Functionally-Indicated Choice-Making Interventions to Address Academic and Social Behaviors of Adolescent Students with Emotional/Behavioral Disorders (E/BD) in a Residential Facility

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Abstract

Two functionally-indicated choice-making interventions were implemented by a classroom teacher to determine the effects on the percentage of task completion, accuracy, and classroom disruption for 9 sixth through eighth grade participants with emotional and behavioral disorders in a residential math classroom using a reversal design. Results indicate that choice of task sequence for two of the three participants with avoidance-maintained behaviors exhibited reduced disruptive behaviors and increased task completion and accuracy. Results were mixed for the six participants with access-maintained behavior. The three participants decreased their disruptive behaviors and increased task completion and accuracy. For the other three participants, decreased disruptive behavior and increased task completion and accuracy occurred for the non-functionally indicated avoidance type of choice. Future directions for choice-making interventions are discussed as well as limitations of the present study.

Keywords: choice-making interventions, emotional/behavioral disorders, single-subject design, residential facility, positive behavior interventions and supports

Introduction

Researchers suggest that students with emotional and behavioral disorders (E/BD) exhibit inappropriate behaviors at increased rates than other students in educational settings (Reid, Gonzalez, Nordness, Trout, & Epstein, 2004; Trout, Nordness, Pierce, & Epstein, 2003). These students usually have issues with interpersonal relationships, depression, somatization, and learning difficulties that cannot be attributed to intellectual, sensory, or health factors (Individuals with Disabilities Education Improvement Act: IDEIA, 2004). These disruptive behaviors and other behavior problems are opposite of the academic expectations, requirements, and routines typically required by classroom teachers (Dunlap et al., 1994; Lane, Carter, Pierson, & Glaeser, 2006). Trout et al. (2003) found that students with E/BD had the greatest deficits in math and spelling and were overall one to two grade levels behind their peers. In overall academic achievement, students with E/BD scored within the 25th percentile (Reid et al., 2004). In the past decade, more researchers have addressed the comorbid academic and behavioral challenges of students with E/BD than in years past (Lane, Gresham, & O'Shaughnessy, 2002; Lane, Wehby, & Barton-Arwood, 2005; Ramsey, Jolivette, Patterson, & Kennedy, 2010). Without intervention, students with E/BD who engage in problem behaviors often experience negative impacts in their experiences with peers, teachers, and other school personnel (Gable & Hendrickson, 2000). Students may likely experience both short- and long-term negative outcomes such as lower graduation rates and lower acheivement scores as compared to their same age peers without disabilities (Trout et al., 2003).

Choice-Making

A critical aspect of school success is the completion of tasks and the absence of problem behaviors that interfere with the learning of others (Lane, Barton-Arwood, Nelson, & Wehby, 2008). Research of antecedent interventions suggests choice-making may improve task performance and reduce problem behavior (Shogren, Faggella-Luby, Bae, & Wehmeyer, 2004). Choice-making can be implemented in a simple manner while maintaining the instructional requirements within the classroom (Kern, Mantegna, Vorndran, Bailin, & Hilt, 2001). Several literature reviews indicate providing choice-making opportunities has had positive effects on the behaviors of students with E/BD (Kern, Vorndan, Hilt, Ringdahl, Adelman, & Dunlap, 1998; Lancioni, O'Reilly, & Emerson, 1996; Morgan, 2006; Shogren et al., 2004). Choice-making has been empirically validated for students with developmental and severe disabilities but further research is needed for students with E/BD (Jolivette, Wehby, Canale, & Massey, 2001). For students with E/BD, six studies have sought to decrease problem behavior and increase task completion by providing choice-making opportunities in the classroom (Dunlap et al., 1994; Jolivette et al., 2001;

Kern et al., 2001; Powell & Nelson, 1997; Ramsey et al., 2010; Romaniuk, Miltenberger, Conyers, Jenner, Jurgens, & Ringberg, 2002).

The seminal research for choice-making for students with E/BD began with Dunlap et al. (1994) demonstrating promising results for students exhibiting problem behaviors. Dunlap et al. (1994) intervened using a reversal design (choice versus no choice) with three 11 year old students with E/BD using choice among tasks and two of the three students showed positive results for task engagement and a decrease in disruptive behaviors. Powell and Nelson (1997) followed using a reversal design with choice of academic assignments to reduce the problem behavior of one elementary student. Results of this study were positive with an increase in academic engagement and decrease in disruptive behaviors. Following this study, Kern et al. (2001) intervened on problem behaviors and task engagement for three students ages 7-15 years using choice of task sequence or no choice. Using a reversal design, Kern et al. (2001) demonstrated a reduction of problem behaviors and increase in task engagement. Next, Jolivette et al. (2001) used choice of task sequence or no choice using a multiple-baseline across 3 seven year old students with an embedded reversal design to reduce problem behavior and increase task engagement and accuracy for three elementary students with E/BD. Overall, the results of this study were positive yet mixed, possibly due to a mismatch of function and choice type for one student. More recently, Ramsey, Jolivette, Patterson, and Kennedy (2010) used a reversal design with choice of task sequence or no choice to reduce problem behaviors and increase time on-task, task completion, and accuracy for five adolescent students age 13-16 years with E/BD in a residential facility. Results were positive for four of the five students. It was hypothesized that the fifth student's function was access and choice of task sequence may not have matched the function of behavior (Ramsey et al., 2010). To address some of the mixed results of these studies researchers suggest further investigations to understand the efficacy of antecedent functionally-indicated choice-making opportunities and behavioral function on the reduction of problem behavior and increase of task engagement for students with E/BD.

Future Directions in Choice-Making for Students with E/BD

Given the small number of studies (n = 6) and combined total of 21 participants, future research directions have been suggested across the choice studies (Dunlap et al., 1994; Jolivette et al., 2001; Kern et al., 2001; Powell & Nelson, 1997; Ramsey et al., 2010; Romaniuk et al., 2002) to further replicate choice-making with students with E/BD to draw further generalizability across this population. Romaniuk et al. (2002) and Kern et al. (2001) indicated that future researchers should examine the feasibility of choice-making interventions in various classroom environments (e.g., typical general education and special education classes as well as alternative

education settings). In addition, replications should include students with E/BD in middle and high school grades. Jolivette et al. (2001) and Ramsey et al. (2010) indicated that treatment acceptability should be assessed to ascertain whether teachers will continue to implement choice-making after a study is concluded. Finally, Kern et al. (2001), Jolivette et al. (2001), Ramsey et al. (2010), and Romaniuk et al. (2002) indicated that future research is needed to delineate the role of behavioral function on the effectiveness of choice-making interventions and of matching specific types of choice-making opportunities to the function of behavior.

