

AN EVALUATION OF THE GOOD BEHAVIOR GAME IN EARLY  
READING INTERVENTION GROUPS

by:

BILLIE JO RODRIGUEZ

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**Confirmation of Approval and Acceptance of Dissertation prepared by:**

Billie Rodriguez

Title:

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This dissertation has been accepted and approved in partial fulfillment of the requirements for the degree in the Department of Special Education and Clinical Sciences by:

Cynthia Anderson, Co-Chairperson, Special Education and Clinical Sciences

Elizabeth Harn, Co-Chairperson, Special Education and Clinical Sciences

Robert Horner, Member, Special Education and Clinical Sciences

Marjorie Woollacott, Outside Member, Human Physiology

and Richard Linton, Vice President for Research and Graduate Studies/Dean of the Graduate School for the University of Oregon.

June 14, 2010

Original approval signatures are on file with the Graduate School and the University of Oregon Libraries.

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Title: AN EVALUATION OF THE GOOD BEHAVIOR GAME IN EARLY READING  
INTERVENTION GROUPS

Approved: \_\_\_\_\_  
Dr. Cynthia Anderson, Co-Chair

Approved: \_\_\_\_\_  
Dr. Elizabeth Harn, Co-Chair

As an increasing number of studies document the link between the development of student academic and social behavior, there is a growing need to create and evaluate interventions that address both types of skill development in school contexts. It is of particular importance to focus on interventions that improve the learning environment to maximize student success. The Good Behavior Game (TGBG) is an example of a research-based intervention that can be easily modified and implemented in conjunction with academic interventions to maximize effectiveness of student supports.

The present study focused on the development and implementation of a modified version of TGBG implemented during the delivery of a secondary level early literacy intervention for students at-risk for reading difficulties. Specifically, this study examined whether instructional assistants' implementation of TGBG was functionally related to changes in student and instructor outcomes. The student outcomes assessed were (1) problem behavior, (2) academic engagement, and (3) pre-literacy skill development. The instructor outcomes assessed were provision of opportunities to respond to instruction, specific praise, and corrective statements for student social behavior. Data were also collected on fidelity of implementation, contextual fit, and social validity of TGBG. A concurrent multiple baseline design across five instructional reading groups was used to evaluate effects of TGBG.

Results indicated that TGBG was functionally related to reductions in student problem behavior. In addition, a functional relation was established between implementation of TGBG and increases in instructor provision of specific praise statements and decreases in provision of corrective statements. Academic engagement and provision of opportunities to respond remained high and stable throughout the study. Pre-literacy trajectories did not appear to be functionally related to TGBG implementation; however, this may have been due to the short timeframe of the study. Instructional assistants implementing TGBG as well as students participating in TGBG rated it positively. Conceptual, practical, and future research implications are discussed.

## CURRICULUM VITAE

NAME OF AUTHOR: Billie Jo Rodriguez

PLACE OF BIRTH: Little Rock, Arkansas

DATE OF BIRTH: November 16, 1982

### GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon, Eugene, Oregon  
University of Central Arkansas, Conway, Arkansas

### DEGREES AWARDED:

Doctor of Philosophy in School Psychology, 2010, University of Oregon  
Master of Science in Special Education, 2008, University of Oregon  
Bachelor of Science, Psychology, 2005, University of Central Arkansas

### AREAS OF SPECIAL INTEREST:

Functional Behavior Assessment & Supports  
Response to Intervention Systems  
Integration of Academic & Social Behavior Interventions in Schools

### PROFESSIONAL EXPERIENCE:

Positive Behavior Support Specialist, Clackamas Education Service District,  
Clackamas, OR 2009-2010

Graduate Teaching Fellow, School Psychology, Special Education and Clinical  
Services Department, University of Oregon, Eugene 2008-2009

Graduate Research Assistant, Educational and Community Supports, Special  
Education and Clinical Services Department, University of Oregon, Eugene,  
2005-2008

Assistant Director, EXPAND Camp Program City of Boulder Parks and  
Recreation, Boulder, Colorado, 2002

## GRANTS, AWARDS AND HONORS:

DIBELS Student Research Support Award, University of Oregon, 2008

Summa cum Laude, University of Central Arkansas, 2005

Travel Abroad Grant, University of Central Arkansas, 2004

Undergraduate Research Grant for Education, University of Central Arkansas, 2003

## PUBLICATIONS:

Loman, S., Rodriguez, B. J., & Horner, R. (in press). Sustainability of a targeted intervention package: First Steps to Success in Oregon. *Journal of Emotional and Behavioral Disorders*.

Rodriguez, B. J., Loman, S., & Horner, R. (2009). A preliminary analysis of the effects of coaching feedback on teacher implementation fidelity of First Step to Success. *Behavior Analysis in Practice*, 2(2), 11-21.

McIntosh, K., Borgmeier, C. J., Anderson, C. M., Horner, R. H., Rodriguez, B. J., & Tobin, T. J. (2008). Technical adequacy of the functional assessment checklist – teachers and staff (FACTS) FBA interview measure. *Journal of Positive Behavior Interventions*, 10, 33-45.

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## CHAPTER I

### LITERATURE REVIEW

#### **Importance of Early School Success**

The political and societal expectations faced by today's schools have dramatically shifted over the past twenty years. For example, today's entry-level jobs require reading skills that are more advanced than approximately half of current high school students (Fielding, Kerr, & Rosier, 2007). To meet these heightened expectations, federal mandates, such as No Child Left Behind (NCLB, 2001) and the Individuals with Disabilities Education Act (IDEA, 2004) have shifted from suggesting that most children be successful to mandating that *every* child be successful. This change in emphasis is demonstrated in changes in special education policy. In 1975, the initial IDEA law required schools simply provide equal *access* to educational services for students with disabilities. In 2004, IDEA focuses on the use of evidenced-based practices and documenting the progress of each child's learning. The reason for this shift from access to outcomes may lie in the compelling and compounding evidence documenting the long-term stability and poor outcome trajectories for students demonstrating early academic and social behavior difficulties (Kazdin, 1987; Walker & Severson, 1992; Walker et al., 1996). This age of "educational accountability" comes at a time when the resources to support students are declining (Walker & Sprague, 2006) and the composition of the

student population is expanding in its diversity of needs, skills, and expectations (Merrell, Ervin, & Gimple, 2005; Ortiz & Flannagan, 2002). This increase in the variety in socioeconomic, linguistic, and cultural backgrounds of the students combined with the pressure to support *all* students, places a huge challenge on schools to ensure that each student is successful. However, educational practices over the course of these changes have not significantly shifted to meet the challenge (Harn, Chard, & Kame'enui, in press).

One change in education practices over the past 10 years has been an emphasis on prevention and the provision of early intervention for students with demonstrated risk and needs. The IDEA (2004), a federal special education policy, allows schools to allocate a percentage of their special education dollars to provide *prevention* services for at risk students in hopes of preventing disabilities and, consequently, reducing the number of students referred for special education services. This shift results from evidence documenting the effectiveness of providing services to intervene with problems while they remain small (Greenwood, 1995; Kazdin, 1987; Reid, 1993 as cited in Walker, Severson, Feil, Stiller, & Golly, 1998) and the research demonstrating the limited effectiveness of interventions after third grade (Kazdin, 1987; Walker & Severson, 1992). In addition, it has been well documented that early intervention can accelerate learning trajectories, support social-emotional growth, and reduce the likelihood of educable disability diagnosis (Chard et al., 2008; Good & Kaminski, 1996; Good, Simmons, & Smith, 1998; Guralnick, 2005; National Institute of Child Health & Development, 2000; Ramey & Ramey, 1998).



When supporting at-risk students, schools, and researchers for that matter, have traditionally focused on dealing with the most pressing issue, either social *or* academic difficulties. This myopic approach has accordingly led to the development of interventions targeting only a specific area of concern (academic or social). This approach, while marginally successful, ignores the fact that many students display needs in both domains, and interventions addressing only one may not be as effective as those simultaneously addressing both areas (Ervin, Schaughency, Goodman, McGlinchey, & Matthews, 2006; Walker, 2004). The co-occurrence of social and academic difficulties is an area that educational researchers must better understand to support schools in meeting each child's needs more effectively and efficiently (Walker & Shinn, 2002). This understanding may provide insight into how schools can change practices to prevent students from developing patterns of difficulties while simultaneously allowing students to be more successful. This project seeks to add to this understanding by examining a method of improving behavior supports within the context of an effective early literacy intervention to determine the benefit on both academic and social behavior outcomes.

**Traditional early intervention approaches.** The shift toward early identification and supports for students who may be at risk for academic or social behavior difficulties is a drastic improvement over the “wait to fail” model of the past (Vaughn & Fuchs, 2003). However, the more current approach to early intervention relies on the inconsistent method of teacher referral to identify students who are likely to benefit from additional intervention (Gresham, 2004). With each referral, the focus is on providing individualized assessment and supports for the student based on the reported area of

concern. This process commonly results in several problems. First, it leads schools to provide reactive, uncoordinated services and supports with the resources available in the schools (Crone & Horner, 2000; Walker, 2004). By approaching each student as a unique case and not recognizing that many students are presenting similar issues, resources are not allocated efficiently. Second, the support provided to the referred student typically only addresses the area the teacher identified without considering other risk areas. Third, the services provided in a traditional approach are more likely to be based on topography of the referring problem than functionality (Crone & Horner, 2000), which may decrease the effectiveness of interventions and again ignores the breadth of the difficulty.

Because of the challenges associated with the “wait to fail” and the typical model of individualistic prevention and early intervention supports, a shift in educational research and practice is taking place. Schools are no longer able assume “within student” problems but instead must focus on creating positive and effective environments to support the success of all students (VanDerHeyden & Snyder, 2006). Examples of practices that can impact the school context are teaching and rewarding expected behaviors, consistently delivering consequences for problem behavior, arranging classrooms to maximize student engagement, and using school-wide evidence-based curriculum for academic interventions. The successful creation of school cultures that promote the academic and social development of students is dependent upon taking a school-wide, systematic approach. This approach should have a dual focus on practices that occur at the school and student level to provide prevention and intervention supports that match the intensity of student needs (Batsche, et al., 2005; Horner et al., 2005). This

systemic focus to create effective school contexts for students is grounded in best-practice research, and studies have demonstrated such an approach leads to sustainable, effective school practice (Sugai & Horner, 2006).

### **System-Wide Prevention and Early Intervention Models**

Systemic models were initially implemented in public health approaches and now span the fields of medicine, welfare, and education (Walker et al., 1996). This model incorporates a focus on preventing and remediating problems by providing a continuum of supports, which are typically conceptualized across three levels of increasing intensity. Universal prevention strategies provide the foundational support for all members of a population and can serve to prevent problems from developing. Secondary interventions are designed to decrease risk and increase support for groups of people who have been exposed to known risk factors and are likely to develop a condition. Tertiary interventions are provided for those who have an established disability or long-term need (Commission on Chronic Illness, 1957; Gordon, 1983; Walker & Shinn, 2002). In schools dual systems incorporating prevention and a system of coordinated supports have been utilized to promote academic (e.g., Response to Intervention) and social behavior (e.g., School-Wide Positive Behavior Support) skill development. Educational research has shown that when the three levels of support are seamlessly coordinated into interventions with meaningful involvement of relevant parties (e.g., teachers, parents, peers), positive outcomes can be achieved (Horner, Sugai, Todd, & Lewis-Palmer, 2005; Nelson, Martella, & Marchand-Martella, 2002; Walker et al., 1996; Walker & Shinn, 2002).

Both academic and social systems of educational support have common core features. These features include: (a) dual focus on school-level variables and student-level variables, (b) coordination of school-wide prevention and intervention supports, (c) universal screening and progress monitoring as part of ongoing data-based decision making, (d) implementation of evidence-based practices, (e) leadership from administrators and school teams, and (f) on-going professional development (Chard, Harn, Sugai, Horner, Simmons, & Kame'enui, 2008). The dual focus on the school and students provides a unique framework for evaluating strengths and needs of each school context. To assist with this process, schools need ongoing data collection to provide feedback on how the system (i.e., school or grade level) is doing as well as how individual students are responding to the coordinated support. The screening process also ensures students with needs are readily identified to prevent problems from becoming more robust. Evidence-based practices, practices verified in the research, are implemented to best meet students' needs and maximize school resources in the most efficient manner. Leadership and on-going professional development are the final two features that are critical to implementing school-wide models of support. While leadership binds the practice and the relevant personnel, on-going professional development ensures that school personnel have the skills and resources needed to implement and sustain evidence-based practices (Chard et al., 2008; Horner et al., 2005). Because the academic (e.g., RTI) and social behavior models (e.g., SWPBS) are conceptualized from the same multi-tiered support framework and share common core features, it seems logical that they could and should be integrated for greater efficiency

and effectiveness. However, until recently (e.g., Ervin et al., 2006; Lane, 2004; Lane et al., 2007) these models have been studied separately by researchers and implemented in isolation in schools, with one set of systems addressing social behaviors and supports while a separate system focuses on academic practices (Stewart, Benner, Martella, & Marchand-Martella, 2007). The next sections will provide an overview of the research supporting school-wide academic and social behavior supports.

**School-wide academic supports.** In a school-wide academic model, primary prevention is based on high-quality instruction using research-based programs that are expected to meet the learning needs of the majority of students. Secondary interventions are designed to target common specific academic skill needs (e.g., math facts, phonemic awareness, fluency with connected text) and are typically delivered in small group settings to successfully remediate these difficulties. Tertiary interventions are individualized and intensive services that may or may not be based in special education (Bradley, Danielson, & Doolittle, 2005). These supports are delivered along a continuum with regular progress monitoring of student growth so instruction can be adjusted in a timely and responsive manner. Many consider this approach a requirement to successfully implementing Response to Intervention (RTI) as advocated by IDEA 2004. The focus of these efforts is on improving outcomes, not solely for students with identified needs, but for all students.

While RTI is a process that is ultimately intended to be implemented across all content areas (e.g., science, math, and writing), reading has been most widely studied (Brown-Chidsey & Steege, 2005; Stewart et al., 2007). The focus on implementation of

school-wide reading models is likely a result of several research findings. The first is the documentation for reading as a foundational skill critical for school success because students must learn to fluently read before they can read to learn (Anderson, Hiebert, Scott, & Wilkinson, 1985; Ehri, 2005; Kame'enui, Carnine, Dixon, Simmons, & Coyne, 2002; Nelson, Benner, & Mooney, 2008). Second, compared to other academic areas, there is a range of evidence-based reading interventions across tier levels widely available (Kame'enui, et al., 2005). Lastly, schools have access to a wealth of resources allowing them to teach and assess indicator skills (e.g., DIBELS) that can be linked to socially important outcomes (Nelson, et al., 2008; Kame'enui, Good, & Harn, 2005).

School-wide reading approaches have been successfully implemented in a variety of school contexts with documented improvement in outcomes. Several studies have demonstrated school-wide reading models can decrease the gap between struggling and proficient readers and can reduce the number of students who are identified as needing special education services (e.g., Linan-Thompson, Vaughn, Prater, & Cirino, 2006; McMaster, Fuchs, Fuchs, & Compton, 2005). Perhaps the strongest support is shown in the mounting research evidence supporting the efficacy of prevention and intervention efforts with young children identified as at risk for reading difficulties (Coyne, Kame'enui, Simmons, & Harn, 2004; Kamps et al., 2008; Cavanaugh, Kim, Wanzek, & Vaughn, 2004; Menzies, Mahdavi, & Lewis, 2008; O'Connor, Fulmer, Harty, & Bell, 2005; Simmons et al., 2008; Torgeson, 1999; Vellutino et al., 1996). Importantly, the early-intervention outcomes appear to result in strong positive reading trajectories that sustain over time (Coyne et al., 2004; Simmons et al., 2008). Additionally, schools

implementing such practices have shown a decrease of 25 to 30 percent in the number of students identified as have reading disabilities (Simmons et al., 2000; Chard & Harn, 2008). Despite these encouraging results, a percentage of students (sometimes up to 30%) do not respond to these research-based interventions (Torgeson, 2000). While the reasons for non-responsiveness are not well understood (Harn, Linan-Thompson, & Roberts, 2008), the students who do not respond frequently have social behavior difficulties in addition to their academic needs (Al Otaiba & Fuchs, 2006; Chard & Harn, 2008).

**School-wide social behavior supports.** The successful development of academic skills is predicated on teachers being able to deliver effective instruction to all students. Students displaying disruptive, violent, and aggressive behaviors can negatively impact academic development for all students, not only the student of concern (Walker, Ramsey, & Gresham, 2003). Therefore, it is important that schools implement systems practices that promote a context for successful learning (Stewart et al., 2007). The most widely implemented and researched approach is School-Wide Positive Behavior Support (SWPBS) (Carr et al., 2002; Horner & Sugai, 2005). School-wide positive behavior support, like the public health model and the current conceptualization of RTI for academics, is not a packaged curriculum. SWPBS is, instead, a 3-tiered systems approach incorporating the core features of systems support with a focus on creating a positive and predictable social climate (Sugai & Horner, 2006; Sugai, Horner, & Gresham, 2002; Horner et al., 2005). SWPBS is used to establish the social culture and behavioral supports needed for all children in a school to achieve socially important outcomes.

In the SWPBS framework, primary prevention is in place for all students in a school and is designed to promote the pro-social behavior and academic competence of all students. Primary level interventions are school and classroom-wide interventions that target all students, involve all school personnel, and cover all of a school's daily routines (e.g., Horner et al., 2005). When schools are implementing SWPBS at the universal level, the environment is predictable (e.g., common language, common vision/understanding of expectations, common experience), positive, safe, and consistent. However, up to 20 percent of the school's students may need additional support beyond primary prevention. Secondary prevention is implemented for at-risk students (e.g., students exhibiting mild disruptive behavior). Secondary level interventions focus on providing function-based interventions for specific groups of students who are at risk for social problem behavior and are likely to be responsive to group interventions rather than requiring individualized, intensive interventions (e.g., Davies & McLaughlin, 1989; Hawken & Horner, 2003; Lewis, Colvin, & Sugai, 2000). Finally, tertiary prevention provides individualized, intensive interventions for students with the most significant needs. These students exhibit problem behaviors that have not been responsive to primary and secondary level interventions, and thus require functional behavioral assessment and individualized support plans (e.g., Carr et al., 1999).

Over the last 10 years SWPBS has been initiated and implemented across 30 states and in over 4,700 schools (Sugai & Horner, 2006). Successful implementation of universal systems of SWPBS has resulted in improved social behavioral outcomes at the individual and school level. Scott and Barrett (2004) found that after just one year of



implementation, a school reduced its office discipline referrals by 500. When estimating that one office referral takes approximately 10 minutes of administrator time and 20 minutes of student instructional time, the school saved 5,000 administrator minutes (over 14 school days of time) and gained 10,000 minutes (28 days) of student instructional time. Improvement in educational quality and accessibility for students with disabilities has been positively correlated with implementation of SWPBS (Freeman et al., 2006). Research has also supported implementation of SWPBS results in improved academic outcomes at the school level (Luiseli, Putman, Handler, & Feinberg, 2005). When the majority of students are successful with the primary prevention practices, resources can then be efficiently allocated to support students with more intense needs.

As increasing numbers of schools successfully implement universal prevention practices, schools are looking for and implementing evidence-based practices for students whose needs are not fully met by primary supports (Freeman et al., 2006). At the tertiary level, the literature documenting the effectiveness of implementing individualized behavior support plans based on function based assessments for individuals with disabilities is expansive (e.g., Blakeslee, Sugai, & Gruba, 1994; Gresham, Quinn, & Restori, 1999), and the documentation for the effectiveness in schools is mounting (Sugai, Lewis-Palmer, & Hagan-Burke, 1999; Quinn et al., 2001; Newcomer & Lewis, 2004). The level of resources (personnel and time) necessary for these efforts is significant, making high quality secondary supports critical so students who need more intensive supports can receive them.

One commonly used secondary intervention is the Behavior Education Program (BEP), which is also known as “Check-in, Check-out” (CICO) (Crone et al., 2002; Hawken & Horner, 2003; Hawken, MacLeoud, & Rawlings, 2007; Todd, Campbell, Meyer, & Horner, 2008). The BEP is designed to provide increased positive adult attention and immediate feedback for behavior using a daily progress card. The BEP has been correlated with decreases in office discipline referrals (March & Horner, 2002; Hawken et al., 2007) and increases in academic engagement (Hawken & Horner, 2003). While BEP can be modified, it is not equally effective for all students and is most successful with students who find adult attention rewarding. In addition, nearly all of the studies evaluating BEP have been implemented in middle school with emerging studies including participants from late elementary grades (Hawken et al., 2007; Todd et al., 2008). Therefore, the efficacy of this approach with early elementary students is unknown. Despite the increasing documentation for the effectiveness of the BEP, there is a need for developing a range of secondary interventions that may better match the range of social behavior needs of student across grades (Hawken & Horner, 2003; Hawken et al., 2007).

### **Rationale for Integrated Academic and Social Behavior Supports**

While the school-wide reading and behavior models are representative of great advances in providing supports that are likely to improve student outcomes, they have a common disadvantage. Student reading and social behavior problems often coexist, but the models, which typically function in isolation, view the problems separately (McIntosh et al., 2006; Stewart et al., 2007). It is also important to note that though RTI has been

conceptualized primarily as an academic intervention, the following definition by the National Association State Directors of Special Education (2005) applies to both social and academic behavior and implies a need for integrating supports across general, special education, and content areas.

Response to intervention (RTI) is...the practice of providing high-quality instruction and intervention matched to student need, monitoring progress frequently to make decisions about change in instruction or goals and applying child response data to important educational decisions. RTI should be applied to decisions in general, remedial, and special education, creating a well-integrated system of instruction/intervention guided by child outcome data. (p. 5)

Although more research is needed to better understand the multiple and interacting pathways by which patterns of problem behavior and reading deficits develop, the link between reading and social behavior skills is well documented (Fleming, Harachi, Cortes, Abbott, & Catalano, 2004; Horner et al., 2005; Lane, Robertson, & Graham-Bailey, 2006; McIntosh et al., 2006; Nelson, Benner, & Gonzalez, 2003; Reid & Patterson, 1991; Stewart et al., 2007). Two potential pathways explaining the co-occurrence of academic and social behavior difficulties have been conceptualized. These pathways may operate in a cyclical or an independent concurrent manner. One pathway is described as a social behavior deficit pathway articulated by Reid and Patterson (1991), and the second is an academic skill deficit pathway (Maguin & Loeber, 1995). Understanding how long-term

patterns of academic and social difficulties emerge may have implications for how support is conceptualized and delivered.

