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THE EFFECTS OF SCHOOL-HOME NOTES ON TEACHER REPORTS OF ACADEMIC PRODUCTIVITY AND DISRUPTIVE CLASSROOM BEHAVIORS OF MIDDLE SCHOOL STUDENTS

by

Nichol Frances Pritchard

Abstract of a Dissertation
Submitted to the Graduate School of The University of Southern Mississippi in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

December 2012
ABSTRACT

THE EFFECTS OF SCHOOL-HOME NOTES ON TEACHER REPORTS OF ACADEMIC PRODUCTIVITY AND DISRUPTIVE CLASSROOM BEHAVIORS OF MIDDLE SCHOOL STUDENTS

by Nichol Frances Pritchard

December 2012

The purpose of the present study was to evaluate the effectiveness of a school-home note (SHN) for increasing academic productivity and decreasing disruptive classroom behaviors of four middle high school students identified as at-risk for failure and/or dropout. Participants included four students from a middle school in a southern state referred for behavioral problems and low academic productivity. A changing criterion design with a withdrawal was employed to assess intervention effectiveness. Students’ levels of academic productivity and appropriate behavior were assessed using SHN point data. Percentage of disruptive behavior, weekly rates of office discipline referrals (ODRs), and frequencies of in-school suspension (ISS) and out-of-school suspensions (OSS) data were also collected. Results indicated that the SHN was an effective intervention resulting in increased rates of on-task and academic productivity behaviors for three of four participants. Additionally, participants, teachers, and parents rated the intervention as effective. The current study contributes to the literature by illustrating the efficacy of the use of the SHN with middle school students.
THE UNIVERSITY OF SOUTHERN MISSISSIPPI

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A Dissertation
Submitted to the Graduate School
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for the Degree of Doctor of Philosophy

Approved:

Joe Olmi
Director

Brad Dufrene

Heather Sterling

Sterett Mercer

Susan A Siltanen
Dean of the Graduate School

December 2012
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CHAPTER I
INTRODUCTION

The term at-risk is commonly used to describe low-income minority youth (Farmer et al., 2004). In 1992 the National Center for Educational Statistics (NCES) stated that any student who is likely to fail the school year may be labeled as at-risk for dropout, academic failure, and/or grade retention. The No Child Left Behind (NCLB) Act has compelled schools districts to improve student academic success and charged school districts with developing drop-out prevention programs for at-risk students (Darling-Hammond, 2006). Consequently, it is important for schools and teachers to identify risk factors that may indicate a need for additional services to improve classroom behavior and academic productivity, thereby decreasing the potential for dropping out of school.

Gleason and Dynarski (2002) outlined five risk factors associated with school dropout including: (a) demographic characteristics and family background, (b) past school performance, (c) personal/psychological characteristics, (d) adult responsibilities, and (e) school or neighborhood characteristics. Any student possessing one or more of these characteristics may be labeled as at-risk for dropout, academic failure, and/or grade retention and may be identified for additional preventative services (e.g., home-based collaborations, drop-out prevention programs, specialized interventions).

Previous researchers have found that African American and Hispanic youth are the most likely demographic groups to drop out of school (Eckstrom, Goertz, Pollack, & Rock, 1987; Natriello, McDill, & Pallas, 1992; Rumberger, 1995). Hispanic students who reside in homes of parents with limited English proficiency are at a heightened risk
for drop-out (National Center for Education Statistics, 1990; Natriello et al., 1992; Rumberger, 1995). Additionally, impoverished students with parents who did not obtain a formal education and families receiving welfare were more susceptible to dropping out (Barro & Kolstad, 1987; Haveman, Wolfe, & Spalding, 1991; Mare, 1980; National Center for Education Statistics, 1990, 1992; Rumberger, 1983, 1995). One of the best and most consistent indicators of dropping out is a history of poor academic performance (i.e., low grades, poor test scores, and nonacademic track placement; Barro & Kolstad, 1987; Crane, 1991; Eckstrom et al., 1987; NCES, 1992; Rumberger, 1995; U.S. Department of Education [USDOE], 1983).

Psychological problems are also commonly observed in students who drop out of school. Specifically, students are more likely to drop out if they are experiencing low self-esteem, feelings of lack of control, and low educational expectations (Eckstrom et al., 1987; Rumberger, 1983). These factors often indicate that a student may struggle with meeting academic expectations and may also lack the skills necessary to communicate that they require additional assistance to complete school work. Having adult responsibilities, such as being a parent at a young age, working more than 20 hours weekly, and caring for siblings for a significant amount of time weekly has also been positively correlated with drop-out rates for students. (Barro & Kolstad, 1987; D’Amico, 1984; Entwisle, Alexander, & Olson, 2005; Pallas, 1997; Rumberger, 1983).

Finally, the neighborhood in which a student lives may affect school attendance. Studies report that students residing in urban settings and schools that are identified as low-income will experience greater drop-out rates (Clark, 1992; Pallas, 1984; Vartanian & Gleason, 1999). The authors speculated that drop-out rates may be due to
intergenerational educational values or other adult responsibilities the students perform for the family. If a student from a low income family lives in a wealthy neighborhood, the student is less likely to be at-risk of dropping out (Vartanian & Gleason, 1999).

Deleterious outcomes are often observed for students who drop out of school prior to graduation. Therefore, school systems should employ strategies to identify students who are at-risk and provide preventative programs to support students in graduating. Students who drop-out of school are more likely to experience a variety of outcomes that adversely impact society. When a student drops out of school at a younger age, the student is more likely to become incarcerated, earn a substantially lower income or gain employment, engage in drug use, and unable to become a productive member of society at large (Jimerson, 1999, 2001). In contrast, students that complete high school experience more positive outcomes which include graduation from institutions of higher learning and job security (Jimerson, 1999, 2001). Given the systemic nature and multiple community and familial variables that may impact drop-out rates, efforts must not only be directed at intervening in the school setting, but should also include the student’s family.

School-home collaborations refer to a group effort between teachers and parents to facilitate academic, behavioral, and social development of children in the education system (Christenson, Rounds, & Franklin, 1992). Collaborations are often used when a comprehensive intervention is needed to eliminate behavioral and/or academic problems within educational settings. The joint effort between the child’s school and home can be advantageous in addressing various behavioral and educational deficits. Researchers have found improved outcomes such as higher levels of achievement, attendance,
homework completion, and higher test scores when school-home collaborations are incorporated (Christenson & Cleary, 1990; Christenson, 2004).

Although interventions that incorporate school and home components are beneficial, there are some potential barriers to the development of appropriate interventions and successful implementation. For one, teachers may have limited knowledge regarding the selection of interventions that are appropriate for students exhibiting a variety of challenging behaviors (Christenson, 1995, 2004). If inappropriate interventions are selected to target a behavior, negative consequences may occur (e.g., accidentally negatively reinforcing a behavior) (Iwata, 1987). Additionally, teachers’ access to resources for reinforcers or punishers that are potent enough to increase or decrease a target behavior (e.g., prizes for good behavior or other tangible rewards) is often limited. Furthermore, other school interventions may have been previously implemented and proved ineffective for students who require a preference for a tangible item that is not available in the school environment.