Functionally-Indicated Interventions and Choice-Making

Functional behavioral assessment (FBA) has grown in importance in the literature for students with E/BD as a means to improve the effectiveness of functionally-indicated interventions (Heckaman, Conroy, Fox, & Chat, 2000; Umbreit, Ferro, Liaupin, & Lane, 2007). Inherent to gathering information in the FBA process is the collection of observational data on antecedent, behavior, and consequences as well as setting event information in the classroom environment which all are included in the hypothesis of the funtion of behavior (O'Neill, Horner, Albin, Sprague, Storey, & Newton, 1997; Sugai, Lewis-Palmer, & Hagan, 1998; Umbreit et al., 2007). Umbreit et al. (2007) asserts that mild to severe behavior problems have been successfully treated in a variety of academic settings when based on an FBA and a priori FBA may lead interventionists to develop or select more effective behavioral interventions based on the function of behavior. When interventions are implemented which do not match the function of behavior, problems may occur such as strengthening the inappropriate behavior and/or have no effect (Ingram, Lewis-Palmer, & Sugai, 2005; Umbreit et al., 2007). For example, limitations in the choice-making research have been attributed to confounding variables such as the lack of matching the function of the problem behavior (avoidance or access) with one of the ten types of choice-making opportunities. Of the six studies mentioned above, matching behavioral function and choice-making interventions was a limitation. Due to these limitations further research in this area is needed to understand the effectiveness of functionally-indicated choice-making opportunities by type and further address the mixed choice-making intervention results.

Lancioni et al. (1996) and Jolivette et al. (2001) postulated that choice-making interventions may match different functions of behavior and indicated that further research was necessary to better understand choice-making opportunities and their effect on problem behavior. In addition, Ramsey et al. (2010) hypothesized a mismatch of function and choice-making type given the mixed results for one study participant. Avoidance and access are both hypothesized functions for disruptive and off-task behavior in the classroom (Dunlap et al., 1993; Heckaman et al., 2000; Romaniuk et al., 2002). The ability to offer various types of choices in the classroom may

match these functions of innappropriate behavior (Romanuik et al., 2002). The choice-making research conducted by Jolivette, McCormick, McLaren, and Steed (2009), Jolivette, Stichter-Peck, Sibilisky, Scott, and Ridgley (2002), Lancioni et al. (1996), Shevin and Klein (1984), and Sigafoos (1998) have specified ten types of choices. These ten types of choices match either access- or avoidance-maintained behavior (Jolivette et al., 2009; Jolivette et al., 2001; Lancioni et al., 1996; Shevin & Klein, 1984; Sigafoos, 1998). Choices which match the function of access include: (a) who, with whom the student is going to complete tasks; (b) where, the location of the task; (c) future, what the student will do in the future; (e) within, specific materials or aspects within the task; and (f) tangible, access to items before, during or after the task. The function of avoid is matched with the following five types of choices: (a) when, the time the task begins; (b) between/among, choice of what task the child will work on; (c) terminate, the time the task will end; (d) refusal, whether or not to start or finish a task; and (e) alternative, how the student will complete the task. Within the classroom certain types of choices work better than others given the logistics of the class and lesson as well as the developmental and ability level of a student (Jolivette et al., 2002).

Reid and Nelson (2002) also add that interventions based on the function of behavior may help students with E/BD develop more adaptive skills in the classroom. Within the choice-making literature, results have suggested that avoidance-maintained problem behavior may benefit from choice of task demands but few researchers have explicitly linked antecedent choice-making opportunities to the function of behavior in interventions (Romaniuk et al., 2002). Romaniuk et al. (2002) directly assessed the function of behavior and of choice-making and stated that choice of task sequence often matched avoidance-based behaviors. Romaniuk et al. (2002) found that students whose behavior were avoidance-based responded to choice of task sequence better than students whose behavior were access-maintained. These researchers indicated that further functionally-indicated choice-making interventions be investigated to determine the functional relations of type of choice-making opportunities and the reduction of problem behavior.

This study extends the current choice-making literature base by empirically investigating the effects of choice-making type linked to function. The research questions were:

1. To what effect does functionally-indicated choice of task sequence (avoidance) and where (access) choice have on class disruption, task completion, and accuracy?
2. To what extent will the effect on the dependent variables be maintained without intervention for three one-week intervals?
3. To what extent is functionally-indicated choice-making socially acceptable to teachers?

Table 1
Participant Characteristics

Student	Age	Grade	Gender	Ethnicity	Disability	Disruptive Behaviors[1]	Function
Sondra	14	8	Female	Hispanic	E/BD	1, 2, 5	Access
Amanda	13	7	Female	Caucasian	E/BD	1, 2, 5	Access
Parvati	14	8	Female	Caucasian	E/BD	1, 2, 5	Access
Russell	12	7	Male	Caucasian	E/BD	2	Access
Coby	13	7	Male	Caucasian	E/BD	1, 3, 6	Avoid
Rupert	14	8	Male	Caucasian	E/BD	1, 6	Avoid
Coach	12	6	Male	African American	E/BD	1, 2, 3, 4, 5	Access
Jerri	14	7	Female	Caucasian	E/BD	1, 2, 3, 5, 6	Avoid
JT	12	6	Male	African American	E/BD	1, 2, 5	Access

Note. [1]Disruptive behaviors, per FBA data: 1. noncompliance, 2 = inappropriate vocalizations, 3 = elopement, 4 = destruction of property, 5 = physical aggression, 6 = sleeping.

Methods

Participants and Setting

Nine middle school participants, ages 12-16, in grades sixth through eighth with E/BD in a residential facility participated in the study (see Table 1 for participant demographics). These participants functioned academically in mathematics two or more grade levels below their current grade level, were nominated by the teacher or education director based on inappropriate behaviors that interfered with task completion during independent practice, and their behaviors were maintained by either an avoidance or access function (see Functional Behavior Assessment section). One teacher, a Caucasian female with 2 years of teaching experience, at the school participated in the study.

The setting was two middle school mathematics classrooms at a residential facility located in a major metropolitan city in the southeast. The residential school has a total of 77 students and 11 teachers. The students live on campus and receive twenty-four hour, seven days a week treatment and services to meet their academic and behavioral therapeutic goals. The math classrooms each had four to eight students, one teacher, and a behavior specialist. Each intervention session was conducted for fifteen minutes during independent work time in the mathematics classroom across consecutive school days. The setting has been implementing school-wide positive behavioral interventions and supports (SW-PBIS) for the past four years. The SW-PBIS plan included 3-5 positively-stated behavioral expectations for all students across classroom and nonclassroom settings with students reinforced for engaging in these behaviors by all staff no matter the specific school environment. The SW-PBIS plan in this setting was being implemented with high fidelity per the

School-Wide Evaluation Tool (Sugai, Lewis-Palmer, Todd, & Horner, 2001) which was conducted just prior to this study. The participants in the study were considered non-responders to the SW-PBIS plan based on continued high rates of disruptive behaviors within the classroom coupled with low academic performance.