**Skills deficit pathways.** The social behavior deficit pathway can be used to describe students who enter school with established routines of problem behavior or social skills deficits. Without intervention, these students continue to engage in problem behavior resulting in missed instructional opportunities. This missed instructional time eventually leads to the development of academic deficits that were not initially present. Students whose difficulties emerge through this pathway are primarily impacted early in their school careers by their social behavior deficits and not academic variables. Over time, however, both academic and social skill deficits co-exist and continue to negatively influence one another (Reid & Patterson, 1991).

This pathway is problematic for educators because students who enter kindergarten with even mild social behavioral deficits (or excesses) may have difficulty benefiting from instruction. Additionally, students exhibiting problem behaviors are likely to disrupt the learning of other students in the classroom as well as impact the instructional delivery by the teacher. For example, a student who talks to her neighbor during instruction would most likely affect the learning of the neighbor (and herself). However, if the teacher spends several minutes during a lesson correcting the problem behavior, this could deleteriously affect the delivery of the lesson, learning time, student engagement, and the number of opportunities for all students to participate in the lesson. Because social behavior trajectories are set early in the school career and interventions increasingly lose effectiveness as students get older (Walker et al., 1996), it is important

that educators are prepared to systematically support the needs of young students who are at-risk for developing long-term patterns of problem behavior based on their entry into kindergarten with challenging behavior. For these students, it may be especially important that practices are in place to ensure success with academic tasks by matching instruction to student skills and delivering instruction to ensure maximal student success (e.g., providing multiple opportunities to respond, brisk pacing of instruction, rewarding appropriate behavior during instruction).

In the academic skill deficit pathway, students enter school with academic deficits and initially exhibit appropriate social behavior (e.g., participating during instruction, taking turns). However, when the academic skill deficits do not allow students to experience the natural reinforcement available through success with academic tasks, routines of problem behavior (e.g., talking out of turn, not attending to tasks) may develop. The problem behavior may be reinforced by escaping difficult academic demands or by accessing teacher or peer attention. The relation between academic skill deficits and patterns of problem behavior may become cyclic. For example, the student engages in disruptive behavior during reading instruction and is sent to the office where the student escapes the aversive instruction. This cycle eventually leads to the student falling further behind academically (Lane et al., 2007; Maguin & Lober, 1995). Recent research has demonstrated the academic-deficit pathway (McIntosh et al., 2006) by demonstrating deficits in pre-reading indicator skills at the end of kindergarten are predictive of future behavior problems and lack of responsiveness to school-wide interventions in fifth grade. Even more importantly, the predictability of long-term

behavioral problems is stronger in students displaying poor early literacy skills in kindergarten than the number of office discipline referrals in kindergarten. This research suggests academic deficits that are not adequately addressed by the end of kindergarten may place students at higher risk for continued patterns of behavior problems and concomitant academic failure.

**Overtly integrated supports.** While it is likely that for many students the social and academic deficit pathways may initially operate independently but concurrently, it is important that research continues to unpack this relation to improve our ability to meet the full range of student needs. Recent efforts have begun integrating academic and social behavior supports by providing students with behavioral concerns academic interventions. Results have shown this approach does reduce the display of problem behavior during that academic setting (Lane, 2004; Lane, Harris, Graham, Weisenbach, Brindle, Morphy, 2008; Lane et al., 2007; Nelson et al., 2003). This research plays a key role in advancing the practice of linking academic and behavior supports. However, it only addresses the social behavior deficit pathway described by Reid and Patterson (1991) because the outcome is to decrease problem behavior and not necessarily to improve academics. Additional research is needed to address the social behavior risks that are present when students enter school with academic skill deficits (e.g., academic skill deficit pathway described by Maguin & Loeber, 1995) because research (e.g., McIntosh et al., 2006) suggests that students who enter school with reading skill deficits are also at risk for developing patterns of problem behavior.

One way to address the risks inherent in either pathway is to provide prevention and early intervention services for young students identified at risk for either academic or social skill deficits (Horner et al., 2005; Stewart et al., 2007). Students who are identified as at-risk for either of these pathways are typically considered as needing secondary support. Integrated secondary level supports that intend to provide targeted early intervention in the identified risk area *and* targeted prevention in the secondary area may allow students to maximally benefit from the supports (Horner et al., 2005; McIntosh et al., 2006; Stewart et al., 2007). These secondary supports need to be efficient and effective at reducing risk and needs through the use of research-based practices and can be delivered in small group arrangements to maximize limited school resources. These secondary interventions should be overtly linked to the universal interventions and result in changes to the environment (e.g., environmental arrangement, improved teacher instructional skills, increased adult feedback and monitoring) (Sugai & Horner, 2006).

### **Toward an Integrated Model of Academic and Social Behavior Interventions**

Successful implementation of universal systems of SWPBS has not only resulted in improved social behavioral outcomes for students; research has also supported implementation of SWPBS results in improved academic outcomes at the school level (Colvin & Fernandez, 2002; Horner et al., 2005; Luiseli et al., 2005). In a similar manner, studies investigating the impact of school-wide reading models demonstrate a small to moderate effect of reading interventions on improved social behavior (Fulk, 2003; Watkins, 1997). Goodman and colleagues in Michigan have been working to overtly integrate academic and behavior support systems through a partnered university and

school-based project. This project is titled Michigan's Integrated Behavior and Learning Support Initiative (MIBLSI). The purpose of the initiative is to translate research into practice by developing "support systems and sustained implementation of a data-driven, problem solving model in schools to help students become better readers with the social skills necessary for success" (Goodman, 2008). This initiative is now being implemented in over 165 schools in the state of Michigan. Outcomes for four schools implementing coordinated reading and behavior interventions were reported in a recent study (Ervin et al., 2006). All schools were able to effectively implement SWPBS, which resulted in fewer office discipline referrals and decreases in the number of students identified with behavioral risks. The schools also documented improvements in reading outcomes at either the school or secondary prevention intervention level. In addition, students who were consistently progress monitored moved from needing intensive to secondary prevention or universal supports. This work has resulted in several lessons learned and recommendations that have implications for future research and practice. The first is that universal practices are a necessary foundation, but large successes are less likely until the full continuum of supports is in place. Another important lesson is that intervention models share core features but are not to be implemented without consideration of context. Lastly, many educators are unprepared to address the problems, necessitating ongoing professional development (Ervin et al., 2006).

The emerging results of integrated universal supports are promising. However, schools should have the full range of supports to meet the range of student needs. Several studies integrating reading and social behavior supports have investigated supports



provided at the secondary level. A meta-analysis investigating the effectiveness of integrating supports (i.e., reading and social behavior interventions vs. reading only or behavior only), demonstrated that students receiving integrated interventions made more improvement in reading than students who received reading-only or behavior-only interventions. In addition to the large gains in reading skills produced by integrated models, moderate effects on behavioral outcomes were also documented (Stewart et al., 2007). This integrated approach is in stark contrast of the typical school approach, which focuses on a single domain. It is important that researchers and practitioners consider ways to overtly link the academic and social behavior supports provided to students who are identified with risks in either area.

### **Strategies to Integrate Supports**

**Change environments to facilitate student success.** Because the reality is that students will continue to enter school and be identified at-risk for academic and/or social behavior skills deficits, it is important that the school environment is responsive to student needs through coordinated support systems. This includes the modification of both static (e.g., classroom seating arrangement, curriculum) and dynamic (e.g., instructional delivery, use of prompts and pre-corrections) instructional and antecedent variables in the child's natural environment (Baer, Wolf, & Risley, 1987; Neilsen & McEvoy, 2004). Changing the child's school environment also includes ensuring that adults engage in behaviors that increase the likelihood that students are successful (e.g., adults provide pre-corrects, consistent routines, rewards for expected behavior and consistent consequences for problem behaviors).

**Professional development.** Because many of these practices require changes in adult behavior to create environments that are preventative of future patterns of skills deficits, it is important to consider the professional development opportunities provided. Many teachers and non-certified staff may need additional knowledge and skills to create environments that are prevention-oriented and effectively promote social and academic growth. Although professional development is not new to education, effective, data-driven models for professional development are less common. While school improvement specialists recommend that a district devote at least 10 percent of its operating budget to staff development (National Staff Development Council [NSDC], 2007), these resources may be wasted if important teacher and student outcomes are not documented. Even with today's standards, schools often approach professional development by having teachers attend lecture-based, didactical workshops focused on specific content areas. However, the effectiveness of these trainings is not well documented. Emerging research suggests trainings should include systematically integrated content, considerations of contextual-fit, and applied opportunities to practice new skills and link them to previous knowledge. (Sterling-Turner, Watson, & Moore, 2002). Despite the shift in roles for many non-certified staff (such as instructional assistants) from clerical and monitoring activities to direct intervention and teaching, the effectiveness of professional development support for these staff is even less well documented (Wallace, Shin, Bartholomay, & Stahl, 2001).

The emerging research on effective training in educational settings suggests that, to maximize effects of professional development, it should include both a didactic and a

hands-on/feedback component. Scott, et al. (2005) suggested that it may be necessary to incorporate meaningful practice (e.g., extended to the classroom) in addition to simulated practice and feedback. With the limited research on implementing trainings that will result in important outcomes and the resource-intensive requirements related to providing full day or multiple day workshops, schools should consider the type and intensity of training necessary as well as who will most benefit from training. School personnel may benefit from in-service activities that are shorter in duration but intensive in focus, including time spent implementing the intervention in the classroom and receiving feedback from a consultant.

Alvero, Buckiin, and Austin (2001) define performance feedback as one means of providing trainees with information regarding the accuracy of their performance to enhance and maintain behavior change. While performance feedback may not be commonly incorporated into training models for school personnel, performance feedback has been shown to be effective for improving adult behaviors in a variety of settings (Coddling, Feinberg, Dunn, & Pace, 2005; Noell et al., 2005; Sterling-Turner et al., 2002). Performance feedback has been used to increase teachers' implementation of academic interventions (Mortenson & Witt, 1998) and behavioral interventions (DiGennero, Martens, & McIntyre, 2005) and has been shown to be more effective in improving both teacher fidelity and student outcomes than weekly interviews or weekly interviews combined with an emphasis on the commitment to implementing interventions with integrity (Noell et al., 2005) or consultation without performance feedback (Jones, Wickstrom, & Friman, 1997).

In addition to providing professional development that incorporates brief training, hands-on practice, and on-going performance feedback, it may also be useful to integrate content topics to facilitate learning. One way this can be done is to provide comprehensive professional development to support students academic and social behavior needs for the adults who will be interacting with these students. For example, all instructional assistants are typically trained in the academic curriculum they will be delivering to students. However, training in the curriculum delivery is only one piece of support that is necessary. The groups of students receiving supplementary instruction from instructional assistants are likely to benefit from learning in an environment where their social behavior needs can be strategically supported as well. Therefore, instructional assistants should be trained in academic curriculum as well as provided with specific strategies to support the social behavior of students who are at-risk for either academic or social behavior challenges.

**Match skill and evidence-based curriculum.** Another way to decrease the likelihood that problem behavior will emerge as a result of academic skill deficits is to ensure student skill is directly matched to the curriculum and instructional level. This is important for all students but even more so for students who are identified for secondary prevention interventions based on their academic risk status. Students who experience success during instruction may be less likely to engage in problem behavior to escape the instructional demands. Not only should skills be matched to curriculum, but the curriculum should also be based on research. An example of a research-based early literacy intervention is the Scott Foresman Early Reading Intervention (ERI; Simmons &

Kame'enui, 2002). Early Reading Intervention is an early literacy intervention implemented in small groups (five or fewer) for at risk kindergarten or first grade students. Early Reading Intervention is delivered in 30-minute sessions and focuses on teaching essential skills in phonological awareness, alphabetic principle, and reading connected text. The research supporting ERI is based on a 5-year longitudinal, randomized control study by Simmons, Kame'enui, Harn, Coyne, Edwards and Thomas (2007).

**Explicit provision of preventive social behavior supports.** Because students who do not begin to develop reading skills in a timely manner are likely to develop patterns of behavior problems (McIntosh et al., 2006), it is imperative that the instructional context is set up to increase the likelihood that students will maximally benefit from the academic supports provided. The explicit provision of preventive social behavior supports simultaneously with academic supports is one way to accomplish this. In addition to having the knowledge and skills to support student success, educators should utilize interventions that are highly likely to result in improved student outcomes as documented by peer-reviewed research, that are adaptable to various contexts, and have a high likelihood of being well perceived by implementers. The Good Behavior Game (Barrish, Saunders, & Wolf, 1969), which is founded on almost 40 years of applied research in a variety of school contexts (Tingstrom, Sterling-Turner, & Wilczynski, 2002; Lannie & McCurdy, 2007), is an example of an intervention that exemplifies each of these features.

**The Good Behavior Game.** The Good Behavior Game (TGBG) is an evidence-based intervention to support the social behavior of groups of students. Although the exact procedures implemented across studies have varied, the core components include specifically teaching of expected and/or unacceptable behaviors, utilizing peer influence to increase appropriate behavior and minimize problem behaviors, and reinforcing appropriate behaviors by acknowledging social behavior successes and allowing students to earn rewards (Barrish, Saunders, & Wolf, 1969). In the original 1969 study, TGBG was implemented in a fourth grade classroom. Students were divided into two teams and instructed that they would receive marks for specific inappropriate behaviors on the chalkboard. The team with the fewest marks (or both teams if neither had more than 5 marks) received a reward (e.g., free recess, lining up first for lunch) at the end of the day. The intervention resulted in decreases in disruptive behavior and was well-liked by both the implementing teacher and the students. Since the 1969 study, versions of TGBG have been implemented in a variety of general and special education settings, primarily with students first through sixth grade. The majority of research on TGBG has focused on decreasing disruptive behaviors via the division of the class into teams and rewarding each team based on exhibiting less than a specified number of problem behaviors (Tingstrom et al., 2002). Several studies have documented increases in appropriate social behaviors (Darch & Thorpe, 1977; Patrick, Ward, & Crouch, 1998; Robertshaw & Hiebert, 1973; Swiezy, Matson, & Box, 1992) and demonstrated improvements in students' work completion rates (Darveaux, 1984; Harris & Sherman, 1973; Maloney & Hopkins, 1973; Robertshaw & Hiebert, 1973).

While the literature documenting the effectiveness and social acceptability of TGBG is strong, research is lacking documenting the applicability of the intervention to small groups of young students or when delivered by instructors who do not have a teaching or behavioral analysis background. In addition, linking the intervention directly to school-wide practices and supports, such as SWPBS, may enhance the effectiveness, social acceptability, and long-term sustainability of TGBG. Lastly, it is possible but not known whether an intervention such as The Good Behavior Game may be integrated with a targeted pre-literacy intervention to increase the academic engagement of young students who are at-risk for reading difficulties. If the Good Behavior Game allows students the opportunity to maximally benefit from reading (pre-literacy) instruction, this intervention may serve as a preventative and early-intervention for students who may enter the social or academic-deficit pathways, resulting in improved long-term outcomes for the students.

### **Statement of the Problem**

Early reading skill deficits are predictive of continued academic failure, which is likely due to the cumulative effect of instructional demands over time. If the deficits persist beyond third grade, the risk for poor long-term outcomes increases and expands to include a greater likelihood of delinquency, school dropout, substance abuse, and decreased effectiveness of social behavioral interventions (Walker et al., 1996). As research continues to support a reduction in the effectiveness of academic and behavioral interventions after third grade (Kazdin, 1987; Walker & Severson, 1992), schools are

facing increased pressure to provide early intervention services in hopes of altering long-term trajectories of at-risk students and meeting increased expectations.

Although academic deficits and established routines of problem behavior are sometimes co-occurring, many students entering school with academic deficits may initially exhibit appropriate social behavior. However, when these students' skill deficits do not allow them to experience the reinforcement available through academic tasks, routines of problem behavior may develop. The problem behavior may be reinforced by escaping difficult demands or by accessing teacher or peer attention. The relation between academic skill deficits and patterns of problem behavior becomes cyclic, causing the student to fall further behind peers. Research by McIntosh, et al. (2006) suggests that deficits in pre-reading skills at the end of kindergarten are predictive of future behavior problems and lack of responsiveness to school-wide interventions in fifth grade. This research supports the importance of early intervention for addressing academic skill deficits, not only to prevent later reading problems but also to prevent future behavioral challenges.

Successful implementation of universal systems of SWPBS has demonstrated improved social behavioral and academic outcomes at the school level (Luiseli, et al., 2005; Horner et al., 2005) while additional research is needed to improve outcomes (behavior and academic) for student requiring secondary supports. Even in schools implementing school-wide approaches for academics and behavior, often the most at-risk students are provided the support by personnel who are the least prepared, instructional assistants (Chard & Harn, 2008). Often these personnel have received training to deliver



the reading intervention but not in practices to improve their behavior support skills. With the growing evidence supporting the relation between academic and behavioral challenges, research is needed to identify and develop practices that best meet the full range of student needs. One social behavior intervention, The Good Behavior Game (TGBG) has a strong research base spanning over 40 years (Barrish et al., 1969; Lannie & McCurdy, 2007). While this intervention has been used to decrease levels of problem behavior in first through sixth grade classrooms, its applicability for use with small groups of kindergarten students is unknown. Teachers who have implemented the TGBG have generally reported high social validity; adults, such as instructional assistants, who do not have teaching or behavior analysis backgrounds, have not implemented it during academic instruction. In addition, linking TGBG directly to school-wide practices and supports, such as SWPBS, may enhance the effectiveness, social acceptability, and long-term sustainability of TGBG. Linking a social behavior intervention such as the TGBG to secondary pre-literacy interventions may provide a context for students to experience more benefit from the academic instruction, yet changes in adult behavior as a provision of the intervention and sensitive student outcomes such as academic engagement and changes in literacy trajectories have not been systematically measured.

**The current study.** While the evidence supporting the effectiveness of universal and intensive interventions is mounting, the need for research evaluating cost-effective, evidence-based prevention interventions to support students who are identified as “at risk” is needed. As the field continues to better understand the link between academic and social behavior, the next step will be to develop effective interventions that addresses

both in a doable manner in school contexts. It is important that the range of interventions considered not only include interventions that are focused on changing behavior of individual students but those that also focus on improving the school context and learning environment to maximize student success.

**Research question.** The purpose of the proposed study was to extend the applied research base examining secondary level prevention interventions in general education settings by explicitly integrating reading and social behavior supports at the secondary prevention level and evaluating effectiveness (added benefit) of applying evidence-based principles of behavior support (TGBG) to small groups of at-risk kindergarten students receiving evidence-based reading intervention. This study sought to extend the literature on secondary level prevention interventions by changing the context of the educational setting to better support students who were identified as at-risk for academic difficulties by also supporting their social behavioral needs, maximizing the effectiveness of academic supports. The proposed study sought to develop and implement a procedure for integrating principles of behavior support while delivering an academic intervention. The study included the development and implementation of a group-wide positive behavior support training curriculum for instructional assistants based on the empirically validated intervention--the Good Behavior Game (1969). Specifically, the proposed study sought to determine if instructional assistant implementation of a modified version of The Good Behavior Game integrated with secondary prevention pre-literacy instruction is functionally related to

- (1) Student outcomes

- a. Group decreases in problem behavior
- b. Group increases in academic engaged time
- c. Group changes in reading trajectories as measured by slope of DIBELS data

(2) Instructor outcomes

- a. Increases in provision of opportunities to respond to academic instruction
- b. Increase in instructor provision of specific praise for student social behavior
- c. Decrease in instructor provision of correction for student social behavior

## CHAPTER II

### METHODOLOGY

#### **Participants and Setting**

The researcher approached the district leadership team of a medium-size school district in the Pacific Northwest, explained the purpose of the study, and received permission to conduct the study in the district. Once district approval was obtained, the participating school was recruited in the manner suggested by the district. This involved having the district reading coordinator meet with administrators and Title-1 coordinators of individual schools to explain the study and to determine interest and whether the school met the criteria for inclusion in the study (i.e., implementing SWPBS with fidelity for at least two years, implementing evidence-based reading instruction). After meeting with several schools, the district reading coordinator identified one school that was interested and met the inclusion criteria. This school had been implementing SWPBS with fidelity for eight years and had obtained a score of 98/100 as documented using the School-Wide Evaluation Tool (Horner, Todd, Lewis-Palmer, Irvin, Sugai, & Boland, 2003) in the previous school year. The participating school was implementing the Scott Forseman *Early Reading Intervention (ERI)*; Simmons & Kame'enui, 2002) for small group pre-literacy instruction in kindergarten.

Once the school was identified as meeting the criteria and expressing interest in participating, the researcher and the district reading coordinator met with the two

kindergarten teachers and the Title-1 coordinator for the school to determine which students and instructional assistants to recruit for the study. The researcher observed five small groups during instruction and collected data on the percent of features of ERI that were in place (see ERI & TGBG fidelity checklist, Appendix A) across two observations to confirm that ERI was being implemented by the instructional assistants that were suggested as potential participants. All five groups had at least 80% of features in place across two observations and thus were considered to be implementing ERI. Twenty-two students and five instructional assistants across the five pre-literacy instruction groups (using ERI) were selected for participation. Two of the instructional groups consisted of five students, and the other groups had four students. Instructional groups were selected based on five criteria: (a) the groups consisted of students who had been identified as at-risk for future reading difficulties based on the school's pre-literacy assessments; (b) groups were using ERI as the reading intervention, (c) the instructor did not hold a teaching certificate but was an instructional assistant or other classified staff, (d) the instructional assistant gave informed consent to participate, and (e) group size did not exceed five students.

All instructional assistants who participated in the study had only worked in the role of instructional assistant in the district where the study was conducted. Amy had been working as an instructional assistant with kindergarten students for 13 years and was part of the pilot group of assistants who implemented ERI as it was being developed (10 years ago). Barbara had 15 years experience working as an instructional assistant but was only in her second year working with kindergarten students and implementing ERI.

Candice was the most experienced instructional assistant with 18 years of work; she had worked with kindergarten students for the past 10 years and had 4 years experience implementing ERI. Deborah was a first year instructional assistant with no prior experience teaching kindergarten students or implementing ERI. Natasha had 7 years of experience as an instructional assistant and had worked with kindergarten implementing ERI for all 7 years.