Parents’ knowledge may be limited as to how to help their child at school. They may not understand how to implement interventions that will improve school and/or home behaviors (Broughton, Barton, & Owen, 1981). Parents often offer home-based privileges (e.g., trip to the mall, money, time at a friend’s house) for chores/homework completed, and/or verbal praise in response to good behavior, but may be unaware that their efforts can also be effective in shaping appropriate school behaviors. However, in contrast to the school environment, parents have additional resources which may result in more potent reinforcers. Additionally, parents may also be unaware that certain negative
consequences (e.g., removal of privileges) may also be successful in decreasing inappropriate behaviors that may occur in the school setting (Christenson, 1995, 2004).

Collaborations between teachers and parents can offer intervention opportunities that may prove more efficient and appropriate for the school setting and subsequently prove to be beneficial to students. The team composed of teachers, parents, school psychologists, and other support personnel may successfully identify the referral problem, target behaviors for intervention, identify the role each person will have in implementing the intervention, and determine the consequences that will be most effective in obtaining significant outcomes that may prove beneficial and address aforementioned limitations. Additionally, this process may often provide antecedents including preventative care for students that may be deemed as at-risk.

Often, simple procedures such as a SHN, are employed to enhance collaboration efforts. SHNs (Kelley, 1990; McCain & Kelley, 1993, 1994) are also sometimes synonymously referred to as a home-school note (HSN; LeBlanc, 1999), daily behavior report card (DBRC; Bailey, Wolf, & Phillips, 1970; Riley-Tillman, Chafouleas, & Briesch, 2007), daily report card (DRC; Murray, Rabiner, Schulte, & Newitt, 2008), good news note (Blechman, Taylor, & Schrader, 1981), and good behavior letter (Ayllon, Garber, & Pisor, 1975). Regardless, the procedures require a student to carry a note used to track progress toward targeted behaviors that are rated throughout the day by teacher(s) and take the note home to his or her parents to receive a consequence based on daily performance. The intervention hinges on the collaboration between the school and home to decrease undesirable behaviors or increase desirable behaviors. The following
section will briefly describe the steps to implement SHN and will review relevant research supporting the procedures.

School-Home Note Procedures

To implement a SHN, target behaviors are identified through the consultation process. The student’s behavior is then evaluated by the teacher(s) multiple times throughout the school day, and the note is sent home to the parents for review. The parents are then responsible for implementing an appropriate consequence based on the student’s performance (Kelley, 1990). When improvement is noted based on a review of data from the SHN, the target behaviors may be revised or modified. The key to SHN efficiency is the communication between the parents and teacher(s). Information that is passed via a collaborative effort between parents and teachers may be the most effective when implementing such a data-based intervention.

Implementing a SHN requires that the teacher(s), parent(s), and the student meet to discuss what behaviors need to be tracked, or targeted, and how that will be accomplished. Additionally, the SHN targeted behaviors should be developed based on available data. Riley-Tillman et al. (2007) suggested that one of the most important processes to implementing a DBRC, a variation of the SHN, is the development of operational definitions of the target behaviors observed during and throughout the intervention. When target behaviors are appropriately defined, the reliability of the DBRC or SHN is significantly enhanced. Additionally, responsibilities should be delegated including the parents role (e.g., when a consequence will be delivered for a good note), the teacher(s) role(s) (e.g., how points will be awarded or not awarded for target behaviors performed or not performed), the students role (e.g., carrying the SHN,
taking to his/her teacher(s), and giving the note to the parent(s) daily, and any additional roles if needed (e.g., a school psychologist conducting direct behavioral observations and checking for intervention integrity). Next, a list of preferred consequences is generated in collaboration with the student to ensure the student is motivated to earn daily points. The SHN should be paired with verbal feedback (e.g., indicating to the student why points were earned or not earned based on the behavior and predetermined goals) and praise, and then eventually faded as the child’s behavior improves (Elliot, Busse, & Shapiro, 1998).

Kelley and Carper (1988) indicated that SHNs were typically used to increase academic productivity or improve other behaviors associated with academic tasks (e.g., staying on task and studying). The authors noted benefits to instituting a SHN intervention including increased interaction between parents and teachers, time and cost efficiency, no need to alter teaching styles, no need for teacher dispersing reinforcers in the classroom, a larger selection of reinforcers available in the home, the availability and potential receipt of more parental praise by children in most home-based programs, and the learning of delay of gratification by children.

Cox (2005) indicated that school-to-home collaborations allow parents to be involved with their child’s education. The author reviewed several school-to-home interventions including positive home notes, a home-school communication intervention, daily report card system, and SHNs. Although different terminology was used, there are several fundamental similarities among each intervention. Similarities included the basic construction of the note, the rules used by teachers to implement the note, and that each student was assigned a note that was carried from school to home to indicate school
performance (i.e., behavior or academic), and a consequence was delivered based on review of the data. In addition to being easy to implement, the procedure is also cost effective, requires less time, and is simpler compared to interventions with multiple components. Treatment acceptability is also high among parents and teachers (Kramer, 1995).

Although research has indicated the efficacious nature of the SHN, Jurbergs and Kelley (2009) note that it may not be an appropriate intervention with all students. For example, parents who are unwilling to monitor or generally do not monitor their child’s behavior are less likely to implement this intervention. A thorough parent interview should indicate whether such a home-school collaborative effort would be an option (Jurbergs & Kelley, 2009). Finally, children who do not respond to delayed consequences (e.g., consequences delivered at home after the school day) may not be suitable candidates for such an intervention.

Prior Research

SHNs have been demonstrated to improve academic accuracy and decrease problem behaviors with preschoolers and kindergarteners (Budd, Leibowitz, Riner, Mindell, & Goldfarb, 1981), school-aged children (Imber, Imber, & Rothstein, 1979; Saudargas, Madsen, & Scott, 1977; Todd, Scott, Bostow, & Alexander, 1976), and adolescents (Alexander, Corbett, & Smigel, 1976; Heaton, Safer, Allen, Spinnato, & Prumo, 1976; Schumaker, Hovell, & Sherman, 1977). However, the majority of research has been conducted with elementary aged children (Cox, 2005).

SHNs have been successful in ameliorating a variety of behavioral problems including truancy (Rosen, Gabardi, Miller, & Miller, 1990; Schumaker et al., 1977),
disruptive classroom behaviors (Ayllon et al., 1975; Budd et al., 1981; Cowart, 2000; Gable, 2002; Lahey et al., 1977; LeBlanc, Olmi, Edwards, & Carlyon, 1996; LeBlanc, 1999; Schumaker et al., 1977; Williams, 2007), as well as educational inconsistencies including incomplete homework assignments, low academic productivity (Ayllon et al., 1975; Blechman et al., 1981), and low grades (Blechman et al., 1981; Schumaker et al., 1977).

