

EFFECTS OF TEACHER CONSULTATION ON EVIDENCE-BASED CLASSROOM
MANAGEMENT STRATEGIES: TEACHER AND STUDENT BEHAVIOR

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ABSTRACT

The American Psychological Association (APA) conducted the online 2005-2006 Teacher Needs Survey wherein 52% of first year teachers, 28% of teachers with two to five years of experience, and 26% of teachers with 6 to 10 years experience ranked classroom management as their greatest need. Difficulty managing student behaviors leads to higher stress and burnout for teachers (Smith & Smith, 2006) as well as less instructional time, lower grades, and poorer performance on standardized tests for students (Shinn, Ramsey, Walker, Stieber, & O'Neill, 1987). When teachers are charged with managing their own classrooms in the field, they are often inadequately prepared (Bergeny & Martens, 2006) and professional development workshops and inservices on classroom management are often ineffective (Allen & Forman, 1984, Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005). The focus of the current study was to evaluate the effectiveness of a checklist of evidence-based classroom management strategies both by itself and coupled with feedback and an action plan. Effectiveness was measured by the percentage of strategies from the checklist that were implemented by the teacher as well as the percentage of disruptive behavior by students in the classroom. The checklist consisted of 17 evidence-based classroom management strategies that were divided into three areas: Beginning of Class; During Instruction; and Responding to Student Behavior. The study consisted of four conditions: Baseline; Checklist; Checklist, Feedback, and Action Plan; and Maintenance. During the Checklist condition, the investigator and teacher read through evidence-based classroom management strategies on the checklist and reviewed examples and non-examples of the strategies. During the Checklist, Feedback, and Action Plan condition, the investigator and teacher reviewed the graphed data on the teacher's use of the strategies during Baseline and Checklist conditions. After reviewing the data, the teacher and investigator identified a

maximum of three strategies from the checklist to implement and an action plan for how to implement those strategies was created. Then, after each observation, a checklist scored by the investigator was given to the teacher. During Maintenance, the teacher no longer received a scored checklist following the observations. Three elementary, self-contained classroom teachers of students with emotional and behavioral disorders participated in the study. During Baseline, the teachers used an average of 20% to 30% of the evidence-based classroom management strategies and the percentages of disruptive behavior ranged from an average of 60% to 90%. During the Checklist condition, the level of the data immediately increased for percentage of strategies used and the level of the data for disruptive behavior decreased, for two of the teachers. The changes in level for both percentage of strategies used and percentage of disruptive behavior, however, did not remain. One teacher returned to baseline levels for both percentage of strategies used and percentage of disruptive behavior. The other teacher showed a slight increase from baseline levels for percentage of strategies used, but the percentage of disruptive behavior returned to baseline levels. For the third teacher, no significant change in level was observed for percentage of strategies used and percentage of disruptive behavior. All three teachers, however, demonstrated increased use of the strategies and decreased percentages of disruptive behavior, when the checklist was coupled with feedback and an action plan. From Baseline to the Checklist, Feedback, Action Plan condition, the average percentages of strategies used were: Teacher A, 24% to 93%; Teacher B, 23% to 93%; and Teacher C, 33% to 88%. During Maintenance, Teacher A used an average of 92% of evidence-based classroom management strategies and Teachers B and C used 94% of evidence-based classroom management strategies. From Baseline to Maintenance, the average percentages of disruptive behavior were: Teacher A, 76% to 17%; Teacher B, 91% to 13%; and Teacher C, 64% to 12%.

All three teachers found the intervention to be acceptable. Specifically, the teachers reported that: this intervention would be beneficial and appropriate for a variety of students; they were likely to use this intervention in the future; they liked the procedures used; and they were more likely to stay in their current teaching position after using this intervention.

DEDICATION

This dissertation is dedicated to the educators, students, and parents who have inspired me along my journey. A special dedication goes to Danny and his mom. About 10 years ago, a 7 year old boy diagnosed with autism and his mom forever changed my life by showing me the next path on my journey.

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CHAPTER 1

INTRODUCTION

Teachers are responsible for creating a safe learning environment wherein all students can learn. The classroom management skills of the teacher affect both the teacher and the student. Teachers who have difficulty managing student behavior have higher stress and burnout (Smith & Smith, 2006). Students in classrooms with frequent disruptive behavior tend to have less instructional time, lower grades, and do poorer on standardized tests (Shinn, Ramsey, Walker, Stieber, & O'Neill, 1987). In teacher preparation programs, classroom management courses are typically offered, but, when teachers are charged with managing their own classrooms in the field, they are often inadequately prepared (Bergeny & Martens, 2006). In addition, professional development workshops and inservices on classroom management are often ineffective (Allen & Forman, 1984, Fixsen, Naom, Blasé, Friedman, & Wallace, 2005). The American Psychological Association (APA) conducted the online 2005-2006 Teacher Needs Survey wherein 52% of first year teachers, 28% of teachers with two to five years of experience, and 26% of teachers with 6 to 10 years experience ranked classroom management as their greatest need.

The three core components of classroom management are: (a) maximized allocation of instructional time; (b) instructional activities that maximize academic achievement and engagement; and (c) proactive behavior management strategies (Sugai & Horner, 2002). Simonsen, Fairbanks, Briesch, Myers, and Sugai (2008) identified 20 evidence-based classroom management strategies from the literature and categorized them into the following five critical features of classroom management: (a) maximize structure; (b) post, teach, review, monitor, and

reinforce expectations; (c) actively engage students in observable ways; (d) use a continuum of strategies to respond to appropriate behaviors; and (e) use a continuum of strategies to respond to inappropriate behaviors.

The focus of this dissertation is to build on current literature through the investigation of whether a checklist of evidence-based classroom management strategies (MacSuga & Simonsen, 2011; Simonsen, et al., 2008; Tincani, 2011) accompanied by review of the strategies with the investigator is sufficient to increase teachers' implementation of the strategies, or if a checklist, feedback, and action plan model is necessary to increase teachers' implementation of strategies. In addition, the effect of the intervention(s) on students' disruptive behavior was also measured.

Research Questions

- 1) What are the effects of a checklist or a checklist, feedback, and action plan model of evidence-based classroom management strategies on a teacher's implementation of those strategies?
- 2) What are the effects of the implementation of evidence-based classroom management strategies on students' disruptive behavior?
- 3) How do teachers perceive the goals, procedures, and outcomes of the intervention with respect to their teaching and students' behaviors?
- 4) Will changes to teachers' and students' behavior from the Checklist, Feedback, and Action Plan condition maintain, once the teachers no longer receive feedback?

To answer these questions, three elementary teachers of students with emotional and behavioral disorders in self-contained classrooms participated in this study. Using a multiple-baseline design, data were collected on the percentage of evidence-based classroom management

strategies used by the teachers and the percentage of disruptive behavior by students, across four conditions: Baseline; Checklist; Checklist, Feedback, and Action Plan; and Maintenance. During Baseline, the teachers conducted business as usual. During the Checklist condition, the teachers were given a checklist of evidence-based classroom management strategies with examples and non-examples. During the Checklist, Feedback, and Action Plan condition, the teachers were provided with feedback on their use of the strategies during Baseline and Checklist conditions and an action plan to increase implementation of the strategies was developed with the investigator. During the Checklist, Feedback, and Action Plan condition, teachers were provided with a checklist scored by the investigator, after each observation. During Maintenance, the investigator discontinued providing a scored checklist to the teacher after an observation. To assess the social validity of the intervention, the three teachers completed a modified Intervention Rating Profile – 15 (IRP-15) wherein two questions were added for a total of 17 questions. The methods used for this study are described in Chapter 3, the results are presented in Chapter 4, and a discussion of the results is in Chapter 5.

CHAPTER 2

REVIEW OF THE LITERATURE

Classroom Management Issues

In 2005-2006, The American Psychological Association (APA) conducted an online survey wherein 2,334 teachers from 49 states and the District of Columbia ranked their professional development needs in classroom management, instructional strategies, classroom diversity, and parental communication. The two highest ranked areas were instructional strategies and classroom management. Pre K – 5 teachers ranked classroom management as their greatest need. Middle school and high school teachers ranked instructional strategies as their first need and classroom management as their second need. Fifty-two percent of first year teachers, 28% of teachers with two to five years of experience, and 26% of teachers with 6 to 10 years experience ranked classroom management as their greatest need. For classroom management, the teachers rated the following three areas of specific interest: “Ensure that students’ negative behaviors are not an ongoing distraction to you and your classroom; ensure that students, including gifted children and children with disabilities, are socially and emotionally safe in the classroom; and, ensure that all students participate in classroom interaction” (APA, 2006, p. 76).

Under the Individuals with Disabilities Education Act (IDEA, 2004), students may qualify for special education services if they have a disability. One of the 13 disabilities under which students can be classified is Emotional Disturbance (ED):

Emotional disturbance means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance: (a) An inability to learn that cannot be explained by intellectual, sensory, or health factors; (b) An inability to build or maintain satisfactory

interpersonal relationships with peers and teachers; (c) Inappropriate types of behavior or feelings under normal circumstances; (d) A general pervasive mood of unhappiness or depression; (e) A tendency to develop physical symptoms or fears associated with personal or school problems. Emotional disturbance includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance under paragraph (c)(4)(i) of this section.

Students with emotional and behavioral disorders (EBD), a term synonymous with ED, exhibit external (e.g., disruptions) and/or internal (e.g., anxiety) behaviors that interfere with their learning, and these maladaptive behaviors are affected by classroom management practices (Oliver & Reschly, 2010). For example, Wehby (2003) found that teachers of EBD students only spend 30% of the school day providing academic instruction. Teachers of students with EBD tend to be less experienced, less credentialed, and less skilled in instructional practices, in comparison to other special educators (Henderson, Klein, Gonzalez, & Bradley, 2005). Through the use of evidence-based classroom management strategies, teachers can effectively decrease inappropriate behaviors and increase student engagement (MacSuga et al., 2011, Oliver, Wehby, & Reschly, 2011).

Classroom Management Practices

Oliver, Wehby, and Reschly (2011) conducted a literature review to examine the effects of classroom management strategies on aggressive, disruptive, or inappropriate behaviors of students in kindergarten through 12th grade. Oliver and colleagues found teachers' classroom management strategies, specifically classroom organization and behavior management, to have a significant effect on reducing problem behavior in the classroom. In addition, "while the ultimate goal may be to reduce problem behavior and increase prosocial behaviors, the fact remains that the teacher behavior ultimately needs to change first to produce changes in student behavior" (Oliver, et al., 2011, p. 36).

Classroom management has three core components: (a) maximized allocation of instructional time; (b) instructional activities that maximize academic achievement and engagement; and (c) proactive behavior management strategies (Sugai et al., 2002). Simonsen, Fairbanks, Breisch, Myers, and Sugai (2008) identified 20 evidence-based classroom management strategies which are categorized into the following five critical features of classroom management: (a) maximize structure; (b) post, teach, review, monitor, and reinforce expectations; (c) actively engage students in observable ways; (d) use a continuum of strategies to respond to appropriate behaviors; and (e) use a continuum of strategies to respond to inappropriate behaviors. The 20 evidence-based classroom management strategies in their respective critical feature of classroom management are summarized in Table 1 (Simonsen et al., 2008, p. 354-357).

Table 1. 20 Evidence-Based Classroom Management Strategies

Evidence-Based Classroom Management Strategies	Supporting References
1. Maximize Structure	
High classroom structure (e.g., amount of teacher directed activity)	<ul style="list-style-type: none"> • Huston-Stein, Friedrich-Cofer, & Susman, 1997 • Morrison, 1979 • Susman, Huston-Stein, & Friedrich-Cofer, 1980
Physical arrangements that minimize distraction (e.g., walls, visual dividers) and crowding	<ul style="list-style-type: none"> • Ahrentzen & Evans, 1984 • Burgess & Fordyce, 1989 • Maxwell, 1996 • Weinstein, 1977
2. Post, Teach, Review, Monitor, and Reinforce Expectations	
Post, teach, review, and provide feedback on expectations	<ul style="list-style-type: none"> • Greenwood, Hops, Delquadri, & Guild, 1974 • Johnson, Stoner, & Green, 1996 • McNamara, Evans, & Hill, 1986 • Sharpe, Brown, & Crider, 1995
Active supervision	<ul style="list-style-type: none"> • Colvin, Sugai, Good, & Lee, 1997 • DePry & Sugai, 2002 • Schuldheisz & van der Mars, 2001
3. Actively Engage Students in Observable Ways	
Rate of opportunities to respond (OTRs)	<ul style="list-style-type: none"> • Carnine, 1976 • Sindelar, Bursuck, & Halle, 1986

Table 1. (continued)

Evidence-Based Classroom	Supporting References
Management Strategies	
Response cards	<ul style="list-style-type: none"> • Sutherland, Alder, & Gunter, 2003 • West & Sloane, 1986 • Christle & Schuster, 2003 • Godfrey, Grisham-Brown, & Schuster, 2003 • Lambert, Cartledge, Heward, & Lo, 2006
Direct Instruction	<ul style="list-style-type: none"> • Abt Associates, 1977 • Becker & Gersten, 1982 • Gersten, Keating, & Becker, 1988 • Nelson, Johnson, & Marchand-Martella, 1996 • White, 1988
Computer assisted instruction	<ul style="list-style-type: none"> • Clarfield & Stoner, 2005 • Layng, Twyman, & Stikeleather, 2003 • Ota & DuPaul, 2002
Class-wide peer tutoring	<ul style="list-style-type: none"> • Delquadri, 1986 • DuPaul, Ervin, Hook, & McGoe, 1998 • Greenwood, Carta, & Hall, 1988 • Greenwood, Delquadri, & hall, 1989 • Simmons, Fuchs, & Fuchs, 1995
Guided notes	<ul style="list-style-type: none"> • Austin, Lee, Thibeault, Carr, & Bailey, 2002

Table 1. (continued)

Evidence-Based Classroom	Supporting References
Management Strategies	
	<ul style="list-style-type: none"> • Sweeney, Ehrhardt, Gardner, Jones, Greenfield, & Fribley, 1999 • Lazarus, 1993
4. Use a Continuum of Strategies to Acknowledge Appropriate Behavior	
Specific, contingent praise	<ul style="list-style-type: none"> • Broden, Bruce, Mitchell, Carter, & Hall, 1970 • Craft, Alber, & Heward, 1998 • Ferguson & Houghton, 1992 • Sutherland, Wehby, & Copeland, 2000 • Wilcox, Newman, & Pitchford, 1988
Class-wide group contingencies	<ul style="list-style-type: none"> • Barrish, Saunders, & Wolf, 1969 • Davies & Witte, 2000 • Hansen & Lignugaris, 2005 • Lewis & Sugai, 1993 • Lohrmann, Talerico, & Dunlap, 2004 • Yarborough, Skinner, Lee, & Lemmons, 2004
Behavioral contracting	<ul style="list-style-type: none"> • Drabman, Spitalnik, & O'Leary, 1973 • Kelly & Stokes, 1984 • White-Blackburn, Semb, & Semb, 1977 • Williams & Anandam, 1973