Classroom teachers contacted the parents of potential students, explained the purpose of the study, and told parents that the informed consent letter would be sent home the following day. All parents of students who were recruited for the study gave informed consent to participate. The classroom teacher explained the study and obtained assent from the students, and all students assented.

### **Materials**

A written script was used to assess student perception of TGBG (Appendix B). An implementation and procedures workbook (Appendix C) was used to train the instructional assistants on TGBG. This workbook included information about TGBG and had a place to write the group expectations and reward options developed during the training. The instructional assistants used a bright yellow TGBG Tally Chart (see Appendix D) to display and track the number of points (e.g. smiley faces) for student appropriate behavior. An envelope was affixed to the back of the Tally Chart using a paper clip, and a total of ten 1" x 2.5" index cards numbered 6 through 15 were placed in the envelope. Stickers, stamps, activity pages, and other educational game activities that were included in the ERI materials were used as rewards for students. Early Reading

Intervention materials included the teacher guide, resource packages (games, letter cards, picture cards), assessment handbook, decodable storybooks, student 8" x 11" write-on/wipe-off boards, student activity books, and student manipulatives (letter tiles, letter cards, chips).

### **Response Definitions and Measurement**

**Dependent variables.** Direct observation data were collected on the following dependent variables: student problem behavior, student academic engagement, student literacy indicator skills (DIBELS PSF and NWF), instructor provision of opportunities to respond, and instructor praises and corrections (for social behavior only). Observations were conducted within 12.5-min (750 s) sessions.

***Student problem behavior.*** Student problem behavior was measured across the group of students during a 12.5-min observation using 10-s partial interval recording. Thus, an occurrence was scored if any student emitted any target problem behavior during the observation. Each student was assigned a data collection code for problem behavior so that data could be examined to determine if the group's problem behavior was dependent primarily on a single student or was spread across the students in the group. If two students engaged in problem behavior in the same 10-s interval, each student's unique problem behavior data collection code was recorded, but this was viewed as one interval of problem behavior occurrence. Problem behavior included talking out, out of seat without permission, disruptive behavior, and noncompliance. *Talking out* was scored when the student spoke when others were talking or without raising his or her hand during instruction (i.e., when the expectation is to be quiet). *Out of*

*seat* was coded when the student's bottom lost contact with the seat surface for more than 3 s (and the student had not been given permission to get up) or when all four legs of the chair were not touching the ground for more than 3 s. *Disruptive* behavior was scored when a student emitted a response that could interrupt the learning of the student or others, including for example, making inappropriate noises, banging a pencil on the desk, yelling, and making faces at other students. Finally, *noncompliance* was scored when a student did not follow an adult's directive for a behavior change (to either start doing something or stop doing something) within 5 s. Noncompliance was scored if a student was asked and did not respond to an academic-related prompt (e.g., what sound does "Wh" make?) but was not scored if a student attempted to answer a question but provided an incorrect response. All problem behaviors were scored using a single problem behavior code such that any behavior meeting the definition for problem behavior was scored to produce a single score for percentage of observation intervals in which any problem behavior occurred.

***Student academic engagement.*** Academic engagement was measured using duration recording and was defined as (1) following teacher academic requests within 5 s, (2) eyes oriented toward teacher or relevant materials for academic tasks, (3) completing tasks as requested by the instructional assistant. There was a 5-s delay for scoring the onset and offset of academic engagement to control for discrete instances of behavior (e.g. briefly looking away from teacher). To obtain a measure of the group's academic engagement, the observer recorded the engagement of one student for 250 s, the next student for 250 s, and a third student for 250 s. Every other day the order of students



observed for academic engagement was reversed so that all students were observed for engagement at least every other day.

***Student literacy achievement.*** Dynamic Indicators of Basic Early Literacy Skills (DIBELS) are a set of standardized, individually administered measures of early literacy development (Good & Kaminski, 2002). They are designed to be short (one minute) fluency measures used to regularly monitor the development of pre-reading and early reading skills. The DIBELS data system is a web-based database that allows schools and districts to enter their DIBELS data online and generate automated reports. Data from the DIBELS measures were used for this study instead of published-norm referenced test data because of the (1) the availability of the measures in the school (the project school was already monitoring at-risk students weekly using these measures), (2) the sensitivity to student growth over time (floor effects often interfere w/interpretability of published-norm referenced tests), and (3) the relevance of the measures for instructional decision-making. For this study, the phoneme segmentation fluency (PSF) and nonsense word fluency (NWF) data were collected weekly for each student in the instructional group throughout the study. In addition, the school collected benchmark data three times during the school year (fall, winter, spring).

Phoneme Segmentation Fluency is a standardized, individually administered test of phonological awareness (Kaminski & Good, 1996). The two-week, alternate-form reliability for the PSF measure is .88 (Kaminski & Good, 1996), and the one-month, alternate-form reliability is .79 in May of kindergarten (Good et al., 2004). Concurrent criterion validity of PSF is .54 with the Woodcock-Johnson Psycho-Educational Battery

Readiness Cluster score in spring of kindergarten (Good et al., in preparation). The predictive validity of spring-of-kindergarten PSF with (a) winter-of-first-grade DIBELS NWF is .62, (b) spring-of-first-grade Woodcock-Johnson Psycho-Educational Battery total Reading Cluster score is .68, and (c) spring-of-first-grade CBM ORF is .62 (Good et al., in preparation). The PSF measure assesses a student's ability to segment three- and four-phoneme words into their individual phonemes fluently and has been found to be a good predictor of later reading achievement (Kaminski & Good, 1996). The PSF task is administered by the examiner who orally presents words of three to four phonemes and asks the student to say the individual phonemes for each word, with the number of correct phonemes produced in 1-min determining the final score.

Nonsense word fluency (NWF) is a standardized, individually administered measure of alphabetic principle (Kaminiski & Good, 1996). The one-month, alternate-form reliability for NWF in January of first grade is .83 (Good et al., 2004). The concurrent criterion-validity of DIBELS NWF with the Woodcock-Johnson Psycho-Educational Battery-Revised Readiness Cluster score is .36 in January and .59 in February of first grade (Good et al., 2004). The predictive validity of DIBELS NWF in January of first grade with (a) CBM ORF in May of first grade is .82, (b) CBM ORF in May of second grade is .60, (c) Woodcock-Johnson Psycho-Educational Battery Total Reading Cluster score is .66 (Good et al., 2004). The NWF measure assesses letter-sound correspondence (representing their most common sounds) and whether students are blending letters into words. The NWF measure was added as an additional measure of

academic progress two weeks into the study because students were scoring relatively high on the PSF measure.

***Instructor provision of opportunities to respond.*** Opportunities for students to respond/participate (OTR) in the instruction were scored when the instructional assistant provided an occasion (i.e., a prompt) for one or more students to emit an overt verbal, behavioral, or written response to an academic request. Opportunities to respond were measured using frequency recording. Opportunities to respond were not scored for requests that were not academic in nature (e.g., “Josh, tell me where you are supposed to be right now.”)

***Instructor attention delivery (praise & corrections).*** Instructional assistant delivery of praise and corrections were only scored for delivery that followed social behavior using 10-s partial interval recording. Praise was scored when the instructional assistant provided a verbal statement or physical gesture that indicated approval of social behavior (of an individual or the group). Examples of appropriate social behavior that were followed by praise included following directions, completing work, hand raising and waiting quietly for a turn. Praise also included social behavior praise paired with praise for academic responses (e.g. “Yes, that sound is a; thanks for paying attention.”). Praise statements that were only in response to academically correct answers (e.g. “nice answer,” “good job, that sound is a”) were not scored. Correction was scored when the instructional assistant provided a verbal statement or physical gesture in response to student problem behavior (individual or group) but not in response to incorrect academic responses. For example, “No that sound is b” was not scored as correction, while “Please,

do not yell out” and “Raise your hand before speaking next time” were scored as corrections.

*Instructor and peer attention following problem behavior.* Instructional assistant delivery of neutral attention was scored for attention delivery that followed a previously defined student social problem behavior using 10-s partial interval recording. Instructor attention was scored when the instructional assistant provided a verbal statement or physical gesture that was in response to student problem behavior but demonstrated neither approval nor disapproval of the behavior. A common example of neutral attention included engaging a student who talked out about a non-academic topic by continuing the off-task conversation with the student. Peer attention following problem behavior was scored for attention delivery by a peer that followed a previously defined student problem behavior using 10-s partial interval recording. Peer attention including providing a verbal statement or physical gesture (including laughing, smiling at peer, frowning) in response to student problem behavior. The peer’s response could be positive (e.g., laughing, talking to peer) or negative (e.g., “stop it,” frowning). To determine the percent of time instructor neutral attention followed problem behavior, the percent of intervals with instructor neutral attention following problem behavior was divided by the total number of intervals scored with problem behavior for each observation. The percent of time peer attention followed problem behavior was calculated in the same way—dividing the number of intervals scored with peer attention following problem behavior by the total number of intervals scored with problem behavior. If there was no problem behavior

scored, these two variables could not be coded since they were defined by their dependence on the occurrence of problem behavior.

**Fidelity of implementation.** In addition, direct observations were conducted on several independent variables to assess fidelity of implementation. For ERI, data were collected on the percent of ERI instructional components implemented. Fidelity of implementation was assessed each observation using the same checklist (see ERI & TGBG fidelity checklist, Appendix A) that was used to determine ERI was in place when selecting participants. For TGBG fidelity was measured at two levels: fidelity of professional development and fidelity of instructional assistant implementation of TGBG during daily small group instruction. Fidelity of the professional development in TGBG was measured using a review of permanent products, including documentation of three to five specific group behavior expectations and completed practice examples in TGBG training manual. Direct observation data were collected on implementation of critical features of TGBG (see description of checklist below), frequency of instructional assistant delivered verbal praise/corrections, and number of instructional assistant provided opportunities to respond.

The TGBG implementation checklist (see Appendix A) assessed critical features of TGBG, including (a) whether the three group behavioral expectations were reviewed, (b) whether TGBG rules were reviewed, (c) a rating of whether smiley point delivery was paired with specific verbal praise for social behaviors, (d) proportion of rewards distributed appropriately. The checklist also asked whether the number of praise statements exceeded the number of corrective statements. All items, except the

proportion of smileys delivered with and without specific praise and proportion of rewards delivered appropriately, were scored as yes-2, no-0 or no opportunity to observe. The proportion of tokens and rewards were scored on 4-point scale (yes = 3, mostly = 2, sometimes = 1, no = 0). To calculate a percent of implementation, the items were added and divided by the total applicable points possible. The real time observation component allowed for observation of teacher behaviors related to the intervention that may increase following implementation of TGBG including the proportion of praise statements relative to corrections and instructional assistant provided opportunities to respond.

The ERI portion of the fidelity checklist consisted of the following 6 items that were scored on a 4-point scale (yes = 3, mostly, sometimes, no = 0): (a) used wording from the script, (b) completed one activity before moving on to the next, (c) teacher modeling new material, (d) all students participated in group and written responses, (e) teacher corrected student mistakes, (f) teacher leads/tests students on remaining examples. The score for each item was added and divided by the total possible score (18). General considerations were also noted (i.e., quality of lesson delivery, student engagement, completion of activities in a timely manner) but not calculated in the ERI fidelity score.

Figures 1 and 2 show the percent of ERI and percent of TGBG features implemented during baseline, TGBG, and maintenance for each instructional assistant. Figure 1 shows that during baseline, prior to training on TGBG intervention, instructional assistants only rarely implemented any components of TGBG and no components were implemented consistently. For example, Amy reviewed group expectations on two

Figure 1

*Percent of Features of TGBG Implemented Before & After TGBG Training*

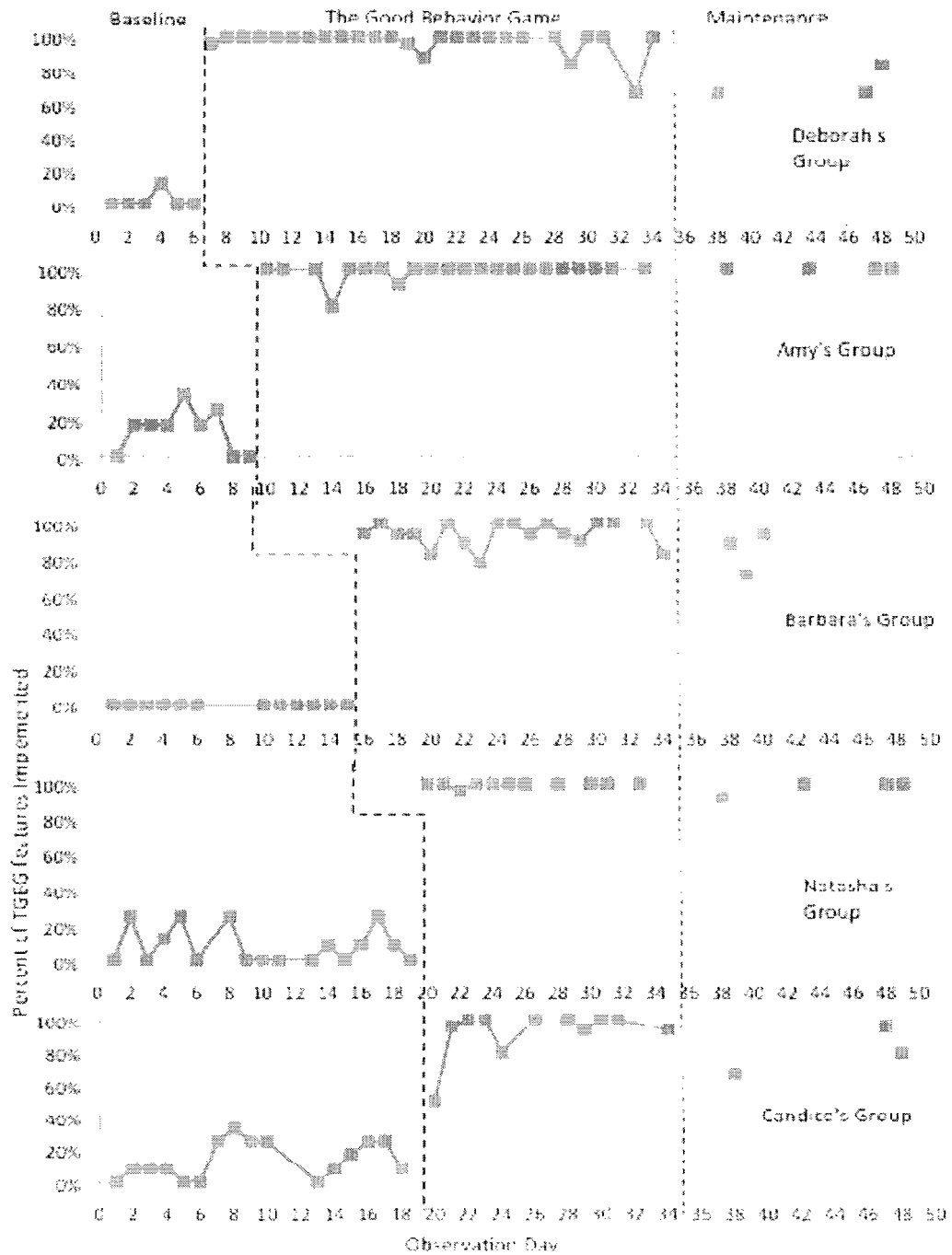
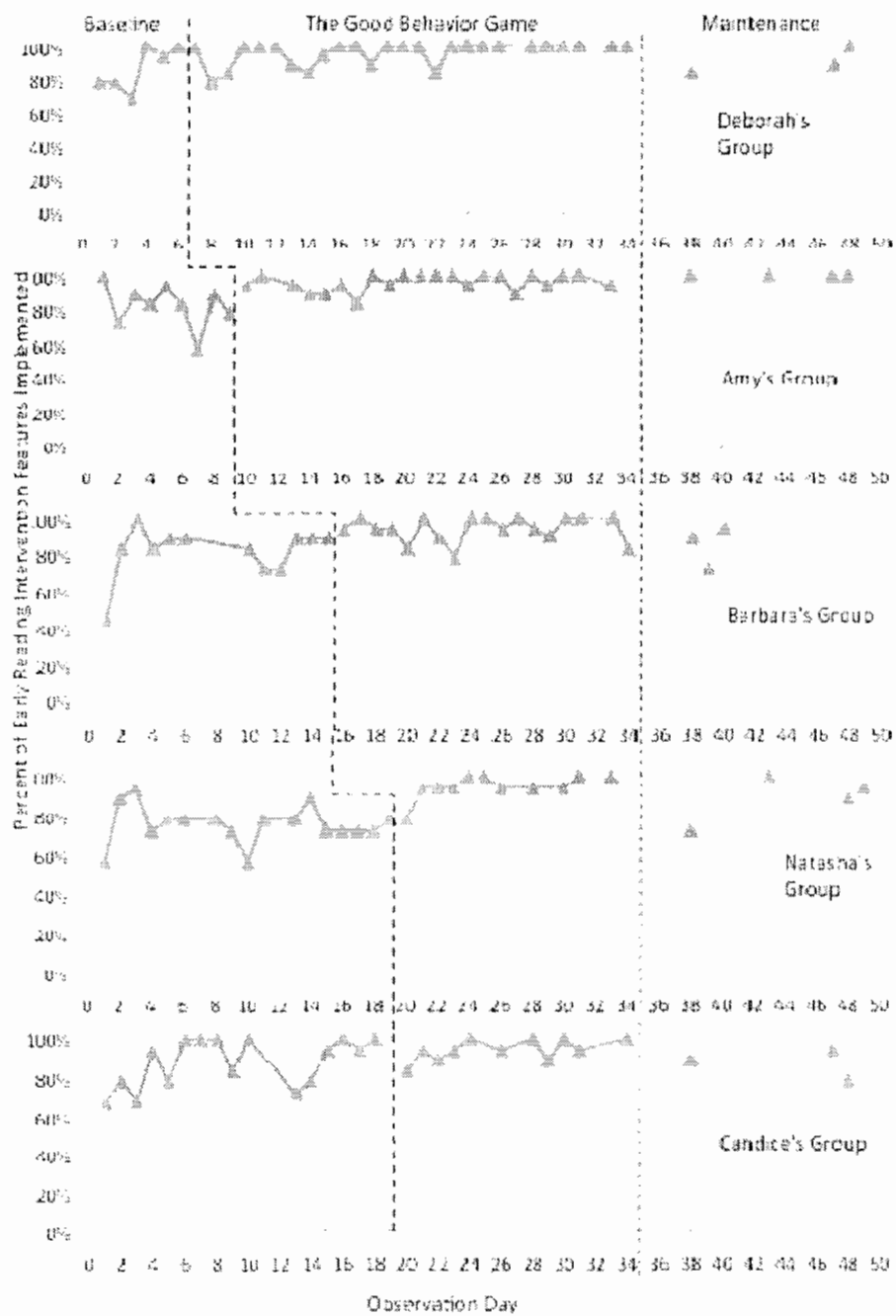


Figure 2

*Percent of Features of ERI Implemented Before & After TGBG Training*



occasions; Natasha delivered more praise than corrective statements once, while Amy and Candice delivered more praise than corrective statements 60% and 25% of the time respectively.

Following training on TGBG, all instructional assistants implemented TGBG with high fidelity. Amy's implementation of TGBG averaged 99% (range 83% to 100%), Barbara averaged 95% (range 79% to 100%), Candice's implementation averaged 90% (range 50% to 100%), Deborah averaged 95% (range 67% to 100%), and Natasha's implementation averaged 99% (range 92% to 100%). The first day following TGBG training, Candice implemented with 50% fidelity. She received additional coaching the next day, and implementation fidelity immediately increased to 96%.

Prior to participation in the study, all the instructional assistants had been trained and were implementing ERI with at least 80% fidelity across at least two observations during the screening. Figure 2 shows that all instructional assistants implemented ERI with variability during baseline. Amy's baseline implementation average was 83% (range 56% to 100%), Barbara averaged 82% (range 44% to 100%), Candice averaged 88% (range 67% to 100%), Deborah's implementation averaged 86% (range 68% to 100%), and Natasha averaged 76% (range 56% to 94%). The only somewhat consistent pattern across all instructional assistants was that the item "all students participated with group and written responses" was often scored lowest. The other items were typically rated as "sometimes" or "mostly" rather than "yes."

Although instructional assistants were not provided with consultation directly related to the academic ERI instruction, all instructional assistants improved their average

level and consistency of ERI implementation during TGBG. Amy's ERI implementation during TGBG improved from 83% to an average of 97% (range 89% to 100%), Barbara's improved from 82% to a 92% average (range 72% to 100%), Candice's average implementation improved 5% and was 93% (range 78% to 100%), Deborah's implementation improved 10% and averaged 96% (range 78% to 100%), and Natasha improved from 76% to average 93% (range 72% to 100%) during TGBG implementation.

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improved from 76% to average 93% (range 72% to 100%) during TGBG implementation.

### **Data Collection**

**Direct observation data collection.** Direct observations were conducted daily using a computerized real-time coding system on laptop computers during the first two phases of the study (baseline and TGBG intervention). To demonstrate possible maintenance effects over time, follow-up direct observations occurred once or twice weekly for four weeks. Observations were 12.5-min (750 s) in duration, and only one observation was conducted per group per day. Observations were conducted during small group reading instruction when ERI was implemented. Instructional assistants assigned each student to sit in a consistent seat in the reading group. This allowed data collectors to track problem behavior by individual students and to document if a student was absent. If the regular instructional assistant or more than one student in the group was absent, data were not collected. Data collectors were graduate students fulfilling research credit requirements. Prior to beginning data collection, observers were trained using verbal instruction, videotapes, and in-vivo practice in a classroom. Data collectors reached 80% total agreement on all variables for both videotape practice examples and two classroom practice sessions prior to collecting data independently.

**Inter-observer agreement.** Inter-observer agreement was assessed during 36% of baseline observation sessions and 38% of TGBG intervention sessions. During these sessions, two observers independently collected data as previously described. To evaluate inter-observer agreement for responses coded as frequency measures, each observation

record was divided into 10-s intervals, and records were compared across each interval. Within each interval, the larger number of recorded target responses (e.g., opportunities to respond) was divided by the smaller number and the resulting coefficients were averaged across intervals. For responses coded as partial interval measures, total agreement, occurrence agreement, and nonoccurrence agreement were calculated. Total agreement was calculated by scoring each interval (or item) as agreement or disagreement, summing the number of agreements, summing the number of disagreements, and dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100% (Kennedy, 2005). Occurrence agreement was calculated by dividing the number intervals both observers recorded a response by the number of times either observer recorded a response while non occurrence agreement was calculated by dividing the number of intervals in which neither observer recorded a response by the number of times one or both observers did not record a response.