Additionally, SHNs have been widely used with children diagnosed with Attention-Deficit/Hyperactivity Disorder (Jurbergs, Palcic, & Kelley, 2007; McCain & Kelley, 1994; Murray et al., 2008; Pelham et al., 2002; Pisecco, Huzinee, & Curtis, 2001). For example, McCain and Kelley (1993) used a SHN intervention to manage the behavior of a preschool male diagnosed with ADHD. The participant’s teacher described him as inattentive, impulsive, easily distracted, and disruptive in the classroom. Three behaviors were targeted for data collection and included on-task behavior (i.e., playing appropriately with others or object), disruptive behavior (i.e., being out of center without permission, physical or verbal aggression towards another student, throwing or grabbing materials, and loud crying or whining), and activity change (i.e., movement from one center to another). A withdrawal design was used to evaluate the effectiveness of the SHN intervention. The note was divided into A.M. and P.M. sections. For each time period, the teacher colored in a frowning face, a straight line (not smiling or frowning) face, or a smiley face. Also, there were five smiley faces at the bottom of each time period that the teacher could color in each time he stayed in the appropriate activity space for the required five minutes. The criterion to access reinforcement was initially no more than one sad face and at least two happy faces colored in by the teacher, and were
gradually increased to no sad faces and at least three happy faces by the end of the intervention.

Results indicated that during baseline, on-task behavior averaged 57% of observed intervals and increased to 85% when the SHN was implemented. When the SHN was withdrawn, the participant’s on-task behavior decreased to 59%, but increased to 84% during the final treatment phase when the SHN was re-implemented. Disruptive behavior averaged 29% of observed intervals during baseline, decreased to 7% when the SHN was used, increased to 33% when the note was withdrawn, and again decreased to 9% when reinstated. McCain and Kelley (1993) demonstrated that a SHN reduced disruptive behaviors in a preschool child diagnosed with ADHD.

The McCain and Kelley (1993) study had several notable limitations. First, the note was evaluated by the teacher after the A.M. and P.M. sessions. For a preschool child, this is a long period of time without feedback and a reminder of the target behaviors. Second, the authors indicated that a criterion change occurred but did not indicate when the criterion changed graphically or in the results. Therefore, it is unclear how many criterion changes occurred throughout the intervention phase. Lastly, the intervention termination criterion was unclear. Although the McCain and Kelley (1993) study researched the disruptive behaviors of only one student, other studies have demonstrated the effectiveness of the SHN with more than one student.

Murray et al. (2008) also examined the effects of a DRC with 24 students in kindergarten through fifth grade who met criteria for a diagnosis of ADHD. Individualized target behaviors and academic goals were established via teacher and parent collaboration. The students were evaluated twice daily and provided verbal
prompts, praise, and feedback as appropriate. As the intervention progressed and students achieved goals, prompts decreased and expectations increased. The report card was sent home every day so that the parents could read the report, sign it, and provide a reward based on a previously developed menu of choices. The authors used pre-and-post measures from the Swanson, Kotkin, Agler, M-Flynn, and Pelham Scale (SKAMP) (a 10-item teacher-report measure of ADHD-related adaptive impairment in classroom functioning that is sensitive to ADHD medication effects) to assess changes in attention and deportment (i.e., rule-inappropriate and social-behavioral impairment) (Swanson, 1992). They used the Academic Performance Rating Scale (APRS; DuPaul, Rapport, & Perriolo, 1991) to assess academic functioning. Pre-measures indicated a change for total SKAMP means from 1.61 to 1.11 in post, with a lower mean indicating better functioning and a significant outcome. Pre-measures also indicated a change for total APRS T-scores from 40.07 to 45.47 in post measures, with a higher score indicating better functioning and a significant outcome. Both changes from pre to post measures indicated a significant change. Overall, academic skills and academic productivity improved in the intervention groups.

One major limitation of the Murray et al. (2008) study was the lack of student classroom observation data, such as classwork data and behavior data. Without these data, it is unclear how the student responded to the DRC on a daily and weekly basis. It is difficult for the reader to ascertain why the intervention was or was not working well for the student without being able to view the DRC data. It is unclear how the authors determined if the DRC was an effective intervention without the permanent product data. Additionally, the article does not detail the target behaviors of the students who were
observed. The authors stated that they were individualized for each student, but it is unclear what behaviors were included on the DRC. Lastly, this study relied on the use of pre- and post-test measures to demonstrate change. Although a significant difference was evidenced, individual student data were not available. This is a shortcoming of using pre/post measures to evaluate change. When pre and post test measures are used, it is difficult to discern if the positive change was due to the intervention or natural maturation. In addition, rater bias may occur. Individuals filling out the pre/post measures may answer questions in a positive light to make the intervention look more effective than it may have been.

In addressing academic productivity and on-task behaviors for low-income students diagnosed with ADHD, Jurbergs et al. (2007) combined a SHN with and without response cost with six African American elementary students between the ages of six and eight who were referred by their teachers. In the SHN without response cost condition, the note was placed on the students’ desk, and the teacher marked either yes, so-so, or no beside two target behaviors (i.e., completed classroom work satisfactorily and used class time well). A yes equaled two points; a so-so equaled one point and a no equaled zero points. Parents provided consequences based on the number of points earned and agreed upon in a contract. In the SHN with response cost condition, the note was the same as the previous condition but had five smiley faces at the bottom of the note. For each instance of off-task or disruptive behavior, a smiley face was crossed off. Each remaining smiley face equaled one point. The authors tracked on-task behaviors (i.e., the student was engaged in appropriate, assignment-related activities for an entire 15-second interval), off-task behaviors (i.e., the student was not engaged in the assignment and the students
eyes were not oriented to the assignment for an entire 15-second interval) work attempted (i.e., mean percent of problems completed), and work completed correctly (i.e., daily mean percent of problems correctly completed).

The authors used a withdrawal design with alternating treatments. The order in which conditions were presented was randomly selected and evaluated the effectiveness of a SHN used with and without response cost. The results indicated on-task behaviors increased from an average of 39.8% during baseline to a mean of 83% (SHN without response cost) and 82.6% (SHN with response cost). When the treatment was withdrawn, on-task behavior decreased to a mean of 44%. When reinitiated, on-task behavior increased to a mean of 88.3% with the SHN and 86.5% with the SHN with response cost. Work completion and accuracy were also evaluated. Students completed an average of 60.3% and correctly answered 44.8% of items answered. When the SHN was introduced, work completion increased to 98.2%, and items correctly answered on classwork increased to 90%. When the SHN was removed, work completion decreased to 89.9% and items answered correctly decreased to 75.8%. However, when it was implemented, it increased to 99% and 96.7% respectively.