Table 1. (continued)

Evidence-Based Classroom	Supporting References
Management Strategies	
Token economies	<ul style="list-style-type: none"> • Jones & Kadzin, 1975 • Main & Munro, 1977 • McCullagh & Vaal, 1975
5. Use a Continuum of Strategies to Respond to Inappropriate Behavior	
Error corrections	<ul style="list-style-type: none"> • Abramowitz, O’Leary, & Futersak, 1988 • Acker & O’Leary, 1988 • Baker, 1992 • Barbetta, Heward, Bradley, & Miller, 1994 • McAllister, Stachwiak, Baer, & Conderman, 1969 • Singh, 1990 • Singh & Singh, 1986 • Winett & Vachon, 1974
Performance feedback (with and without the addition of other evidence-based strategies)	<ul style="list-style-type: none"> • Brantley & Webster, 1993 • Kasteien, Nickel, & McLaughlin, 1984 • Van Houten & McKillop, 1977 • Yarborough, Skinner, Lee, & Lemmons, 2004
Differential reinforcement	<ul style="list-style-type: none"> • Deitz, Repp, & Deitz, 1976 • Didden, de Moor, & Bruyns, 1997

Table 1. (continued)

Evidence-Based Classroom	Supporting References
Management Strategies	
Planned ignoring plus contingent praise and/or instruction of classroom rules	<ul style="list-style-type: none"> • Repp, Deitz, & Deitz, 1976 • Zwald & Gresham, 1982 • Hall, Lund, & Jackson, 1968 • Madsen, Becker, & Thomas, 1968 • Yawkey, 1971
Response cost	<ul style="list-style-type: none"> • Forman, 1980 • Greene & Pratt, 1972 • Trice & Parker, 1983
Time out from positive reinforcement	<ul style="list-style-type: none"> • Barton, Brulle, & Repp, 1987 • Foxx & Shapiro, 1978 • Ritschl, Mongrella, & Presbie, 1972

The first feature, maximum structure and predictability, included the physical arrangement and design of the classroom, the amount of teacher-directed activities, and clearly defined routines. Simonsen and colleagues (2008) concluded that in classrooms with high structure, students were more likely to engage in tasks (Morrison, 1979) and appropriate behaviors (e.g., helpful, paying attention, friendly toward peers) and were less likely to be as aggressive (Huston-Stein, Friedrich-Cofer, & Susman, 1977; Susman, Huston-Stein, & Friedrich Cofer, 1980). Consequently, in classrooms with more structure, students were more likely to engage in appropriate academic and social behaviors.

The second feature, post, teach, review, monitor, and reinforce expectations, included defining a few positively stated expectations/rules that are explicitly taught and reviewed and then the teacher actively supervised students and provided error corrections for behaviors not aligned with the expectations/rules and reinforcement to those students demonstrating the expectations/rules. Simonsen and colleagues (2008) found that off-task and disruptive behavior decreased while academic engagement increased, from posting, teaching, reviewing, and providing feedback on the expectations (Johnson, Stoner, & Green, 1996; Lane, Wehby, & Menzies, 2003; Lo, Loe, & Cartledge, 2002; McNamara, Evans, & Hill, 1986; Sharpe, Brown, & Crider, 1995; Rosenberg, 1986). They also found that pairing feedback and reinforcement led to even more significant changes (Greenwood, Hops, Delquadri, & Guild, 1974). In addition, the use of active supervision decreased the incidence of minor behavioral incidents (De Pry & Sugai, 2002).

The third feature, actively engage students in observable ways, included active (e.g., answering a question) and passive (e.g., listening to the teacher) behaviors that indicate participation in the lesson. Simonsen and colleagues (2008) concluded that increasing the rate of opportunities to respond led to increased on-task behavior (Carnine, 1976; Sutherland, Alder, & Gunter, 2003), academic engagement (Carnine, 1976), and the number of correct responses (Sutherland et al., 2003), while decreasing disruptive behavior (Carnine, 1976; Sutherland et al., 2003; West & Sloane, 1986). Choral responding increased academic achievement (Sindelar, Bursuck, & Halle, 1986) and on-task behavior (Godfrey, Grisham-Brown, & Schuster, 2003). Using response cards increased student responding and on-task behavior (Christle & Schuster, 2003; Godfrey, Grisham-Brown, & Schuster, 2003; Lambert, Cartledge, Heward, & Lo, 2006) as well as academic achievement (Christle & Schuster, 2003). Direct instruction increased

academic achievement (Becker & Gersten, 1982) and on-task behavior (Nelson, Johnson, & Marchand-Martella, 1996). Computer assisted instruction increased on-task behavior in students with Attention Deficit/ Hyperactivity Disorder (AD/HD; Ota & DuPaul, 2002; Clarfield & Stoner, 2005). Classwide peer-tutoring decreased off-task behavior and increased academic performance in students with ADHD. Guided notes increased academic achievement (Austin, Lee, Thibeault, Carr, & Bailey, 2002; Lazarus, 1993; Sweeney et al., 1999).

The fourth feature, a continuum of strategies to respond to appropriate behavior, included evidence-based strategies that ranged from simple (e.g., specific-contingent praise) to complex (e.g., class-wide group contingencies), as a method of recognizing and acknowledging appropriate behaviors. Simonsen and colleagues (2008) concluded that specific-contingent praise increased correct responses (Sutherland & Wehby, 2001), work productivity and accuracy (Craft, Alber, & Heward, 1998), on-task behavior (Ferguson & Houghton, 1992), student attending (Brodin, Bruce, Mitchell, Carter, & Hall, 1970), and compliance (Wilcox, Newman, & Pitchford, 1988). Class-wide group contingencies and token economies increased positive verbal interactions (Hansen & Lignugaris, 2005), decreased transition time (Yarborough, Skinner, Lee, & Lemmons, 2004), and decreased talk-outs and out-of-seat behavior (Barrish, Saunders, & Wolf, 1969). Behavioral contracting increased student productivity (Kelley & Stokes, 1984) and on-task and work completion behavior (White-Blackburn, Semb, & Semb, 1977).

The fifth feature, a continuum of strategies to respond to inappropriate behavior, included evidence-based strategies that ranged from simple (e.g., correcting inappropriate behavior) to complex (e.g., differential reinforcement), as a method of addressing inappropriate behaviors. Simonsen and colleagues (2008) concluded that error corrections increased appropriate behavior (Winett & Vachon, 1974). Problem behaviors decreased with performance feedback (Brantley &

Webster, 1993), differential reinforcement (Deitz, Repp, & Deitz, 1976; Repp, Deitz, & Deitz, 1976), planned ignoring (Hall, Lund, & Jackson, 1968), response cost (Greene & Pratt, 1972; Trice & Parker, 1983), and time-out (Barton, Brulle, & Repp, 1987; Foxx & Shapiro, 1978).

Simonsen and colleagues (2008) also created the checklist in Table 2, known as the Classroom Management Assessment (CMA), to be used either by teachers to reflect on their own strategies or by observers to help teachers implement the strategies:

Table 2. Classroom Management Assessment

Practice	Rating	
1. I maximized structure and predictability in my classroom.		
a. I explicitly taught and followed predictable routines .	Yes	No
b. I arranged my room to minimize crowding and distraction .	Yes	No
2. I posted, taught, reviewed, monitored, and reinforced a small number of positively stated expectations .		
a. I operationally defined and posted a small number of expectations (i.e. school wide rules) for all routines and settings in my classroom.	Yes	No
b. I explicitly taught and reviewed these expectations in the context of routines.	Yes	No
c. I prompted or pre-corrected students to increase the likelihood that they will follow the expectations.	Yes	No
d. I actively supervised my students.	Yes	No
3. I actively engaged students in observable ways.		
a. I provided a high rate of opportunities to respond during my instruction.	Yes	No
b. I engaged my students in observable ways during teacher directed instruction (i.e. I used response cards, choral responding, and other methods).	Yes	No
c. I used evidence-based methods to deliver my instruction (e.g. Direct Instruction).	Yes	No
4. I used a continuum of strategies to acknowledge appropriate behavior .		
a. I provided specific and contingent praise for academic and social behaviors (e.g. following expectations)	Yes	No
b. I also used other systems to acknowledge appropriate behavior (group contingencies, behavior contracts, or token economies).	Yes	No

Table 2. (continued)

Practice	Rating	
5. I used a continuum of strategies to respond to inappropriate behavior.		
a. I provided specific, contingent, and brief error corrections for academic and social errors.	Yes	No
b. In addition, I used the least restrictive procedure to discourage inappropriate behavior (differential reinforcement, planning ignoring, response cost, time out).	Yes	No

On the CMA, there are a total of 13 items that can be scored “yes” or “no.” It was recommended that “yes” responses to 10 or more items (77% and above) indicated the teacher’s classroom management is “effective” while “yes” responses to 7-10 items (54%-77%) indicated “somewhat effective” classroom management and “yes” responses to fewer than 7 items (46% and less) indicated “needs improvement” (Simonsen, et al., 2008). In order to determine if a checklist like the CMA was effective for improving teachers’ use of classroom management strategies, the literature was reviewed.

Checklists and Classroom Management

A search of the literature was conducted using “checklist AND classroom management” as the search terms in the following EBSCOHost Research Databases: Academic Search Premier, Education Full Text, Education Research Complete, ERIC, Primary Search, PsycARTICLES, Psychology and Behavioral Sciences Collection, and PsycINFO. The search resulted in 13 articles that were peer reviewed and linked to full text and an additional 19 articles that were peer reviewed. Of the 32 articles, four were relevant to using a checklist for classroom management. The other 28 articles contained the word “checklist” but the references to a checklist were irrelevant to classroom management. Of the four relevant articles, two of the

articles included checklists for classroom management; one of the articles identified components of classroom management; and one of the articles provided and conducted a study on the effectiveness of a checklist, consultation, and an action plan model for improving classroom management.

Stewart, Evans, and Kaczynski (1997) discussed and provided a checklist of four factors related to the classroom environment. The authors identified the following four factors as effective on the classroom environment: (a) physical environment; (b) time/instructional management; (c) behavior management; and, (d) teacher effectiveness. The first factor, physical environment, included the following: the layout of the classroom, the decorations, the organization of materials, defined instructional areas, traffic patterns, and seating arrangements. The second factor, time/instructional management, included the following: a posted daily schedule which shows maximum instructional time for content areas, short- and long-term academic and behavior goals, the type of instruction (e.g., whole class, independent work, small group instruction), the number of learning/response opportunities for students, providing error corrections immediately, a rapid pace of instruction, and reinforcing correct/appropriate behaviors. The third factor, behavior management, included the following: three to five positively stated classroom rules that are posted and reviewed frequently, consequences in place for following and not following the rules, three positives for every negative, individual reward systems as needed, and performance feedback. The final factor, teacher effectiveness, included the following: maintaining high but realistic expectations, adapting instruction, accommodating diversity, and modeling. For each factor, the authors provided vignettes of problematic behavior in the classroom which highlighted the importance of the corresponding factor. The authors created a 30 item checklist of the four factors, as a self-assessment for teachers. However, some

of the items on the checklist were subjective and not operationally defined. For example, under factor 4, teacher effectiveness, the five items were: maintains high expectations; knows students and accommodates diversity; models and infuses time-tested values; likes children and teaching and believes every student can learn; has a sense of humor, confidence, and enthusiasm. It is unclear how one would identify whether or not a teacher exhibits or possesses these characteristics. In addition, the authors did not implement the checklist with any teachers and so the effectiveness of the checklist is unknown.

Witt, VanDerHeyden, and Gilbertson (2004) also created a checklist which partly focused on classroom management. These authors described how to use a checklist as a systematic process for troubleshooting problems with behavioral interventions. The authors used the Behavioral Intervention Troubleshooter (BIT) to look at four areas of behavioral interventions: (a) the definition of the problem and monitoring; (b) fundamentals of behavior management and classroom instruction; (c) the integrity of the intervention; and, (d) the design of the intervention. The BIT is a sequential checklist for consultants to use. Table 3 contains the checklist for level 2, fundamentals of behavior management and classroom instruction:

Table 3. Behavioral Intervention Troubleshooter, Level 2

Item	Yes	No
Does the teacher utilize lesson plans that provide for clear directions, guided practice, frequent opportunities to respond, and feedback?		
Are most students performing the academic work assigned to them at high accuracy rates?		
Are classroom rules posted?		
When observed, is the overall student appropriate behavior greater than 70%?		
Is there evidence of a systematic plan for addressing noncompliance and compliance with classroom rules (e.g., posted plan, training, and student knowledge)?		
Are rule violations enforced according to behavior plan 100% of the time?		
Do students transition between activities in less than 4 minutes?		

While some of the items in this section of the checklist are evidence-based practices (e.g., posted classroom rules, frequent opportunities to respond), the authors did not provide any data to support the checklist in promoting teachers' evidence-based practices, and thus effects of the checklist are unknown.

Roscoe and Orr (2010) identified and discussed six elements of classroom management. Based upon the authors' professional experiences as science teachers and the work of Emmer, Evertson, and Worsham (2008), the following six elements were identified and defined as necessary for effective classroom management in a science classroom: (a) organization of the physical environment; (b) positive relationships; (c) behavioral expectations; (d) classroom procedures; (e) effective instruction; and, (f) intervention. Roscoe and Orr also recommended that teachers create a checklist before the school year begins and focus on the following: information regarding teaching assignment; names of students and their needs; establishing rules and procedures; plans for building relationships; and instructional plans. The six elements of classroom management identified by the authors were vaguely described and the descriptions were largely based upon the authors' professional experiences. The authors did not collect data on the effects of the six strategies on teacher classroom management skills and student behavior. As such, the necessary components of each strategy as well as their effectiveness are unknown.