Functional Behavior Assessment

A functional behavior assessment (FBA) was conducted to determine the function of problem behavior for each participant. A four-step FBA process was followed from Sugai et al. (1999) with additions from Umbreit et al. (2007).

First, a description of the problem behavior was developed for each student. Historical and archival data on the reported problem behavior, a questionnaire, and an interview were used to develop a description of the problem behavior for each participant. The teacher and education director described in detail the topography of the most problematic behavior for each student and completed the Problem Behavior Questionnaire (PBQ; Lewis, Scott, & Sugai, 1994) followed by the Functional Assessment Checklist for Teachers and Staff (FACTS) interview (March, Lewis-Palmer, Brown, Crone, Todd, & Carr, 2000). The PBQ has 15-items in which the problem behavior is defined and the teacher rates each item on a 7 option scale (i.e., never, 10%, 25%, 50%, 75%, 90%, always).

The FACTS is conducted in an interview format and (a) identifies the problem behavior; (b) identifies the routines (where, when, with whom) of the problem behavior; (c) prioritizes the problem routines; and (d) identifies antecedents and consequences of the problem behaviors. The FACTS qualities have been validated: test-retest reliability and interobserver agreement is strong and convergent reliability is moderate to strong (McIntosh, Burgmeier, Anderson, Horner, Rodriguez, & Tobin, 2008). Both the FACTS and PBQ provide information related to the possible function of the problem behavior.

The second step was to determine the conditions under which the behavior occurred from both indirect and direct data sources to refine the operational definition of the problem behavior. Using the information from the FACTS and PBQ, the conditions in the math class that the problem behaviors were most likely to occur were determined. Three direct observations of the problem behavior were conducted in the math class. Direct observational data were taken on an Antecedent-Behavior-Consequence (ABC; Cooper, Heron, & Heward, 2007) iPod application called Behavior Tracker Pro that electronically recorded frequency and duration data and information on the antecedents and consequences. A refined operational definition was written and shared with the teacher and education director.

Step three involved the consolidation of the indirect data and ABC observations to form a hypothesis of the function of the problem behavior formulated for each participant.

Step four involved taking the direct observational data to verify the accuracy of the hypothesis of the function of the problem behavior for each participant (Sugai et al., 1999; Umbreit et al., 2007).

Direct observation data were taken on the A-B-C iPod application for three sessions during fifteen minute independent math assignments to verify

consistent patterns of antecedents, behaviors, and consequences across observations based on the hypothesis of function. The hypothesis was substantiated by the A-B-C data for each participant.

Materials

The materials used in all phases were selected from the school's math curriculum and supplemented with worksheets from the math support curriculum. The supplemental materials were chosen to facilitate additional in-class, independent practice opportunities. The materials were adapted to be equal in length (e.g., the number of problems and anticipated time to complete) and met the math skill level for independent practice. Adaptation of the independent assignments was based on: (a) classroom observation during independent assignment work periods, (b) the specific academic objective for the math lesson, (c) each participant's individualized education program math goals, and (d) each participant's current educational achievement based on the current year's educational testing and classroom-based assessments.

Dependent Variables and Data Collection

The duration of disruption per each participant's operational definition during the 15-minute independent math work time was displayed on the iPod screen and data were uploaded to an Excel file. Percentage of class disruption was calculated by dividing the total time the participant was engaged in disruptive behavior by 15 minutes. Permanent product data were collected each session and recorded. Permanent product percentage of task completion was calculated by dividing the number of items completed by the total number of items on the assignment. Permanent product accuracy were calculated by the total number of items correct divided by the total number of items on the assignment.

Teacher and Data Collector Training

The researcher conducted one, two-hour training session with the teacher. Training included an overview of choice-making in the classroom, modeling of the choice-making procedures for task sequence and choice of where, assignment selections and preparation, procedures for data collection and problem solving, and teacher practice. Using a procedural fidelity checklist, the researcher observed and evaluated the teacher's implementation of the choice-making procedures in a role-playing situation until the teacher demonstrated 100% mastery of both choice-making procedures. Also, one graduate student was trained on the data collection procedures for the study. The use of the iPod application and components of the data collection procedures were demonstrated and elucidated in a training session. Examples and non-examples of disruptive behavior and operational definitions were reviewed for each participant. Data collection training in the classroom was conducted until the data collection personnel was familiar with the iPod application and 100% agreement for duration was reached between the researcher and data collector.

Design

A reversal design was used to evaluate the effects of the two choice-making interventions (Kazdin, 1982; Kennedy, 2005). "A" represented the baseline no choice condition, which was commensurate with the current classroom environment. "B" represented the avoidance-maintained condition of choice of task sequence. "C" represented the access-maintained condition of choice of where. The design order was either ABCBCBC or ACBCBCB. "M" corresponded to the maintenance phase and was the last phase for all participants. The sessions were counterbalanced across participants to reduce sequencing effects and participants ended in the most effective phase prior to maintenance.

Functionally-Indicated Choice-Making Interventions

A total of four conditions were used and included: Baseline, Choice of Task Sequence, Choice of Where to Complete Tasks, and Maintenance.

Baseline. (A) The teacher presented the participants with two independent math tasks by placing the two tasks in front of the participant on his/her desk and saying, "You have two assignments to complete." The teacher then described the two assignments and asked if the participant had any questions about the assignments. During the baseline condition, the teacher told the participants they had to complete both math assignments and in a random order gave the students the two assignments to complete in the 15 minutes of independent practice during math at their assigned desk.

Choice of task sequence. (B) The choice of task sequence was to address avoidance-maintained behavior. The teacher followed a five-step modified method (Jolivette et al., 2001) by providing choice-making opportunities to the participants during independent math assignments. The teacher presented the participants with two independent math tasks by placing the two tasks in front of the participant on his/her desk and said, "You have two assignments to complete." The teacher then described the two assignments and asked if the participant had any questions about the assignments. Then the teacher asked, "Which assignment would you like to complete first?" The teacher provided wait time for the participant to make their selection. When the participant verbalized their choice, the teacher wrote a "1" on the top of the chosen sheet and a "2" on the second sheet, gave the participant the assignments, and prompted the participant to begin work at their desk. All participants completed the assignments in their selected order.