Jurbergs et al. (2007) sought to test the effectiveness of SHNs for underserved populations. One important limitation was the difference in effectiveness of the SHN with and without response cost varied for participants; therefore, individual differences were important. Additionally, treatment integrity for the home component was low with one participant. Without adequate treatment integrity, potential threats to internal validity occur. The dates for SHN renegotiations were not recorded and also pose a threat to internal validity. Furthermore, the student had to engage in a behavior for an
entire 15 second interval to be recorded as on-task or off-task. Whole interval recording procedures may have underestimated behaviors that are occurring (Ary & Suen, 1982). The authors also failed to note the limitations of a response cost intervention. Although it was not reported in this study, response cost interventions can have a negative impact because there is a negative consequence involved (DuPaul & Stoner, 2003).

Recently, the SHN intervention has been used to target on-task and academic behaviors (Jurbergs et al., 2007; Murray et al., 2008); although, traditionally, it has been used to target disruptive behaviors. Dating back to the 1970’s, disruptive classroom behaviors have also been targeted. Bailey et al. (1970) designed three experiments to increase appropriate classroom behavior (i.e., following classroom rules) and work completion. The authors wanted to demonstrate that privileges given could be faded from a fixed to intermittent schedule of reinforcement. In the first experiment, participants included five adolescent males who were labeled as “school behavior problems” (p. 224) by their special education teachers. The participants resided in a group-home for pre-delinquent youths ordered by a juvenile court. The authors designed a Daily Report Card (DRC) for teachers to record whether each participant had followed the classroom rules (i.e., rule violations included talking without permission, making noise, out of seat, disturbing others, desk tilting, and looking out the window.). An observer recorded rule violations which were defined as a participant violating any of the classroom rules during any 10 second interval while an observation was being conducted. In addition, a second observer recorded all on-task behaviors. During baseline, participants came to the classroom and participated as usual. Classwork completion and accuracy were recorded daily for each participant.
During the first phase, the yes only condition, the teachers checked either yes or no on the DRC for obeying the classroom rules and studied for the whole period. If the participant received all affirmatives, they earned privileges (e.g., snacks, TV, and outdoor time) and if not, they would be assigned chores in order to earn back privileges. All reinforcements were delivered at the group home facility.

The second phase was the yes and no condition. During this phase, if 10% of the intervals or less were marked as a rule violation, and 90% or more of the intervals were marked as study behavior, then the participant received a yes for the day. Participants had to obtain all affirmatives, as in the first phase, to receive reinforcement. During the third phase, the back-up reinforcement condition, reinforcement was removed so that no reinforcement was delivered at the end of the day (i.e., privileges were granted automatically), but the participants were still required to take the report card to the teacher each day. During the last phase, the reinstatement of the yes and no condition, participants were informed that they needed to obtain all affirmatives to receive privileges. Major privileges included TV time, snacks, and permission to go outdoors. If the student was marked for rule-violations for more than 10% of the class period intervals, then he received a no for the period. In addition, if the student was marked for study behaviors for 90% or more during the class period intervals, he received a yes for the period.

Results indicated that the home-based reinforcement was effective in increasing academic productivity and problem classroom behaviors, especially in the yes and no phase. Differential reinforcement and back-up reinforcement, or privileges received at
home when all yes scores were obtained in the home setting, were shown to be critical factors in the improvements.

In a second experiment, Bailey et al. (1970) examined the effectiveness of a DRC with a 15-year-old male residing in the same group-home previously described. The participant was referred by his math teacher for exhibiting disruptive classroom and inattentive behaviors. A DRC was used to track the participant’s study behavior which was defined as “head and eyes oriented toward assigned materials” (p. 229). If he received 100% affirmatives, then he received major privileges as listed in the previous study. Overall, study behaviors (i.e., head and eyes oriented towards the workbook) increased immediately and dramatically when the report card was implemented and returned to baseline levels when removed. Data were recorded using a 10 second momentary time-sampling technique. The observer would look up after 10 seconds and score the behavior. Baseline data ranged from 3% to 45% of observed intervals for study behaviors and increased to a mean of 95% during the treatment phase. When the intervention was removed, the participants’ study behavior decreased to 25% of observed intervals, but returned to 80% when the treatment phase was re-implemented the next day.

The last experiment by Bailey et al. (1970) implemented the same strategies used in the first two experiments. The participant was tracked for rule violations and study behavior (i.e., head oriented towards the speaker or any materials used by the speaker). After a four day baseline period, the student carried a DRC that tracked the following behaviors: paid attention and studied the entire period, obeyed class rules, completed homework on time, and earned a grade for attempting questions on an exam or quiz. If
the student received all yes scores he was awarded 1000 points that could be spent on major privileges (e.g., snacks, television time, and permission to go outdoors). The participant was then given three days with no card and told he would receive the privileges for free. Finally, the DRC was reinstated so that points had to be earned to receive access to privileges. After these conditions, the participant entered a fading condition in which he only carried the card on Tuesdays and Fridays; however, points from the other days were still recorded. For instance, although the participant did not carry the card to school on Mondays, his points for Monday were still marked on Tuesday’s card, and he required 2000 points (i.e., 1000 points from Friday and 1000 points from Monday) and all affirmatives to receive a major privilege. A consequence was given if the student received a no for any category that included a removal of points that was equivalent to the points that could be earned for a yes (e.g., 2000 points for a yes or a deduction of 2000 points for a no).

During baseline, the participants’ study behaviors ranged from 40% to 70%; however, no data were collected to evaluate rule violations. Due to the unavailable baseline data, it is difficult to evaluate the dependent variable. When the card was implemented, study behavior averaged above 90%, and rule violations occurred in only 17% of intervals observed. When the participant was not using the card, studying behavior dropped to baseline levels; however, rule violations did not increase. When the card was reinstated once again, study behavior increased to over 95% of observation intervals. During the study a substitute teacher came into the class for two days, and the card was once again withdrawn. During this time period, study time dropped to 39%, and rule violations increased to 34% of intervals observed. When the teacher returned, the
card was reinstated for one month, and study behavior averaged above 90%, and rule violations never rose above 2%. During the fading condition in the last five weeks of school, mean study behavior was 87% of intervals observed, and rule violations fell to below 6%.

Bailey et al. (1970) demonstrated that the DRC could be successfully used to target multiple disruptive behaviors; however, a few limitations should be noted. One limitation was the target behaviors tracked for each student. Although reliability was obtained at 80% or higher for each experiment, the behavioral definitions were defined in terms of “do not” instead of appropriate behaviors that could be performed by the student. By having positively stated behavioral expectations, appropriate replacement behaviors can be taught instead of constantly stating what the student should not do and what he or she should do. Additionally, the authors wanted to demonstrate that the card would still be effective when faded. However, fading procedures were never actually implemented since teachers continued to rate student behaviors even when the card was not in effect. It is unknown whether students received feedback from these ratings on the days in which they carried the card. It is also unclear if the student was blind to this practice or not. Last, there was a consequence component if a participant received a no. Although rule violations were reported, it is unknown how many times points were deducted for a student and what impact it had on the participant receiving reinforcers.