MacSuga and Simonsen (2011) not only created a checklist of classroom management skills, but they also tested the effectiveness of a consultation, checklist, and action plan model. Specifically, they examined the effectiveness of consultation, a checklist, and an action plan to improve the use of evidence-based classroom management strategies by teachers. The participants were two teachers who were recommended by their principals because of classroom management difficulties. The first participant, a music teacher of 10 years to seventh- and

eighth-grade students, was concerned with the following behaviors: swearing, calling out, and leaving the assigned area (seat and/or classroom). The second participant, a special education resource room teacher of seventh-grade students for three years, identified the following behaviors of concern: completing work, swearing, and calling out. Each participant was asked to identify three students who attended class regularly and exhibited behaviors of concern. Using a 10-item checklist, a four step consultation model, and an action plan, five evidence-based classroom management strategies were targeted: (a) structured learning environment; (b) teach, review, monitor, and reinforce expectations; (c) active student engagement; (d) strategies for responding to appropriate behavior (i.e., group and individual contingencies, specific praise); and, (e) strategies for responding to inappropriate behavior (i.e., error correction, planned ignoring). The four step consultation model consisted of the following steps: (a) initiation; (b) prompting skill acquisition; (c) building skill fluency; and (d) supporting skill maintenance. The action plan was part of the second step of the consultation model which consisted of identifying three areas for improvement and looking at current performance in the identified areas, goals to improve the areas, and steps to reach those goals. Table 4 contains the 10 item checklist used.

Table 4. 10 Item Checklist

Classroom Management Practice	Extent of Implementation			
	Yes	Partial	No	N/A
Beginning of Class				
1. I greeted my students as they entered the classroom and prompted them to show respect (e.g. use a quiet voice) and responsibility (e.g. sit and start work) before class.				
2. I posted the schedule/routine for the class period and I reviewed it with students at the beginning of the period.				
3. I posted 3-5 positively stated expectations and reviewed them at the beginning of the period.				
During Instruction				
4. I prompted students to follow 3-5 positively stated expectations throughout the period.				
5. I provided each student with multiple opportunities to respond and participate during instruction.				
6. My instruction actively engaged students in observable ways (e.g., writing, verbalizing).				
7. I actively supervised my classroom (e.g. moving, scanning) during instruction.				
8. I used one or more strategies/systems to acknowledge appropriate student behavior (e.g. praise, coupons, etc.)				
9. I provided quick, calm, direct, explicit corrections/redirections in response to inappropriate behavior (or ignored the behavior if appropriate).				
10. I provided more frequent acknowledgement for appropriate behaviors than inappropriate behaviors (+ to – ratio)				

The two participants were observed for implementation of items 4 – 10 on the checklist, because the beginning of the period was not consistently observed. The six identified students were observed for on- and off-task behavior.

Using an AB design, the two participants were observed daily for 15 minutes during baseline and intervention and the 10-item checklist was completed by the observer. The six identified students were also observed daily for 15 minutes and were marked as on- or off-task at the end of one-minute intervals using momentary time-sampling. In addition, during intervention, each participant was asked to check off his/her own copy of the checklist daily as a self-monitoring tool. Results indicated that one participant improved from an average baseline of 51% (range, 40% - 70%) of the use of evidence-based classroom management strategies to 100% with the checklist, consultation, and action plan model. For this participant, there were increases in the on-task behavior for two of the identified students and the other student's on-task behavior remained at 80%. The other participant had an average baseline of 27% (range, 15% - 30%) and with the model increased to an average of 51% (range, 40% - 70%). The researchers then provided this participant with daily e-mail feedback in addition to the model, and this participant averaged 70% (range, 60% - 85%) use of the evidence-based classroom management strategies. With the model and daily feedback, the three identified students showed increases in on-task behavior. The researchers concluded that this model appears to be effective for increasing teachers' use of evidence-based classroom management strategies.

Despite promising results, the study had the following limitations which restrict the authors' conclusion. The authors did not operationally define the behaviors of concern. Interobserver agreement data were not collected and was acknowledged as a limitation. It would have been helpful if numerical values of the data were provided, since the graphs were small. In

the discussion section, the authors mentioned how the teacher who improved to 100% with the model also used 15 M&Ms each class period as a way to remember to acknowledge 15 appropriate behaviors. With the use of daily e-mail feedback for one participant and the use of 15 M&Ms for the other participant, it cannot be concluded that the checklist, consultation, and action plan model was effective for increasing use of evidence-based classroom management strategies.

In addition to the relevant literature from the search, the book *Preventing Challenging Behavior in Your Classroom: Positive Behavior Support and Effective Classroom Management* (Tincani, 2011) is relevant. Strategies discussed in chapters 3, 4, and 5, classroom organization, active student responding (ASR), and classroom-wide behavior support, respectively, are summarized in Table 5.

Table 5. Classroom Management Strategies

Chapter 3: Classroom Organization		Chapter 4: ASR	Chapter 5: Classroom-Wide Behavior Support
Schedules: Whole Class and Individual	Alternate demanding and preferred activities	Response cards	Contingent praise and attention
	Break up long activities	Wait time should be as brief as possible (i.e. 5 seconds or less)	Behavior-specific praise
	Offer choices	Intertrial intervals should be 3-5 seconds	Teach students to recruit teacher attention
Physical Space	Clearly defined instructional areas	Choral responding	Error correction
	Seating arrangements match instructional activity and students' needs	Guided notes	Post and reinforce classroom rules
	Traffic patterns and distractibility – place easily distracted students away from the door, computer, play area, etc.	Brisk instructional pacing	Group contingencies
	Students with physical disabilities can navigate the classroom and obtain materials easily	Provide immediate (within 1-3 seconds) positive or corrective feedback when students respond	Active supervision
Transitions	As brief as possible (2-3 minutes)		Precorrections
	A clear cue to signal the end of one activity and the beginning of another		

Of these strategies, wait-time, intertrial time, transitions, teaching students to recruit teacher attention, and precorrections were not identified by Simonsen and colleagues (2008) as evidence-based classroom management strategies, because they did not appear in their literature search. Precorrections are provided to prevent the occurrence of predictable problem behavior and facilitate the occurrence of appropriate behavior (Colvin & Sugai, 1988; Colvin, Sugai, & Patching, 1993). Verbal reminders, demonstrations of appropriate behavior, or behavior rehearsals that occur right before the problem behavior is likely to occur are examples of precorrections (Colvin, Sugai, Good, & Lee, 1997). Using precorrections and active supervision together decreased problem behavior during transitions for elementary students in one study (Colvin et al., 1997) and the number of office referrals decreased for students participating in a morning gym program in another study (Haydon & Scott, 2008). In addition to using precorrections and active supervision, Tincani (2011) recommended that transitions should take no more than 2-3 minutes, a clear cue/signal should be used, and all necessary materials should be in the location of the activity. Wait-time, the time between a teacher's question and an elicited response, and intertrial time, the time between the answer to one question and the next posed question, are functionally related to student learning (Valcante, Roberson, Reid, & Wolking, 1989). Rowe (1986) recommended 3 seconds or more of wait-time and intertrial time, Jegede and Olajide (1995) found that wait-time of 3 seconds or more was effective, and Tincani (2011) recommended 3-5 seconds of wait-time and intertrial time. A review of the literature by Alber and Heward (1997) on teaching students to recruit teacher attention showed that students with varying ages and abilities were able to be taught to independently recruit social reinforcement (e.g., raise hand) in the form of teacher praise and attention.

Tincani (2011) included a non-empirically based survey in his book wherein the strategies from the three chapters discussed, as well as from the other chapters in the book, were listed and a rating of 1 (totally not in place) to 5 (totally in place or not applicable) could be assigned. The area (e.g., classroom organization, ASR, etc.) with the lowest average was then used to create an action plan. The action plan consisted of targeting three components from the area for improvement and setting a target date for completion.

Performance Feedback

Performance feedback (PF) involves “monitoring a behavior that is the focus of concern and providing feedback to the individual regarding that behavior” (Noell et al., 2005, p. 88). Myers, Simonsen, and Sugai (2011) examined the effectiveness of PF on four middle school teachers’ use of praise statements. The researchers concluded that simply exposing the teachers to praise statements by providing them with and reviewing with them a handout on specific, contingent praise and the ideal rates for praise did not increase their usage of the statements and that PF was effective for increasing the rate of praise statements for all teachers. The researchers did note, however, that the amount of PF needed to meet criterion for rate of praise statements varied between teachers which suggested that a continuum of PF with varying intensities would be useful. Similarly, Colvin, Flannery, Sugai, and Monegan (2008) found PF as an effective intervention for a high school teacher. In this study, the researchers shared baseline data with the teacher and created an action plan for improving instructional practices. This resulted in increasing student engagement, decreasing problem behavior, and changing instructional practices of the teacher. Soloman, Klein, and Politylo (2012) conducted a meta-analysis of single-case research on PF, since, in the school setting, PF is often used to increase the integrity of academic and behavioral interventions. The results of the meta-analysis indicated that PF is

effective with preschool through high school special education and general education teachers. In looking at behavioral and academic interventions, PF was found to be more effective for increasing the integrity of academic interventions. The researchers did note, however, that the type of measurement used for the two types of interventions was different with academic interventions using integrity checklists and behavioral interventions using direct observation with time-sampling or frequency count. In terms of the immediacy of the PF, there was no significant difference between PF delivered immediately and PF delivered within a day.

Conclusions

The survey by the APA (2006) indicated that Pre K-5 teachers and teachers with 0-10 years of experience need more training in classroom management strategies. The body of literature in the present review suggests that a checklist of evidence-based strategies may be one method or strategy to help teachers become more fluent with evidence-based classroom management strategies necessary for effective classroom management (APA, 2006; MacSuga et al., 2011; Roscoe et al., 2010; Simonsen et al., 2008; Stewart et al., 1997; Tincani, 2011). Simonsen and colleagues (2008) identified five critical features of classroom management: (a) maximize structure; (b) post, teach, review, monitor, and reinforce expectations; (c) actively engage students in observable ways; (d) use a continuum of strategies to respond to appropriate behaviors; and (e) use a continuum of strategies to respond to inappropriate behaviors, and 20 evidence-based classroom management strategies that fit into those categories. Simonsen and colleagues found that in classrooms with high structure, students were more likely to engage in tasks (Morrison, 1979) and appropriate behaviors (e.g., helpful, paying attention, friendly toward peers) as well as be less aggressive (Huston-Stein et al., 1977; Susman et al., 1980). Posting, teaching, reviewing, and providing feedback on the expectations decreased off-task and

disruptive behavior (Johnson et al., 1996; Lane et al., 2003; Lo et al., 2002; McNamara et al., 1986; Sharpe et al., 1995; Rosenberg, 1986). The use of active supervision decreased the number of minor behavioral incidents (De Pry et al., 2002). Increasing the rate of opportunities to respond increased on-task behavior (Carnine, 1976; Sutherland et al., 2003) and academic engagement (Carnine, 1976), and decreased disruptive behavior (Carnine, 1976; Sutherland et al., 2003; West et al., 1986). On-task behavior increased with the use of choral responding (Godfrey et al., 2003) and response cards (Christle et al., 2003; Godfrey et al., 2003; Lambert et al., 2006). Specific-contingent praise increased on-task behavior (Ferguson et al., 1992) and compliance (Wilcox et al., 1988). Class-wide group contingences and token economies increased positive verbal interactions (Hansen et al., 2005), decreased transition time (Yarborough et al., 2004), and decreased talk-outs and out-of-seat behavior (Barrish et al., 1969). Error corrections increased appropriate behaviors (Winett et al., 1974) and problem behaviors decreased with performance feedback (Brantley et al., 1993) and planned ignoring (Hall et al., 1968). The reviewed checklists (MacSuga et al., 2011; Roscoe et al., 2010; Simonsen et al., 2008; Tincani, 2011) were largely based on these strategies. In addition, Tincani (2011) recommended some additional classroom management strategies. Precorrections and active supervision together, decreased problem behavior during transitions for elementary students in one study (Colvin et al., 1997) and the number of office referrals decreased for students participating in a morning gym program in another study (Haydon et al., 2008). Tincani (2011) recommended that transitions should take no more than 2-3 minutes, a clear cue/signal should be used, and all necessary materials should be in the location of the activity. At least 3 seconds of wait-time and intertrial time should be sufficient (Rowe, 1986; Jegede et al., 1995; Tincani, 2011). Students with varying ages and abilities were able to be taught to independently recruit

social reinforcement (e.g., raise hand) in the form of teacher praise and attention (Alber et al., 1997). Only one study was conducted on the application of one of the checklists.

MacSuga and Simonsen (2011) found that using the checklist and providing a four step consultation which included developing an action plan and daily e-mail feedback increased one teacher's implementation of the evidence-based classroom management strategies, while the other teacher did not need the daily e-mail feedback piece of the model, but used 15 M&Ms to remember to acknowledge 15 appropriate behaviors. In addition, the on-task behaviors of all three students from each of the classrooms increased. Given the differences (e.g., daily email feedback, M&Ms) in the intervention, it is unclear what specifically led to the increase in the teachers' implementation of the evidence-based classroom management strategies. In addition, PF has been shown to be effective with preschool through high school special education and general education teachers, and there was no significant difference between PF delivered immediately and PF delivered within a day (Soloman et al., 2012).

To date, few studies have evaluated the effects of an intervention to train teachers to implement a package of evidence-based classroom management strategies. In addition, few studies have evaluated the effects of teacher consultation and feedback on students' disruptive behavior in the classroom setting. This dissertation evaluated whether a checklist based on the identified evidence-based strategies (MacSuga et al., 2011; Simonsen et al., 2008; Tincani, 2011), with review of those strategies with the investigator, was sufficient to increase teachers' implementation of the strategies or if a checklist with review of those strategies with the investigator, coupled with feedback and development of an action plan was necessary. The effect of the intervention(s) on students' disruptive behavior was also measured.

CHAPTER 3

METHOD

Participants and Setting

In a suburban public school district in Southeastern Pennsylvania, three elementary, self-contained emotional support teachers and their students participated in this study. In this school district, the Director of Special Education asked the investigator to provide the three emotional support teachers with weekly morning trainings in classroom management strategies, because of high levels of disruptive behavior in their classrooms. The investigator then proposed asking the three emotional support teachers to participate in this study, rather than conducting the weekly training sessions. All three teachers agreed to participate in this study, and informed consent to participate in the study was obtained per Temple's Institutional Review Board. Teacher A was dually certified in elementary education and special education. This was her first year in a teaching position. There were eight fifth and sixth grade students in Teacher A's classroom. Teacher B was dually certified in elementary education and special education, earned a master's degree in education, and had been teaching for a total of five years. This was her second year teaching in a self-contained emotional support classroom. There were six first and second grade students in Teacher B's classroom. Teacher C was dually certified in elementary education and special education and enrolled in a master's degree in education program. This was his second year in a teaching position and his second year as a self-contained emotional support teacher. There were eight third and fourth grade students in Teacher C's classroom.