Choice of where to complete the math task. (C) During the choice of where condition to address access-maintained behavior, the teacher followed a four-step method to provide choice-making opportunities of where to complete tasks in the current classroom. The teacher presented the participants with two independent math tasks by placing the two tasks in front of the participant on his/her desk and said, "You have two assignments to complete." The teacher then described the two assignments and asked if the participant had any questions about the assignments. Next, the teacher said, "You can choose where to complete your math tasks in the classroom, where would you like to work?" The participants could select any open seat

Table 2

Fidelity and Inter-observer Agreement of Fidelity Means and Ranges

Student	Percentage of Sessions	Fidelity (Mean, Range)	Inter-observer Agreement (Mean, Range)
Sondra	39%	100% (100%)	100% (100%)
Amanda	41%	100% (100%)	100% (100%)
Parvati	41%	100% (100%)	100% (100%)
Russell	39%	100% (100%)	100% (100%)
Coby	31%	98% (90% - 100%)	100% (100%)
Rupert	39%	98% (90% - 100%)	100% (100%)
Coach	39%	100% (100%)	100% (100%)
Jerri	52%	100% (100%)	100% (100%)
JT	41%	100% (100%)	100% (100%)

in the classroom. When the participant replied with their choice, the teacher wrote the choice on the top of the math assignments and put the assignments in random order. The teacher then prompted the participant to go to that seat within the classroom and begin work.

Final Phase. Since all participants received the conditions in a counterbalanced manner, the participant may have ended in an intervention phase that was less effective than the other. In this case, the participant was returned to the choice condition with the lowest levels of disruption no matter if the condition was functionally-indicated or not. The same procedures previously described for the choice conditions were implemented.

Maintenance. (M) Upon termination of the most effective intervention condition of the study (i.e., choice type), data were collected for each participant on three occasions in one-week intervals following the termination of intervention to assess maintenance.

Treatment Acceptability. The social validity of each treatment condition for this intervention was assessed using the Treatment Acceptability Rating Form—Revised (TARF-R; Reimers & Wacker, 1988). Approximately one week after the last data point of the final phase, the teacher completed the TARF-R on each participant to determine how and if the teacher viewed one or both of the choice interventions as acceptable for use with the participant and within the classroom. The teacher independently completed each TARF-R by scoring 20 questions per choice type on a 7-point Likert scale (i.e., not at all to somewhat to very). The higher the score meant the intervention was more socially acceptable. The TARF-R has three factor categories to address treatment acceptability with teacher willingness, perceived effectiveness, and perceived disadvantages. The data from the TARF-R were compiled into the three factor categories and a composite score for each category was calculated for each participant with high scores indicating higher treatment acceptability for the factors of teacher willingness

and expected effectiveness and lower scores in perceived disadvantages indicating treatment acceptability.

Fidelity. To assess treatment fidelity of the choice-making conditions, the researcher observed the teacher in the classroom during 31-52% of sessions using the procedural fidelity checklist (see Table 2 on page 54). The percentage of sessions was dependent on data collector availability across all phases and sessions. Percentage of treatment fidelity was calculated by dividing the number of observed correctly completed expected steps by the total number of steps for the intervention and multiplying by 100%. Inter-observer agreement (IOA) data for treatment fidelity were assessed of the same sessions as the fidelity checks using point-by-point agreement and the formula was the number of agreements for expected steps divided by the agreements plus disagreements of expected steps multiplied by 100% (Kazdin, 1982; Kennedy, 2005).

Inter-observer Agreement. Inter-observer agreement (IOA) data for disruption were collected during 31-52% of sessions for each student and distributed across conditions and phases. IOA for task completion and accuracy was calculated using point-by-point agreement (Kazdin, 1982; Kennedy, 2005). The formula was the number of agreements divided by the agreements plus disagreements multiplied by 100%. IOA for duration of class disruption was completed by synchronously taking observational data using the Behavior Tracker Pro on two IPods. Synchronization of observation occurred by both observers at the beginning of the observational period with a three-count countdown and verified by the time and date stamp. IOA for duration was determined by total agreement using the formula calculated by taking the smaller total duration divided by the larger duration and the sum multiplied by 100% (Kennedy, 2005).

IOA data for disruption were conducted for Sondra, Russel, Rupert, and Coach for 39% of total sessions with a M=100%. Amanda, Parvati, and JT's IOA data were collected for 41% of total sessions with IOA data were conducted for Coby 31% of total sessions, and 52% of total sessions for Jerri; Amanda M=99% (range, 95% to 100%); Parvati M=99% (range, 95% to 100%); Coby M=98% (range, 94% to 100%); and JT M=97% (range, 95% to 100%). Task completion and accuracy IOA data were conducted on 55% of permanent product data for each student with a M=100% for both.

Results

Limitations in the research line for antecedent choice-making opportunities for students with E/BD have researchers hypothesizing that some choice-making types match avoid-maintained behavior and others access-maintained behaviors. For students with E/BD functionally-indicated choice-making interventions have only been reported in one study and further research is necessary.

Access-maintained behavior. Table 3 on the next page represents the means and ranges per phase and Table 4 (pg. 58 and 59) represents the

Table 3

Access-Maintained Behavior Means and Range per Phase

Student	Data	Baseline	Task Sequence	Where
Sondra	*Task Completion*	18.12% (0%, 35%)	23.12% (15%, 35%)	53.33% (35%, 70%)
	Task Accuracy	0%	1.87% (0%, 15%)	25.83% (20%, 35%)
	Disruption	42% (20%, 63%)	49.87% (23%, 65%)	42.5% (35%, 50%)
Amanda	*Task Completion*	7.5% (0%, 30%)	4% (0%, 15%)	10% (5%, 20%)
	Task Accuracy	1.87% (0%, 15%)	0%	5% (0%, 10%)
	Disruption	48.62% (28%, 63%)	55.4% (52%, 63%)	42% (40%, 45%)
Student	**Data**	**Baseline**	**Where**	**Task Sequence**
Parvati	*Task Completion*	33.12% (0%,50%)	47.5% (0%, 80%)	82.5% (80%, 85%)
	Task Accuracy	3.12% (0%, 10%)	22.5% (0%, 50%)	58.33% (50%, 65%)
	Disruption	57.62% (40%,80%)	48% (35%, 65%)	34.16% (30%, 40%)
Student	**Data**	**Baseline**	**Task Sequence**	**Where**
Russell	*Task Completion*	54.37% (40%,75%)	91.87%(75%, 100%)	89.37(50%, 100%)
	Task Accuracy	31.25% (15%, 50%)	50.62% (30%, 90%)	74.37% (35%, 90%)
	Disruption	45.75% (30%, 60%)	51.87% (40%, 65%)	50.62% (30%, 90%)
Student	**Data**	**Baseline**	**Where**	**Task Sequence**
Coach	*Task Completion*	5% (0%, 25%)	30.41% (0%, 60%)	71.25% (70%, 75%)
	Task Accuracy	0%	8.83% (0%, 20%)	18.75% (15%, 20%)
	Disruption	90.37% (78%, 100%)	70.91% (45%, 90%)	48.75% (45%, 55%)
JT	*Task Completion*	80% (70%, 90%)	88.75% (60%, 100%)	72.5% (40%, 90%)
	Task Accuracy	70% (60%, 80%)	73.75% (70%, 85%)	55% (0%, 85%)
	Disruption	48.37% (33%, 58%)	46.37% (30%, 60%)	41.87% (20%, 90%)