Ayllon et al. (1975) explored the additive effects of a home-based contingency system. Participants included 23 African American 3rd grade students who had been identified as academically at-risk. The participants had been referred by the teacher for exhibiting disruptive classroom behaviors (i.e., fighting). The authors reported that initial
school-based contingency systems only resulted in temporary improvements in behavior and academic production. In the first experiment, a school-based motivational system was used. After baseline data were collected for seven days, a reinforcement system for academic goal attainments was employed in which the students earned one point for each page of classwork completed with 70% accuracy. Points earned could be used to obtain reinforcers (i.e., comic rentals, doll rentals, recess, or admittance to a game room). Baseline data indicated that disruptive behaviors occurred a mean of 85% of recorded intervals. Initially, the goal was to decrease disruptive behaviors from 85% to 20% during intervention; however, within two days of implementation, disruptive behaviors returned to approximately 90%. Therefore, a reinforcement system for academic and non-disruptive behaviors was employed. As in the previous phase, the students received points for academic behavior; however, during this phase, students also received points for appropriate conduct. Students could earn one point for each 15 minute interval they did not engage in disruptive behaviors (i.e., out-of-seat, talk-outs, and any behaviors that interfered with other students study habits). If any student was disruptive more than two times during a 15 minute interval, the student lost all points accrued for their behavior for that day. Following baseline, in the reinforcement for academics condition, disruptive behaviors decreased to 20%; however, within two days of implementation, disruptive behaviors increased to 95%, which was above the baseline level of disruptive behavior. The authors concluded that it was a limitation to implement the intervention only in the classroom because access to reinforcers was limited. The authors speculated that parents could be integral in providing salient rewards to children at home based on appropriate school behaviors.
In the second experiment, the authors used a combined school-home based motivational system. During this phase, a meeting was held with the parent(s) of each student. Parents were coached on how to use the home-based reward system, but were not taught what to use as rewards. A good behavior letter was issued if the student did not exceed two disruptions during one 15 minute recorded interval. Three disruptions resulted in the loss of the letter. If the child brought home the good behavior letter, parents were encouraged to consistently provide the child with access to a reinforcer. No attempt was made by the authors to teach parents what to use as a reinforcer. If the child did not take a note home for the day, no reward was provided, and the teacher called the parent to indicate that they did not receive a note. Rewards were provided by the teacher during class for points earned for academic successes and nondisruptive behaviors as outlined in the previous experiment. During the first 15 days of baseline data collection, class disruptive behavior averaged 90% of observation intervals. When the good behavior letter was in effect, disruptive behaviors decreased to a mean of 10% of observed intervals. When the letter was removed, disruptive behaviors increased to approximately 50% of observed intervals. When the letter was reintroduced, disruptive behaviors decreased to 10%.

Ayllon et al. (1975) demonstrated that increasing a school intervention to include a home-based component can decrease disruptive behaviors in the classroom. One limitation to this study was the lack of student involvement in selecting preferred reinforcers. Although disruptive behavior decreased, the results could have been more dramatic if the students had been involved in developing the list of rewards provided rather than a reliance on parent selection.
Schumaker et al. (1977) designed a series of experiments to examine the use of a DRC combined with home-based contingencies. The first experiment explored the use of a DRC with parent administered consequences. The participants included three male students in the 7th grade identified by school personnel as being disruptive in class and not completing homework assignments. A multiple baseline design was used to evaluate the intervention. Target behaviors included rule following behavior (e.g., coming to class on time, class work performance (e.g., work completion), and acceptable semester grades (e.g., final letter grade for each subject compared to like students from the previous semester that did not participate with a daily behavior report card).

During the initial baseline phase, the participants were not told that they were being monitored; however, the teacher completed a DRC for each participant to evaluate baseline rates of behavior. In the second phase, the home-based contingency program was implemented. The participants were made aware of the DRC intervention and the participant and parents collaborated on appropriate privileges (e.g., visiting a friend, going fishing with a parent, and going bowling). In addition, the parents were instructed to provide verbal praise. The card was based on a point system, and the participant could redeem points earned during this phase. Treatment integrity was monitored through weekly visits to the home.

Overall, the study demonstrated that use of the DRC increased appropriate classroom behavior and semester grades. During baseline, the percentage of rule following behavior increased from approximately 60% of observed intervals with great variability within and between students to approximately 90% with reduced variability when the DRC was implemented. During baseline, the percentage of classwork points
earned increased from approximately 50% with great variability within and between students to approximately 80%, still with great variability, when the DRC was implemented. Finally, semester grades between the experimental and control group for the first semester were roughly the same (experimental=1.46 to control=1.39) equating to a D+ average; however, when the DRC was implemented the experimental group’s second semester grades increased to a C average (experimental=1.99 control=1.43) and the control group was relatively unchanged.

The second experiment was conducted to ascertain if contingent praise and contingent privileges were more effective than contingent praise alone in improving behavior. The participants were two 7th grade males (i.e., Fred and Ron) referred for similar behaviors as the participants in the first experiment. For both participants, the DRC was implemented after baseline, and only contingent praise was delivered. In this condition, the participant took a DRC to school, the teacher scored the note, it was returned to the parents, and the parents delivered praise only for scores on the note. The next condition consisted of the DRC, praise, and privileges. In this condition, the participant took the note to and from school as previously described, but received praise and a reward at home from the parents. Then, the participants received the contingent praise only condition again. Fred received the intervention that included a reward administered at home. However, Ron received a reversal design including the baseline and DRC with praise only. This experiment was designed to assess whether the reinforcement was needed for the DRC to be effective instead of praise and the card only. The results indicated that when the participant received praise and privileges, rule following and earned classroom points improved more than when the participant received
contingent praise only (Schumaker et al., 1977). During baseline, Ron followed, on average, 59% of the rules and earned 39% of classwork points. When the report card with praise was instituted, Ron did not bring the report card home for 15 consecutive days, and his teacher reported no changes in his behavior. When the report card, praise, privilege condition began, Ron, on average, followed 93% of the rules and earned 64% of classwork points. Finally, when the DRC with praise only was reinstated, Ron followed 80% of the rules and earned 44% of classwork points; however, during this condition, Ron did not take the note home for 10 of 18 days. Fred demonstrated higher levels of rules followed and percentage of classwork points earned during the DRC, praise, and privilege condition.

The final experiment was designed to ascertain if school personnel within the school could implement the DRC without supervision and with only a written manual. Two school counselors from different schools chose an 8th grade student for participation who had been exhibiting truancy and disruptive behaviors. Each counselor was given a manual with the procedure described in the first experiment and was asked to implement the intervention with one participant. Results indicated that during baseline, students’ percentage of rules followed ranged from approximately 20% to 55%. When the DRC was implemented, rule following for one participant stayed at approximately 100% and never fell below 75% for the other participant. In addition, it was reported that one participant’s grade point average increased from 1.07 to 2.16; however, the other participant’s grade point average was not reported. The authors did not make an attempt to fade the DRC; thus it is uncertain if the card was needed every day or if a faded
version would have been as effective. Overall, the school counselors were able to implement the DRC without supervision and only with a manual.