Primary Dependent Measure and Recording Procedure

To determine whether a checklist based on the identified evidence-based strategies (MacSuga & Simonsen, 2011; Simonsen et al., 2008; Tincani, 2011) with review of those strategies and examples and non-examples with the investigator was sufficient to increase teachers' implementation of the strategies, or if a checklist with review of those strategies with examples and non-examples, feedback, and an action plan with the investigator, was necessary, each teacher was given a checklist entitled Classroom Management Checklist. Each teacher's implementation of the evidence-based classroom management strategies on the checklist was observed during 15 minute sessions which occurred at the beginning of an academic block. The three sections on the checklist were: Beginning of Class, During Instruction, and Responding to Student Behavior. Within each of those sections, there were evidence-based classroom management strategies, wherein components of each strategy were listed. For example, in the section entitled Beginning of Class, the first evidence-based classroom management strategy was Schedule and Agenda. The two components for Schedule and Agenda were: daily schedule posted and reviewed at beginning of class and agenda posted and reviewed at beginning of class. When a component on the checklist was observed, a check was placed in the box next to that component. A check was played in the "yes" column for each evidence-based classroom management strategy, if all boxes for the strategy were checked. A check was placed in the "partial" column, if at least one component of the strategy was checked. A check was placed in the "no" column, if none of the components of the strategy were checked. A total of three points could be earned for The Beginning of Class section of the checklist; a total of eight points could be earned for the During Instruction section of the checklist; and a total of six points could be earned for the Responding to Student Behavior section of the checklist. A total of 17 possible

points could be earned on the entire checklist. Although Simmons and colleagues (2008) recommended that 77% and above on their checklist was considered “effective” classroom management, there is not empirical support for this criterion. As such, the goal for this study was implementation of 100% of the evidence-based classroom management strategies on the checklist. Thirty second partial interval recording was used to measure the level of disruptive behavior in the classroom. The operational definition of disruptive behavior used for each classroom was: any instance of calling out, leaving the assigned area without adult permission, talking with a peer when expected to work independently or listen to the teacher, and/or making noises (i.e., kicking desk with foot, opening and closing desk lid, drumming with pencils on desk). The teacher and investigator reviewed the checklist during the teacher’s preparation period; therefore, students were unaware of the checklist intervention.

Checklist

The evidence-based classroom management strategies on the checklist were selected from the evidence-based strategies and checklists outlined by MacSuga and Simonsen (2011), Simonsen and colleagues (2008), and Tincani (2011) and are summarized in Table 6.

Table 6. Evidence-Based Classroom Management Strategies

Strategy		Used/Referenced/Recommended		
		MacSuga & Simonsen (2011)	Simonsen and colleagues (2008)	Tincani (2011)
Beginning of Class	Schedule posted with times and activities	X		X
	3-5 positively stated expectations	X	X	X
During Instruction	Transitions – cue, 3 minutes or less, materials ready			X
	Active supervision	X	X	X
	Wait time and intertrial time			X
	Active student responding	X	X	X
	Method for obtaining teacher attention			X
Responding to Student Behavior	Precorrections		X	X
	Behavior-specific praise	X	X	X
	Token economy or class-wide group contingency	X	X	X
	Planned Ignoring	X	X	X
	Corrections/redirections	X	X	X
	Performance feedback		X	

Procedures

Baseline

A minimum of five data points that demonstrated steady responding were collected during Baseline. Teacher participants conducted business as usual. Data on the percentage of evidence-based strategies used and the percentage of disruptive behavior were collected by the investigator. Baseline data collection continued in each classroom until steady responding over at least five data points was established.

Checklist

The teacher was provided with the Classroom Management Checklist on 8.5"x11" paper, in the Checklist condition. The teacher and investigator read each item on the Classroom Management Checklist in Table 7 together.

Table 7. Classroom Management Checklist

Classroom Management Checklist			
	Yes	Partial	No
Beginning of Class			
Schedule and Agenda <ul style="list-style-type: none"> <input type="checkbox"/> Daily schedule posted and reviewed at beginning of class <input type="checkbox"/> Agenda posted and reviewed at beginning of class 			
Expectations <ul style="list-style-type: none"> <input type="checkbox"/> 3-5 positively stated expectations posted and reviewed at beginning of class 			
Total Score For Beginning of Class	____ / 3 = ____%		
During Instruction			
Transitions <ul style="list-style-type: none"> <input type="checkbox"/> Consistent signal/cue used <input type="checkbox"/> 3 minutes or less <input type="checkbox"/> All necessary materials in location of activity 			
Supervision and Pacing <ul style="list-style-type: none"> <input type="checkbox"/> Active supervision (walking around in unpredictable pattern, scanning) <input type="checkbox"/> 3-5 seconds wait time when asking a question <input type="checkbox"/> 3-5 seconds between teacher feedback and next question 			
Student Responding <ul style="list-style-type: none"> <input type="checkbox"/> Active student responding method is used (e.g., response cards, choral responding) <input type="checkbox"/> Consistent method used for obtaining teacher attention (e.g., raise hand) 			
Total Score for During Instruction	____ / 8 = ____ %		
Responding to Student Behavior			
Appropriate Behavior Strategies <ul style="list-style-type: none"> <input type="checkbox"/> Precorrections (reminders to engage in appropriate behavior) are used <input type="checkbox"/> Behavior-specific praise delivered within 1-3 seconds <input type="checkbox"/> Token economy or class-wide group contingency 			
Inappropriate Behavior Strategies <ul style="list-style-type: none"> <input type="checkbox"/> Performance feedback (graph for target behavior and criteria) <input type="checkbox"/> Planned ignoring for calling out: ignore, behavior-specific praise for students raising hand <input type="checkbox"/> Corrections/redirections given within 1-3 seconds: state problem behavior and what student should do instead 			
Total Score for Responding to Student Behavior	____ / 6 = ____ %		
Total Score for Entire Checklist	____ / 17 = ____ %		

The investigator then provided and read the following examples and non-examples for each item. The examples and non-examples, found in Tables 8-14, were provided on 8.5"x11" paper and stapled to the checklist, for easy reference.

Table 8. Examples and Non-Examples of “Schedule”

Schedule		
	Examples	Non-Examples
Daily schedule posted and reviewed at the beginning of class	9:00-9:15 – Morning Work 9:15-10:00 – Math 10:00-10:45 – Science Pointing to the daily schedule: “It’s 9:15. We just finished our morning work and will begin math.”	Math Science “Let’s start math.”
Agenda posted and reviewed at the beginning of class	Today in math, we will do the following (pointing to the written agenda): “Math: Fractions 1. Math message 2. Page 96 3. Math game with partner “	“It’s math time. Turn to page 247 and complete the math boxes.”

Table 9. Examples and Non-Examples of “Expectations”

Expectations		
	Examples	Non-Examples
3-5 positively stated expectations posted and reviewed at the beginning of class	Keep hands and feet to self.	Don't touch anyone.
	Raise your hand to speak.	Don't call out.
	Stay in your seat.	Don't leave your seat
	Follow directions.	Don't refuse to do something.
	“We are about to begin math. Let's read our expectations together: Keep hands and feet to self. Raise your hand to speak. Stay in your seat. Follow directions.”	“Take a minute and look at the posted expectations.”
	“We are about to begin math. Let's review our expectations. Who can tell me one of our expectations?” (Have all expectations stated.)	“Our expectations are posted here.” Pointing to the expectations – “Here is what I expect from you.”

Table 10. Examples and Non-Examples of “Transitions”

Transitions		
	Examples	Non-Examples
Consistent signal/cue used	Use of <u>one</u> signal/cue: Bell Clap hands “Freeze!” “1,2, 3 eyes on me!” “5, 4, 3, 2, 1, your eyes are on me and you are quiet.”	A variety of signals/cues are used (i.e., bell, clap hands, stop-look-listen)
3 minutes or less	Students are in designated area(s) and instruction begins within 3 minutes after the transition signal/cue	Students are wandering around the room or not in designated area or students are sitting and waiting in designated area 4 minutes or more after the transition signal/cue
All necessary materials in location of activity	All materials students need that are supplied by the teacher are at the location of the activity	Bringing materials to location of the activity Searching for needed materials

Table 11. Examples and Non-Examples of “Supervision & Pacing”

Supervision & Pacing		
	Examples	Non-Examples
Active supervision (walking around in unpredictable pattern, scanning)	Walking past all students in an unpredictable pattern Constantly looking around/scanning entire room	Standing in one spot Walking past some students Walking in predictable pattern Not looking up from activity
3-5 seconds wait time when asking a question	Giving a maximum of 5 seconds and then calling on a student	Giving 6 or more seconds before calling on a student
1-3 seconds between teacher feedback and next question	Giving feedback (i.e., correct answer, confirming student’s answer is correct) and a maximum of 3 seconds later asking the next question	Not giving feedback and asking the next question Waiting 4 seconds or long to ask the next question

Table 12. Examples and Non-Examples of “Student Responding”

Student Responding		
	Examples	Non-Examples
Active student responding method is used (response cards, choral responding)	<p>Students are able to participate in the lesson by engaging in the following:</p> <p>Response cards – all students will be given the same materials (whiteboard with marker and eraser, colored cards, paper and pencil) and they write their answer at the same time and show the teacher their answers all at the same time.</p> <p>“On your whiteboard, write the word <i>cat</i>. When I say ‘go,’ everyone hold up your whiteboard. Go!”</p> <p>Choral responding – students answer in unison</p> <p>Show me - You give a prompt or ask a question and students show understanding by signaling (thumbs up, down, sideways; hold up number of fingers; press a number on key pad to indicate correct answer, etc.)</p> <p>Guided Notes – You provide students with notes for the lesson. The notes include blanks in strategic places for students to write in key facts, concepts, and/or relationships. You stop at intervals to check that students have filled in the blanks in the notes.</p>	Calling on one student for the answer
Consistent method used for obtaining teacher attention (i.e. raise hand)	Students can identify how to get your attention during that particular activity and you only respond to students using the designated method	Students call out, raise hand, walk up to you and you respond to all of them

Table 13. Examples and Non-Examples of “Appropriate Behavior Strategies”

Appropriate Behavior Strategies		
	Examples	Non-Examples
Precorrections (reminders to engage in appropriate behavior) are used	<p>“Remember, to get my attention, raise your hand.”</p> <p>“Remember, during our small group discussion, one person speaks at a time.”</p> <p>“This is just a reminder that, if you need help, all you have to do is raise your hand.”</p>	<p>“Don’t call out.”</p> <p>“Don’t talk over others.”</p> <p>“Don’t just sit there.”</p>
Behavior-specific praise delivered within 1-3 seconds	<p>Name, praise statement, specific behavior within 1-3 seconds:</p> <p>“Jon, nice job raising your hand!”</p> <p>“Maggie, I like how you went right to the table when the bell rang!”</p>	<p>“Good job!”</p> <p>“Way to go!”</p> <p>“Awesome!”</p> <p>“Nice work!”</p> <p>(After class) “Maggie, I like how you went right to the table when the bell rang!”</p>
Token economy or class-wide group contingency	<p>In conjunction with behavior-specific praise, the following can be used:</p> <p>Tickets: students get a ticket when a desirable behavior (i.e., working quietly, asking for help) is observed. Students can exchange tickets for tangibles (i.e., prize, sticker, pencil) or intangibles (i.e., lunch with teacher, line leader).</p> <p>Marble jar: when the class exhibits a desirable behavior (i.e., quiet during test, all materials on desk in 10 seconds), the class earns a certain number of marbles for that behavior. When the jar is filled to the designated line, the class earns a reward (i.e., extra recess, free time).</p>	<p>Randomly giving student tickets for no specific reason</p> <p>Giving every student a ticket every time</p> <p>Excluding students when the class earns a reward from the marble jar</p>

Table 14. Examples and Non-Examples of “Inappropriate Behavior Strategies”

Inappropriate Behavior Strategies		
	Examples	Non-Examples
Performance feedback (graph for target behavior and criteria)	<p>Students graph or chart their progress on a target behavior:</p> <p>Students graph the percentage they raise their hand for math class, with a goal of 85% for one week</p>	Verbally telling students their percentage
Corrections/redirections given within 1-3 seconds: state problem behavior and what student should do instead	<p>Within 3 seconds after observing the inappropriate behavior:</p> <p>Mike is observed talking to his neighbor and not doing his work - “Mike, you are talking to John and right now you need to have a quiet mouth and complete page 65 in your workbook.”</p>	<p>Waiting 4 or more seconds to correct the observed inappropriate behavior.</p> <p>“Stop.”</p> <p>“You should know better.”</p>
Planned ignoring for calling out: ignore, behavior-specific praise for students raising hand	Ignore the calling out student and provide behavior-specific praise to students raising their hand (e.g., “John, nice job raising your hand.”)	<p>“Stop calling out.”</p> <p>Looking at the student</p>

Thereafter, the scoring procedure was discussed. The investigator informed the teacher that each evidence-based classroom management strategy on the checklist was worth one point. A total of three points could be earned for the Beginning of Class section of the checklist; a total of eight points could be earned for the During Instruction section of the checklist; and a total of six points could be earned for the Responding to Student Behavior section of the checklist. A total of 17 possible points could be earned on the checklist and the goal was to implement all 17 of the strategies on the checklist.

Checklist, Feedback, and Action Plan

During the Checklist condition, if the teacher did not achieve 100% on the checklist for one session within five observations, the investigator then commenced the second intervention condition, Checklist, Feedback, and Action Plan. During the Checklist, Feedback, and Action Plan condition, the teacher was provided with feedback from the investigator, and the teacher and investigator created an action plan entitled Steps to Success. A graph showing the teacher's performance during Baseline and Checklist conditions was provided by the investigator. The investigator and teacher reviewed the area of lowest performance, as indicated by the lowest average percentage for Beginning of Class, During Instruction, or Responding to Student Behavior. Within the area with the lowest average score, a maximum of three strategies were the focus of the action plan. A maximum of three steps to achieve the identified strategy were listed by the teacher and investigator together. For each observation thereafter, a copy of a scored checklist for the teacher's review was provided by the investigator at the end of each observation. Once the teacher demonstrated the strategy identified in the action plan over three consecutive observations, the date completed was entered on the action plan. The goal was to

implement all of the evidence-based classroom management strategies to obtain 100% on the checklist.

Maintenance

As described, the goal of the intervention was for the teachers to implement all 17 strategies on the Classroom Management Checklist. Given that this was the first time this package of strategies on the checklist was being tested, if the teachers implemented at least 14 of the 17 strategies (80%) and there was a significant decrease in the percentage of disruptive behavior, the teachers were able to move to the Maintenance condition, even though they did not achieve the 100% criterion for percentage of evidence-based classroom management strategies implemented. Once Teacher A demonstrated stable responding with the percentage of evidence-based classroom management strategies used over at least five observations, and the students' disruptive behavior decreased and was steady, Teacher A moved to Maintenance wherein a scored checklist was no longer provided after each observation. The same procedure was used for Teachers B and C.