overall means. Of the participants with access-maintained behavior, Sondra, Amanda, and JT had overall means that indicated the functionally-indicated choice of where was the most effective intervention phase. Parvati and Russel had overall means that indicated the nonfunctionally-indicated choice of task sequence was most effective. Coach had overall means that indicated choice of task sequence was most effective but the last matched choice of where intervention demonstrated variability and Coach was left in the function-matched choice of where. Figures representing the percentage of task completion, accuracy, and disruptions for the participants (i.e., Sondra, Amanda, Parvati, Russel, Coach, and JT) with access-maintained behavior are available upon request from the second author.

Avoidance-maintained behavior. Table 5 (see pg. 60) displays the means and ranges per phase of the percentages of task completion, accuracy, and disruptions for Coby, Rupert, and Jerri's avoidance-maintained behavior. Figures demonstrating this information are also available upon request from

Table 3 (continued)

Task Sequence	Where	Task Sequence	Where
77.5% (65%, 85%)	75% (70%, 85%)	84% (80%, 90%)	87% (85%, 90%)
37.5% (35%, 40%)	41.66% (40%, 45%)	38% (35%, 40%)	45% (45%, 45%)
31.66% (30%, 35%)	34.16% (25%, 40%)	27% (25%, 30%)	23.2% (20%, 27%)
4.16% (0%, 15%)	12.85% (10%, 15%)	0%	17% (15%, 20%)
3.33% (0%, 10%)	3.57% (0%, 5%)	0%	8% (0%, 10%)
77.5% (40%, 100%)	77.85% (70%,100%)	97% (90%,100%)	78.2% (70%, 85%)
Where	**Task Sequence**	**Where**	**Task Sequence**
88% (80%, 95%)	96% (90%, 100%)	94.16% (85%, 100%)	100%
49% (40%, 55%)	55% (50%, 60%)	60% (50%, 70%)	73% (70%, 75%)
25% (20%, 35%)	20% (15%, 25%)	29.16% (25%, 35%)	18.6% (15%, 20%)
Task Sequence	**Where**	**Task Sequence**	
99% (95%, 100%)	88% (65%, 100%)	100%	
85% (80%, 90%)	57% (5%, 90%)	93% (90%, 95%)	
31% (25%, 35%)	46% (30%, 80%)	19.2% (17%, 21%)	
Where	**Task Sequence**	**Where**	
74.16% (65%, 80%)	78% (75%, 80%)	86.11% (0%, 100%)	
20% (15%, 25%)	21% (20%, 25%)	27.22% (0%, 35%)	
42.5% (40%, 55%)	48% (35%, 70%)	31.55% (14%, 100%)	
82% (75%, 90%)	59.16% (50%, 80%)	85.83% (80%, 95%)	
59% (55%, 60%)	36.66% (25%, 50%)	63.33% (60%, 75%)	
25% (20%, 35%)	40% (35%, 45%)	15.83% (10%, 20%)	

the second author. Table 6 (see pg. 61) display the overall means and ranges. Of participants with avoidance-maintained behaviors, Coby and Rupert had the highest increase for task completion and accuracy in the choice of task sequence intervention. The third participant, Jerri, exhibited one data point in baseline other than 100% disruption and 0% for task completion and accuracy. After 29 sessions, the intervention of choice of task sequence was terminated which was the hypothesized functional match.

Overall scores indicate that the teacher found both choice-making interventions to be acceptable for all but one participant, Jerri. The overall mean for teacher willingness for all nine participants was 29 out of a possible 35, indicating overall high willingness to implement the interventions. Perceived effectiveness mean was rated 21 out of a possible 28 indicating the effectiveness of the interventions was favorable. The mean rating for perceived disadvantages was 19 out of 25 indicating that disadvantages for the interventions were low.

Table 4
Avoidance-Maintained Behavior Means and Range per Phase

Student	Data	Baseline	Where	Task Sequence
Coby	*Task Completion*	0%	0%	1.42% (0%, 10%)
	Task Accuracy	0%	0%	0%
	Disruption	100%	100%	78.57% (70%, 100%)
Rupert	*Task Completion*	0%	19.58% (0%, 40%)	47% (40%, 55%)
	Task Accuracy	0%	7.5% (0%,15%)	18% (15%, 20%)
	Disruption	100%	82.5% (60%,100%)	42% (35%, 60%)
Student	**Data**	**Baseline**	**Task Sequence**	**Where**
Jerri	*Task Completion*	2.5% (0%, 15%)	0%	0%
	Task Accuracy	1.87 (0%, 15%)	0%	0%
	Disruption	100%	100%	100%

Discussion

This study replicated and extended the current body of research in choice-making interventions for students with E/BD. For the majority of participants in the study, providing choices in the classroom increased their overall task completion and accuracy and reduced disruption. The effectiveness and treatment acceptability of the functionally indicated choice-making interventions are discussed as well as maintenance of the intervention.

Functionally indicated choice-making. All participants of the study had a history of well-established chronic behavioral problems to the extent that they required residential care. The participants continued to engage in low levels of task completion and accuracy as well as high levels of disruptive behaviors in the classroom even though each participated in the facility SW-PBIS plan. In particular, Coach, Coby, Rupert, and Jerri engaged in disruptive behaviors more than 90% of the time during baseline while Sondra, Amanda, Parvati, JT, and Russel engaged in disruptive behavior nearly 50% of the time in the classroom. With the exception of JT all participants also completed tasks in the math classroom with less than 40% completion and 30% accuracy. The participants performed a minimum of two grade levels below their academic grade level. Often, for students with E/BD problem behaviors function as a means to avoid classroom task demands (Filter & Horner, 2009). However, access-maintained behavior also contributes to disruptive behaviors in the classroom and interferes with task completion and accuracy (Filter & Horner, 2009). Broussard and Northup (1995) reported that students with E/BD often engaged in disruptive behaviors to gain access to teachers and peers.