Average total agreement was 89% or higher for all direct observation variables. Average occurrence only agreement was 80% or higher for all variables, while average non-occurrence only agreement was 89% or higher for all variables. For student group problem behavior, total agreement was 96%, occurrence only agreement was 86%, and non-occurrence agreement was 94%. Total agreement for praise was 98%, occurrence only agreement was 86%, and non-occurrence agreement was 98%. Total agreement for correction was 99%, occurrence only agreement was 82% and non-occurrence agreement was 99%. For peer attention following problem behavior, total agreement was 99%, occurrence only agreement was 81%, and non-occurrence agreement was 99%. Teacher

attention following problem behavior was coded with 99% total agreement, 80% occurrence only agreement, and 99% non-occurrence agreement. Total and occurrence only agreement for academic engagement was 99.5%, and non-occurrence agreement was 89%. Total agreement for opportunities to respond was 89%.

Inter-observer agreement for the fidelity checklists was assessed for 37% of sessions by calculating the percentage of items that both observers selected the same fidelity response (yes, no, or not applicable). Total agreement for the ERI fidelity checklist was 93% (range 67% to 100%) and total agreement for TGBG checklist was 97% (range 71% to 100%). In addition, inter-observer agreement for the DIBELS PSF measure was assessed 37% of administrations while inter-observer agreement for NWF was assessed 50% of administrations. Inter-observer agreement was obtained by having a second observer sit near the student and independently record the student's responses on a duplicate page. Total agreement was determined by calculating the percentage of correct phonemes segmented (for PSF) or the percentage of correct letter sounds recorded (for NWF). Total agreement for PSF was 96% (range 74% to 100%). Total agreement for NWF was also 96% (range 74% to 100%).

**Indirect measures.** Data were also collected on contextual fit, pre/post training knowledge of TGBG, and student and instructional assistant perception of intervention. The following measures were used:

***Contextual fit.*** Contextual fit was assessed during the first week of implementation of TGBG intervention phase and again at the end of the study. All five instructional assistants involved in the intervention completed a modified version of the

Contextual Fit Questionnaire (Horner, Salantine, & Albin, 2003; Appendix E). The Contextual Fit Questionnaire assessed each instructional assistant's perceptions on the ease of implementation, amount of effort needed to implement TGBG, and whether the effects of TGBG were worth the effort (Horner et al., 2003).

***Knowledge of TGBG training components.*** Knowledge of TGBG training components was measured using a pre/post survey to assess instructional assistant knowledge of TGBG implementation components and procedures. The measure was based on the training and included whether the instructional assistant knows the school rules/expectations (because TGBG was linked to these expectations) and knowledge of TGBG components and implementation (Appendix F). The knowledge survey consisted of 12 items (10 questions and 2 sub-questions) that were scored as correct-1 or incorrect-0. To determine a percentage, the number of questions answered correctly was divided by 12 (the total number of questions and sub-questions). The items assessed knowledge of school-wide expectations, whether the instructional assistant had group expectations linked to the school-wide expectations as well as items that assessed critical features of TGBG (e.g., how often should expectations be reviewed, how often should positive feedback be delivered, what is the "magic" number).

***Social validity.*** The social validity measures were intended to determine how the instructional assistants and students participating in TGBG perceived the intervention's effectiveness. The measures also were used to assess the amount of perceived effort required to implement TGBG.

Instructional assistant perception of student problem behavior and ease of implementation was assessed weekly following training in TGBG throughout the study. Instructional assistants completed a 2-item questionnaire as part of the implementation coach check-in procedures (described in the Procedures section). Instructional assistants provided a rating on the perceived impact of TGBG on student overall level of problem behavior for the week using a 4-point Likert scale (where 1 indicated high impact resulting in little or no problem behavior, 2-3 medium high or medium low impact, and 4 indicated no impact with very high levels of problem behavior) as well as the ease of TGBG implementation (1 indicated little or no effort, 2-3 indicated some effort, and a 4 indicated high effort) (see Appendix G).

After the first week of TGBG implementation, the implementation coach also asked students if they like playing TGBG, if they earned rewards, and if they thought TGBG helped them be more successful during their reading group. The implementation coach asked the students the questions no more than once per week, and students were instructed to provide two thumbs up for a “yes” answer (scored with 2 points), provide one thumb up for a “sometimes” answer (scored with 1 point), and hands flat on the table to represent “no” (Appendix B).

### **Experimental Design**

This study used a concurrent multiple baseline design across five instructional assistant small reading groups with two phases: baseline (treatment as usual) and TGBG intervention phase. A multiple baseline design was used so that the academic outcome data (DIBELS PSF and NWF slopes) could be compared pre and post intervention for all

students in the groups participating in The Good Behavior Game. The concurrent multiple baseline design also allowed for evaluation of whether changes in instructional assistant and student behavior were due to the intervention as opposed to some other variable. Instructional assistants implemented all phases of the study. The ERI curriculum was in use during both baseline and TGBG. Phase change from baseline to intervention occurred when stable or increasing trends were seen in the primary dependent variable-- student problem behavior (as judged via visual inspection).

### **Procedures**

**Baseline.** During the baseline phase, instructional assistants provided small group reading instruction for their students using the ERI curriculum as part of the regular kindergarten day. Instructional assistants were told to continue to implement ERI and respond to student behavior as they typically do, as if the observers were not present. Instructional assistants provided each student with a small card that contained 20 spaces for stamps. Instructional assistants provided stamps to individual students for good behavior, and when the card was full, the student could go to the “Treasure Box.” The “Treasure Box” was filled with small tangible items (e.g., pencils, erasers, little toys) purchased from the school’s SWPBS incentives budget. Instructional assistants were inconsistent in their delivery of stamps but typically gave out stamps at the end of the lesson as students were transitioning to recess. During the baseline phase, direct observations were conducted daily.

**Instructional assistant training.** Following baseline, instructional assistants were trained to implement TGBG. Because interventions were staggered, instructional



assistants were trained individually. Instructional assistants were asked not to discuss the training with one another. Training consisted of one 60-min professional development session provided by the Investigator and the Implementation Coach assigned to that instructional assistant. Implementation coaches were graduate students in special education or school psychology and had completed at least one year of graduate level training that included coursework in behavioral concepts, functional behavioral assessment and interventions. In addition to assisting with training, they observed implementation of TGBG and met once weekly to review fidelity with the instructional assistant and to assess instructional assistant and student perception of TGBG intervention.

The 60-min teaching session (a) taught the instructional assistant the routines of TGBG (including developing specific group behavioral expectations linked to school-wide positive behavior support expectations), (b) provided examples and non-examples of TGBG implementation, (c) allowed the instructional assistant to practice implementation and receive feedback of TGBG in conjunction with an ERI lesson, and (d) provided time to address questions and concerns. Prior to and following training, knowledge surveys described previously were completed. During the teaching session, instructional assistants were taught to provide specific praise for social behavior (e.g., “thank you for keeping your eyes on me,” you are doing a great job sitting in listening position”) paired with a smiley point about once every two minutes during their 30-min instructional group, resulting in the goal to deliver at least 15 smiley points paired with specific praise each day.

All instructional assistants worked with the researcher during TGBG training to develop a list of acceptable rewards. The rewards were low or no cost rewards built into the SWPBS incentive system budget (e.g., stickers, stamps, activity sheets, instructional games). Specific rewards were based on availability of materials, appropriateness of activity given the context of instruction (i.e., some groups could not do “noisy” games/activities because of the potential to distract other instructional groups in the same classroom, activities needed to be able to be completed or delivered in two minutes or less), and student preference. All instructional assistants selected to use games from the ERI curriculum, stamps, stickers, time to draw on small white boards, and the “Treasure Box” as the weekly “bonus” reward on Friday if the students met TGBG daily goal for the entire week. The “Treasure Box” had been used as a reward strategy prior to implementation of the study. Some instructional assistants incorporated other activities such as “Simon Says,” giving two minutes to color worksheets, dismissing early for recess, or providing kids’ choice.

**The Good Behavior Game.** Implementation of TGBG in the small group setting began the first school day following training, and the Implementation Coach and/or the Investigator were available to observe and provide feedback during the initial two to three days of TGBG implementation and at least weekly thereafter. The implementation coach observed implementation daily until instructional assistants implemented TGBG with 90% or greater fidelity for two consecutive observations.

To implement TGBG, the instructional assistant placed a bright yellow TGBG record sheet on the table. An envelope containing the “magic” numbers inside was paper

clipped to the back of the yellow TGBG record sheet. The “magic” number determined the number of smiley faces the students needed to earn that day to receive the reward. Because 15 specific praise statements was the goal for the instructional assistants, this was also the highest “magic number” in the envelope. Therefore, instructional assistants knew that if they delivered at least 15 smiley points, the students would win the game for the day. The students, however, had no knowledge of the range of “magic” numbers in the envelope (and thus did not lose interest in earning smileys throughout instruction). The instructional assistants explained that smiley faces would be earned by meeting specific behavioral expectations. Next, the instructional assistant taught the specific behavioral expectations (tied to the individual school’s behavioral expectations but specific to the group) by providing specific examples and non-examples of desired behaviors and by practicing via role-plays with the students. Once TGBG procedures and specific behavioral expectations had been taught, the instructional assistants began TGBG along with delivery of ERI.

During instruction, the instructional assistant provided positive, labeled verbal praise paired with smiley faces on the yellow record sheet when a specific student was engaging in an expected appropriate behavior and when the majority of the students were exhibiting behavior concurrent with a behavioral expectation (e.g. eyes on teacher, following directions) (see sample script used by the instructional assistants in Appendix C, workbook pp. 10-12). About three minutes before the end of the group, the instructional assistant opened the envelope, drew a magic number, and shared the magic number with the students. If students earned at least as many smiley faces as the “magic”

number (and no more than four frown faces), they received a reward (e.g., time to draw or write letters on small wipe boards, game of Simon Says, sticker, stamp). Typically, the instructional assistant chose the reward for the day (based on how much time was left before the end of the group and which rewards had been used previously). On some occasions, the instructional assistant allowed a student who was especially well behaved during the lesson pick the reward for the day. If the students meet the criterion each day of the week, they were allowed to earn a larger reward on Friday (i.e., trip to the Treasure Box).

After the initial three days of implementation, the instructional assistants continued to briefly review the expectations each day prior to beginning instruction as part of TGBG implementation but no longer conducted practice and role-plays with the students. There were a few instances (approximately one per group during the course of the study) that the students did not win TGBG. When this happened instructional assistants used the last two minutes of the group to re-teach group expectations. In addition, they began the next day's lesson with a review of expectations and role-playing expected behaviors.

Throughout implementation of TGBG, instructional assistants met once a week for a 5-min check-in with an implementation coach to receive feedback on fidelity of implementation data and to address any potential instructional assistant concerns. All instructional assistants received at least two weeks of coaching support. Meetings were scheduled based on instructional assistant and implementation coach availability but typically occurred just prior to or following implementation of TGBG that day.

**Maintenance.** After all instructional assistants implemented TGBG for at least two weeks with coaching support, the study moved to the maintenance phase where instructional assistants continued to implement TGBG without coaching support. When the study shifted to this phase, classroom teachers requested that they be allowed to re-group students as needed based on the students' skill development. The classroom teachers then decided when and which students would be re-grouped for literacy instruction. Amy's group did not change at all, and Barbara's group changed the first week following the conclusion of coach check-ins. Candice, Deborah, and Natasha kept the same group for one week during maintenance. All instructional assistants continued to implement TGBG regardless of whether their group changed or stayed the same. As long as all the students in the group were part of the group that gave parental consent, both student and instructional assistant behavior were observed. When instructional assistants received new students, only the behavior of the instructional assistants was observed (i.e., fidelity of ERI, TGBG, and praise/corrections).

## CHAPTER III

### RESULTS

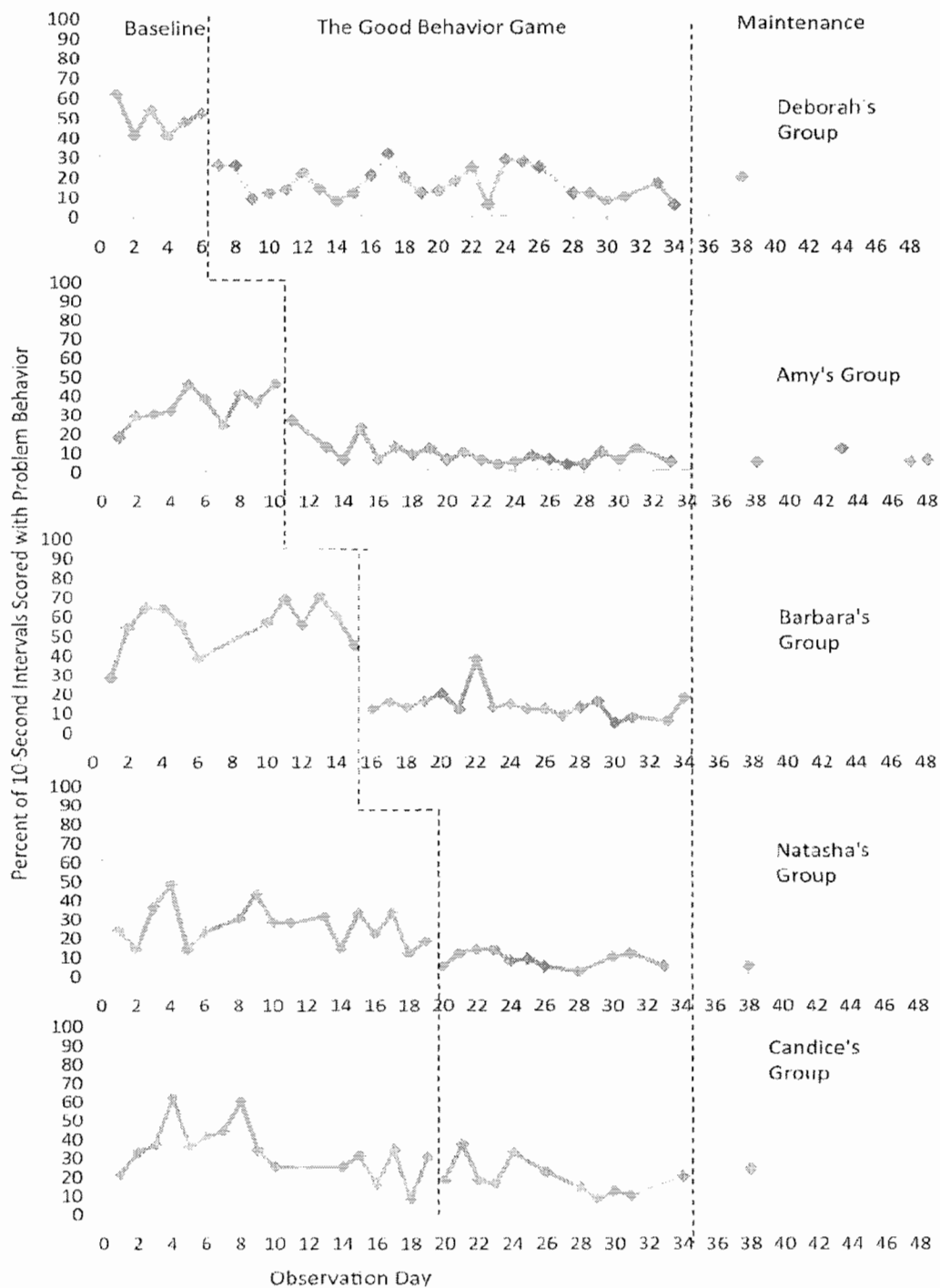
Results are presented for each research question addressed in this study. The first section shows student group level data related to problem behavior, academic engagement, and early literacy skill development. The next section presents direct observation instructional assistant data for provision of opportunities to respond and attention for student social behavior. Finally, information related to teacher knowledge in implementing TGBG, contextual fit, and general social validity is reviewed.

#### **Direct Observation of Student Behavior and Academic Performance**

**Student problem behavior.** Figure 3 shows the percent of 10-s intervals scored with student problem behavior for each instructional group. During baseline all groups, except Candice's group, demonstrated stable or increasing patterns of problem behavior. The students engaged in problem behavior an average of 49% of intervals (range 40% to 60%) in Deborah's group, 33% of intervals (range 17% to 45%) in Amy's group, 54% of intervals (range 27% to 69%) during Barbara's group, 26% of intervals (range 11% to 47%) in Natasha's group, and 33% of intervals (range 7% to 61%) in Candice's group. Following implementation of TGBG, the students in Deborah, Amy, and Barbara's groups showed an immediate and sustained reduction in percent of intervals with problem behavior that was maintained throughout the study. Following implementation of TGBG,

Figure 3

*Percent of 10-Second Intervals Scored with Student Problem Behavior by Group*



the students in Natasha's group showed a reduction in variability and in percent of intervals with problem behavior (i.e., consistently below 10% of intervals during TGBG) that resulted in a floor effect. The low levels of problem behavior were maintained throughout the study. The students in Candice's group initially engaged in moderate levels of problem behavior during baseline that was followed by lower levels of problem behavior prior to implementation of TGBG. Following implementation of TGBG, the level of problem behavior was similar to the level that was observed near the end of baseline.

To calculate percent change from baseline to intervention, the last three points during baseline and the last three points during intervention phase were compared. During TGBG implementation, students engaged in problem behavior an average of 16% of intervals (range 5% to 31%) in Deborah's group, and the percent decrease from baseline to TGBG intervention was 78%. The students in Amy's group engaged in problem behavior an average of 8% of intervals (range 3% to 26%), and the percent decrease from baseline to intervention was 80%. The student's in Barbara's group engaged in problem behavior an average of 13% of intervals (range 4% to 37%), which was an 82% decrease. The students in Natasha's group engaged in problem behavior 7% of intervals (range 1% to 13%), and the percent of problem behavior decreased by 65%.

Although a slight (26%) overall reduction in problem behavior was obtained in Candice's group, this reduction did not appear to function as a result of implementation of TGBG. It should be noted that one particular student in this group engaged in problem behavior that accounted for 71% of the total problem behavior coded for the group.



During TGBG intervention, this same student's problem behavior accounted for 92% of the intervals coded with problem behavior, suggesting that the student would benefit from a more intensive intervention.

All instructional assistants implemented TGBG for at least two weeks with coaching check-ins and support as previously described. After the last two instructional assistants had implemented TGBG for two weeks, observations moved to "maintenance" and occurred only once or twice weekly for four weeks. As the study shifted to "maintenance" phase, the classroom teachers requested that they be allowed to re-group students as needed based on the students' instructional progress and skills. The classroom teachers then decided when and which students would be re-grouped for literacy instruction. Amy's group did not change at all and so several maintenance observations were conducted. No observations were conducted for Barbara's group as membership shifted in the first maintenance week, and one week's worth of maintenance data were able to be collected with Candice, Deborah, and Natasha who kept the same group for one week. While there are not enough follow-up observations to draw definite conclusions about student behavior over time for all groups, the observations showed that levels of student problem behavior remained well below baseline behavior levels for all groups except Candice's group—within which the same student continued to emit the majority of problem behavior. The follow-up observation for Candice's group was nearly identical to the last observation during intervention, and the single student (previously discussed) engaged in all of the observed problem behavior.

**Student group academic engagement.** Mean levels of student academic engagement during baseline and TGBG implementation are presented in Table 1. Shifts in academic engagement were not observed as a function of TGBG. Mean student engagement never dropped below 91% throughout the study and was typically above 98%.