Experimental Design

A multiple baseline across teacher participants design was used to evaluate the effects of the checklist and, if necessary, the checklist coupled with feedback and action planning, on increasing teacher participants' implementation of evidence-based classroom management strategies. The four conditions were: Baseline; Checklist; Checklist, Feedback, and Action Plan; and Maintenance. During Baseline, the teachers conducted business as usual. During the Checklist condition, the teacher and investigator read through the checklist and provided examples and non-examples of the strategies on the checklist. During the Checklist, Feedback, and Action Plan condition, the teacher and investigator reviewed the graphs of data on the

teacher's implementation of the strategies during Baseline and Checklist conditions and identified three strategies to focus on by creating an action plan. In addition, a scored checklist was provided to the teacher after each observation. During Maintenance, the teacher was no longer provided with a scored checklist after each observation. During all conditions, data were collected on the percentage of evidence-based classroom management strategies implemented by the teacher and the percentage of disruptive behavior by the students.

After stable responding during Baseline for Teacher A was established, Teacher A began the Checklist condition, while Teachers B and C remained in Baseline. Once Teacher A demonstrated steady responding in the Checklist condition, Teacher B began the Checklist condition. Once Teacher B showed steady responding during the Checklist condition, Teacher C began the Checklist condition. Visual inspection of data for level, trend, and variability was conducted. Across conditions, the percentage of evidence-based classroom management strategies implemented by the teacher was visually assessed for the level of change. During each condition of the study, the direction of the data points was visually inspected for trends. Maintenance data were collected to determine if the teacher maintained the same level of use of evidence-based classroom management strategies. When each teacher participant was in Baseline, data for student disruptive behavior were collected via partial interval recording for 30 second intervals for a total of 15 minutes. Data for disruptive student behavior were collected via partial interval recording for 30 second intervals for a total of 15 minutes during Checklist, Checklist, Feedback, and Action Plan, and Maintenance conditions.

Interobserver Agreement Measures

Sessions for interobserver agreement were selected randomly across the intervention phase(s). Across Baseline, Checklist, Checklist, Feedback, and Action Plan, and Maintenance

conditions, interobserver agreement (IOA) was measured during 36% of total observations for Teacher A; 38% of the total observations for Teacher B; and 37% of total observations for Teacher C. The investigator and one independent observer collected the data. For percentage of evidence-based classroom management strategies used, agreements were recorded when both the investigator and the independent observer, an undergraduate student, checked off the same strategies on the checklist. For percentage of disruptive behavior, agreements were recorded when both the investigator and the independent observer scored the interval the same. The percentage of agreement was calculated by dividing the number of agreements by the total number of agreements and disagreements and multiplying by 100. IOA for percentage of evidence-based classroom management strategies used was: Teacher A, 99% (range, 88-100%); Teacher B, 97% (range, 71-100%); and Teacher C, 94% (range, 76-100%). IOA for disruptive behavior was: Teacher A, 93% (range, 77-100%); Teacher B, 93% (range, 80-100%); and Teacher C, 88% (range, 63-100%).

Procedural Integrity Measures

A second, independent observer, an undergraduate student, observed the investigator implementing the checklist with each of the three teachers for the Checklist condition by using the checklist in Table 16. An independent observer observed the investigator implementing the checklist, feedback, and action plan with each of the three teachers for the Checklist, Feedback, and Action Plan condition by using the checklist in Table 17. Procedural integrity for Checklist and Checklist, Feedback, and Action Plan implementation was 100% for all three teachers.

Social Validity Measure

Each teacher completed a modified version of The Intervention Rating Profile (IRP-15; Martens, Witt, Elliot, & Darveaux, 1985), to assess the social validity of the checklist and/or the

checklist, feedback, and action plan. The IRP-15 consisted of 15 items with a 6-point Likert scale. Questions 16 and 17 were added to the survey by the investigator. Total scores on the unmodified survey can range from 15 to 90. As determined by the authors of the survey, the higher the score is, the greater the social validity and a score of 52.50 or higher is considered acceptable.

CHAPTER 4

RESULTS

Results for overall percentage of evidence-based classroom management strategies used by Teachers A, B, and C during Baseline, Checklist, Checklist, Feedback and Action Plan, and Maintenance are depicted in Figure 1. Results for percentage of disruptive behavior in the classrooms of Teachers A, B, and C during Baseline, Checklist, Checklist, Feedback, and Action Plan, and Maintenance are depicted in Figure 2.

Experimental control, according to the guidelines set forth by Horner, Carr, Halle, McGee, Odom, and Wolery (2005), was demonstrated in the Checklist, Feedback, and Action Plan condition. Specifically, visual inspection of the data indicate that the increase in level was immediate and the increase maintained during the staggered introduction of the Checklist, Feedback, and Action Plan condition across Teachers A, B, and C. In contrast, experimental control was not established with the Checklist condition, because an immediate change in level of target behaviors was not apparent across Teachers A, B, and C and, therefore, the condition lacked efficacy. The Checklist, Feedback, and Action Plan and Maintenance conditions, however, were efficacious for increasing and maintaining all three teachers' use of the evidence-based classroom management strategies.

Teacher A

Results for Teacher A's overall average and range of percentages of evidence-based classroom management strategies used during Baseline, Checklist, Checklist, Feedback, and Action Plan, and Maintenance are summarized in Table 15. Results for the overall average and range of percentages of disruptive behavior of students in Teacher A's classroom during

Baseline, Checklist, Checklist, Feedback, and Action Plan, and Maintenance are summarized in Table 16.

Baseline

During Baseline, Teacher A, over five observations, used an average of 24% (range, 12-35%) of the evidence-based classroom management strategies and the students engaged in an average of 76% (range, 63-97%) disruptive behavior. On the checklist, Teacher A used 0% of Beginning of Class strategies, an average of 38% (range, 25-50%) of During Instruction strategies, and an average of 17% (range, 0-50%) of Responding to Student Behavior strategies. For During Instruction strategies, Teacher A consistently had materials ready and active supervision was used. Sometimes transitions were three minutes or less and 3-5 seconds between teacher feedback and the next question was used. The remaining strategies in During Instruction were not used at all during Baseline. For Responding to Student Behavior strategies, Teacher A inconsistently used a group contingency and corrections and redirections. The remaining strategies in Responding to Student Behavior were not used.

Checklist

During the Checklist condition, Teacher A used an average of 44% (range, 24-59%) of the evidence-based classroom management strategies which was an average increase of 20% from Baseline. Students engaged in an average of 65% (range, 43-87%) disruptive behavior which was a decrease from an average of 76% during Baseline. On the Classroom Management Checklist, Teacher A used an average of 87% (range, 33-100%) of Beginning of Class strategies which was an increase from 0% during Baseline. An average of 45% (range, 38-50%) of During Instruction strategies were used which was an increase from 38% during Baseline. Teacher A used an average of 20% (range, 0-50%) of Responding to Student Behavior strategies which was an increase from 17% during Baseline. For all observations except one, all Beginning of Class

Strategies were implemented. For During Instruction strategies, Teacher A consistently had materials ready, transitions were three minutes or less, and active supervision was used. A transition signal was used inconsistently. For Responding to Student Behavior strategies, Teacher A inconsistently and infrequently used behavior-specific praise, a group contingency, planned ignoring, and corrections and redirections.

Checklist, Feedback, and Action Plan

After the checklist only condition, the investigator and Teacher A reviewed the data and created an action plan. After reviewing the data, Teacher A and the investigator decided that the following three strategies were the focus of the action plan: a consistent method used for obtaining teacher attention; a token economy/group contingency; and planned ignoring for calling out. For obtaining teacher attention and planned ignoring, it was decided that Teacher A would only respond to students who had a hand raised and a quiet mouth. For the token economy/group contingency, Teacher A was currently inconsistently and infrequently giving checks to students on a side chalkboard. It was decided that Teacher A would put chart paper with students' names listed on the front board and students would earn a check every time they raised their hand with a quiet mouth. The checks earned turned into points that went into the students' point banks for daily and weekly rewards.

During the Checklist, Feedback, and Action Plan condition, Teacher A used an average of 93% (range, 88-94%) of the evidence-based classroom management strategies which was a significant increase from an average of 24% during Baseline and an average of 44% during the Checklist condition. The students engaged in an average of 15% (range, 7-27%) disruptive behavior which was a significant decrease from an average of 76% during Baseline and 65% during Checklist conditions. On the checklist, Teacher A used 100% of Beginning of Class strategies, which was a significant increase from an average of 0% during Baseline and an

average of 87% during the Checklist condition. An average of 98% (range, 88-100%) of During Instruction strategies were used which was a significant increase from an average of 38% during Baseline and an average of 45% during the Checklist condition. Teacher A used 83% of Responding to Student Behavior strategies which was a significant increase from an average of 17% during Baseline and an average of 20% during the Checklist condition. For During Instruction strategies, Teacher A used 100% of the strategies for 11 out of the 14 observations. For two of the observations, an active student responding strategy was the only strategy not used. For one of the observations, 3-5 seconds between teacher feedback and the next question was not used. For Responding to Student Behavior strategies, every strategy except performance feedback was implemented. Teacher A mastered (three consecutive observations of implementing the strategy) the three strategies on the action plan within the first three observations during the condition.

Maintenance

Maintenance data for Teacher A were collected over five weeks. During this time, Teacher A used an average of 92% (range, 88-94%) of the evidence-based classroom management strategies which indicated that the increased use of strategies during the Checklist, Feedback, and Action Plan condition maintained without feedback. Students engaged in an average of 17% (range, 7-33%) disruptive behavior which indicated that the decreased percentage and descending trend of disruptive behavior during the Checklist, Feedback, and Action Plan condition maintained when Teacher A was no longer receiving feedback. There was an average decrease of 59% in disruptive behavior from Baseline to Maintenance. Out of the eight observations, during five of the observations, Teacher A used every strategy except performance feedback. During two of the observations, Teacher A did not use planned ignoring and during the other observation, Teacher A did not use 3-5 seconds between feedback and the

next question. Those three observations were during the first two weeks in the Maintenance condition; Teacher A consistently used 94% of the strategies during the last three weeks of Maintenance.

Table 15. Overall Percentage of Strategies Used by Teacher A

	Baseline	Checklist	Checklist + Feedback + Action Plan	Maintenance
Average	24%	44%	93%	92%
Range	12-35%	24-59%	88-94%	88-94%

Table 16. Percentage of Disruptive Behavior by Teacher A's Students

	Baseline	Checklist	Checklist + Feedback + Action Plan	Maintenance
Average	76%	65%	15%	17%
Range	63-97%	43-87%	7-27%	7-33%

Teacher B

Results for Teacher B's overall average and range of percentages of evidence-based classroom management strategies used during Baseline, Checklist, Checklist, Feedback, and Action Plan, and Maintenance are summarized in Table 17. Results for the overall average and range of percentages of disruptive behavior of students in Teacher B's classroom during Baseline, Checklist, Checklist, Feedback, and Action Plan, and Maintenance are summarized in Table 18.

Baseline

During Baseline, over eight observations, Teacher B used an average of 23% (range, 18-29%) of the evidence-based classroom management strategies and the students engaged in an average of 91% (range, 77-100%) disruptive behavior. On the Classroom Management Checklist, Teacher B used 0% of Beginning of Class strategies, an average of 33% (range, 25-38%) of During Instruction strategies, and an average of 23% (range, 0-33%) of Responding to Student Behavior strategies. For During Instruction strategies, Teacher B consistently had materials ready and active supervision was used. For the most part, transitions were three minutes. The remaining strategies in During Instruction were not used at all during Baseline. For Responding to Student Behavior strategies, Teacher B inconsistently used behavior-specific praise, a group contingency, and corrections and redirections. The remaining strategies in Responding to Student Behavior were not used.

Checklist

During the Checklist condition, Teacher B used an average of 51% (range, 35-65%) of the evidence-based classroom management strategies which was an average increase of 28% from Baseline. Students engaged in an average of 75% (range, 53-87%) disruptive behavior which was a decrease from an average of 91% during Baseline. On the checklist, Teacher B used 100% of Beginning of Class strategies which was a significant increase from 0% during Baseline; an average of 43% (range, 25-63%) of During Instruction strategies which was an increase from 33% during Baseline; and an average of 37% (range, 17-50%) of Responding to Student Behavior strategies which was an increase from 23% during Baseline. For During Instruction strategies, Teacher B consistently had materials ready and active supervision was used. For the most part, transitions were three minutes and a transition signal was inconsistently

used. For Responding to Student Behavior strategies, Teacher B consistently used behavior-specific praise and inconsistently used a group contingency and precorrections.

Checklist, Feedback, Action Plan

After the Checklist condition, the investigator and Teacher B reviewed the data and created an action plan. After reviewing the data, Teacher B and the investigator decided that the following three strategies were the focus of the action plan: three minutes or less for transition; a token economy/group contingency; and an active student responding strategy. At the time of the observations, the students in Teacher B's class were transitioning from special (e.g., gym, art, music, etc.) at various times back to the classroom for math. During this transition, while Teacher B would begin instruction within three minutes, some of the students often initially sat in their assigned seats and then immediately engaged in disruptive behavior. In order help the students transition back from special and be ready for math instruction, it was decided that students would immediately enter the classroom from special and access a preferred item (e.g., Play-Doh, drawing) for approximately five minutes (the timer started as soon as the first student transitioned into the classroom). For a token economy/group contingency, it was decided that a chart on the front board with each students' name and five blocks would be posted. During each math activity (e.g., math message, whole group lesson, math boxes, etc.), Teacher B would provide behavior-specific praise and a check in a student's block each time the student was observed working on the assigned math task. Once every student in the class received all five checks, the entire class received a five minute break that consisted of a choice of coloring, drawing, using putty, or cutting out objects. For an active student responding strategy, response cards for the math message, which was the first activity of the math block of instruction, were going to be used.

During the Checklist, Feedback, and Action Plan condition, Teacher B used an average of 93% (range, 82-94%) of the evidence-based classroom management strategies which was a significant increase from an average of 28% during Baseline and an average of 51% during the Checklist condition. Students engaged in an average of 29% (range, 20-57%) disruptive behavior which was a significant decrease from an average of 91% during Baseline and 75% during Checklist conditions. On the checklist, Teacher B used 100% of Beginning of Class strategies which was a significant increase from an average of 0% during Baseline and Checklist conditions. An average of 99% (range, 88-100%) of During Instruction strategies were used which was a significant increase from an average of 33% during Baseline and an average of 43% during the Checklist condition. Teacher B used an average of 82% (range, 67-83%) of Responding to Student Behavior strategies which was a significant increase from an average of 23% during Baseline and an average of 37% during the Checklist condition. For During Instruction strategies, Teacher B used 100% of the strategies for 10 out of the 11 observations. For the one observation, a consistent method for recruiting teacher attention was the only During Instruction strategy not used. For Responding to Student Behavior strategies, Teacher B implemented every strategy except performance feedback for 10 out of the 11 observations. It was during the same observation that a consistent method for recruiting teacher attention was not used that planned ignoring was not used as well. Teacher B mastered (three consecutive observations of implementing the strategy) the three strategies on the action plan within the first three observations during the condition.