Schumaker et al. (1977) demonstrated that by adding contingent praise and privileges, target behaviors can increase. One of the most interesting experiments in the study was experiment three due to the participants’ academic deficits. Not only did participant behavior increase, but grade point averages also increased. However, little can be gleaned from the study. Only one teacher took integrity data and only once during the intervention. Therefore, it is unclear how reliably the DRC was used. Another limitation was that most students included in the study were at least three years behind in major subject areas (i.e., reading, math, and writing), and no strategies in the intervention addressed these discrepancies.

Lahey et al. (1977) conducted a study to investigate the effects of a DRC that was implemented with minimal consultant involvement and did not award tangible rewards. Children in two kindergarten classrooms were referred by their teachers for disruptive behaviors during nap time. Behaviors tracked included participation (i.e., lying down on the floor or mat with feet on the floor and hands and arms still) and non-participation (i.e., rolling around, sitting up, placing legs in the air, and any other distracting behavior) in resting, sleeping (i.e., lying down with eyes closed and not moving), and distraction (i.e., verbal behavior, manipulating any object, and bothering other children). A DRC was sent home to students during the intervention phase. The card required the students’ teachers to check “yes” if the student engaged in appropriate sleep and class behaviors, and to be positive with the students when they explained how the student could obtain positive ratings. The note was sent home each day, and parents were asked to give the
student positive feedback for doing a good job but asked to avoid punishment for a poor note. The parents were made aware of the procedure when the child earned their first brag sheet for appropriate classroom behavior; however, no further contact was made. During baseline, the mean rate of participation in resting was approximately 65%, sleeping was approximately 20%, and distractions were approximately 50% to 60%. When the DRC was used, the mean participation in resting was increased to approximately 95%, sleeping was increased to approximately 60%, and distractions were reduced to approximately 10% to 15% of intervals recorded.

This study was important because it demonstrated that tangible rewards are not necessarily needed to reinforce appropriate behavior; however, one major limitation was the limited contact between the school and the parents for the intervention. Although parents who rated the intervention rated it positively, 40% did not return the questionnaires. The study could have been strengthened by adequately training the parents in giving specific praise for good notes and appropriate feedback.

In a study conducted by Blechman et al. (1981), elementary teachers were advised to send participants home with a good-news note when their math assignment grades equaled or were greater than their baseline means. Participants included 17 volunteer teachers, including students attending second through sixth grade, from three different school settings. Prior to intervention, the six students from each class who were deemed inconsistent (i.e., had the most scatter in baseline as evidenced by a scatter index or standard deviation of daily scores) with math work. The six participants were then randomly assigned to a condition: three in a family problem-solving group (total across classes = 45), two in a home-school note group (total across classes = 26), and one to a
control group (total across classes = 16). In the good-news note condition, the teacher sent home a note if the student achieved 80% or better on math work. Parents were instructed to give praise and a reward to the student when receiving the good-news note, and instructed that if their child did not meet the 80% criterion for the day, then a note would not be sent home. In the family problem-solving condition, the students also carried a note home if the criterion was met, but would also come to a university clinic for one hour per week. The parents were taught the intervention, met a project teacher, and reviewed their child’s data. In addition, they would spend time playing a “Solutions” game which guided them in writing a contingency contract that helped make decisions about what rewards were to be given.

Utilizing univariate data analysis, no significant difference between the good-news note and family problem-solving conditions was noted, and both interventions improved the consistency of math performance. A repeated measures ANOVA was conducted that used a 2 x 3 condition (i.e., family problem-solving, home note) by Trial (i.e., baseline mean, intervention mean, and probe mean). An interaction effect was found, F(2,102) = 4.99, p < .01, and a test of simple effects of trial at each condition evidenced that in the family problem-solving condition, a significant trial effect was due to higher accuracy during probes than at baseline.

Blechman et al. (1981) used a Good-News Note for academic behaviors which was the first time in the literature this had occurred without other behaviors targeted. One major limitation of the study was the lack of information pertaining to the participants. It is unclear why the students were not accurate with math work and could have been due to many extraneous variables (e.g., skill deficits and/or disruptive
behaviors). Secondly, no other variables other than scores obtained and accuracy were included; therefore, no other data were available to indicate the child’s ability to complete the work. Accordingly, a treatment effect may have been present. If the child had a skill deficit, this intervention could have made the child feel frustrated because they did not have the skills to complete work and could have led to other inappropriate behaviors (e.g., task-refusal or task-escape). Finally, most HSN interventions have used a multiple baseline design to demonstrate effects across and within participants. Blechman et al. (1981) used a series of univariate analysis procedures, making clinical effect more difficult to determine for individual students.

The potential effects of a home-based contingency system were also investigated by Budd et al. (1981). The participants included three groups of six students who were participating in a summer remedial program for disruptive school behavior. The study was designed to assess the effects of several different reinforcement methods for appropriate class behavior. Target variables included off-area, aggression, and negative statements. Additionally, the authors wanted to track responses that may be considered a side-effect of the intervention which included disruptive movements, on-task, and talking out. The first group was the home-based privileges group. They received stickers if they did not engage in any of the target behaviors, and received verbal praise, and feedback for engaging in appropriate behaviors. Participants traded stickers earned for privileges at home. Initially, the number of stickers to obtain a privilege was 12; however, as the study continued, the participant was required to trade larger amounts of stickers to continue to receive a privilege at home in a changing criteria design. If the child received the required number of stickers at school, the parents would give the child a reward from
the list the parent’s made. Rewards included snacks, going swimming, watching *Sesame Street*, or having a friend over to play. The second group received stickers, but they received no tangible rewards at home or school. The note was not sent home, but if the child received a full token card of stickers, he/she received teacher praise and a big sticker on a classroom chart. The last group received a reward at school at the end of each school period if they had a sufficient number of stickers.

During baseline, the first group’s mean baseline data for off area, aggression, and negative statements were 39%, 18%, and 22% respectively and decreased to 4%, 2%, and 2% of intervals observed per hour during the home privileges condition. The second group’s mean baseline data for behaviors were 25%, 18%, and 14% respectively and decreased to 7%, 3%, and 3% during the stickers plus home privileges condition. Lastly, the third group focused only on off-area behavior and began with the sticker intervention. No baseline data were recorded or reported for the third group. With stickers, off-area behavior data were 16%, increased to 22% when the home privileges condition was introduced, and decreased to 4% when the school and home privileges were introduced.

Additionally, untreated behaviors decreased. For the first group, the initial percentage of disruptive movements was 11% and decreased to 9%, and the second group’s data changed from 11% to 5%. The initial percentage of on-task behavior for the first group was 47% and increased to 60%, and the second group changed from 46% to 61%. The initial percentage for talking out behavior for the first group was 36% and decreased to 29%; the second group showed no change with 23%.