Table 1

*Mean Student Academic Engagement*

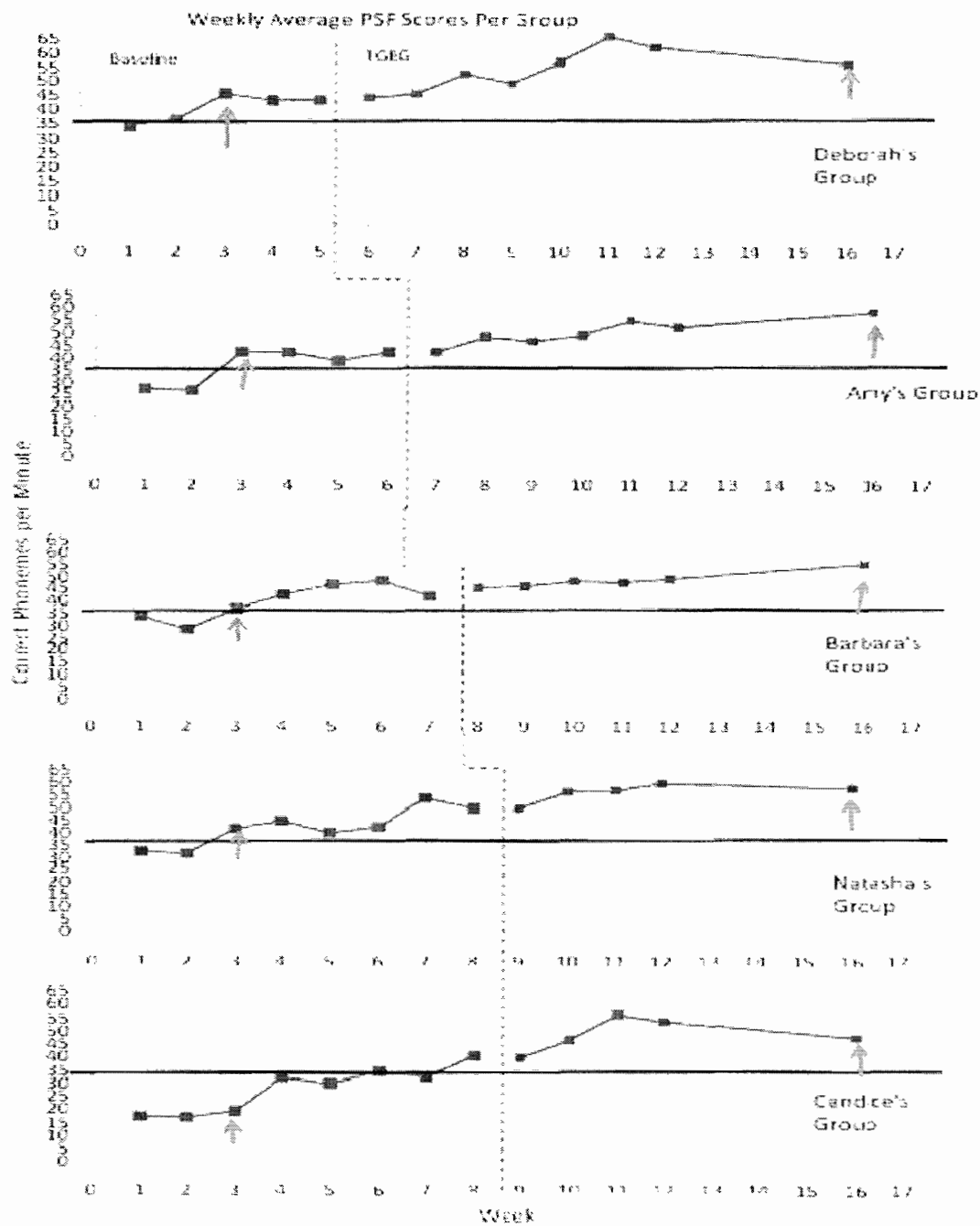
<i>Intervention Phase</i>	<i>Amy's Group</i>	<i>Barbara's Group</i>	<i>Candice's Group</i>	<i>Deborah's Group</i>	<i>Natasha's Group</i>	<i>Overall</i>
Baseline	100%	100%	92%	93%	99%	97%
	SD = 0.7	SD = 0.5	SD = 8.4	SD = 12.1	SD = 2.1	SD = 6.6
TGBG	100%	99%	91%	98%	100%	98%
	SD = 0.2	SD = 2.3	SD = 10.7	SD = 4.6	SD = 0.0	SD = 5.5

**Student group DIBELS performance.** Average student performance per group on the weekly collected Phoneme Segmentation Fluency (PSF) and Nonsense Word Fluency (NWF) is presented in Figures 3 and 4 respectively. The solid horizontal line depicts the score needed to meet the end-of-year kindergarten benchmark. The third week data point was the average group score on the winter benchmark for the measure, and the 16<sup>th</sup> week score was the average group score on the spring benchmark assessment (noted

with arrows). The benchmark assessment was conducted as part of the school-wide literacy screening and was not conducted by the researcher. There did not appear to be a significant change in pre-literacy skill development trajectories following implementation of TGBG. The average performance of each group on PSF, except Candice's, was above the spring benchmark during the winter benchmark time period, suggesting the students had already learned to fluently differentiate the different sounds that make up words. While the average performance of Candice's group was not at the spring benchmark in winter, the performance suggested students were on pace to meet the benchmark in a timely manner (by spring). All but one student (97%) participating in the study met the end of year benchmark for PSF. A similar pattern emerged for NWF performance across groups. The average performance of the students in Amy and Barbara's groups was above the spring benchmark during winter. The other three groups were on pace to meet the spring benchmark in a timely manner. All students in all groups met the end of year (spring) benchmark for NWF. All students in each instructional group ended the year in the low-risk category for early literacy skill development. This means that students are likely to continue to meet future literacy benchmarks and to learn to read in a timely manner if they continue to receive evidence-based literacy instruction.

Figure 4

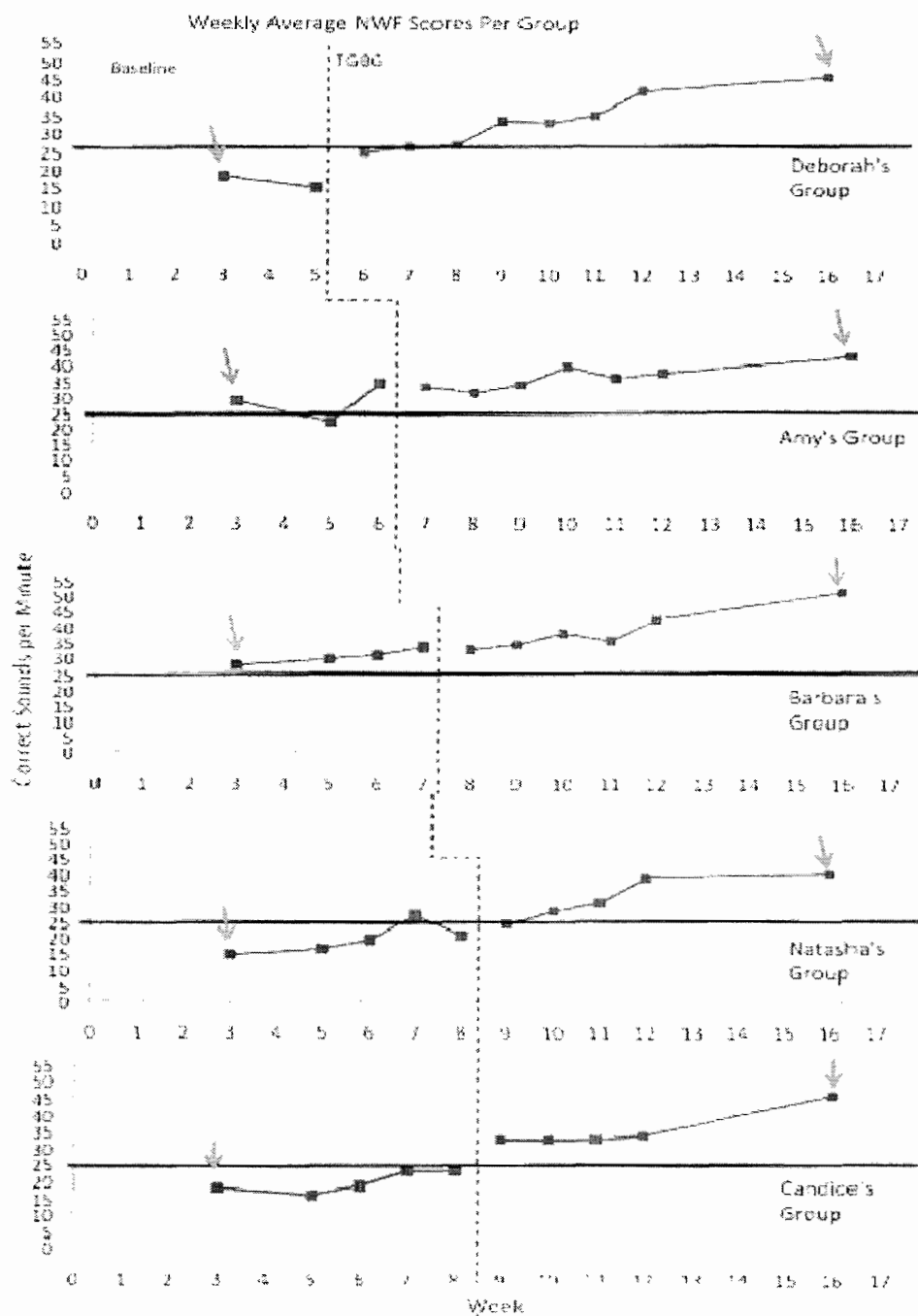
*Average Weekly Phoneme Segmentation Fluency Score per Instructional Group*



\*Note: Arrows denote benchmark scores for winter and spring

Figure 5

## Average Weekly Nonsense Word Fluency Score per Instructional Group



\*Note: Arrows show benchmark scores for winter and spring

## Direct Observation of Instructional Assistant Behavior

**Opportunities to respond.** Results for each instructional assistant's average rate per minute of opportunities to respond are presented in Table 2. The table shows each individual instructional assistant's average for baseline and TGBG intervention as well as an overall average across all instructional assistants. All instructional assistants improved their average rate of opportunities to respond to academic instruction from baseline to TGBG implementation. Amy's rate of opportunities to respond per minute increased by 28%, Barbara's increased 46%, Candice's rate increased 25%, Deborah's rate increased 48%, and Natasha's increased by 45%.

Table 2

### *Mean Rate of Opportunities to Respond per Minute*

Instructional Group	<i>Baseline</i>	<i>Range</i>	TGBG	<i>Range</i>
Amy	3.52	2.31 – 5.09	4.50	2.00 – 13.1
Barbara	2.65	1.83 – 4.54	3.87	1.90 – 7.00
Candice	2.56	1.28 – 3.83	3.20	1.28 – 7.64
Deborah	2.66	1.76 – 3.88	3.93	0.95 – 8.89
Natasha	4.51	1.91 – 7.64	6.56	1.51 – 13.51
Overall	3.18	SD = 1.01	4.41	SD = 2.16

**Praise and corrective statements delivered.** The percent of 10-s intervals scored with instructional assistant-delivered praise and correction for social behavior each day by each instructional assistant are presented in Figures 6 and 7 respectively. Because it is not expected that praise and corrective statements be delivered more than 50% of intervals, the scales on the Y-axis on both Figures 6 and 7 have been truncated to show a range of 0 to 50% of intervals.

Figure 6 shows that all instructional assistants increased the percent of intervals with specific praise statements delivered for student social behavior from baseline to TGBG implementation. Deborah, Amy, Barbara, and Natasha showed an immediate and sustained increase in percent of intervals with praise statements. Following training in TGBG, Deborah's percent of intervals with specific praise statements improved from 5.9% of intervals to an average of 16.7% of intervals (range 8% to 22.7%), Amy's average improved from 8.6% (range 2.3% to 18.7%) to 13% (range 4% to 23%), Barbara's average improved from 1.2% (range 0% to 2.7%) to 7.8% (range 4% to 12%), Natasha's average improved from 3.1% (range 0% to 6.7%) to 15.1% (range 12% to 20%), and Candice's average improved from 3.7% (range 0% to 8%) to 11.7% (range 4% to 23%). During baseline, four of five instructional assistants engaged in a higher percentage of corrective statements than praise statements. Following implementation of TGBG, praise was scored in more intervals than corrective statements for all instructional assistants. In TGBG training, instructional assistants were told to attempt to use at least 1 praise statement every 2 min, and all instructional assistants achieved this goal. Deborah and Natasha delivered praise statements most often, and both exceeded 1 praise statement

Figure 6

*Percent of 10-Second Intervals with Praise for Social Behavior by Group*

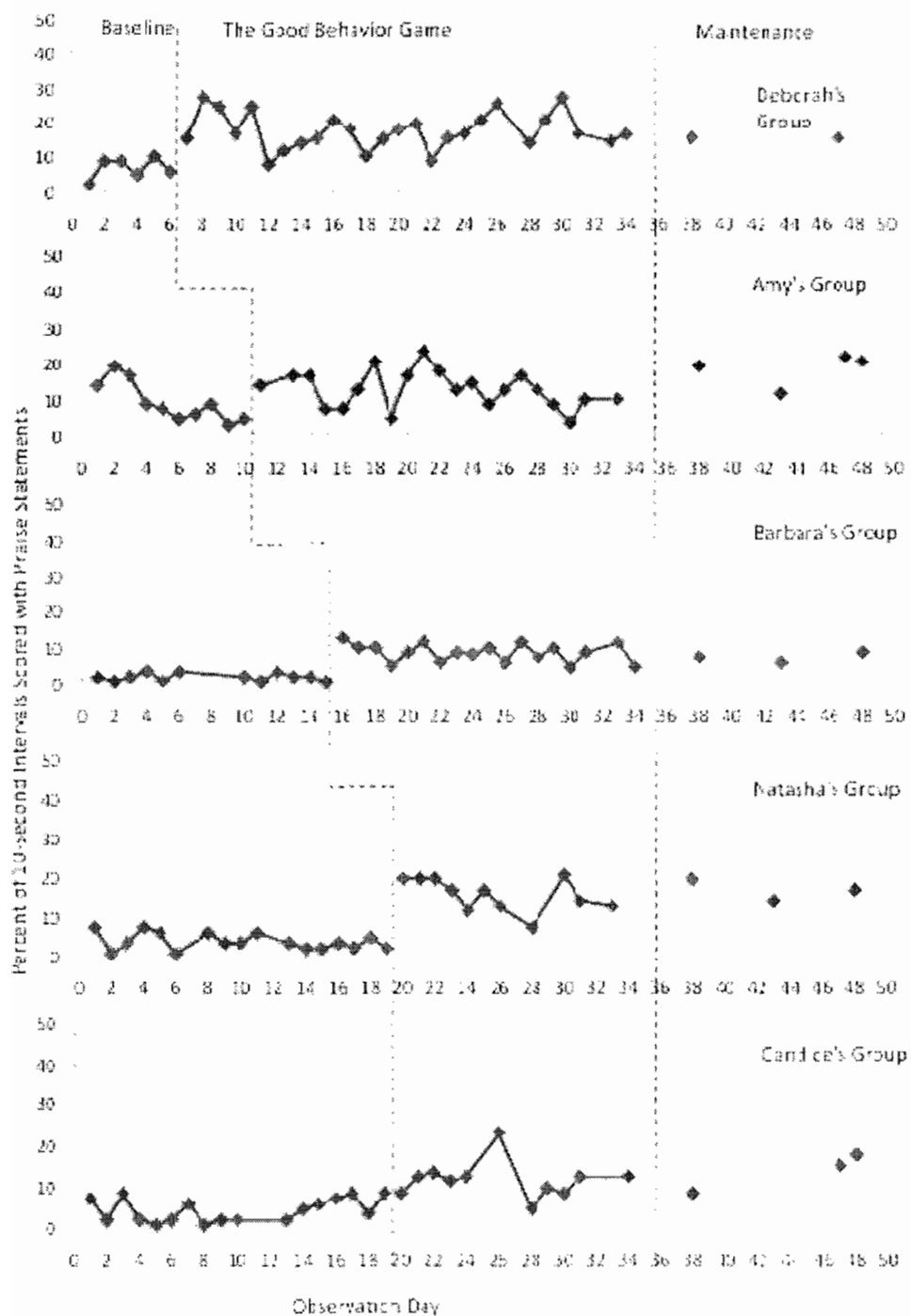
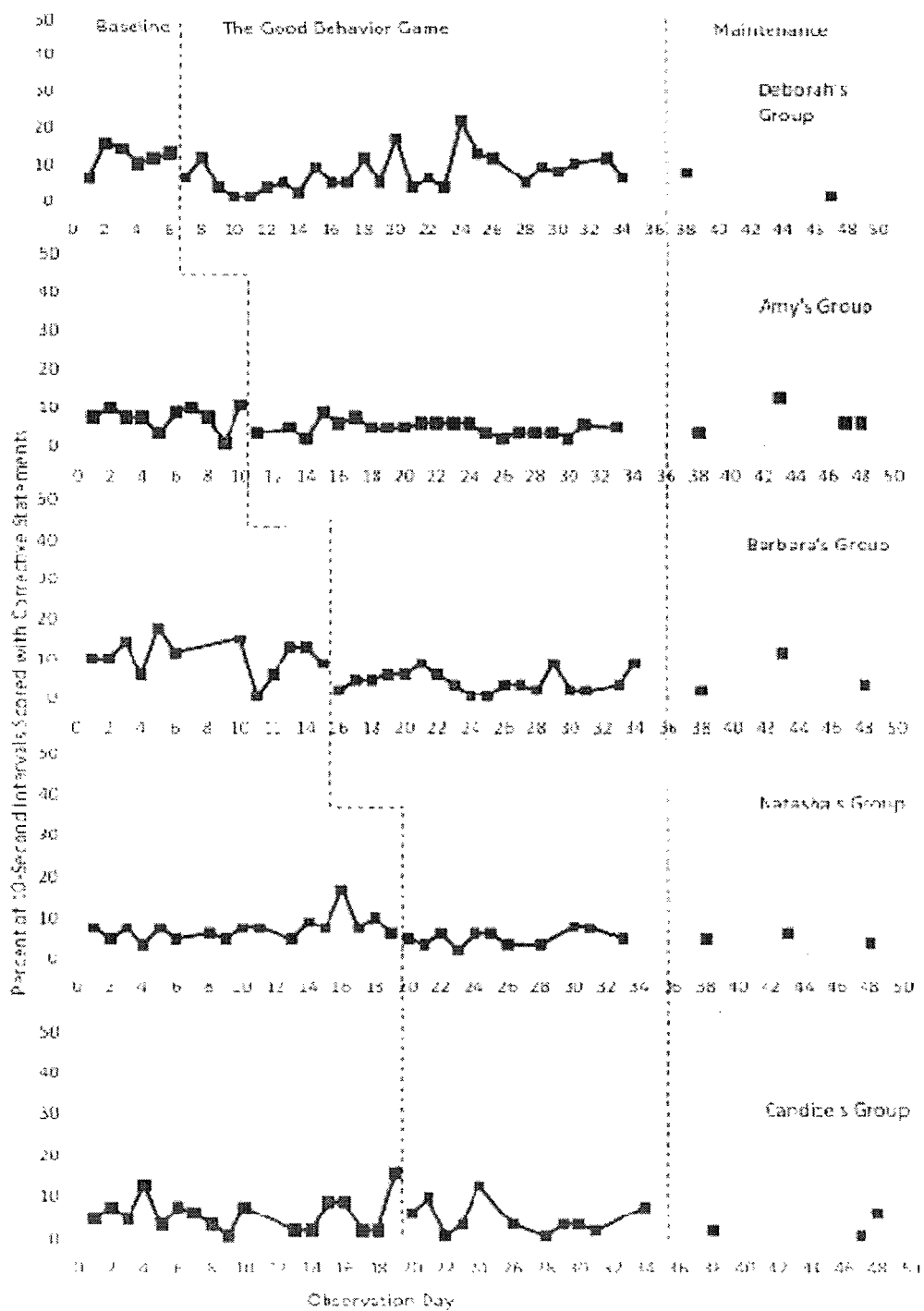




Figure 7

*Percent of 10-Second Intervals with Corrections for Social Behavior by Group*



per min during most observations. Amy and Candice delivered approximately 1 praise statement per min during TGBG, and Barbara provided approximately 1 praise statement every 2 min.

In addition to increasing praise statements, each instructional assistant decreased her average delivery of corrective statements in response to student social behavior from baseline to TGBG implementation. Figure 7 shows the percent of intervals of corrective statements for student social behavior delivered each day by each instructional assistant during baseline, TGBG, and during TGBG maintenance. Following training in TGBG, Deborah, Amy, and Barbara showed an immediate drop in percent of intervals with corrective statements in response to student social behavior. Barbara and Amy sustained a low percent of intervals with corrections, while Deborah demonstrated more variability in her provision of corrections, with an increasing trend over time. While Natasha and Candice both decreased their overall average of percent of intervals with corrections from baseline to TGBG, Natasha's corrections were consistently below 10% of intervals during baseline and TGBG, resulting in a floor effect and Candice's behavior was variable during baseline and TGBG, making visual inspection of change difficult to interpret. Following TGBG training and implementation, Deborah's percent of intervals with corrective statements decreased from 10.9% (range 5.3% to 14.7%) to an average of 6.4% of intervals (range 0% to 21%), Amy's averaged decreased from 6.6% (range 0% to 10%) to 4.4% (range 1.3% to 8%), Barbara's average decreased from 9.7% (range 0% to 14.3%) to 3.7% (range 0% to 10.7%), Natasha's average decreased from 6.4% (range 4% to 16%) to 4.2% (range 2.7% to 6.7%), and Candice's average decreased from 5.1%

(range 0% to 15%) to 3.7% (range 0% to 12%). Deborah and Amy decreased their average percent of intervals with corrective statements by 41%, and Barbara by 62%, Natasha by 34%, and Candice by 38%.

### **General Intervention Information**

**Knowledge of TGBG.** Table 3 shows the percent of knowledge survey questions answered correctly prior to and following training in TGBG. Prior to TGBG training, the instructional assistants answered an average of 42% of the questions on the knowledge survey correctly. Some of the corrections answered correctly had to do with the school's school-wide discipline system and not TGBG specifically. All of the instructional assistants knew there were school-wide expectations, and three instructional assistants knew the expectations. Four of the instructional assistants had specific expectations for their instructional group but none of their expectations were explicitly linked to school-wide expectations. Amy and Candice reported they tried to review expectations daily, while Barbara and Natasha reported they reviewed expectations once or twice weekly, and Deborah reported she reviewed expectations as needed but typically about once a month. Four instructional assistants correctly stated that the rate of positive feedback during TGBG should be about once every two minutes, and two instructional assistants correctly reported that TGBG is founded on attending to appropriate behaviors. On the other questions pertaining to TGBG (i.e., What is the magic number, what materials do you need, are tangibles required, when should students receive a reward, how often is the coach available to check-in), all instructional assistants reported that they did not know or that their answers were just guesses.

Table 3

*Instructional Assistant Knowledge of TGBG Components*

<i>Time</i>	<i>Deborah</i>	<i>Amy</i>	<i>Barbara</i>	<i>Natasha</i>	<i>Candice</i>	<i>Overall</i>
Pre Training	39%	46%	31%	46%	46%	42%
Post Training	100%	100%	85%	92%	100%	95%

Following training in TGBG, the instructional assistants improved their scores to an average of 95%. Amy, Candice, and Deborah answered 100% of the questions correctly. Barbara missed two questions and Natasha missed one. Barbara reported the rate of positive feedback should be once every 30 sec instead of once every 2 min, and both she and Natasha incorrectly stated that tangibles were required to implement TGBG.

**Contextual fit.** Table 4 shows the mean contextual fit scores on the modified Contextual Fit Questionnaire (Horner et al., 2003) before and after implementation of TGBG for each instructional assistant as well as an overall average contextual fit rating. The table also shows contextual fit scores broken down for TGBG and ERI. All instructional assistants completed the modified Contextual Fit Questionnaire twice--once following training but prior to implementation of TGBG and again during the maintenance phase of the study. To calculate overall contextual fit, the rating for all items was summed and divided by 132 (22 items multiplied by 6, resulting in the highest possible rating of 132) to determine a percent score. To determine contextual fit for

TGBG, the 17 items related to TGBG were summed and then divided by 102 (17 items multiplied by 6, resulting in the highest possible TGBG rating of 102). The percentage contextual fit rating for ERI was calculated by summing the 5 items related to ERI and dividing by 30.