Maintenance

Maintenance data for Teacher B were collected over three weeks. During this time, Teacher B consistently used 94% of the evidence-based classroom management strategies which indicated that the increased use of strategies during the Checklist, Feedback, and Action Plan

condition maintained without feedback. Students engaged in an average of 13% (range, 10-20%) disruptive behavior which indicated that the decreased percentage of disruptive behavior during the Checklist, Feedback, and Action Plan condition maintained when Teacher B was no longer receiving feedback. There was an average decrease of 78% in disruptive behavior from Baseline to Maintenance. Teacher B consistently used every strategy on the checklist except for performance feedback.

Table 17. Overall Percentage of Strategies Used by Teacher B

	Baseline	Checklist	Checklist + Feedback + Action Plan	Maintenance
Average	23%	51%	93%	94%
Range	18-29%	35-65%	82-94%	n/a

Table 18. Overall Percentage of Disruptive Behavior by Teacher B's Students

	Baseline	Checklist	Checklist + Feedback + Action Plan	Maintenance
Average	91%	75%	29%	13%
Range	77-100%	53-87%	20-57%	10-20%

Teacher C

Results for Teacher C's overall average and range of percentages of evidence-based classroom management strategies used during Baseline, Checklist, Checklist, Feedback, and Action Plan, and Maintenance are summarized in Table 19. Results for the overall average and range of percentages of disruptive behavior of students in Teacher C's classroom during

Baseline, Checklist, Checklist, Feedback, and Action Plan, and Maintenance are summarized in Table 20.

Baseline

During Baseline, over 13 observations, Teacher C used an average of 33% (range, 18-53%) of the evidence-based classroom management strategies and the students engaged in an average of 64% (range, 40-87%) disruptive behavior. On the checklist, Teacher C used 0% of Beginning of Class strategies, an average of 44% (range, 25-75%) of During Instruction strategies, and an average of 34% (range, 0-83%) of Responding to Student Behavior strategies. For During Instruction strategies, Teacher C consistently had materials ready and active supervision was used. Sometimes a transition signal was used and transitions were three minutes or less. Of the remaining During Instruction strategies, 3-5 seconds of wait time, 3-5 seconds between teacher feedback and the next question, and a consistent method for obtaining teacher attention were inconsistently and infrequently used. For Responding to Student Behavior strategies, Teacher C consistently provided corrections and redirections. Teacher C inconsistently used a group contingency and corrections and redirections. Planned ignoring, behavior-specific praise, and precorrections were inconsistently and infrequently used.

Checklist

During the Checklist condition, Teacher C used an average of 42% (range, 29-59%) of the evidence-based classroom management strategies which was an average increase of 9% from Baseline. Students engaged in an average of 65% (range, 47-87%) disruptive behavior which was about the same as during Baseline (64%). On the checklist, Teacher C used an average of 74% (range, 67-100%) of Beginning of Class strategies which was a significant increase from 0% during Baseline. An average of 43% (range, 25-75%) of During Instruction strategies were used which was a slight decrease from 44% during Baseline. Teacher C used an average of 27%

(range, 17-50%) of Responding to Student Behavior strategies which was a decrease from 34% during Baseline. For Beginning of Class strategies, Teacher C consistently posted and reviewed the schedule and expectations. Teacher C inconsistently posted and reviewed the agenda. For During Instruction strategies, Teacher C consistently had materials ready and active supervision was used. Teacher C infrequently and inconsistently used a transition signal, had transitions that were three minutes or less, provided 3-5 seconds wait time, had 3-5 seconds between teacher feedback and the next question, and used an active student responding strategy. For Responding to Student Behavior strategies, Teacher C consistently provided corrections and redirections. Teacher C inconsistently and infrequently used a group contingency.

Checklist, Feedback, Action Plan

After the Checklist condition, the investigator and Teacher C reviewed the data and created an action plan. After reviewing the data, Teacher C and the investigator decided that the following three strategies were the focus of the action plan: a consistent method used for obtaining teacher attention and planned ignoring; a token economy/group contingency; and an active student responding strategy. For obtaining teacher attention and planned ignoring, it was decided that Teacher C would only respond to students who had a hand raised and a quiet mouth. During the Baseline and Checklist conditions, Teacher C was giving students a check every time they called out. Each check resulted in the loss of one minute of recess. If during the instruction the student was quiet for a bit, Teacher C would erase a check. Any checks left by Friday of that week would equal the number of minutes the student would have to miss of the second recess on that day. During the feedback session, it was decided that Teacher C would discontinue the current check system and would instead list the students' names on the front board and students would earn a check every time they raised their hand with a quiet mouth. The checks earned turned into points that went into the students' point banks for daily and weekly rewards. For an

active student responding strategy, it was decided that the students would chorally read the math message (the first activity of the math block of instruction) and then the teacher would ask the students to give a thumbs up or down when checking answers to math problems as a class.

During the Checklist, Feedback, and Action Plan condition, Teacher C used an average of 88% (range, 82-94%) of the evidence-based classroom management strategies which was a significant increase from an average of 33% during Baseline and an average of 42% during the Checklist condition. Students engaged in an average of 29% (range, 10-63%) disruptive behavior which was a significant decrease from an average of 64% during Baseline and an average of 65% during Checklist conditions. On the checklist, Teacher C used an average of 90% (range, 67-100%) of Beginning of Class strategies which was a significant increase from an average of 0% during Baseline and an average of 74% during the Checklist condition. An average of 94% (range, 88-100%) of During Instruction strategies were used which was a significant increase from an average of 44% during Baseline and an average of 43% during the Checklist condition. Teacher C used an average of 80% (range, 67-83%) of Responding to Student Behavior strategies which was a significant increase from an average of 34% during Baseline and an average of 27% during the Checklist condition. For Beginning of Class strategies, Teacher C consistently posted and reviewed the schedule and expectations. There were a few observations where an agenda was not posted and reviewed. For During Instruction strategies, Teacher C consistently used all of the strategies except consistent method of recruiting teacher attention and an active student responding strategy. For Responding to Student Behavior strategies, Teacher C implemented every strategy except performance feedback. Of the implemented strategies, Teacher C consistently used all of them except planned ignoring. Teacher C mastered (three consecutive observations of implementing the strategy) planned

ignoring/consistent method for obtaining teacher attention within eight observations and an active student responding strategy within the first three observations during the condition.

Maintenance

Maintenance data for Teacher C were collected over two weeks. During this time, Teacher C consistently used 94% of the evidence-based classroom management strategies which indicated that the increased use of strategies during the Checklist, Feedback, and Action Plan condition maintained without feedback. Students engaged in an average of 12% (range, 10-13%) disruptive behavior which indicated that the decreased percentage of disruptive behavior during the Checklist, Feedback, and Action Plan condition maintained when Teacher C was no longer receiving feedback. From Baseline to Maintenance, there was an average decrease of 42% in disruptive behavior. Teacher C used all of the strategies on the checklist except performance feedback.

Table 19. Overall Percentage of Strategies Used by Teacher C

	Baseline	Checklist	Checklist + Feedback + Action Plan	Maintenance
Average	33%	42%	88%	94%
Range	18-53%	29-59%	82-94%	n/a

Table 20. Percentage of Disruptive Behavior by Teacher C's Students

	Baseline	Checklist	Checklist + Feedback + Action Plan	Maintenance
Average	64%	65%	29%	12%
Range	40-87%	47-87%	10-63%	10-13%

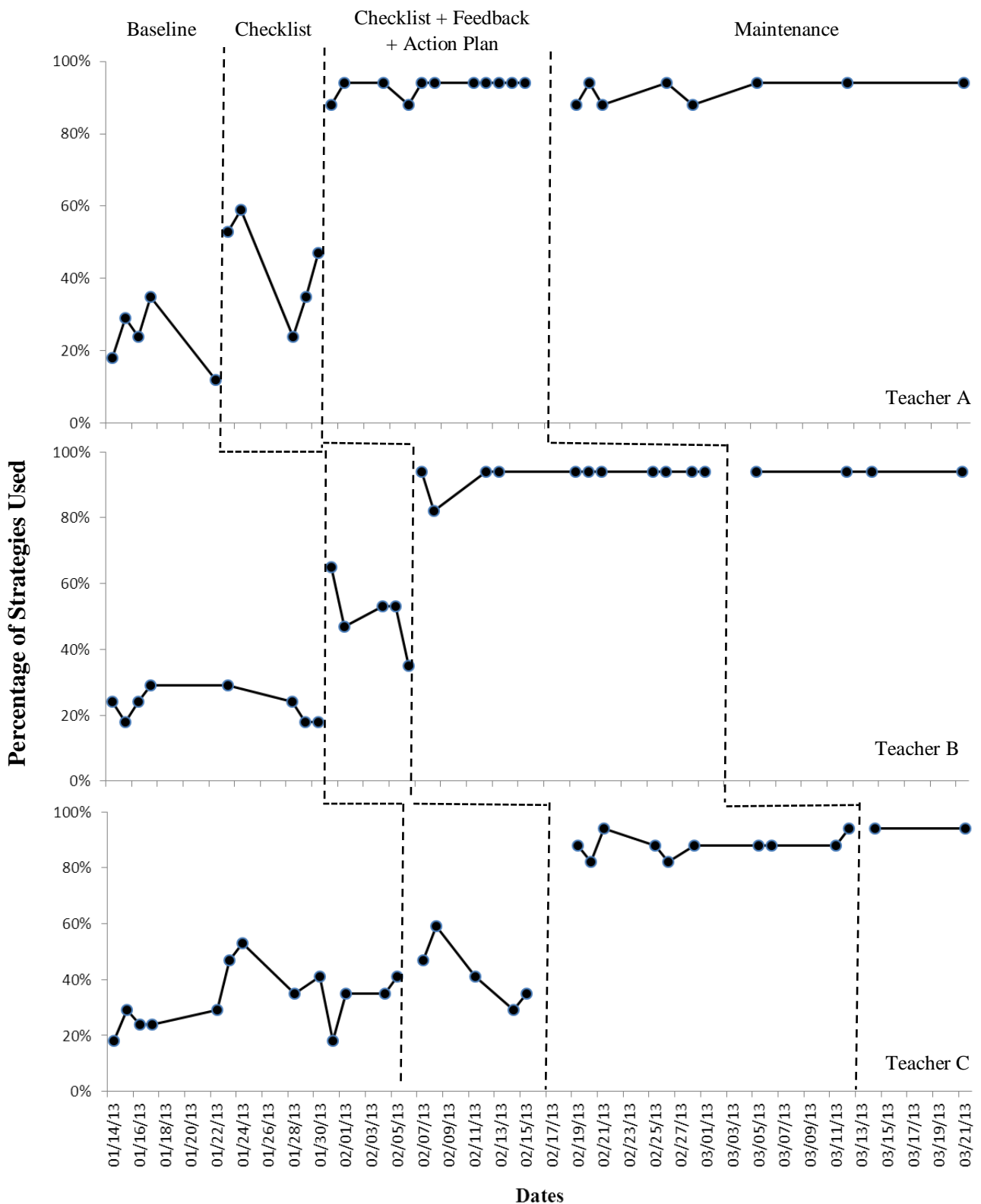


Figure 1. Percentage of Evidence-Based Classroom Management Strategies Used. This figure depicts the percentage of evidence-based classroom management strategies used by teachers during Baseline, Checklist, Checklist, Feedback, and Action Plan, and Maintenance.

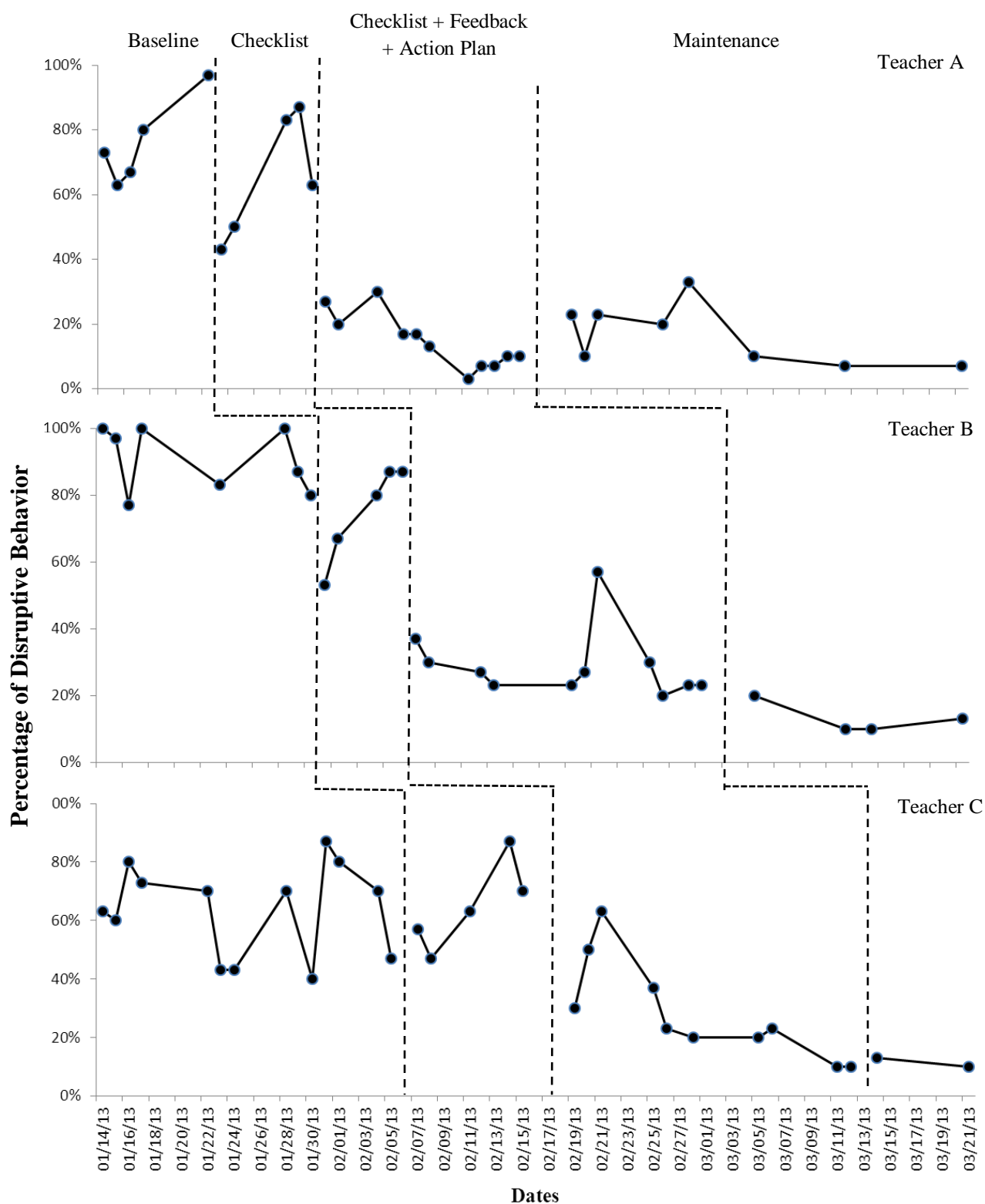


Figure 2. Percentage of Student Disruptive Behavior. This figure depicts the percentage of 30-second intervals during which students engaged in disruptive behaviors during Baseline, Checklist, Checklist, Feedback and Action Plan, and Maintenance.