The results of the study indicated that participants that received home-based reinforcement showed a meaningful decrease in disruptive behaviors, whereas when the
participants received only school-based reinforcements they showed less improvement. It should be noted that the intervention did not change the behavior of two children in the study. The authors noted three factors may have impeded improvements in behaviors including the social immaturity for their age, aggression rates more than double the average for the other participants, and the participants did not respond to teacher praise in a predictable manner (i.e., teacher praise seemed to be related to disruptive behavior). This is the first study to report that the home-school note may not be effective for some participants.

There have been several pivotal studies that have addressed academic productivity utilizing a similar intervention process. Using the DRC as a class-wide intervention, Dougherty and Dougherty (1977) targeted a classroom of 15 fourth grade students. The classroom was not displaying any serious disruptive behaviors, but was experiencing homework completion problems and problems with talking-out behavior. After collecting baseline, the DRC was implemented. Results indicated an immediate and marked effect on both behaviors. Homework non-completion fell from 34.7% to 17% of observed intervals when the DRC was implemented. When homework rates stabilized, talk-out rates were addressed. Talking-out behaviors decreased from 13.5 per hour to 2.3 per hour upon implementing the DRC. On the 34th day of the DRC intervention, the students were transitioned to a weekly DRC and percentages of homework completion and talk-outs per hour remained significantly reduced.

This study was limited in the interaction with student’s parents. A note was sent home describing the study, but any further contact was either not discussed or did not
occur; therefore, it is unclear if the note was discussed at home or provided any reinforcement to the participant.

Overall, the SHN has proved efficacious as an intervention with school aged children. Authors have used the SHN to address a variety of behavioral and academic issues with successful results. However, several studies have combined the SHN with additional interventions as a part of a multicomponent package.

*Daily Report Cards Used as Part of a Multicomponent Package*

DRCs are often implemented as a part of a multicomponent treatment package to address behaviors. Seay, Fee, Holloway, and Giesen (2003) used a DRC in conjunction with praise, problem-solving, modeling, and self-instruction to target participants that were nominated by their teachers for having trouble with anger control. The mean age of the students was 9.75 with various ethnicities and races represented (i.e., Caucasian, African American, Native American, and Hispanic). The DRC was used to monitor physical aggression, angry outbursts, destruction of objects, threats, inappropriately throwing objects, and crying. Each DRC started with a total of 10 points for each target behavior, and if a student engaged in any of the target behaviors noted, a point was removed. To obtain reinforcement at the end of the day, at least five points must be retained each day. As the intervention continued, the student had to continue to obtain the five points, but this number was steadily increased to ensure the student engaged in the target behavior more often to receive classroom reinforcement (e.g., basketball cards). Additionally, the participants were involved in a problem-solving condition, after the DRC was reviewed. Target variables were introduced via a problem situation in which participants were asked to problem solve through using examples (e.g., “Another boy has
a basketball and you would like to play with it, what do you do?”) (p. 10). When the
group had decided how to resolve the problem, the therapists used self-instruction, which
involved modeling appropriate behaviors and acting them out. The group finally
participated in a group activity that was recreational and somehow related to the situation
for that day.

Results from implementation of the multicomponent package indicated an
increase in anger control. The DRC showed increased points gained and generalized to
other classrooms. Overall, based on comparisons of scores on the Olweus Aggression
Inventory, a statistically significant group by time effect (F[1,14] = 5.78, p = .031) was
determined. Also, observational data were analyzed with a repeated-measures ANOVA
and found that more praise was exhibited to peers than the control group t (1, 7) = -2.18,
p = .0325.

Seay et al. (2003) used the DRC as a component in a multicomponent treatment
package to increase anger control. However, one major limitation is the lack of
individual data for each student. The authors did take observational data, but it was not
included for each individual student. Therefore, it is difficult to ascertain if the program
was more effective for some students rather than others based on the absence of
observational data. Additionally, because the DRC was only one component to the
treatment package, it is unclear if the card was the most effective component, the least
effective component, or if it was necessary.

To assess the use of a SHN with and without response cost, McCain and Kelley
(1994) used the procedure with three male fourth grade students that were selected by
their teachers for disruptive classroom behaviors, inattentiveness, and unsatisfactory class
work completion. In the SHN condition without response cost, the participant was given a SHN and received points for staying on-task. Points were not taken away once earned. In the response cost condition, teachers removed one point for each reprimand given. Additionally, the participants assisted in determining what rewards would be earned and included TV or Nintendo time, late bedtime, and outside playtime. A contract that outlined contingencies for reward was constantly renegotiated to make the contingencies more stringent and to determine if rewards were still reinforcing.

Using an alternating treatment design, it was concluded that the additive effects of response cost increased attentiveness and stabilized disruptive behaviors. The first participant had an average of 31% of observed intervals of on-task behaviors during baseline, which increased in the condition with the response cost (75%), but were not evidenced in the condition without response cost (47%). During baseline, the participant also exhibited an average of 24% disruptive behavior which was not reduced when the without response condition was introduced (20%), but showed a decrease in the response cost condition (4%). The second participant had an average of 36% of observed intervals of on-task behaviors during baseline and increased in the condition with the response cost (84%) and without response cost (63%). During baseline, the participant also exhibited an average of 13% disruptive behavior which was relatively unchanged when the without response condition was introduced (10%), but showed a decrease in the response cost condition (4%). The third participant had an average of 41% on-task behaviors which increased in the response cost condition (77%), but was not evidenced in the condition without response cost (36%). During baseline, the participant also exhibited an average of 23% disruptive behavior which decreased minimally when the without response
condition was introduced (22%), but showed a greater decrease in the response cost condition (5%).

McCain and Kelley (1994) demonstrated that using response cost with a home-school note can be effective in targeting disruptive behaviors. The authors, however, did not address what would occur if the students lost all their points because there was no planned opportunity for the participants to regain them. Response cost can be counterproductive if the students do not have the skills to obtain the points or maintain those earned or if students find themselves in a negative balance situation.

Similarly, Rosen et al. (1990) combined the DRC with and without response cost with ten junior high students. All students had excessive discipline referrals for truancy, fighting, and noncompliance. Each student was randomly assigned to a positive consequences only group or a positive and negative consequences group. A DRC was given to each student that included the classroom rules (i.e., on time to class, follows instructions, does not disrupt class, does not disturb others, and works during class). In the positive condition, if the student complied with the classroom rules, the parents administered a positive consequence, and no consequence was delivered if the student failed to meet the classroom rules expectation. In the positive and negative group, positive consequences (e.g., later bedtime, money) were awarded if the teacher indicated that classroom rules were followed; however, a negative consequence (e.g., extra chores, privileges withdrawn) was awarded in a calm manner by the parents if the student failed to meet the expectations.