Table 4

*Contextual Fit*

<i>Measure</i>	<i>Amy</i>	<i>Barbara</i>	<i>Candice</i>	<i>Deborah</i>	<i>Natasha</i>	<i>Overall</i>
Overall Contextual Fit						
Pre	98%	95%	83%	94%	95%	93%
Post	99%	94%	94%	96%	90%	95%
TGBG Contextual Fit						
Pre	97%	96%	82%	94%	93%	92%
Post	99%	93%	94%	97%	88%	94%
ERI Contextual Fit						
Pre	100%	90%	83%	93%	96%	92%
Post	100%	97%	94%	93%	96%	96%

*\*Note: No items by any instructional assistant on post measures rated lower than 5*

Contextual fit scores were high following training (average 93%) and remained high following implementation of TGBG (average 95%). Following training in TGBG but prior to implementation (pre contextual fit), four of five instructional assistants rated no items below a 5 (“moderately agree”). Candice rated one item--whether she was comfortable with implementing TGBG as “barely agree” (rating 4).

Overall, instructional assistants rated the contextual fit of TGBG as high both following training and after implementation. Candice's TGBG contextual fit rating improved the most following implementation of TGBG (82% to 94%). Amy and Deborah rated TGBG contextual fit as slightly higher following implementation (97% to 99% for Amy, 94% to 97% for Deborah), whereas Barbara and Natasha rated TGBG contextual fit slightly lower (96% to 93% for Barbara, 93% to 88% for Natasha). After implementing TGBG, Barbara and Candice both improved their contextual fit ratings of ERI (90% to 97% for Barbara, 83% to 94% for Candice), while the other instructional assistants rated ERI similarly to their ratings prior to implementation of TGBG.

**Social validity.** Table 5 shows the instructional assistant and student ratings for social validity. All instructional assistants rated the overall impact of TGBG and its impact on student problem behavior as high and medium high. Ratings of effort were a bit more variable as Barbara rated the effort as low; Deborah, Amy, and Natasha indicated a medium low effort. Candice indicated that TGBG required medium high effort. Candice's rating of medium high effort was likely due to a combination of her nervousness with implementing a new intervention and her consistent attempts to implement TGBG with fidelity despite one student whose problem behavior did not respond. His lack of response and continued need for more intensive supports that were not in place during the study may have made it somewhat more difficult for Candice to implement TGBG.

Table 5

*Social Validity*

<i>Item</i>	<i>Amy</i>	<i>Barbara</i>	<i>Candice</i>	<i>Deborah</i>	<i>Natasha</i>	<i>Overall</i>
Impact of TGBG on Problem Behavior	1.67	1.00	2.00	2.00	1.67	1.71
Amount of Effort to Implement	1.67	1.00	3.00	1.60	2.00	1.71
	<i>Amy's Group</i>	<i>Barbara's Group</i>	<i>Candice's Group</i>	<i>Deborah's Group</i>	<i>Natasha's Group</i>	<i>Overall</i>
Students like TGBG?	1.72	2.00	1.90	2.00	1.70	1.88
Students have earned rewards?	1.73	2.00	1.92	2.00	2.00	1.92
Students rate TGBG helps them do better at school.	1.92	2.00	2.00	2.00	2.00	1.98

The average ratings for all three questions were fairly consistent across groups. The rating for whether students liked TGBG was 1.88, which suggests that most students said, “yes” they liked TGBG when asked. When asked about earning rewards, students rated an average of 1.92, suggesting that most stated “yes” they had earned rewards in the last week. It is possible that one student in Natasha’s group misunderstood the meaning of “rewards” to mean tangible prizes, as he rated “no” and “sometimes” to the question across weeks despite observational data documenting rewards were delivered daily. The question, “Does playing TGBG help you do better in reading group at school?” was scored the highest by students with a rating of 1.98. The data from Candice’s group was somewhat surprising. Even though Candice’s group showed the least overall change in problem behavior (and one student in particular struggled throughout the study), all students in her group consistently rated that they liked playing TGBG and that they thought it helped them do better in reading group.



## **CHAPTER IV**

### **DISCUSSION**

The current study used a concurrent multiple baseline design to evaluate proposed effects of TGBG on instructor and student outcomes. The goal of this study was to assess whether use of an evidence-based classroom management program modified for small group delivery would reduce student problem behavior and increase student academic skill acquisition. While TGBG has over forty years of research (e.g., Barish et al., 1969; McCurdy et al., 2009; Tingstrom et al., 2006), no studies have documented implementation in small group settings with explicit linkage to both social behavior and prevention literacy supports for young students. The first research question asked whether implementation of TGBG impacted the behavior of groups of students including average group levels of: a) student problem behavior, b) student academic engaged time, and c) pre-literacy academic trajectories. The second question asked whether training in and implementation of TGBG was related to changes in instructional assistant delivery of instructional opportunities to respond and attention for student social behavior. In this chapter, findings first are discussed in relation to these research questions. Next, extensions to TGBG literature based on the study are reviewed. The final chapter presents a broader discussion of limitations and implications for future research.

## **Integrating Academic and Behavioral Supports**

Early intervention practices have been shown to accelerate learning trajectories, support social-emotional growth, reduce the likelihood of educable disability diagnosis, and decrease risk for school drop out (Bradshaw, Zmuda, Kellam, & Jalongo, 2009; Chard et al., 2008; Good & Kaminski, 1996; Good, Simmons, & Smith, 1998; Guralnick, 2005; National Institute of Child Health & Development, 2000; Ramey & Ramey, 1998). To maximize the efficiency and effectiveness of early interventions, it is important to consider all areas of potential risk and address them simultaneously when possible (Ervin et al., 2006; Walker, 2004). In particular, interventions addressing the co-occurrence of academic and social behavior difficulties may allow schools to implement interventions that are likely to increase student success in current areas of skill deficits while simultaneously preventing the development of difficulties in other areas (Walker & Shinn, 2002).

In the current study, the students were identified to receive supplementary academic interventions based on the most pressing concern, at-risk performance in academics. However, observational data suggested many of the students were also displaying problem behaviors. These problem behaviors could have a negative impact on delivery of quality instruction and academic benefit for the students. Specifically integrating the implementation of evidence-based interventions for social and academic behavior (i.e., TGBG and ERI) at the secondary prevention level is one way educators may maximize student outcomes and prevent the development of more problematic behaviors.

**Impact on student problem behavior.** Inspection of the direct observation data shows a functional relation between implementation of TGBG and decreases in levels of student problem behavior in four of the five reading groups. With the exception of Candice's group, all groups showed an immediate and sustained drop in problem behavior following implementation of TGBG. While there was a slight reduction in Candice's group average level of problem behavior, it is difficult to determine if the change in level was due to TGBG or some other variable. The lack of change in Candice's group is not surprising, as a single student engaged in the majority of the problem behavior throughout the study, and this student's behavior did not appear to be responsive to TGBG.

Although students were identified as at-risk based on their academic skills, the students did engage in problem behavior during baseline. It is clear by the reductions in level of problem behavior that the students benefited from the social behavior supports that were provided in TGBG. Based on the wealth of evidence supporting the co-occurrence of reading and social behavior difficulties (e.g., Fleming, Harachi, Cortes, Abbott, & Catalano, 2004; Horner et al., 2005; Lane, Robertson, & Graham-Bailey, 2006; McIntosh et al., 2006; Nelson, Benner, & Gonzalez, 2003; Reid & Patterson, 1991; Sampson, 1966; Stewart et al., 2007), one could predict that without systematically supporting appropriate social behaviors during instruction, students identified for difficulties in reading may not maximally benefit from the instructional supports provided.

**Impact on student academic engagement.** Student group academic engagement was high during baseline and remained high following implementation of TGBG (never below 78% and typically above 98%). The high level of academic engagement was predictable, given the structure of the small groups (three to five students and one adult). The high level of academic engagement during baseline essentially resulted in ceiling effects where only minimal increases were possible during TGBG intervention. Because instructional assistants were asked to implement TGBG in addition to the literacy intervention for young students, some may have predicted TGBG could interfere with instruction delivery and thus negatively impact academic engagement. This study, however, found evidence to the contrary. Groups either maintained or improved their average academic engagement following implementation of TGBG.

**Impact on student academic performance.** The interpretation of the groups' average pre-literacy skill development is complex. The groups of students selected to participate in the study were all identified as "at-risk" based on their fall benchmark literacy scores and the classroom teachers' on-going assessments. However, by the time the study began in winter, most of the students were responding to instruction and their performance was much closer to benchmark or grade-level expectations. While the DIBELS measures were specifically designed to be sensitive to skill development and to assist in early identification of students at-risk, typical rates of progress for PSF and NWF have not been developed (Good & Kaminski, 2005). Additionally, due to the criterion nature of the measures (i.e., to reach the established benchmark goal by a specific time), growth after reaching the goal for a measure is not necessarily continuous

or linear (Harn, Stoolmiller, & Chard, 2008). This issue of a plateau after reaching benchmark is highly relevant when interpreting these results as the PSF results indicate that the mean performance was above the spring benchmark goal by the time TGBG was implemented for all groups. NWF was similar, with four of the group means being above benchmark when TGBG was implemented and all students achieving the spring benchmark goal before the end of the intervention. Because their level of performance was so high at the time of implementing TGBG, it is unclear what role this addition had on improving student academic response to the intervention. However, it is promising that all students ended the year in the low-risk category for pre-literacy skill development.

**Impact on implementation.** Fidelity of implementation is an ever-present concern when attempting to support the social or academic skill development of students because of the many demands on teachers (e.g., students entering school with increased risk factors, increase in class sizes, less instructional time). In the case of instructional assistants, potential concerns with fidelity are even greater as these adults typically have less formal training in effective instructional and behavior support practices than classroom teachers. The goals of measuring fidelity in this study were to document whether outcomes obtained were functionally related to implementation of the TGBG (Gresham, MacMillan, Beebe-Frankenberg, & Bocian, 2000). In addition, should positive effects not have been obtained, a second goal would have been to distinguish between an ineffective intervention and a potentially effective intervention that was not implemented as intended (Gresham, Gansle, Noell, Cohen, & Rosenblum, 1993). However, it is

necessary to acknowledge that this definition of fidelity (whether interventions are implemented as intended) is somewhat conservative. As the field of education continues to explore the importance of fidelity, disagreement on what constitutes fidelity as well as on how it should be measured has evolved. More recently, researchers have noted the importance of expanding the definition to include the measurement of quality of intervention delivery, which involves rating how well or to what degree the intervention was delivered (Gersten et al., 2005; Mowbray, Holter, Teague, & Bybee, 2003; Power et al., 2005).

In the current study, there was variability in implementation of the pre-literacy intervention (ERI), but the average fidelity of implementation for each teacher was moderate to high during baseline and during implementation of TGBG. It is unclear, as questions remain about how fidelity of an academic intervention should be measured and how these outcomes should be interpreted, whether increased or more stable fidelity of ERI would improve student outcomes. The difficulties with measurement are a result of a combination of factors including lack of evidence documenting an acceptable level of fidelity and lack of fidelity measurement tools that are sensitive to the variable nature of the activities in an intervention such as ERI (e.g., many varied activities from lesson to lesson, the use of a variety of manipulatives, the need to modify/re-teach based on student learning; Parisi & Harn, in press).

Despite the difficulties with defining and measuring fidelity, the adherence to ERI is important to consider when examining the other outcomes correlated with implementation of TGBG. Following training in TGBG, all instructional assistants

implemented TGBG with at least 90% fidelity. Surprisingly, the fidelity of ERI implementation also improved for each instructional assistant following implementation of TGBG. This finding is important, as the instructional assistants were asked to implement TGBG *in addition* to the pre-literacy intervention. This finding might be explained by the fact that as problem behaviors decreased instructional assistants could more effectively and efficiently deliver academic instruction. Interventionists' attention was to delivering instruction rather than redirection or correction of problem behaviors. Previous research has documented creating consistent and supportive school contexts through the use of positive teaching strategies such as those utilized in TGBG and ERI interventions (i.e., specific praise for appropriate behavior and increased provision of opportunities to respond correctly to instruction) results in increased appropriate student learning behaviors and decreased problem behaviors (Greenwood, Dlequadri, & Hall, 1984; Hall et al., 1971; Lewis, Hudson, Richter, & Johnson, 2004; Partin, Roberts, Maggin, Oliver, & Wehby, 2010; Sutherland & Wehby, 2001; Sutherland, Wehby, & Copeland, 2000). The improvements in fidelity provide additional evidence that systematically supporting social behavior of small groups of students may actually result in the ability to deliver academic interventions with more precision, which should ultimately improve outcomes for students.

In addition, it is promising that both ERI and TGBG were implemented with high fidelity by all instructional assistants even though there was a great variation in the range of individual experience (i.e., no prior experience to 18 years working with kindergarten students) and expertise with instruction (i.e., no prior experience implementing ERI to 10

years experience implementing ERI). None of the instructional assistants had ever heard of or implemented TGBG prior to the study. The incorporation of coaching support, while minimal and focusing on TGBG implementation, likely improved the precision with which both interventions could be delivered. The instructional assistants consistently noted the regular coaching support during implementation as a positive aspect of participating in the study. The coaches focused on providing both specific corrective feedback and specific positive feedback, which allowed potential problems to be minimized or averted (e.g., managing a particularly challenging student behavior, reminders to pair points with specific praise, suggestions to vary rewards before students became bored).

*Opportunities to respond.* There was variability in the provision of opportunities to respond to academic instruction across the study. This variability was expected because of the many different types of activities that are incorporated into the ERI curriculum. The important finding, however, is that despite the expected variability, each instructional assistant actually increased her average from baseline to TGBG. The rates obtained during TGBG were similar to the guidelines provided by the Council for Exceptional Children (as cited in Sutherland & Wehby, 2001), which recommend teachers emit four to six responses per min during instruction of new material. This finding is important for two reasons. The first is that an increase in the provision of opportunities to respond has been consistently associated with improved academic and social behaviors (e.g., Armendariz & Ubriet, 1999; Carnine, 1976; Partin et al., 2010; Skinner & Shapiro, 1989; Sutherland & Wehby, 2001). Secondly, these findings are



especially important in the context of the current study because one requirement of TGBG is to deliver rewards regularly, which can take some time away from academic instruction. If, however, the minutes during academic instruction are used more effectively (resulting in students having more opportunities to respond to academic instruction) and rewards are brief or academic in nature, the time potentially “lost” by delivering rewards becomes less concerning. The opportunity to respond data in combination with the ERI fidelity data suggest that instructional assistants used their instructional time more effectively when implementing in conjunction with TGBG. Therefore, the few minutes spent delivering rewards did not result in a loss of academic instruction for students. Instead, the students possibly actually received higher quality instruction during their academic time.

*Praise and corrective statements delivered.* A large body of research has documented that teacher attention contingent on appropriate student behaviors is an effective classroom behavior management strategy (e.g., Hall et al., 1971; Partin et al., 2010; McAllister, Stachowiak, Baer, & Conderman, 1969; Sutherland & Wehby, 2001; Sutherland et al., 2000). Additionally, the quality of teacher praise is important (Partin et al., 2010), and Brophy (1981) documented that praise should be directly linked to the behaviors the teacher wants to increase. Two important ways this study differed from previous research on TGBG is that instructional assistants were explicitly taught to provide specific, labeled praise and a positive reinforcement system was used instead of a negative reinforcement program. Perhaps due to these facts, this is the first study on TGBG documenting large increases (nearly a tripling) in use of specific praise for

appropriate behavior. Further, the average percentage of correction for problem behaviors was reduced by nearly half.

The strategies utilized in training and implementing TGBG also align with other educational research documenting the effectiveness of goal setting, continued feedback, and self-evaluation to increase praise rates (Kalis, Vannest, & Parker, 2007; Partin et al., 2010; Sutherland et al., 2000). The use of the “magic number” (i.e., the appropriate behavior criterion that students needed to win TGBG) potentially paralleled the goal-setting and self-evaluation components from previous literature. Instructional assistants knew the largest magic number was based on providing approximately one specific praise statement and smiley point every two min during instruction (goal setting), and the instructional assistants rated each day whether the students met the goal based on how many specific praise statements paired with smiley points were delivered (self-evaluation). In addition, the instructional assistants received feedback from coaches each week on implementation of TGBG, including use of specific praise statements paired with TGBG smiley points.

***Knowledge of TGBG.*** The results of the pre and post knowledge of TGBG survey provide evidence that the instructional assistants learned the essential components to implement TGBG following training. In addition, the baseline knowledge survey results suggest this particular group of instructional assistants likely had a solid foundation for learning TGBG. This foundation was likely a result of continuous implementation of SWPBS with fidelity in the school and district. All instructional assistants knew there were school-wide expectations, and three knew the specific expectations. Although not

linked to the school-wide expectations, four of the five instructional assistants already had specific expectations for their ERI instructional groups, and all stated they had taught and reviewed expectations this year. It is likely that there are both school contextual factors (including implementation of SWPBS) and individual instructional assistant background/skills that positively influenced the acquisition of knowledge and skills necessary to implement TGBG.

*Contextual fit and social validity.* The high contextual fit and social validity ratings for TGBG were consistent with previous studies on TGBG (Barrish et al., 1969; McCurdy, Lanine, & Barnabas, 2009; Tingstrom 1994; Tingstrom et al., 2006) and not surprising, given the school and district climate focused extensively on teaching and reinforcing positive student social behaviors. Because TGBG is a group intervention, all students in the group participated in the same way. Anecdotally, instructional assistants reported they liked TGBG better than individualized student systems because it was easier to manage and because there was more buy-in from students to work as a team to meet goals. Approaching behavior management at the group level instead of the tertiary level (with individualized cards and goals for each student) was not only perceived more positively, but the data also demonstrate it was more effective. It was encouraging to see that, overall, contextual fit ratings remained high even after all instructional assistants had experience implementing TGBG.

During the weekly social validity assessments, all instructional assistants rated the overall impact of TGBG on student behavior between “high” and “medium-high” and four instructional assistants rated the amount of effort between “low” and “medium-low.”

These ratings were collected weekly just following small group instruction. Therefore, these data potentially capture a more valid picture of the day-to-day challenges with implementing TGBG than the contextual fit ratings that were only collected once following implementation of TGBG. It is promising that the perceived effort to implement TGBG was relatively low and the perceived effectiveness was relatively high, as the instructional assistants may be more willing to implement TGBG over time than if the intervention were perceived as difficult to implement or as ineffective for students.

It is important to note that one instructional assistant, Candice, did rate the effort to implement TGBG as medium-high. This was not surprising as Candice had one student in her group who engaged in high rates of problem behavior across each phase of the intervention. Because this student's behavior did not respond to TGBG, it is likely that Candice's attempts to implement TGBG actually required more effort than was necessary in the other groups (where all students responded). The single student "Tim" whose behavior was not responsive to TGBG potentially interrupted her delivery of TGBG and ERI. His consistent off-task and disruptive behavior may have made it more difficult for Candice to attend to the features of TGBG. Candice reported that despite the challenges of working to support one particular student, she really enjoyed implementing TGBG. Anecdotally, she also asked following training in TGBG if she could also implement it with her other instructional groups because she felt TGBG was a powerful and worthwhile intervention.

During the weekly assessments, most students rated that they liked playing TGBG and all students almost always reported that playing TGBG helped them do better in

reading group at school. While the study did not evaluate long-term student perceptions, it is promising that students continued to rate they liked and benefitted from playing TGBG over time. If students become bored or uninterested in participating in an intervention, the outcomes may be more difficult to obtain and maintain. Even more importantly, the low effort TGBG intervention positively impacted student outcomes. The success of the students playing the game coupled with the high ratings of acceptability over time may improve the likelihood that TGBG will be a sustainable practice (Fixsen et al., 2005; Han & Weiss, 2005).

**Sustainability of interventions.** The most common mode of choosing interventions to support students in schools often appears quite sporadic and may be based on a whim, hearsay, or limited consideration for the evidence for and applicability of use. This practice can become quite expensive because resources are often allocated to adopt and implement an intervention with little consideration for how it fits with other systems and practices to support students, and these interventions are often quickly abandoned for the next new intervention. It is important to consider careful, coordinated implementation of a range of evidence-based practices that can be overtly linked to and implemented within the larger system (e.g., linked to SWPBS, linked to materials used in general education; Chard & Harn, 2008). This coordination of supports via creation of explicit linkages may increase the likelihood that adults will sustain implementation of effective practices and students will generalize skills across settings to maximize learning (Chard & Harn, 2008).

Integrating interventions, such as TGBG, within the larger system of supports may reduce system overload and maximize sustainability (Fixsen et al., 2005). Additionally, implementing TGBG within the context of SWPBS likely increased the buy-in for implementation, the efficacy of training, and the fidelity of implementation. These factors all increase the likelihood that TGBG could be sustained and continuously implemented in the school and district over time (Domitrovich, Bradshaw, Greenberg, Embry, Poduska, & Jalongo, 2010; Greenberg, Domitrovic, Graczyk, & Zins, 2001). Although TGBG has been shown to be effective in a variety of settings in previous research (e.g., Bradshaw et al; 2009; Lanine & McCurdy, 2007; McCurdy et al., 2009; Swiezy et al., 1992; Tingstrom et al., 2006), it is likely that the district support and strong school implementation in SWPBS allowed for a foundation that eased implementation of this version of TGBG (i.e., expectations linked to school expectations and focusing on positive, expected behaviors).

### **Implications for TGBG**

This study extends the literature on TGBG in several ways. In this study, TGBG was successfully integrated with evidence based pre-literacy instruction for kindergarten students. This extends the literature base on TGBG to include its effectiveness and acceptability with kindergarten students and with instructional assistants who do not have teaching or behavior analysis backgrounds. In addition, the instructional groups in this study were small so the team component remained, but the competition component (where several teams worked against one another to earn the largest reward) from previous studies was not utilized. Future studies may more closely examine whether the

competition component positively or negatively influences outcomes and whether that importance of competition varies with age (as older students may respond more enthusiastically to competition than younger students).

In this study instructional assistants were explicitly taught to link group expectations to the school-wide expectations, and the instructional assistants received training and support in developing and teaching the expectations to students using examples and non-examples of meeting expectations. This is the first study to document the specific integration of TGBG into the school-wide system of supports (SWPBS). In addition, a major focus in training was to teach the instructional assistants to provide specific, labeled praise and utilize a positive reinforcement system instead of a negative reinforcement program, which has typically been used in TGBG research. It is possible that teaching instructional assistants to attend mostly to positive behaviors by using a positive reinforcement system may correlate with improvements in adult-delivered specific praise for appropriate behavior. The only previous study to examine praise rates as a function of TGBG implementation (Lanine & McCurdy, 2007) had a negative reinforcement system in place and did not see improvements in provision of praise. Other studies in education, however, have documented that appropriate behavior was not predictably correlated with teacher praise (Van Acker, Grant, & Henry, 1996; McKerchar & Thompson, 2004). This suggests the inclusion of a positive reinforcement system may not be effective without also teaching and supporting the delivery of specific praise statements, but further research on this component of TGBG is necessary.

