procedures on a yearly basis.

As teachers in the school district assume the case management responsibilities for students on individual accommodation plans, they need to be afforded training opportunities to learn about the development, implementation, and periodic review of individual accommodation plans for students who qualify under Section 504. In addition, the training should include information on attention deficit disorder with or without hyperactivity and central auditory processing disorder.

University teacher training programs must provide pre-service students with opportunities to learn how to design and implement Section 504 individual accommodation plans for students with disabilities. Pre-service students also need to have a basic understanding of appropriate accommodations and adaptations that may be provided for students who have a diagnosis of attention deficit disorder and central auditory processing disorder.

At the beginning of each school year, teachers need to listen and hear what parents are telling them about the accommodations and modifications that have been successful for the child during the previous years. This is not to say that teachers are going to implement all previously tried accommodations and modifications. Rather, it is about valuing the experiences and opinions of parents and using that information to develop an individual accommodation plan that will provide the student with the opportunity to succeed in school. Each plan should be reviewed and rewritten to accommodate the students’ maturation while taking into account different teaching styles, schedules, and classes. The team should avoid using a “cookbook” approach when determining the

accommodations and modifications that should be written into the plan. The plan needs to be individualized based on firsthand knowledge and observations from those who actually know the student.

Communication must be a continuous process throughout the school year. Ongoing collaboration between the parents of children with attention deficit disorder and central auditory processing disorder and teachers is crucial to the success of each student. These students are often at risk for academic failure because of poor self-concept, difficulty with social interactions with peers, and lack of motivation. The more isolated students feel from their school community, the less motivated they will be to succeed in that environment. To reduce the risk of school failure, parents and teachers need to make a concerted effort to develop a collaborative relationship with each other that will foster ongoing communication about the student's academic progress throughout the school year.

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