We investigated the effect of choice of task sequence and the where choice linked to function on class disruption, task completion, and accuracy. Upon completion of the FBA six participants (i.e., Sondra, Amanda, Parvati, Russel, Coach, and JT) exhibited access-maintained problem behaviors during independent math activities. The hypothesized intervention match to access-maintained behavior was choice of where to complete assignments

Table 4 (continued)

Where	Task Sequence	Where	Task Sequence
0%	19% (0%, 25%)	2% (0%, 10%)	26.66% (20%, 30%)
0%	5% (0%, 10%)	0%	9.16% (0%, 15%)
70% (70%, 70%)	64% (50%, 100%)	99% (95%, 100%)	61.5% (43%, 80%)
59% (55%, 65%)	59.16% (40%, 65%)	45% (40%, 55%)	64% (55%, 75%)
18% (15%, 20%)	23.33% (10%, 30%)	17% (10%, 25%)	32% (30%, 35%)
32% (30%, 35%)	28.33% (20%, 50%)	48% (40%, 55%)	28.6% (27%, 33%)
Task Sequence	**Where**	**Task Sequence**	**Where**
0%	0%	0%	0%
0%	0%	0%	0%
100%	100%	100%	100%

(Sigafoos, 1998). Sondra, Amanda, and JT all had higher means of task completion and accuracy, with lower means of disruption during this intervention. However, Sondra also improved in the choice of task sequence intervention as well. Results indicated that when choice of where to complete assignments was offered to these participants, their disruptive behaviors decreased more than 10% over baseline. These results though small numerically, anecdotally translated to a significant reduction of disruption in the classroom. Sondra had gains of more than 50% for task completion and 37% for accuracy. Her disruption levels, based on notes taken during the observational period, indicated that peer interactions increased when Sondra was given an opportunity to choose where to complete assignments by choosing to sit near selected peers. JT also displayed similar behaviors as Sondra by engaging in peer conversation, which may have influenced task-completion, accuracy, and disruption. Amanda displayed higher levels of disruption during both interventions over baseline. On sessions with the higher percentages of disruption, Amanda made various negative statements regarding prior events on the unit related to her. The above examples indicate that confounding variables may have influenced the data. Russel and JT responded best to choice of task sequence over choice of where. Overall, both improved their task completion and accuracy and reduced disruptive behaviors when given opportunities to choose the order in which they completed tasks. JT stated that he preferred the where choice but he often engaged in more disruption by talking to peers or staff and completed less work in that condition. In the present study, the researchers extended the Romanuik et al. (2002) study by matching access-maintained behavior to choice of where, a functionally-maintained access-maintained behavior as described by Sigafoos (1994).

Answering the first research question, the researchers replicated and extended studies by: Jolivette et al. (2001), Kern et al. (2001), Romanuik et al. (2002), and Ramsey et al. (2010) for participants with avoidance-maintained behaviors. Coby, Rupert, and Jerri all exhibited behaviors during independent math activities that were maintained by avoidance. Choice of

Table 5
Access-Maintained Behavior Overall Means

Student	Data	Task Sequence	Where
Sondra	*Task Completion*	61.54% (15%, 90%)	71.77% (35%, 90%)
	Task Accuracy	25.79% (0%, 40%)	37.49% (20%, 45%)
	Disruption	36.17% (23%, 65%)	33.32% (20%, 50%)
Amanda	*Task Completion*	2.72% (0%, 15%)	13.28% (5%, 20%)
	Task Accuracy	1.11% (0%, 10%)	5.52% (0%, 10)
	Disruption	76.63% (40%, 100%)	66.01% (40%, 100%)
Student	**Data**	**Where**	**Task Sequence**
Parvati	*Task Completion*	76.55% (0%, 100%)	92.83% (80%, 100%)
	Task Accuracy	43.83% (0%, 70%)	62.11% (50%, 75%)
	Disruption	39.05% (20%, 65%)	24.25% (15%, 40%)
Student	**Data**	**Task Sequence**	**Where**
Russell	*Task Completion*	96.95% (75%, 100%)	88.68% (50%, 100%)
	Task Accuracy	76.20%(30%, 95%)	65.68% (5%, 90%)
	Disruption	34.02% (17%, 65%)	48.31% (30%, 90%)
Student	**Data**	**Where**	**Task Sequence**
Coach	*Task Completion*	63.56% (0%, 100%)	74.62% (70%, 80%)
	Task Accuracy	18.68% (0%, 35%)	19.88% (15%, 25%)
	Disruption	56.71% (14%, 100%)	48.38% (35%, 70%)
JT	*Task Completion*	85.53% (60%, 100%)	65.83% (40%, 90%)
	Task Accuracy	65.36% (55%, 85%)	45.83% (0%, 85%)
	Disruption	29.07% (10%, 60%)	40.94% (20%, 90%)

task sequence was the most effective intervention for Coby. His disruptive behaviors decreased by approximately 30% which produced a socially valid change from his previous behavior of leaving the classroom and/or sleeping for the duration of the class period. Choice of task sequence was effective in reducing Rupert's avoidance-based behaviors. In addition, Rupert increased his task completion from 0% to 57%. Though his accuracy did not improve to a passing average, he continued to make steady progress in increasing his task completion and accuracy. During the FBA, Jerri demonstrated avoidance-maintained behaviors, often verbally stating she was not going to complete work. Only during the baseline phase of data collection did Jerri engage in task completion while still displaying 100% disruptive behavior. Jerri's avoidance behaviors ranged from sleeping to verbally refusing to complete classwork to continuous vocalizations which would increase in intensity when presented with a task to complete. Jerri's behavior did not improve during either of the choice-making interventions.