Social Validity Survey

The results of the modified IRP-15 completed by Teachers A, B, and C are in Table 21. The original IRP-15 consists of 15 questions with a 6-point Likert scale. Total scores range from 15-90 and a score of 52.50 or higher is considered acceptable (Martens et al., 1985). The IRP-15 was modified slightly with the addition of questions 16 and 17. For purposes of determining social validity according to the authors' scoring guide, questions 16 and 17 are not included in the overall score. The three overall scores were 81, 79, and 83, resulting in an average score of 83.

Table 21. Results from Modified IRP-15

Item	Average Response	Range of Responses
1. This would be an acceptable intervention for the students' problem behavior.	6 strongly agree	5-6
2. Most teachers would find this intervention appropriate for behavior problems in addition to the one described.	5 agree	5-6
3. This intervention should prove effective in changing the students' problem behavior.	5 agree	n/a
4. I would suggest the use of this intervention to other teachers.	6 strongly agree	5-6
5. The students' problem behavior is severe enough to warrant use of this intervention.	5 agree	5-6
6. Most teachers would find this intervention suitable for the behavior problem described.	4 slightly agree	4-5
7. I would be willing to use this intervention in the classroom setting.	6 strongly agree	n/a
8. This intervention would <i>not</i> result in negative side effects for the students.	4 slightly agree	4-5
9. This intervention would be appropriate for a variety of students.	6 strongly agree	5-6

Table 21. (continued)

Item	Average Response	Range of Responses
10. This intervention is consistent with those I have used in classroom settings.	5 agree	4-5
11. The intervention was a fair way to handle the students' behavior problem.	6 strongly agree	5-6
12. This intervention is reasonable for the behavior problem described.	6 strongly agree	n/a
13. I liked the procedures used in this intervention.	6 strongly agree	n/a
14. This intervention was a good way to handle the students' behavior problem.	6 strongly agree	5-6
15. Overall, this intervention would be beneficial for the students.	6 strongly agree	5-6
16. Before using this intervention, I was less likely to stay in my current teaching position.	4 slightly agree	n/a
17. After using this intervention, I am more likely to stay in my current teaching position.	5 agree	n/a

CHAPTER 5

DISCUSSION

This section begins with a discussion of the results (see Figures 1 and 2) in relation to the four research questions of this study. Next, there is a discussion of the limitations of this study. Lastly, there is a discussion of implications for future research.

Research Questions

Question 1

What are the effects of a checklist or checklist, feedback, action plan model of evidence-based classroom management strategies on a teacher's implementation of those strategies?

From Baseline to the Checklist condition, there was an immediate increase in the percentage of evidence-based classroom management strategies implemented by Teachers A and B. For Teacher C, the percentage of evidence-based classroom management strategies during the Checklist condition was unstable and mirrored data in Baseline. Also, Teacher C's data showed a decrease in the percentage of During Instruction and Responding to Student Behavior strategies used in the Checklist condition compared to Baseline. For Teacher A, even though there was an immediate increase in the percentage of evidence-based classroom management used during the Checklist condition, subsequent data points returned to Baseline levels. For Teacher B, the immediate increase in the data for percentage of strategies used subsequently decreased, but remained slightly above Baseline levels. During Baseline, Teachers A and B often used active supervision and had materials ready which indicated that these were strategies already being used in the classroom with some degree of consistency. Teacher C used all During Instruction and Responding to Student Behavior strategies at least once during Baseline, except

active student responding, which indicated that Teacher C had knowledge of the strategies but was not using them consistently. Teacher A consistently posted and reviewed the schedule, agenda, and expectations, had transitions that were three minutes or less, had materials ready, and engaged in active supervision, during the Checklist condition. Teacher B, during the Checklist condition, consistently posted and reviewed the schedule, agenda, expectations, had transitions that were three minutes or less, had materials ready, engaged in active supervision, and provided behavior-specific praise. During the Checklist condition, Teacher C consistently posted and reviewed the schedule and expectations, had materials ready, engaged in active supervision, and provided corrections and redirections. Collectively, the data suggest that providing only a checklist with examples and non-examples was effective for getting teachers to implement the Beginning of Class strategies (post and review expectations, schedule, and agenda) only. The three teachers were already consistently using active supervision and had materials ready during Baseline.

For Teachers A, B, and C, there was an immediate increase in the percentage of evidence-based classroom management strategies used during the Checklist, Feedback, and Action plan condition which remained steady throughout the condition. Teachers' increase in their use of evidence-based classroom management strategies during this condition could be attributed, in part, to discussions between the investigator and teachers during feedback sessions. The content of discussions strongly highlighted the importance of explaining to teachers the relationship between their behaviors and students' behaviors. During each feedback session, wherein teachers were shown graphs of the percentage of evidence-based classroom management strategies used during Baseline and Checklist conditions, the investigator and teachers engaged in discussion about the importance of evidence-based strategies that teachers

were not currently using. For example, teachers failed to realize the relationship between their attention and students' disruptive behavior. The investigator explained to the teachers that when a student calls out or engages in other disruptive behavior and they respond to the student in any way (e.g., making eye contact, prompting them to raise their hand, telling them to be quiet), their attention may function as positive reinforcement for disruptive behavior (Cooper, Heron, & Heward, 2007). Consequently, teachers understood the importance of ignoring the students' calling out (planned ignoring) and the importance of only providing attention to students when they obtained teacher attention appropriately (e.g., raising their hands). Through discussion, teachers also discovered that behavior-specific praise should be provided or paired with the token economy/group contingency system to increase the reinforcement value of praise (Cooper, et al., 2007). In addition, the investigator also engaged teachers in considerable discussion on the importance of active student responding. As with attention, the teachers were unaware of the connection between students' academic engagement and their problematic behaviors. After much discussion about these strategies, an action plan was developed with each teacher. The action plan for Teachers A, B, and C was as follows.

Teacher A's action plan included implementing the following strategies: a consistent method used for obtaining teacher attention; a token economy/group contingency; and planned ignoring for calling out. Teacher B's action plan included the following strategies: three minutes or less for transitions; a token economy/group contingency; and an active student responding strategy. Teacher C's action plan included the following strategies: a consistent method used for obtaining teacher attention and planned ignoring; a token economy/group contingency; and an active student responding strategy. A token economy/group contingency was on each of the teachers' action plans. This suggested that high levels of disruption in all three classrooms could

be attributed, in part, to absence of any systematic, class-wide reward system. Planned ignoring and a consistent method for obtaining teacher attention were part of Teacher A's and C's action plans. These strategies were implemented in tandem as ignoring students' inappropriate bids for attention (e.g., calling out) were accompanied by prompting and reinforcing appropriate bids for attention (e.g., hand raising). Active student responding strategies were part of the action plans for Teachers B and C. During Baseline and Checklist conditions, students in these classrooms were not often actively participating in the instruction and, therefore, were likely engaging in high levels of disruptive behavior. Finally, Teacher B's action plan also focused on use of an independent activity immediately following transitions. Specifically, students in this classroom would transition from specials at various times during the class period. While Teacher B would prompt the students to sit in their seats and begin math instruction within three minutes, as indicated on the checklist, students were often unfocused and disruptive when math instruction began because of insufficient time to adjust to the new activity. Consequently, Teacher B gave the students a quiet, independent activity (i.e., play with PlayDoh, draw, cut) to do for five minutes before academic instruction began.

During Maintenance, when feedback was discontinued, the teachers maintained their intervention levels of evidence-based classroom management strategies. During Maintenance, Teachers A and B informed the investigator that they disliked no longer receiving a scored checklist after each observation. Teachers A and B then asked if they could see their data during Maintenance; however, the investigator did not provide them with their data. This clearly suggests that the teachers found the scored checklists helpful and they enjoyed receiving the feedback, though intervention gains maintained after the checklist and feedback was withdrawn.

Data suggest that the checklist alone was insufficient to increase teachers' implementation of all of the evidence-based classroom management strategies. The checklist alone can be likened to workshops and inservices that are typically provided to teachers. In both of these formats, teachers are provided with "one-shot" information or strategies that they are then expected to incorporate into their everyday teaching practices. This finding that a checklist alone was insufficient in getting teachers to consistently implement the strategies on the checklist was consistent with previous findings that professional development workshops and inservices on classroom management are often ineffective (Allen, et al., 1984, Fixsen, et al., 2005). These data suggested that a checklist by itself may be sufficient for getting teachers to implement the Beginning of Class strategies, as was evident in the data for Teachers A and B. For Teacher C, however, implementing the checklist actually led to a decrease in the use of During Instruction and Responding to Student Behavior strategies. The data strongly suggested, however, that using a checklist, providing feedback, and creating an action plan were sufficient to increase and maintain teachers' implementation of evidence-based classroom management strategies. This finding is consistent with MacSuga and Simonsen (2011) wherein a consultation, checklist, and action plan model improved the use of evidence-based classroom management strategies by two teachers. In addition, with the exception of performance feedback, all of the evidence-based classroom management strategies on the checklist were recommended by Tincani (2011) (see Table 6). While the checklist as a whole in Tincani's book was not empirically based, the classroom management strategies recommended and explained in the book were very similar to the strategies on the checklist in the present study. As such, the present study validated those strategies in Tincani's book.

Feedback was necessary for teachers to increase their percentages of evidence-based classroom management strategies. For example, feedback led to increased and consistent use of behavior-specific praise which is consistent with the findings of Myers, Simonsen, and Sugai (2011) wherein performance feedback was effective for increasing middle school teachers' use of praise statements. Similar to the findings of Colvin et al. (2008), feedback also led to teachers' increased use of active responding strategies. Lastly, feedback in the form of a scored checklist following each observation proved to be effective for increasing and maintaining the teachers' implementation of the evidence-based classroom management strategies. This was consistent with Soloman, Klein, and Politylo (2012) who concluded that performance feedback was effective for increasing integrity of academic and behavioral interventions for preschool to high school general and special education teachers. In addition, the teachers needed different amounts of feedback in the form of a scored checklist, in order to consistently implement a majority of the strategies. For example, it took Teacher A five observations, Teacher B three observations, and Teacher C six observations to consistently use the strategies during the Checklist, Feedback, and Action Plan condition. This was consistent with the findings of Myers, Simonsen, and Sugai (2011) who concluded that the amount of performance feedback needed to meet criterion may vary between teachers and, therefore, a continuum of performance feedback with varying intensities would be useful.

Question 2

What are the effects of the implementation of evidence-based classroom management strategies on students' disruptive behavior?

The data showed that when all three teachers consistently used a high percentage of evidence-based classroom management strategies during the Checklist, Feedback, and Action

Plan condition, the percentage of disruptive behavior mainly trended downward across all three classrooms. When the data leveled out, the low levels of disruptive behavior during the Checklist, Feedback, and Action Plan condition continued during Maintenance when the teachers were no longer receiving feedback. Continued low levels of disruptive behavior during Maintenance were likely a function of teachers' continued use of evidence-based classroom management strategies.

As part of the Checklist, Feedback, and Action Plan condition, all three teachers created an action plan for three evidence-based classroom management strategies that were not being implemented consistently, if at all, in their respective classrooms. None of the three teachers were using a token economy/group contingency during Baseline and Checklist conditions wherein the percentages of disruptive behavior in their classrooms were high. Similarly, Teachers A and C were not using planned ignoring and a consistent method for obtaining teacher attention during Baseline and Checklist conditions wherein the levels of disruptive behavior in their classrooms were high. For Teachers B and C, an active student responding strategy was not used during Baseline and Checklist conditions. For Teacher B, while the transitions were three minutes or less, the students were immediately engaging in disruptive behavior when instruction began during Baseline and Checklist conditions. While it was key for all of the evidence-based classroom management strategies to be implemented, the data indicated that a token economy/group contingency, planned ignoring, a consistent method for obtaining teacher attention, and an active responding strategy were the most effective strategies for reducing levels of disruptive behavior in the classrooms. When these strategies were implemented, disruptive behavior decreased substantially. When these strategies were not consistently used, there was a higher percentage of disruptive behavior.

Disruptive behavior was most likely maintained through positive reinforcement in the form of teacher attention. The data indicated that planned ignoring and a consistent method for obtaining teacher attention appeared to be the most influential strategies on reducing the level of disruptive behavior. When those strategies were in place, there were lower levels of disruptive behavior across classrooms. When those strategies were not in place, there were higher levels of disruptive behavior across classrooms. For example, for Teacher C, on February 20, 2013, the students engaged in 50% disruptive behavior while Teacher C was not using planned ignoring or a consistent method for recruiting teacher attention. All other strategies, except for performance feedback, were in place. On the next day, February 21, 2013, Teacher C implemented all evidence-based classroom management strategies on the checklist except performance feedback and the students engaged in 63% disruptive behavior. Thereafter, with all strategies in place except performance feedback, the students engaged in 37% or less disruptive behavior. This indicated that the disruptive behavior was primarily being positively reinforced with teacher attention. On February 21, 2013, the increase in disruptive behavior could have been considered an extinction burst wherein previously reinforced behavior (e.g., calling out) was no longer being reinforced through planned ignoring. For Teacher A, whenever planned ignoring was not used, disruptive behavior increased, during the Checklist, Feedback, and Action Plan and Maintenance conditions. For Teacher B, all of the strategies except performance feedback were consistently used during the Checklist, Feedback, and Action Plan condition. With the exception of one data point which appeared to be an outlier, there was a descending trend in disruptive behavior.