While this is not the first TGBG study to utilize a positive reinforcement program (Swiezy et al., 1992), this is the first time TGBG implementation has involved explicitly teaching and coaching adults to pair the delivery of points with specific, positive praise. Strategically focusing on a positive reinforcement system coupled with explicitly teaching and supporting instructional assistants to provide specific praise may be why this is the first study on TGBG documenting large increases (nearly a tripling) in use of specific praise for appropriate behavior. Future studies may examine the positive reinforcement systems and specific praise components in isolation to determine if the feature impacting student performance is focusing on providing positive attention, providing specific praise, or both.

Another unique feature of TGBG utilized in this study was the use of the “magic number” (the students did not know how many smiley points they needed to “win” the game each day). One obvious potential implication of this component is that a potential abolishing operation was removed--students did not reach the goal early in the instructional period and then lose motivation to behave appropriately because they had already met the criterion for reinforcement. Lanine and McCurdy (2007) used this logic when they implemented TGBG in a cafeteria setting. However, in the case of the current study, the use of a positive reinforcement system meant the burden for student success remained with the instructional assistant to deliver sufficient smiley points for acknowledgement to occur. This resulted in adult goal setting and evaluation for delivery of praise and positive reinforcement. Future studies may examine how having an



unknown goal (linked to either positive or negative reinforcement system) influences outcomes related to TGBG.

### **Implications for RTI**

Response to Intervention can be defined as the practice of providing high quality instruction matched to student needs and frequently monitoring progress of student learning to make important educational decisions (NASDSE, 2006). RTI models have an explicit focus on prevention and intervention, and the most comprehensive models involve school-wide tiered systems approaches (e.g, SWPBS, school-wide reading model). School-wide RTI models are unique in that they have a dual focus on whole the school (e.g., are the majority of our students benefiting from primary prevention supports) and the individual students (e.g., Is “Tim” developing pre-literacy skills at an appropriate rate?) to evaluate needs. In the current study, the RTI process was systematically utilized at the secondary prevention level for academics, as students were identified to receive supplemental instruction based on lack of response to universal literacy instruction and academic supports were coordinated (e.g., instructional assistants received training in the intervention, the academic intervention was connected to universal instruction). However, the students receiving supplemental academic interventions received instruction from adults who were not trained to systematically support the social behavior of their students (even though the students were also engaging in moderate to high rates of problem behavior). Implementation of TGBG resulted in improved precision of academic instruction delivery and also resulted in decreased levels of student problem behavior. Because these results were obtained early in the students’

school careers, these students are at decreased risk for developing long-term literacy or social behavior deficits (Kazdin, 1987; 1993; Walker & Severson, 2002).

**Lack of response to interventions.** While TGBG was effective overall as a small group intervention, it did not appear to be as effective in one group where a particular student struggled with more intensive inappropriate behavior than the other students. The implications from this group are two-fold. First, prior to implementation of TGBG, there were many students across groups who were struggling with social behavior based on the observation data and anecdotal report. However, following implementation of TGBG, 95% (21 of 22) of the students “responded” to TGBG intervention and reduced problem behavior to acceptable levels. The implementation of TGBG for each group was an efficient way to support the majority of the students and allowed for a more confident decision that the single student who did not respond would benefit from more intensive support. Secondly, this approach allowed the school to more efficiently utilize resources and better support all of the students than an approach where the first step is to individualize supports.

There are several potential reasons why the single student’s behavior in Candice’s group (i.e., “Tim”) did not respond to TGBG. One hypothesis for his lack of response is that TGBG is more likely to be successful for students whose problem behavior is maintained by teacher and/or peer attention, and Tim’s behavior was maintained by a different function. TGBG intervention focused on providing adult attention for appropriate behavior, minimizing adult attention for problem behavior, and utilizing positive peer attention by having students work as a team to earn rewards. Therefore, if

Tim's problem behavior was maintained by avoidance of the academic tasks, one would not predict TGBG to be successful in decreasing problem behavior. Another hypothesis for non-responsiveness is that Tim's academic skills were lower than the other students in the group. Tim's NWF score for winter was 0, while the other students scored between 18 and 28 correct sounds per minute. Tim's low academic skills may have decreased the regularity with which he accessed positive feedback for correct academic responding. If Tim were placed in a group where his skills were closer to the levels of his peers, it is likely he would access positive feedback related to academic tasks at a rate more similar to peers and not need to engage in problem behavior to access feedback. A third hypothesis is that Tim's problem behaviors were reinforced at a higher rate than his appropriate behaviors during TGBG. In this case, matching law would suggest that problem behavior would continue to occur. Lastly, it is possible that emitting problem behavior required less effort (i.e., had a lower response cost) to access reinforcement than did engaging in appropriate responses required by TGBG.

The non-response to TGBG for Tim in Candice's group also provides evidence for the effectiveness of using a RTI model to understand problems and systematically increase supports. As previously discussed, Tim's lower academic skills compared to the other peers in his instructional group suggest it is possible that either he did not regularly access reinforcement for appropriate academic responding as regularly as peers (thus resulting in a problem behavior to access attention) or there was a functional mismatch between Tim's problem behavior and TGBG (his problem behavior resulted in escaping the difficult demands of instruction, whereas TGBG provided attention for

appropriate behavior). More detailed assessment of the student's non-responsiveness would allow supports to be better aligned for this student. It is possible, based on the DIBELS pre-literacy skill data, that a change as simple as placing him in a group where his skills more closely align with that of peers would result in a decrease in the level of problem behavior.

**Integration of supports.** The current practice in most schools is to provide separate, pull out supports for students who need supplemental interventions. For example, a single student who is displaying moderate difficulties with academics and is also somewhat inappropriate during the classroom is likely to receive supports based on the most pressing concern (despite the potential need for both types of supports). In the few cases where this student may receive both types of supports, it is likely the student would be pulled from the classroom to receive academic interventions and later pulled from the classroom to receive social behavior skills training. This approach to providing supplemental interventions is inefficient on many levels. From a systems level, this practice is not efficient because when supports are not integrated, more time is required to implement and fewer students can access the supports. In addition, teachers may be less likely to refer an at-risk student for "pull-out" supports if it means receiving one type of support at the expense of another. Lastly, this approach often results in disjointed services for the student that are less meaningful than those that take place at the point of performance (e.g., supporting appropriate learning behaviors *during* academic instruction). Harn, Chard, and Kame'enui (in press) documented a significant improvement in reading performances of at-risk students when supports were carefully

aligned. It is hypothesized that similar or possibly even more powerful benefits will be documented as researchers and practitioners work not only to coordinate supports across tiers but also to *integrate* the academic and social behavior supports students receive across all tiers of the prevention framework (Horner et al., 2005; McIntosh et al., 2006; Stewart et al., 2007). For students receiving secondary supports for reading and/or academics, it is important those interventions not only are effective but also that efficiency of delivery (e.g., small group arrangements) maximizes limited school resources. This study provides initial documentation that instructional and behavioral supports can be integrated relatively seamlessly and effectively at the secondary prevention level.

**Role of professional development.** While the training of TGBG was minimal, it included a combination of features that have been shown improve performance. Specifically, TGBG training included didactic instruction, hands-on/feedback with meaningful practice, and performance feedback components (Alvero et al., 2001; Coddling et al., 2005; Noell et al., 2005; Scott et al., 2005; Sterling-Turner et al., 2002). The training features are important, but it is likely the current and historical implementation of SWPBS (with a strong focus on teaching and reinforcing student social behavior) in the district and school where the study took place created a foundation to teach instructional assistants skills that were utilized in TGBG implementation. All instructional assistants knew of the school-wide expectations, had taught expectations, and were utilizing individual positive reward strategies in an attempt to support student learning. Their previous training on school-wide behavior support, the district perspective

that teaching and supporting social behavior of students is important, and the encouragement of positive acknowledgements suggests the instructional assistants were not theoretically opposed to those practices that are critical in TGBG. Therefore, it is not surprising that a relatively brief training in combination with coaching support resulted in TGBG implementation with fidelity.

The nature of the weekly coaching support (15 min observations and 5 min check-ins) was such that it allowed for a level of accountability and support without being intrusive. Training and coaching support has not been well documented in previous research on TGBG. The earliest literature on TGBG does not explicitly discuss coaching implementation of TGBG. More recent studies have typically incorporated two to three brief observation and feedback sessions immediately following training (Bradshaw et al., 2009; Lanine & McCurdy, 2007; McCurdy et al., 2009; Witvliet et al., 2009). The coaching support was not a major focus of the study, but it is likely that the coaching was important to support skill development of the instructional assistants in implementing TGBG. Coaches provided specific, positive feedback on positive aspects of implementation, specific corrective feedback, and addressed instructional assistant questions and concerns. The research clearly documents the importance of performance feedback and coaching support as a critical feature of to enhance and maintain behavior change (Alvero et al., 2001; Coddling et al., 2005; DiGennero et al., 2005; Mortenson & Witt, 1998; Noell et al., 2005; Sterling-Turner et al., 2002). It is quite likely that without some level of coaching support, the effectiveness of interventions may not be maximized.

The student problem behavior data in the study demonstrates the need for interventionists to have training in both academic interventions *and* behavior management. Proactively supporting the behavior of groups of students using TGBG was more effective than the typical individual point card approach that was utilized during baseline. However, implementation of TGBG was also more complex and required more training and coaching than implementing the individual student point cards. It is hypothesized that the long-term effects from investing in training and coaching will ultimately be cost effective because the instructional assistants will work with many students, continuously impacting the learning trajectories of all the students they teach.

## CHAPTER V

### LIMITATIONS AND IMPLICATIONS

#### **Study Limitations**

**Internal validity.** Although the use of a concurrent multiple baseline design controlled for external factors that may have influenced study results, the length of the study did not allow a direct assessment of the sustainability and long-term impacts on student problem behavior or academic skill development as a result of participation in TGBG. In addition, it is not possible to assess how and to what extent TGBG was implemented in other settings outside the context of the current study. Future studies should examine whether universal behavior supports such as SWPBS provide a foundation that improves long-term sustainability of interventions intended to support students at-risk for developing academic or social behavior deficits.

Another potential threat to internal validity is reactivity to being observed. The presence of an additional person in the classroom may have influenced behavior of students and the adults implementing the intervention. However, observers were present for screening participants, during baseline, and during TGBG intervention, decreasing the likelihood of reactivity effects over time, as observers in the classroom were a regular occurrence.



**External validity.** Participation in the study included two criterion that make generalization to other groups difficult. The first was that the school implemented SWPBS with fidelity. Although TGBG has been shown to be effective in a variety of settings in previous research (Barrish et al., 1969; McCurdy et al., 2009; Swiezy et al., 1992; Tingstrom et al., 2006), it is difficult to know if this version of TGBG (focusing on positive, expected behaviors) would have the same type of effects if SWPBS was not in place in the school. In fact, research suggests interventions, such as TGBG, that are integrated within a larger system of supports may reduce system overload and maximize sustainability (Fixsen et al., 2005). Additionally, interventions implemented in isolation are more likely to result in insufficient buy-in, training, and fidelity making them less likely to be sustained over time (Domitrovich, Bradshaw, Greenberg, Embry, Poduska, & Ialongo, 2010; Greenberg, Domitrovic, Graczyk, & Zins, 2001).

The second criterion that makes generalization difficult was that instructional assistants were selected who had been trained and were implementing ERI academic intervention with moderate to high fidelity. The potential effectiveness of TGBG in conjunction with academic intervention may not generalize to instructional groups where the academic intervention is not delivered with at least moderate fidelity prior to training in TGBG.

In addition, while there were near equal numbers of males and females in the student groups, nearly all the students in the study were Caucasian, and all spoke English as their first language. It is unknown whether the same results would be found with students from different cultures or with different language backgrounds. All the

instructional assistants who participated in the study were Caucasian females whose only teaching and training experience related to small group instruction was in the current district. While the instructional assistants did vary widely in their experience (zero years to eighteen years prior experience), it is difficult to know if adults from other backgrounds or who worked in districts where a focus on positive behaviors was not the norm would be willing or able to implement TGBG as was done in this study.

Another limitation is that direct observations were only 12.5 min of the 30 min instructional groups each day. Ideally, observations would occur during the entire 30 min group, but logistics of observing and scheduling made this impossible for the current study. All students also received academic instruction as part of their whole group classroom time that was not observed. Therefore, the observational data are only a sample of the adult and student behavior that occurred each day.

**Other limitations.** One additional limitation is the difficulty with interpreting the impact of TGBG on pre-literacy outcomes. While all 22 students made outstanding academic progress and their end of year DIBELS scores were in the low risk range, it is difficult to know to what extent, if any, implementation of TGBG impacted these outcomes. The students selected for the study were initially at risk but made gains very quickly likely because they received higher quality and intensity literacy instruction than is typical in most schools. Many of the students were near or exceeding pre-literacy benchmarks by the time data collection in the study began. While it is possible that the students' pre-literacy trajectories were accelerated by their participation in TGBG, the

length of the study and the difficulty with using DIBELS to assess performance above benchmarks make conclusions about academic trajectories difficult.

### **Future Studies**

To better understand the impact of TGBG on pre-literacy outcomes, future studies may compare pre-literacy outcomes of ERI implemented as usual to implementation of ERI integrated with TGBG. Future studies may also better understand academic outcomes by ensuring students selected are performing in the at-risk or intensive range on DIBELS assessments and also by extending the pre-literacy data assessment beyond the use of DIBELS measures. Studies may incorporate broader measures of student achievement and measure them over time (e.g., performance on state literacy assessments, teacher ratings of performance compared to peers, student grades, other normative assessments).

Future studies may more closely examine the outcomes of interventions, such as TGBG, in various contexts. Researchers may examine the sustainability of TGBG implementation linked with universal supports compared to implementation of TGBG in isolation. The studies could examine the effectiveness of interventions, such as TGBG, in contexts with universal behavior supports (i.e., SWPBS), universal academic supports (i.e., core reading instruction) as well as the impact of having both academic and social behavior supports in place. In addition, studies may more closely examine the maintenance, generalization, and sustainability effects of interventions explicitly linked with universal support systems versus those that are implemented within them but not explicitly linked to the system.

Examining whether students continue to maintain low levels of problem behavior for a long period of time during participation in TGBG will allow educators to adopt, train, and implement the intervention with more confidence.

Anecdotally, several of the instructional assistants implemented TGBG with other instructional groups, but observations of implementation in other settings did not occur as part of the study. Future studies may examine generalization of both student and adult skills to other settings. It is possible that the skills the instructional assistants gained as part of TGBG training transferred to other settings even when they were not specifically implementing TGBG. For example, future studies may examine whether the instructional assistants develop, teach, and reinforce group behavior expectations linked to the school-wide expectations, whether the use of specific praise statements increases in other settings, and whether their implementation of other instructional programs improves.

Future studies may look at the amount and intensity of coaching support provided. In this study the coaching was minimal (15 min observation and 5 min check-in once weekly) but rated positively. The coaching potentially improved accountability for implementation of the intervention as well as potentially prevented implementation problems before they became too large (e.g., reminding to vary rewards, problem solving minor individual student concerns). Studies may examine how the role of coaching needs vary depending on how well universal support systems are implemented prior to TGBG. For example, implementation of TGBG in conjunction with academic supports may be possible in a system that is not implementing SWPBS with fidelity, but the level of coaching required to implement TGBG may be higher. Similarly, studies may look at

contexts where instructional assistants are not implementing the academic intervention with at least moderate fidelity prior to TGBG. Coaching in this context would likely require support for the delivery of both the academic intervention and TGBG.

Future studies may consider designs that would allow for better analysis of the potential mechanisms of TGBG that are most influential in changing student behavior. The current study utilized a design that incorporated student instructional groups as the unit of analysis, which did not allow for analysis of the potential mechanisms that may be most important for changes in student behavior. Specifically, the extent to which adult attention was dependent on appropriate versus problem behavior could not be calculated because of the way data was coded. For example, student problem behavior was recorded and adult attention was recorded. However, probabilities could not be calculated because one student could engage in problem behavior, and the adult could provide attention to another student (not the misbehaving student), who was behaving appropriately, in an attempt to indirectly prompt the misbehaving student. In the data stream, attention was scored following problem behavior even though the attention was delivered contingent upon the appropriate behavior of another student. Future research should explore the many components of TGBG utilized in the study (e.g., explicit linkage to SWPBS, focus on positive behaviors, use of “magic number,” teaching instructional assistants to provide specific praise, removing the competition element) to better understand which features (in isolation or combination) are most important in influencing student outcomes.

**Conclusion**

While the results of this study are not conclusive in demonstrating that improvement in behavior management of a secondary academic intervention improves student literacy development, it does provide support for integrating academic and behavioral supports. Interventionists liked the intervention and reported that it did not interfere with providing the academic intervention, which was supported through sustained high fidelity of implementation for both interventions. Additionally, even though students were initially identified for low pre-literacy skills, many of the students were displaying problem behavior during the academic intervention. By supporting interventionists with the skills necessary to address both the academic and behavioral needs of students, we may become more effective in maximizing the power of interventions. In addition, teaching interventionists to proactively support the behavior of groups of students may minimize the need to deliver more individualized interventions.

**APPENDIX A**

**ERI & TGBG FIDELITY CHECKLIST**

**Early Reading Intervention  
FIDELITY OF IMPLEMENTATION CHECKLIST**

DATE:  
- -09  
M T W R F

Instructor ID : _____	Observer _____	Time began: _____
Number of children in group today: _____		Time ended: _____

Scoring	Critical Instructional Features	Comments
yes mostly sometimes no	Used wording from script.	
yes mostly sometimes no	Completed all steps in the first activity before moving on to next activity.	
yes mostly sometimes no	Teacher modeled new material (or at least 1 example)	
yes mostly sometimes no	All students participated with group and written responses.	
yes mostly sometimes no	Teacher corrected student mistakes.	
yes mostly sometimes no	Teacher leads/tests students on remaining examples.	

**TO SCORE FIDELITY OF IMPLEMENTATION:**

Yes (90% or more) = 3 points.

Mostly (60-90%) = 2 points,

Sometimes (<60%) = 1,

No = 0 points

Add all points: \_\_\_\_\_ =

Total possible

GENERAL CONSIDERATIONS:		
		COMMENTS
_____	Quality of Lesson Delivery (high, medium, low).	
_____	Student Engagement (high, medium, low).	
_____	Completed All Activities in the Lesson.	
_____	Completed All Activities Within 15 minutes.	



**THE GOOD BEHAVIOR GAME  
FIDELITY OF IMPLEMENTATION CHECKLIST**

Scoring	Critical Instructional Features	Comments
yes 2      no 0	Reviewed 3-5 Group Behavior Expectations	
yes 2      no 0	Reviewed how to play TGBG	
Yes Mostly Sometimes No	Tokens paired with specific verbal praise for social behaviors	
Exceed/ met 2      no 0	Did students met/exceed criteria for TGBG stickers?	
Regular Reward yes      no 2           0	Were stickers/rewards distributed appropriately? (e.g. 1 per student if met or opportunity for quick game if goal met;	
Bonus Reward yes      no      N/A 2           0	plus bonus reward if met all week)	

Did the number of positive statements for social behavior exceed number of corrective statements for social behavior? Number of positives: \_\_\_\_\_ Corrections: \_\_\_\_\_  
Yes    No

**TO SCORE FIDELITY OF IMPLEMENTATION:**

yes = 2 points, no = 0 points

Add all points:  $\frac{\quad}{\text{Total possible}}$  =

## APPENDIX B

### STUDENT PERCEPTION OF TGBG

Instructional Assistant ID: _____	Date: _____
Number of Students in Group Today: _____	

*Script to read to students:*

Hi, I am here to find out how your reading group is going, and I have a few questions for you.

When I ask the question, place two thumbs up if you want to answer “yes,” place one thumb up if you want to answer, “sometimes,” and keep your hands flat on the table if you want to say, “no.”

Question 1: Do you like playing the Good Behavior Game? Remember, two thumbs up means yes you like playing TGBG, one thumb means you sometimes like playing TGBG and flat hands on table means you do not like playing TGBG.

Question 2: Do you earn rewards when playing TGBG? Remember, two thumbs up means yes you earn rewards when playing TGBG, one thumb means you sometimes earn a reward, and flat hands on table means you have not earned a reward.

Question 3: Do you think TGBG helps you do better during reading group with (instructor name)? Remember, two thumbs up means yes TGBG helps you do better during reading group, one thumb means TGBG sometimes helps you do better during reading, and flat hands on table means no, TGBG does not help you do better during reading.

Record student responses by writing the number of students who respond in each box:

	YES	SOMETIMES	NO
Question 1: Do you like playing TGBG?			
Question 2: Do you earn rewards when playing TGBG?			
Question 3: Do you think TGBG helps you do better during reading group with (instructor name)?			

It may be helpful to use the following script during first three times you ask the question. After that, it may not be necessary to use the practice examples.

Implementation Coach: “Let’s practice. Are you in Kindergarten?”

Students response: thumbs up

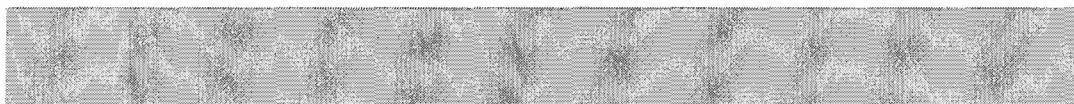
Implementation Coach: “That’s right. You are in kindergarten, and you gave me two thumbs up to answer yes.”

OR students do not respond with thumbs up. Implementation Coach: “Remember to answer yes, place a thumbs up. You are all in kindergarten, so you should all show me thumbs up.”

Other practice examples: “Are you a grown up?” “Do you like reading group?”