Table 6
Avoidance-Maintained Behavior Overall Means

Student	Data	Task Sequence	Where
Coby	*Task Completion*	15.69% (0%, 30%)	.66% (0%, 10%)
	Task Accuracy	0%	0%
	Disruption	68.02% (43%, 80%)	89.66% (70%, 100%)
Rupert	*Task Completion*	56.72% (40%, 75%)	41.19% (0%, 65%)
	Task Accuracy	24.44% (10%, 35%)	14.17% (0%, 25%)
	Disruption	32.98% (20%, 60%)	54.17% (30%, 100%)
Student	**Data**	**Task Sequence**	**Where**
Jerri	*Task Completion*	0%	0%
	Task Accuracy	0%	0%
	Disruption	0%	0%

Maintenance. The second research question addressed the extent to which the dependent variable percentages would be maintained without intervention? No maintenance data were collected on Jerri because of the lack of any behavioral change. Maintenance probes were collected for the other participants at one-week intervals for three weeks after the intervention was withdrawn. Amanda's maintenance data indicated she had higher levels of disruption and lower levels for task completion and accuracy than during the intervention phases. Anecdotal notes did indicate that Amanda exhibited overall higher levels of problem behaviors throughout the school and unit environments during this time. Coby also exhibited levels near 50% for disruption and below 20% for task completion and accuracy; however, these levels were still lower than baseline. Coach exhibited the highest levels of disruption during the maintenance intervals with a steady increase over the three weeks. Based on reports from staff, Coach's typical staff were changed, which he verbally protested and this change coincided with the beginning of the maintenance period.

Based on the results of the participants, overall reduced levels of disruption and increased task completion and accuracy were maintained without the intervention. However, Kennedy (2005) indicated that maintenance of interventions is best established with longer time spans of maintenance data collection. Future researchers may investigate the maintenance of choice-making with longer periods of time between maintenance probes. In addition, future research into the factors that support the maintenance of choice-making interventions by teachers is recommended.

Treatment Acceptability. We investigated to what extent functionally-indicated choice-making interventions were rated as acceptable by the teacher? With the exception of one student, the teacher rated the two interventions positively across the three factors. Jerri was the one student the teacher did not rate the interventions as acceptable. Based on conversations with the teacher a few weeks after the termination of the study, the lack of

effectiveness of the interventions on Jerri's behavior influenced the teacher's rating. One factor of the TARF-R, perceived disadvantages, did have some variations in scoring acceptability by student, which was positively or negatively associated with the overall effectiveness of the choice-making interventions on student disruptive behaviors. As with many of the other choice-making studies and students with E/BD (e.g., Jolivette et al., 2001; Ramsey et al., 2010), the TARF-R was used as the social metric. Future researchers may want to investigate the treatment acceptability of choice-making with other metrics as well.

Limitations and Future Directions

The conclusions of the present study should be interpreted with caution. First, sample size was a limitation for this study. Due to the small sample size (n=9) results of this study may not be generalized to all students with E/BD in residential settings. In addition, study participant data were variable. Future researchers may want to increase the number of students with E/BD included in functionally-indicated choice-making interventions to add to the choice-making literature with this population, as well as extend the study settings (e.g., general education settings, residential settings), types of classroom/academic areas, and ages (e.g., high school) for further generalizability.

Second, limitations in the studies of Jolivette et al. (2001), Romanuik et al. (2002), and Ramsey et al. (2010) of non-responders whose behavior were too variable to determine a functional relation also were present in the current study. For Coach, Jerri, and Amanda, variability in the intervention data could not be explained simply through observations in the classroom. Other factors, such as comorbid psychiatric diagnosis, setting events, and issues related to family function, may have served as confounds and may explain the variability in the data. The participant data of Amanda, Russel, and Coach in the current study were variable within intervention phases. Future researchers, especially in regards to students with E/BD served in residential facilities, should study the possible interfering aspects of these factors on the effects of functionally-indicated choice-making. In addition, the topography of disruptive behaviors of the study participants were different, which may have influenced the data. The participants of the current study exhibited a wide range of disruptive behaviors from talking to peers to physical aggression. This variation in disruptive behaviors may account for the variability of participant intervention data. Future researchers may want to limit the types and topography of disruptive behavior when selecting future participants.

Third, the types of choices in relation to intervention effectiveness should be explored. Sigafoos (1998) indicated ten types of choices and Jolivette et al. (2002) found that some of these types of choices naturally occur in the classroom, but others are constructed by teachers, especially when offered to students with disabilities. Romanuik et al. (2002) and Ramsey et al. (2010) suggested that a mismatch of the type of choice and function of behavior

may have accounted for the ineffectiveness of choice-making interventions for participants in these studies. In the present study, the types of choice-making opportunities were chosen by the teacher with the assistance of the investigator, other teachers may have chosen other choice types based on their individual classrooms. Of the ten types of choices, it is important to take into account how the type of choice, such as termination, may effect task completion and accuracy negatively. Future researchers should investigate other types of functionally-indicated choices which match aviodance- and access-maintained behavior to potentially effect task completion and accuracy more positively.

Fourth, Rupert increased his task completion from 0% to 57%. Rupert is not atypical in terms of the academic characteristics of students with E/BD, who often exhibit high levels of academic failure and low task completion (Lane et al., 2008). Though his accuracy did not improve to a passing average he continued to make steady progress in increasing his task completion and accuracy. This was evident in the Ramsey et al. (2010) study as three of the five participants did not increase the percent accuracy to an overall passing rate. Rupert responded well to the choice of where intervention, often choosing to move near staff where he would ask for help appropriately. Future researchers should investigate the role of poor academic performance over a long period of time and the link to avoidance-maintained behavior. In addition, future researchers should investigate other positive behaviors, such as appropriate help seeking behaviors and academic behaviors, which may improve academic performance and reduce task avoidance during choice-making interventions.

Conclusion

Overall, the results of this study suggested that functionally-indicated choice-making interventions positively affected task completion, accuracy, and disruption for many of the participants in a residential middle school mathematics classroom. Choice-making interventions are flexibile, cost-effective, and efficient to use within classrooms during academic instruction (Jolivette et al., 2001; Kern et al., 1998), and choice-making historically has been a socially acceptable, antecedent-based intervention for classroom use (Morgan, 2006). This study investigated two functionally-indicated types of choices to address avoidance- and access-maintained inappropriate behavior, and given that Sigafoos (1998) and Jolivette et al. (2001, 2009) outlined ten types of choices for the varius functions, there are numerous opportunities for future researchers to study the effect of these ten types of choices on problem behavior and their link to behavioral function. Providing choice-making opportunities was manageable for the teacher and participants stated their support and fondness for the opportunity to make choices when completing work and often asked to make choices during other times in the classroom and throughout their school day. ■

References

Cooper, J., Heron, T., & Heward, W. (2007). *Applied behavior analysis* (2nd ed.). Columbus, OH: Merrill/Prentice Hall.

Dunlap, G., DePerczel, M., Clarke, S., Wilson, D., Wright, S. White, R., & Gomez, A. (1994). Choice-making to promote adaptive behavior for students with emotional and behavioral challenges. *Journal of Applied Behavior Analsis, 27*, 505-518.