Although data were not collected on teachers' academic instructional strategies specifically, given the high levels of disruptive behavior during Baseline and Checklist conditions, it was probable that minimal academic instruction was taking place during these

conditions. This is consistent with Wehby (2003) who found that teachers of EBD students only spend 30% of the school day providing academic instruction due to misbehaviors. The results of this study indicate that the use of evidence-based classroom management strategies has a direct effect on the level of disruptive behavior in the classroom. This finding is similar to those of Oliver and colleagues (2011) who concluded that classroom organization and behavior management have a significant effect on reducing problem behavior in the classroom. The findings of this study support the conclusion by Oliver and colleagues that teacher behavior needs to change first in order to produce changes in student behavior. In addition, the conclusion that external and/or internal behaviors of students with EBD are affected by classroom management practices (Oliver, et al., 2010) was verified by this study wherein the teachers' increased use of evidence-based classroom management strategies led to decreased disruptive behavior.

Overall, while all evidence-based classroom management strategies on the checklist except for performance feedback were necessary, it appeared that a token economy/group contingency, planned ignoring, a consistent method for obtaining teacher attention, and an active student responding strategy were the most effective strategies for decreasing students' levels of disruptive behavior. This finding is consistent with previous research which concluded that problem behaviors decreased with differential reinforcement (Deitz, et al., 1976; Repp, et al., 1976), and planned ignoring (Hall, et al., 1968). This finding also aligns with previous research that active student responding strategies such as choral responding (Godfrey, et al., 2003) and response cards increased student responding and on-task behavior (Christle, et al., 2003; Godfrey, et al., 2003; Lambert, et al., 2006). Lastly, this finding supports previous findings that behavior specific-contingent praise increased compliance (Wilcox, et al., 1988) and class-wide

group contingences and token economies decreased talk-outs and out-of-seat behavior (Barrish, et al., 1969).

Question 3

How do teachers perceive the goals, procedures, and outcomes of the intervention with respect to their teaching and students' behaviors?

The three teachers who participated in this study completed a modified version of the IRP-15. On the modified IRP-15, there were 17 questions, with questions 16 and 17 added by the investigator. A total score for the first 15 questions of 52.50 or higher is considered an acceptable intervention (Martens, et al., 1985). Teachers A, B, and C received overall scores of 81, 79, and 83, respectively, resulting in an average score of 83, which suggests that the intervention was highly acceptable to all teachers. The lowest score assigned to any question was a 4, in which Teachers B and C answered "slightly agree" to two questions: most teachers would find the intervention suitable for disruptive behavior and the intervention would not result in negative side effects for the students. Teacher B slightly agreed that the intervention was consistent with interventions previously used. All three teachers answered that they slightly agreed they were less likely to stay in their current teaching position prior to using the intervention. No scores of disagreement (1-3) were given in response to any of the questions.

Two questions, #6 and #8, received an average score of 4, suggesting only moderate agreement with these questions. The first of these questions, #6, asked whether most teachers would find the intervention suitable for disruptive behavior. While all three teachers answered that they agreed (a score of 5) or strongly agreed (a score of 6) that the intervention was acceptable and effective for addressing disruptive behavior (Questions 1, 3, 11, 12, 14, and 15) and that they would recommend the intervention to other teachers (Question 4), it was unclear

why the teachers only slightly agreed that other teachers would find the intervention suitable for disruptive behavior, specifically. One possible explanation was that the teachers had past experiences wherein their colleagues were resistant to implementing similar interventions, and therefore the teachers perceived that their colleagues would be unwilling to implement this intervention. Another possible explanation was that the teachers had past experiences with colleagues who had students with disruptive behaviors wherein the colleagues did not agree that classroom management strategies, or lack thereof, may have affected the high levels of disruptive behavior in their classrooms. Question 8 asked if the intervention would not result in negative side effects for the students. It was unclear why the teachers only slightly agreed with that statement when they agreed or strongly agreed that the intervention was: a fair way to handle disruptive behavior; reasonable for disruptive behavior; a good way to handle students' disruptive behavior; and beneficial for students. One possible explanation was that the teachers misread, misinterpreted, or did not understand what the question was asking, because it contained the word "not." Given the agreement and strong agreement responses to the other questions about the benefits and effects of the intervention in regards to students, it appeared that this may have been what happened with that particular question.

The investigator added questions 16 and 17 to the survey. All three teachers reported that they slightly agreed with the statement that they were less likely to stay in their teaching position before using this intervention. All three teachers indicated that they agreed that they were more likely to remain in their teaching position after using this intervention. While it appears that the teachers slightly agreed that they were less likely to remain in their current teaching positions before this intervention, social desirability could have been a factor as to why the score "slightly agree" was chosen. While the teachers knew that the results of the study could not be used

against them, the teachers also knew that the results of the study, including the results of the social validity survey, would be shared with administrators in their school district and so this may have affected how the teachers answered question 16.

Overall, all three teachers found the goals, procedures, and outcomes of this intervention to be socially valid. Specifically, questions with an average response of 6 (“strongly agree”) indicated that the intervention was reasonable, appropriate, and beneficial and a good way to handle the students’ disruptive behavior. The teachers liked the procedures used and would suggest this intervention to other teachers. They felt the intervention was appropriate for a variety of students. The intervention was something that teachers were willing to use in the future.

Question 4

Will changes to teachers’ and students’ behavior from the Checklist, Feedback, Action Plan condition maintain, once the teacher no longer receives feedback?

The investigator collected maintenance data for five weeks for Teacher A, three weeks for Teacher B, and two weeks for Teacher C. During Maintenance, teachers no longer received feedback (a scored checklist) after each observation. The teachers maintained their high percentages of evidence-based classroom management strategies used and the percentages of disruptive behavior remained low and even continued to decrease in two of the classrooms during Maintenance.

During the Checklist, Feedback, and Action plan condition, Teacher A used an average of 93% (range, 88-94%) of the evidence-based classroom management strategies and the students engaged in an average of 15% (range, 7-27%) disruptive behavior. During Maintenance, Teacher A used an average of 92% (range, 88-94%) of the evidence-based classroom

management strategies and the students engaged in an average of 17% (range, 7-33%) disruptive behavior. Teacher A maintained use of the strategies and the percentage of disruptive behavior continued to remain low during Maintenance. During the Checklist, Feedback, and Action Plan condition, Teacher B used an average of 93% (range, 82-94%) of evidence-based classroom management strategies and the students engaged in an average of 29% (20-57%) disruptive behavior. During Maintenance, Teacher B consistently used 94% of the evidence-based classroom management strategies and the students engaged in an average of 13% (range, 10-20%) disruptive behavior. Teacher B consistently maintained use of the strategies and the percentage of disruptive behavior continued to decrease during Maintenance. During the Checklist, Feedback, and Action Plan condition, Teacher C used an average of 88% (range, 82-94%) of evidence-based classroom management strategies and the students engaged in an average of 29% (range, 10-63%) disruptive behavior. During Maintenance, Teacher C consistently used 94% of the evidence-based classroom management strategies and the students engaged in an average of 12% (range, 10-13%) disruptive behavior. Teacher C consistently maintained the increased use of the strategies and the percentage of disruptive behavior continued to decrease during Maintenance. The data clearly showed that the changes to the teachers' and students' behaviors from the Checklist, Feedback, and Action Plan condition continued during Maintenance.

Limitations

Participants

The three teachers in this study were self-contained, emotional support teachers in the elementary setting. As such, all of the student participants were students with emotional and behavioral disorders. While the data clearly indicated the use of the evidence-based classroom

management strategies directly affected disruptive behavior of students, it is unclear whether the effects would be the same with general education or other special education students (e.g., autistic support, learning support). Likewise, while the Checklist, Feedback, and Action Plan condition was effective for getting the teachers to implement the evidence-based classroom management strategies, it is unknown whether general education and other special education teachers of various grade levels would respond similarly.

Generalization

Generalization data on whether teachers used evidence-based classroom management strategies across instructional areas and throughout the school day were unable to be collected, due to time constraints. This limits the generalizability of the results, because it is unknown whether the teachers implemented the strategies across academic areas and throughout the entire school day.

Maintenance

The investigator only collected maintenance data for five weeks for Teacher A, three weeks for Teacher B, and two weeks for Teacher C, because of time constraints. Lack of additional maintenance data limits the ability to determine if the Checklist, Feedback, and Action Plan condition was a durable intervention over extended periods of time (e.g., 3-months, 6-months).

Dependent Measure of Student Behavior

Disruptive behavior of students was measured using 30-second partial interval recording. Off-task/on-task data were not collected, nor were data collected on other aspects of students' performance. This limits any conclusion about the effects of the intervention on student engagement.

Future Research

As the results of this study indicated that the Checklist, Feedback, and Action Plan condition were effective for increasing the number of evidence-based classroom management strategies used while simultaneously decreasing disruptive behavior, future research should extend this research to general education and other special education teachers at the elementary, middle, and high school levels.

In addition, while the results of this study indicated that all of the evidence-based classroom strategies, except for performance feedback, on the checklist were necessary to decrease disruptive behavior, future research should determine whether or not all of the strategies on the checklist are in fact necessary for decreasing disruptive behavior. In addition to measuring disruptive behavior, future research should include measurements of academic performance. This study found that planned ignoring, a token economy/group contingency, a consistent method to recruit teacher attention, and an active student responding strategy were the most effective strategies for decreasing disruptive behavior. It was unclear, however, which strategies in isolation or combined were responsible for the decrease in disruptive behavior. Future research should conduct a component analysis to determine which specific strategies affect the percentage of disruptive behavior.

Finally, while maintenance data indicated that the effects of the intervention on both teachers' and students' behaviors maintained, the maintenance data collection was limited in duration. Future research should explore whether the effects of the Checklist, Feedback, and Action Plan condition on both teachers' and students' behaviors maintain across an entire school day and over an entire school year when the teachers no longer receive feedback.

Summary

This study found that a checklist of evidence-based classroom management strategies coupled with feedback and an action plan was an effective and socially valid intervention for all three teachers. Visual analysis of the data suggested that there was experimental control in the Checklist, Feedback, and Action Plan condition in which the combination of these procedures was effective for increasing teachers' use of evidence-based classroom management strategies while simultaneously decreasing students' disruptive behavior. All three teachers used 94% of the evidence-based classroom management strategies during the Checklist, Feedback, and Action Plan condition and continued to do so in Maintenance. Planned ignoring, a token economy/group contingency, a consistent method for recruiting teacher attention, and an active student responding strategy appeared to be the most effective strategies for decreasing disruptive behavior. Disruptive behavior in all three classrooms decreased significantly during the Checklist, Feedback, and Action Plan condition and the decrease in disruptive behavior continued during Maintenance.

The social validity survey results clearly showed that the intervention was socially valid. Specifically, the teachers reported that they liked the procedures, were willing to use the intervention in the future, and would recommend the intervention to other teachers. In addition, they felt that the intervention was reasonable, appropriate, and beneficial for the students' disruptive behavior.

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APPENDIX A

Partial Interval Recording Data Sheet

Disruptive Behavior: Defined as any instance of calling out, leaving the assigned area without adult permission, talking with a peer when expected to work independently or listen to the teacher, and/or making noises (i.e., kicking desk with foot, opening and closing desk lid, drumming with pencils on desk).

Observer: _____

Date: _____

Observation Time: _____

Total Observation Time: 15 minutes

Length of Each Interval: 30 seconds

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total Occurrences
															_____/30
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	_____%

X = Occurrence

O = Non-Occurrence

APPENDIX B

Action Plan

Steps to Success		
Item for improvement	Item for improvement	Item for improvement
Steps to implement	Steps to implement	Steps to implement
1.	1.	1.
2.	2.	2.
3.	3.	3.
Date completed	Date completed	Date completed

APPENDIX C

Procedural Integrity Checklist – Checklist Condition						
Teacher	1	2	3 (circle one)	Date: _____	Yes	No
1. Did the investigator and teacher read through each item on the checklist?						
2. Did the investigator and teacher read through the examples and non-examples for each item?						
3. Did the investigator review the scoring for each area of the checklist, the total possible points, and the goal points and percentages?						

APPENDIX D

Procedural Integrity Checklist – Checklist, Feedback, and Action Plan Condition						
Teacher	1	2	3 (circle one)	Date: _____	Yes	No
1. Did the investigator will provide the teacher with a graph showing the teacher's performance during the first two conditions						
2. Did the investigator and teacher review the area of lowest performance, as indicated by the lowest average percentage for Beginning of Class, During Instruction, or Responding to Student Behavior?						
3. Did the teacher and investigator identify a maximum of three items from the lowest average are which will be the focus of an action plan?						
4. Did the teacher and investigator identify a maximum of three steps for each item on the action plan?						

APPENDIX E

Intervention Rating Profile – 15 (IRP-15) - Modified

The purpose of this questionnaire is to determine how effective the Classroom Management Checklist and feedback were in helping you to implement the evidence-based classroom management strategies as well as decrease your students' disruptive behavior. Please circle the number that best describes your agreement or disagreement with each statement using the scale below.

1 = strongly disagree	2 = disagree	3 = slightly disagree	4 = slightly agree	5 = agree	6 = strongly agree	
1. This would be an acceptable intervention for the students' problem behavior.	1	2	3	4	5	6
2. Most teachers would find this intervention appropriate for behavior problems in addition to the one described.	1	2	3	4	5	6
3. This intervention should prove effective in changing the students' problem behavior.	1	2	3	4	5	6
4. I would suggest the use of this intervention to other teachers.	1	2	3	4	5	6
5. The students' problem behavior is severe enough to warrant use of this intervention.	1	2	3	4	5	6
6. Most teachers would find this intervention suitable for the behavior problem described.	1	2	3	4	5	6
7. I would be willing to use this intervention in the classroom setting.	1	2	3	4	5	6
8. This intervention would <i>not</i> result in negative side effects for the students.	1	2	3	4	5	6
9. This intervention would be appropriate for a variety of students.	1	2	3	4	5	6
10. This intervention is consistent with those I have used in classroom settings.	1	2	3	4	5	6
11. The intervention was a fair way to handle the students' behavior problem.	1	2	3	4	5	6

- | | | | | | | |
|--|---|---|---|---|---|---|
| 12. This intervention is reasonable for the behavior problem described. | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. I liked the procedures used in this intervention. | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. This intervention was a good way to handle the students' behavior problem. | 1 | 2 | 3 | 4 | 5 | 6 |
| 15. Overall, this intervention would be beneficial for the students. | 1 | 2 | 3 | 4 | 5 | 6 |
| 16. Before using this intervention, I was less likely to stay in my current teaching position. | 1 | 2 | 3 | 4 | 5 | 6 |
| 17. After using this intervention, I am more likely to stay in my current teaching position. | 1 | 2 | 3 | 4 | 5 | 6 |

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