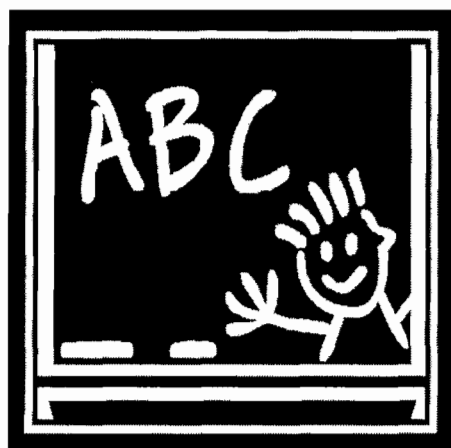
**APPENDIX C**

**TGBG IMPLEMENTATION & PROCEDURES WORKBOOK**



# The Good Behavior Game

Implementation & Procedures Workbook



Developed by:  
Billie Jo Rodriguez



## The Good Behavior Game

### Background

The Good Behavior Game (TGBG) is an evidence-based prevention intervention that is founded on over 40 years of scientific research. TGBG has been shown to decrease discipline problems, increase student learning, and reduce the likelihood of drug/alcohol use, aggression, and other problem behaviors over time. TGBG has been implemented by teachers in typical classrooms, by specialists in the library and physical education settings, and by behavior support personnel in classes for students with disabilities. The game has been well-received by teachers and students alike and is considered relatively easy to implement within an instructional routine. It is important to remember that TGBG is not a curriculum but a daily application implemented during regular instruction. TGBG will be implemented for all students in your group.

### Purpose

The purpose of TGBG is to increase student social and academic success without costing additional instructional time. It is likely that by implementing TGBG and focusing on preventing problem behaviors and encouraging appropriate social behaviors you will find yourself with more time to teach while your students have more fun learning. The idea is that students exhibit behaviors to which we pay attention, and TGBG helps you to encourage behaviors you want to see by paying attention to them (and ignoring minor behaviors that you don't want to see). In addition, TGBG will be directly linked to the school-wide behavioral expectations, which may help both you and your students experience increased success. Basing your behavioral expectations for TGBG on the school-wide expectations may help students generalize their appropriate behaviors across settings. Additionally, you will be supported by an implementation coach, who will support you in the implementation of the game. The components of TGBG implementation include:

1. *Materials*
2. *Developing Expectations & Rewards*
3. *Teaching TGBG to Students*
4. *Playing TGBG*

**Materials**

In addition to your regular instructional materials, you will need a few materials for TGBG.

- *The Good Behavior Game Tally Chart* (template provided): This chart is for you to record student points/smiley faces for appropriate behavior and make note of problem behaviors that interfere with instruction. The positive behavior space is larger, as that is where you should focus your attention during instruction—catching students being good. The Tally Chart also has a place to write your name/group ID, date, behavioral expectations, and rewards the students earned.
- *Envelope with "Magic Number Cards"* (provided): Ten cards (numbered 6 to 15) will be included. Each day, one "magic number card" will be placed in the envelope prior to the beginning of the group (without showing to students). That number will serve as the minimum number of positives the students need to earn to receive the reward for the day.

**Optional Materials**

- *Rewards* (not provided): While it is possible to implement TGBG without using tangible rewards, the use of small "prizes" (e.g. stickers, stamps, activity sheets) is acceptable. You can work with your implementation coach, supporting classroom teacher, and/or administrator to determine acceptable rewards.
- *Envelope with "Mystery Prizes"* (not provided): Your students may be motivated by working for a surprise. One way to do this is to write a reward on a slip of paper and place in an envelope. Students can then work toward the surprise in the envelope.
- *Visuals for Teaching/Reviewing Expectations* (sample templates provided): While not necessary to implement TGBG, you may find it helpful to teach/review expectations with visual cues that can be posted. Sample templates are provided for your use.

*Other Materials:* When working with the implementation coach, if you determine other materials that may be helpful for implementing TGBG please use the space below to list these materials.

### Getting Started: Develop Expectations & Rewards

#### *Develop Expectations*

Telling students what you want them to do in a way that is very clear and easy to understand is critical for setting students up to be successful during instruction. It is important that students are able to remember what we expect of them, so we should have three to five rules. We must also show students examples of what it looks like to behave in ways that are meeting expectations and clarify how behaviors that do not meet the expectations look. To support student success across settings, we want to link our expectations to the school-wide expectations, making sure we have no more than five rules for students. Use the following worksheet to develop/modify the expectations for your instructional group.

- What are the school-wide expectations for your school?
  1. \_\_\_\_\_
  2. \_\_\_\_\_
  3. \_\_\_\_\_
  4. \_\_\_\_\_
  5. \_\_\_\_\_
  
- What are the specific expectations for your group (linked to SWPBS expectations)?
- Provide at least two examples and non-examples for each expectation that you can use to teach your students the expectations?
  1. \_\_\_\_\_
    - Examples:
    - Non-Examples

2. \_\_\_\_\_

- Examples:
- Non-Examples:

3. \_\_\_\_\_

- Examples:
- Non-Examples:

4. \_\_\_\_\_

- Examples:
- Non-Examples:

5. \_\_\_\_\_

- Examples:
- Non-Examples:

- Note any other considerations for teaching expectations (e.g. using visuals, transitions, answering on signal, signal for voices off).



### *Consider Rewards*

Earning positive recognition or a reward for reaching a goal is an important piece of TGBG that allows students to feel motivated and successful. For students who academic skills do not come easily, earning regular feedback for appropriate behavior may be even more critical because they do not readily access the rewards of learning. Rewards do not have to be time or financially intensive but they should be varied so that students do not tire of them. Work with your implementation coach to develop a list of rewards that would work for you and your students. Remember to develop a range of types and sizes so that students do not become bored. We can then take the list of rewards you consider appropriate and present to the students to find out the ones they like the most. The reward lists at the end of the workbook provide some examples of rewards. Choose the ones that will work for you, and add others that you like. You can then present the list to the students for them to pick the ones they like best. You may want to revisit the options and choose some different ones to keep your students interested and motivated. The following categories can be used when considering rewards. You can then use the Rewards Worksheet to develop a list of potential rewards.

- **Wacky Prizes & Games-** are fun games and safe behaviors that that are not typically allowed in class. These safe, silly behaviors may be great motivators for your students.
- **Teacher Prizes-** are fun rewards that you come up with to motivate students. Students may work very hard to see their teacher do something silly or unusual.
- **Prize Box Items-** If you or your school have the option of using other tangible incentives (e.g. stickers, pencils, activity sheets), write things you would like to include in the prize box rewards below.
- **Kids' Prizes-** You may want to consider asking the students if there are other things they are willing to work for, letting them know you will write down their suggestions and check with the TGBG rules (implementation coach) to make sure they are allowed in the game.
- **Mystery Prizes-** This category allows students to work for a "surprise." You can place a slip of paper labeled with a reward inside an envelope. The rewards can be games or tangibles but students will not know what they are working toward until they reach the day's goal. Mystery prizes can be taken from the above prizes or can be different. Write your ideas for mystery prizes below.

### Ideas for Rewards

**Wacky Prizes-** are fun games and safe behaviors that that are not typically allowed in class. These safe, silly behaviors may be great motivators for your students.

Animal Noises- students get to briefly make animal noises	Nerf (ball) Toss- students throw a ball at a basket, trash can, or hoop.
The Animal Game- the teacher thinks of an animal and gives clues until the students are able to figure out the animal.	Paper Airplane Toss- everyone makes a paper airplane and then a contest to see whose goes the farthest.
Bazillion Bubbles- students blow as many bubbles as they can in one minute.	Artwork- students have a few minutes to draw or doodle using color pencils, markers, or crayons.
Chalkboard/Whiteboard Doodles- students earn a couple of minutes to draw on the board.	Reading- students may look at a favorite book.
Computer Time- students earn time to play a game on the computer.	Story- students have a fun book read to them.
Dancing- students earn a couple of minutes of time to dance to a fun song.	Extra recess- students receive two to five minutes of extra recess.
Hangman- students earn a game or two of hangman using reading words.	Tic-Tac-Toe- students can play a tic-tac-toe tournament.
Jokester- the teacher reads silly jokes to the students.	Tiptoe Tag- students can play indoor tag while tiptoeing.
Paper Wad Toss- students can toss wadded paper scraps in the trashcan.	Other academic games- students can have extra time on a favorite academic activity/game.
Simon says- teacher (or student who's been working very hard) lead the students.	Wiggle time- students have one minute to wiggle in their chairs or act silly using inside voices.

**Teacher Prizes-** are fun rewards that you come up with to motivate students. Students may work very hard to see their teacher do something silly or unusual.

Teacher wears something silly (pajamas, hat, hair bow, etc.).	Lunch with teacher.

**Prize Box Items-** If you or your school have the option of using other tangible incentives (e.g. stickers, pencils, activity sheets), write things you would like to include in the prize box rewards below.

Stickers	Stamps	Pencil Grip	
Activity Sheet	School-wide ticket		
Pencil	Book		
Snack	Eraser		

## REWARDS WORKSHEET

### *Review items with students.*

Directions: When I tell you the prize, if it sounds like something you'd really like to earn, place two thumbs up. If it seems kind of fun, place one thumb up, and if you think you wouldn't want to work for one of the prizes, just keep your hands flat on the table.

*Place star next to item most students rate with two thumbs up, and cross out items students rate as not-liked by keeping hands flat on table.*

### **Wacky Prizes & Games**

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

### **Teacher Prizes**

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

### **Prize Box Items-**

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

### **Kids' Prizes**

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

### **Mystery Prizes**

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

### Teaching TGBG to Students

Once you have determined your expectations and rewards, you are ready to present TGBG to your students. The following script provides a template for how to introduce TGBG and teach the expectations to your students.

#### *Introduce TGBG and Tally Chart*

We have a very special opportunity in our reading group to play a new game that is going to help us have fun and learn more. How many of you would like to learn about this new game? Good. Well, this game is called The Good Behavior Game. It has helped lots of kids and teachers have fun and get smarter at school, and I think it will be great to play in our reading group. Here's how it works. (Show TGBG Tally Chart with magic number envelope attached).

- See this chart, it is labeled with all the days of the week (point to Mon, Tues, Wed, Thurs, Fri). Each day there is a big space to earn smileys (point to the smiley face). If we earn the magic number of smileys each day, we will earn a special reward. Who thinks we can earn the magic number of smileys every day? I think we can earn them, too. Let me tell you how we earn smileys.

*The implementation coach will work with you to develop a script specific to your expectations. The following is a sample script for teaching expectations.*

- We earn smileys by following the school-rules in our reading group. The first school rule is Be Respectful. In reading group, Be Respectful means following directions quickly and quietly. Let's see if you can be respectful. Touch your head. Good—you followed my direction quickly and quietly and are all touching your head. Let's try another one. Stand up. Good—you were respectful because you followed my direction quickly and quietly. Sit down. Excellent job being respectful. You have just earned a smiley in today's column (teacher records smileys throughout teaching expectations when students are meeting them). Let's see. Suzy, tell me to start my work. (Teacher talks to student next to her and does not start working.) Was I being very respectful? No. Why not? (students provide answers). That's right to be respectful we need to follow directions quickly and quietly. I think you all will be very good at playing this game. Let's try the next school-rule that will help us earn smileys; it is Be Responsible. In reading group, Be Responsible means being ready to learn and includes having eyes on me, sitting square in your chair (back to back, bottom to bottom, feet on floor), keeping hands to self, and talking in turn. Let's practice being responsible. Very good. I see Sam is being responsible because she has her eyes on me. Suzy is sitting square in her chair. Joe and Pam are keeping their

hands to themselves and everyone is letting me have my turn to talk. (Teacher slouches in her chair) Am I ready to learn? (students answer no) Why not, remember to be responsible and talk in turn (raise your hand)? (students provide answers). You guys are going to be great at earning smileys—I just know it. Here’s the last way we earn smileys—it’s the easiest one. The last thing we can do to earn smileys is Do your personal best. Doing my personal best in reading means that I am working hard to get my work done and learn. (Teacher continues to review examples and non/examples.) All of you are doing your personal best right now, so I will put a smiley in today’s column. Great work.

*Briefly Review What Happens for Behaviors that are Disruptive to Learning*

Now that we’ve talked about how to earn smileys, I will also let you know that there is a small place for frowns. I don’t expect that I will give very many frowns to this group, but I will have to give frowns if students do not follow my directions and make it hard for other students to learn. If we get more than four frowns in our group, we will not be able to earn the prize for the day. I don’t think I will need to give out frowns, do you? Good. Let’s work hard to get smileys. Are you ready to learn about the “magic number” of smileys we need to get a prize?

*Magic Number*

Each time you come to group, there will be a magic number in this envelope (envelope is attached to Tally Chart). No one will know the number but it tells us how many smileys we need to earn our prize. We will have to work really hard to make sure we earn enough smileys. I will be looking for students who are following our school-rules in reading group. I will look for students who are being respectful by following directions quickly and quietly, who are being responsible and ready to learn, and students who are doing their personal best. When I see students doing these things, I will give the group a smiley. And, at the end of our group, we will count our smileys and open the magic number envelope. If we’ve earned the same number (or more) smileys than is on the magic number we will get a prize. AND, at the end of the week, if we’ve met the magic number every day, we will get an extra prize. Does this sound fun? Good.

*Prizes (Refer to Reward Worksheet)*

Let’s take a few minutes to talk about prizes. I’ve been thinking hard of some fun things you would like to work for, and I’d like to share them with you. When I tell you the prize, if it sounds like something you’d really like to earn, place two thumbs up. If it seems kind of fun, place one thumb up, and if you think you wouldn’t want to work for

one of the prizes, just keep your hands flat on the table. *Refer to Reward Worksheet. Star the items on your reward worksheet that most students give two thumbs up and cross out ones that students don't want to work for.*

### **Playing the Game**

Prior to beginning the lesson, place a "magic number" in the envelope on the TGBG Tally Chart and post the chart where students can see it and you can easily access it during instruction. If it is the first day of the week, fill out the Group ID and Date on the top of the Tally Chart and the expectations on the bottom of the chart.

Tell the students the reward they will be working for today, and review the specific group expectations (including examples and non-examples of specific behaviors) with the students prior to beginning the reading lesson. During the review of expectations and during ERI instruction, provide positive specific verbal praise paired with smiley faces on the board when the majority of the students are exhibiting behavior concurrent with a behavioral expectation (e.g. eyes on teacher, following directions). You want to provide specific praise for appropriate social behavior (e.g. "thank you for keeping your eyes on me," "you are doing a great job sitting in listening position") paired with the delivery of the smiley face at least once every two minutes if the majority of the students are meeting behavior expectations.

Three minutes before the end of the group, you will open the envelope and share the magic number with the students. If students earned at least as many smiley faces as the "magic" number (and no more than four frown faces), they will receive a reward (e.g. game of Simon Says, sticker, stamp). If the students meet the criterion each day of the week, they will be allowed to earn a larger or "special" reward on Friday (e.g. reading game, special literacy activity, larger stickers).

Circle on the Tally Chart whether the students won the game and received a reward. Write the reward received in the space. This information will be useful to monitor the different rewards used over time, as some may be more motivating for students than others.

Weekly check-ins with your implementation coach will take approximately 5 minutes. Throughout the week, the implementation coach will observe your implementation of TGBG as well as your students' responsiveness to TGBG. The implementation coach will then share this information with you and provide time to address any concerns you may have. Please list days and times (just following instruction of the group if possible) that work for you to have a 5 minute check-in with the coach. The coach will schedule with you one of your available times to meet regularly.

Available times for coach check in:

Mon: \_\_\_\_\_ Tues: \_\_\_\_\_ Wed: \_\_\_\_\_ Thurs: \_\_\_\_\_ Fri: \_\_\_\_\_

#### **Continued implementation**











After the first week of implementation, it is likely that your review of group expectations and TGBG rules will go quickly. While you should always start the lesson with a quick review of expectations (and how to earn smileys), you may not need to spend time specific examples and non examples but instead can simply provide specific praise for students who are engaging in the expectations.




**APPENDIX D**  
**TGBG TALLY CHART**

## The Good Behavior Game Tally Chart

Group Name: \_\_\_\_\_ ID: \_\_\_\_\_ Date: \_\_\_\_\_

Monday	Tuesday	Wednesday	Thursday	Friday
				
Magic Number: <input style="width: 40px;" type="text"/>	<input style="width: 40px;" type="text"/>	<input style="width: 40px;" type="text"/>	<input style="width: 40px;" type="text"/>	<input style="width: 40px;" type="text"/>
				
Win game?    Y   N Reward given? Y   N	Win game?    Y   N Reward given? Y   N	Win game?    Y   N Reward given? Y   N	Win game?    Y   N Reward given? Y   N	Win game?    Y   N Reward given? Y   N Bonus Reward Earned?

-  Group Expectations:
1. \_\_\_\_\_
  2. \_\_\_\_\_
  3. \_\_\_\_\_
  4. \_\_\_\_\_
  5. \_\_\_\_\_

**APPENDIX E**

**SELF-ASSESSMENT OF CONTEXTUAL FIT IN SCHOOLS**

### Self-Assessment of Contextual Fit in Schools

Horner, Salentine, & Albin, 2003

Modified by Billie Jo Rodriguez on May 5, 2008 to be used for The Good Behavior Game.

The purpose of this interview is to assess the extent to which the elements of The Good Behavior Game (TGBG) fit the contextual features of your school environment. The interview asks you to rate (a) your knowledge of the elements of TGBG, (b) your perception of the extent to which the elements of TGBG are consistent with your personal values, and skills, and (c) the school's ability to support implementation of TGBG. This information will be used to improve the practical procedures that will help school personnel support children with problem behaviors. The information you provide will be maintained and reported in a confidential manner consistent with the standards of the American Psychological Association. You will not be identified.

Please read the attached behavior support plan, and provide your perceptions of the specific elements in this plan. Thank you for your contribution and assistance.

ID Number of Interviewee: \_\_\_\_\_

#### Knowledge of elements in the Good Behavior Game.

1. I am aware of the elements of TGBG.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

2. I know what I am expected to do to implement TGBG.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

#### Skills needed to implement TGBG

3. I have the skills needed to implement TGBG.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

4. I have received any training that I need to be able to implement TGBG.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

Values are consistent with elements of TGBG

5. I am comfortable implementing the elements of TGBG.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

6. The elements of TGBG are consistent with the way I believe students should be treated.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

Resources available to implement the plan

7. My school provides the faculty staff time needed to implement TGBG.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

8. My school provides the funding, materials, and space needed to implement TGBG.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

Administrative Support

9. My school provides the supervision support needed for effective implementation of TGBG.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

10. The implementation coach provides any additional support needed for effective implementation of TGBG.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

11. My school administration is committed to investing in effective design and implementation of behavior support interventions such as TGBG.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

Effectiveness of TGBG

12. I believe TGBG will be (or is being) effective in achieving targeted outcomes.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

13. I believe TGBG will help prevent future occurrence of problem behaviors for these students.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

TGBG is in the best interest of the student

14. I believe TGBG is in the best interest of the students.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

15. TGBG is likely to assist the children to be more successful in school.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

TGBG is efficient to implement

16. Implementing TGBG will not be (or is not) stressful.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

17. The amount of time, money and energy needed to implement TGBG is reasonable.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

\*\*\*\*\*  
 \*\*\*\*\*

*Please answer the following questions about the Early Reading Intervention.*

Effectiveness of ERI

18. I believe ERI will be (or is being) effective in achieving targeted outcomes.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

19. I believe ERI is affecting improved pre-literacy skills for these students.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

ERI is in the best interest of the students

20. I believe ERI is in the best interest of the students.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

ERI is efficient to implement

21. Implementing ERI will not be (or is not) stressful

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

22. The amount of time, effort, and energy needed to plan for and implement ERI is reasonable.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Barely Disagree	Barely Agree	Moderately Agree	Strongly Agree

## APPENDIX F

## TGBG KNOWLEDGE SURVEY

## The Good Behavior Game Knowledge Survey

Participant ID: _____	Date: _____	Pre or Post
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Please circle your answer for the following questions.

1. Does your school have specific school-wide rules or expectations?      *Yes*      *No*
  - a. If so, what are the expectations?  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
  
2. Do you have specific rules or expectations for your ERI instructional group?      *Yes*      *No*
  - a. If so, are they linked to the school-wide rules?      *Yes*      *No*
  - b. What are your rules or expectations?  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
  
3. How often do you (or will you) review rules and expectations with your reading group?  
*Daily*      *Once or Twice Weekly*      *Monthly*      *Taught only at beginning of year*

Questions below are designed to assess your familiarity with *The Good Behavior Game*, which is a behavior management strategy. If you are not familiar with the Game, that is okay.

4. How often (minimum) should you attempt to provide positive feedback to students during TGBG if they are meeting behavioral expectations? Once every...  
*Ten Minutes*      *Five Minutes*      *Two Minutes*      *Thirty Seconds*
  
5. According to the principles on which TGBG is founded, what types of student behaviors is it most important to attend?  
*Appropriate Behaviors*      *Problem Behaviors*
  
6. What is the "magic number" in TGBG?  
 \_\_\_\_\_  
 \_\_\_\_\_
  
7. What materials do you need to implement TGBG?  
 \_\_\_\_\_  
 \_\_\_\_\_
  
8. Are tangible rewards required to implement TGBG?      *Yes*      *No*      *Don't know*
  
9. If students meet or exceed the "magic number" for the day, when should they receive a reward?  
*At the end of the lesson*      *At the end of the day*      *The next day*      *At the end of the week*
  
10. How often will the implementation coach be available for check-in?  
*Daily*      *Once a week*      *Once a month*



## APPENDIX G

## INSTRUCTIONAL ASSISTANT PERCEPTION SURVEY

Instructional Assistant ID: _____ Date: _____
---

Instructional Assistant Perception of  
The Good Behavior Game

Please circle your answer for the following questions.

*How is using The Good Behavior Game impacting the problem behavior of students in your group during ERI instruction?*

**1-High Impact:** student behavior during instruction is much better since I started using TGBG

**2-Medium High Impact:** Student behavior is somewhat better since I started using TGBG

**3-Medium Low Impact:** Student behavior is a bit worse since I started using TGBG

**4-Adverse Impact:** Student behavior is much worse since I started using TGBG

*How much effort is required to implement The Good Behavior Game?*

**1-Low Effort:** TGBG is very easy to implement and requires little effort

**2-Medium Low Effort:** TGBG is somewhat easy to implement and requires some effort

**3-Medium High Effort:** TGBG is somewhat difficult to implement and requires moderate effort

**4-High Effort:** TGBG is difficult to implement and requires too much additional effort

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