Filter, K., & Horner, R. (2009). Function-based academic interventions for problem behavior. *Education and Treament of Children, 32*, 1-19.

Gable, R., & Hendrickson, J. (2000). Strategies for maintaining positve behavior change stemming from functional behavioral assessment in schools. *Education and Treatment of Children, 23*, 286-297.

Heckaman, K., Conroy, M., Fox, J., & Chait, A. (2000). Functional assessment-based intervention research on students with or at risk for emotional and behavioral disorders in school settings. *Behavioral Disorders, 25,* 196-210.

Individuals with Disabilities Education Improvement Act. IDEIA. (2004). Washington DC: Office of Special Education Programs.

Ingram, K., Lewis-Palmer, T., & Sugai, G. (2005). Function-based intervention planning: Comparing the effectiveness of FBA function-based and non-function-based intervention plans. *Journal of Positive Behavior Interventions, 7*, 224-236.

Jolivette, K., McCormick, K., McLaren, E., & Steed, E. (2009). Opportunities for young children to make choices in a model interdisciplinary and inclusive preschool program. *Infants and Young Children, 22,* 279-289.

Jolivette, K., Stichter-Peck, J., Sibilisky, S., Scott, T., & Ridgley, R. (2002). Naturally occurring opportunities for preschool children with or without disabilities to make choices. *Education and Treatment of Children, 25*, 396-414.

Jolivette, K., Wehby, J., Canale, J., & Massey, N. (2001). Effects of choice-making opportunities on the behavior of students with emotional and behavioral disorders. *Behavior Disorders, 26,* 131-145.

Kazdin, A. E. (1982). *Single-case research designs methods for clinical and applied settings.* Oxford: Oxford University.

Kennedy, C. H (2005). *Single-case designs for educatonal research.* Boston, MA: Allyn and Bacon.

Kern, L., Mantegna, M., Vorndran, C., Bailin, D., & Hilt, A. (2001). Choice of task sequence to reduce problem behaviors. *Journal of Positive Behavior Intervention, 3*, 3-10.

Kern, L., Vorndran, C., Hilt, A., Ringdahl, J., Adelman, B., & Dunlap, G. (1998). Choice as an intervention to improve behavior: A review of the literature. *Journal of Behavioral Education, 8*, 151-169.

Lancioni, G., O'Reilly, M., & Emerson, E. (1996). A review of choice research with people with severe and profound disabilities. *Research in Developmental Disabilities, 17*, 391-411.

Lane, K. L., Barton-Arwood, S., Nelson, J. R., & Wehby, J. H. (2008). Academic performance of students with emotional and behavioral disorders served in a self-contained setting. *Journal of Behavioral Education, 17*, 43-62.

Lane, K., Carter, E., Pierson, M., & Glaeser, B. (2006). Academic, social, and behavioral characterisitics of high school students with emotional disturbances or learning disabilities. *Journal of Emotional and Behavioral Disorders, 14*, 108-117.

Lewis, T. J., Scott, T. M., & Sugai, G. M. (1994). The Problem Behavior Questionnaire: A teacher-based instrument to develop functional hypotheses of problem behavior in general education classrooms. *Diagnostique, 19*, 103-115.

March, R., Lewis-Palmer, L., Brown, D., Crone, D., Todd, A.W., & Carr, E. (2000). *Functional assessment checklist for teachers and staff (FACTS).* Educational and Community Supports. University of Oregon, Eugene, Oregon.

Morgan, P. (2006). Increasing task engagement using preference or choice-making some behavioral and methodological factors affecting their efficacy as classroom interventions. *Remedial and Special Education, 27*, 176-187.

O'Neill, R., Horner, R., Albin, R., Sprague, J., Storey, K., & Newton, J. (1997). *Functional assessment and program development for problem behavior: A practical handbook.* Pacific Grove, CA: Brooks/Cole.

Powell, S., & Nelson, B. (1997). Effects of choosing academic assignments on a student with attention deficit hyperactivity disorder. *Journal of Applied Behavior Analysis, 30*, 181-185.

Ramsey, M. L., Jolivette, K., Patterson, D., & Kennedy, C. (2010). Using choice to increase time on task, task completion, and accuracy for students with emotional/ behavior disorders in a residential facility. *Education and Treatment of Children, 33*, 1-21.

Reid, R., Gonzalez, J., Nordness, P., Trout, A., & Epstein, M. (2004). A meta-analysis of the academic status of students with emotional/behavioral disturbance. *Journal of Special Education, 38*, 130-143.

Reid, R., & Nelson, J. (2002). The utility, acceptability, and practicality of functional behavioral assessment for students with high-incidence problem behaviors. *Remedial and Special Education, 23*, 15-23.

Reimers, T., & Wacker, D. (1988). Parents' ratings of the acceptability of behavioral treatment recommendations made in an outpatient clinic: A preliminary analysis of the influence of treatment effectiveness. *Behavioral Disorders, 14*, 7-15.

Romaniuk, C., Miltenberger, R., Conyers, C., Jenner, N., Jurgens, M., & Ringenberg, C. (2002). The influence of activity choice on problem behaviors maintained by escape versus attention. *Journal of Applied Behavioral Analysis, 35*, 349-362.

Shevin, M. & Klein, N. (1984). The importance of choice-making skills for students with severe disabilities. *Journal of the Association for Persons with Severe Handicaps, 9*, 159-166.

Shogren, K., Faggella-Luby, M., Bae, S., & Wehmeyer, M. (2004). The effects of choice-making as an intervention for problem behavior: A meta-analysis. *Journal of Postive Behavior Intervention, 6*, 228-237.

Sigafoos, J. (1998). Choice-making and personal selection strategies. In J. Luiselli, & M. Cameron (Eds.), *Antecedent control* (pp. 187-221). Baltimore, MD: Brookes.

Sugai, G., Lewis-Palmer, T., & Hagan, S. (1998). Using functional assessments to develop behavior support plans. *Preventing School Failure, 43*, 6-15.

Sugai, G., Lewis-Palmer, T., Todd, A.W., & Horner, R. (2001). *School-wide Evaluation Tool (SET).* Educational and Community Supports. University of Oregon, Eugene, Oregon.

Trout, A., Nordness, P., Pierce, C., & Epstein, M. (2003). Research on the academic status of children with emotinoal and behavioral disorders: A review of the literature from 1961 to 2000. *Journal of Emotional and Behavioral Disorders, 11*, 198-213.

Umbreit, J., Ferro, J., Liaupsin, C., & Lane, K. (2007). *Functional behavioral assessment and function-based intervention.* Upper Saddle River, NJ: Pearson Merrill Prentice Hall.

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