A one-tailed paired t-test was conducted for each group to determine if average referrals had decreased from pre to post treatment. A significant decrease was found for
the Positive/Negative group $t (4) = 2.69$, $p < .05$, but not for the Positive only group. Therefore, the condition in which a negative consequence was given if noncompliance was indicated proved most effective in decreasing posttreatment rates of office referrals for conduct problems.

Rosen et al. (1990) demonstrated that a negative consequence added to a DRC can enhance treatment effects; however, no individual data were available. Therefore, it is unclear how each participant performed on the DRC and if any individual effects were present. In addition, it is unclear if the group of students that were randomly assigned to the two groups were similar. The groups could have been vastly different from one another and not comparable. Although several limitations were noted, the study by Rosen et al. (1990) is important because it is one of few studies that address behaviors in junior high participants rather than younger participants.

The DRC is often paired with and without a response cost component to increase appropriate behavior; however, it is also used within other multicomponent packages. The school-home note intervention can also be used with other interventions that have proven effective in decreasing inappropriate classroom behaviors.

Cowart (2000) investigated the effects of a SHN combined with the Mystery Motivator (MM), a classroom- or individually-administered intervention. The study included three elementary students that were displaying disruptive behaviors and academic difficulties. During the first phase, the students were evaluated four times daily at predetermined times using the SHN, and verbal/physical praise was administered for points earned. During the second phase, the SHN was continued with the addition of the MM.
Based on the review of the results, it was indicated that for two of the three students, the SHN/praise phase was not sufficient to increase the frequency of appropriate behaviors; however, with the addition of the MM, appropriate behaviors increased for all three students. During baseline, participants’ problem behaviors were 51.25%, 35%, and 50.70% for participants one, two, and three with a mean of 45.65%. Participant one responded to the praise alone condition, with a mean of 34.87%; however, participant two and three did not respond to the praise condition only with scores of 32.78% and 52.22% respectively, which was not an improvement over baseline. When the SHN was combined with praise and the MM mean problem behavior decreased to 33.33% for participant one, 36.67% for participant two, and 40.95% for participant three.

A limitation in the Cowart (2000) study was that two students were diagnosed with ADHD or ODD prior to the study; therefore, generalizability to other students who are typically developing or without a diagnosis is limited. Additionally, the SHN in this study was used as part of a treatment package, thereby making it difficult to determine the effect of that component alone.

Similar results have been found by combining the HSN with the Mystery Motivator (LeBlanc, 1999). The author examined the effectiveness of a treatment package that included a HSN with the MM intervention versus a treatment package that included a HSN with a Reward Menu. Participants included four kindergarten students who were nominated by their teachers for displaying disruptive behaviors (e.g., talking out of turn, being out of seat, not following direction, and not completing classwork). An ABAC multiple baseline design was used, with the dependent variable being the number of points earned by the individual students. During baseline, the teacher recorded
positive behaviors (e.g., raised hand, remained in seat) using the note. Students could earn a maximum of 20 points across the school day. In other words, the student could earn one point for five behaviors for each of the four periods during the day. In the next phase, the HSN and reward menu package was initiated. Teachers continued to give one point for appropriate behavior, provide praise and feedback regarding points earned, and give an explanation for when points were not earned. If the student met criterion (i.e., equivalent or greater than the baseline mean points), student received praise from parents and a reward from a menu generated by the student and parents. A brief withdrawal phase then occurred in which the teachers still tracked behavior; however, the students were blind to this phase. After the withdrawal, the last phase, HSN and MM package was implemented. In this phase, the HSN was reinstated, and parents were given a Mystery Motivator Weekly Chart. If the student brought the note home and met criterion, then the participant could use a changeable marker and color over that day of the week. If an “X” appeared, they could choose a reward from the reward menu and if not, they were encouraged to keep working. Both participants in Classroom A increased points earned while in both treatment conditions. Participant one earned a mean of 7.33 points during baseline, 8.43 during the reward menu (RM) condition, and 11.29 during the MM condition. Participant two earned a mean of 8.78 points during baseline, 11.93 during the MM condition, and 14.11 in the RM condition. Although both participants earned more points during the treatment conditions, participant one benefited more from the MM condition as compared to participant two.

Participants in Classroom B also increased points earned in both treatment conditions. Participant one earned a mean of 4.40 points during baseline, 9.58 during the
reward menu (RM) condition, and 10.30 during the MM condition. Participant two earned a mean of 8.53 points during baseline, 13.00 during the MM condition, and 12.29 in the RM condition. Both participants earned more points during the treatment package conditions.

Overall, the authors wanted to determine which treatment package was better for decreasing disruptive classroom behavior. Results indicated that both were effective for decreasing inappropriate behaviors and was more effective than having no intervention at all. Additionally, the MM package was better for participant one, while the RM was better for participant two in Classroom A; however, results indicated that both participants in Classroom B benefited from both interventions, and the points earned phases was negligible.

Once again, it is difficult to tease apart the effects of the HSN in the treatment package. It is unclear if both components were needed or if the HSN was enough to increase points gained without the RM or MM, but the interventions did provide an additive effect. Additionally, order effects may have been present. Although the RM and MM conditions were alternated across participants, the participants received both conditions and may have learned from the previous condition. Last, parent treatment integrity was not assessed due to multiple failed attempts to contact them.

A review of the literature indicates that the SHN can be used to effectively decrease many disruptive classroom behaviors and increase academic work completion and accuracy. Additionally, it has been used with participants from various ethnicities and age groups. And, not only is the SHN effective as an intervention, but it can be used
in conjunction with other interventions in a treatment package to effectively target behaviors.

Critical in the implementation of any intervention is the issue of treatment integrity. Factors that may increase integrity with SHN are faculty and peer support, administrative support, and confidence in implementing the intervention (Sprick, 2009). In addition, the school environment itself may play a large role. Research suggests that schools focusing on proactive approaches will serve students best (Sprick, 2009). Positive Behavior Intervention and Supports (PBIS) is a newer school-wide intervention process for teachers and students that may create a better school environment for teachers to feel more confident in their skill to help students.

Positive Behavior Interventions and Supports

Discipline problems in school are not a new concept; however, currently new approaches are being used by school systems to address challenging behaviors. Many schools are attempting to focus on prevention and utilize positive strategies to alter and direct behaviors as opposed to previous systems that focused on negative consequences, which were largely reactive (e.g., zero tolerance) (Sugai & Horner, 2002). The Response to Intervention (RtI) model is a three-tiered system focused on the prevention of problem behaviors and identification of students who require additional supports to meet behavioral and academic expectations. In an RtI model, all students have access to the primary level (i.e., Tier I level) of support. Often, schools who utilize an RtI model choose to incorporate PBIS as part of their Tier I efforts to manage student behaviors. PBIS is a general term that refers to “the application of positive behavioral interventions and systems to achieve socially important behavior change” (Sugai et al., 2000, p. 133).
PBIS is a school-wide intervention process designed to help students acquire appropriate school behaviors by teaching the school expectations (e.g., walk in the halls, using an “inside” voice,) and specifies how behaviors will be reinforced or acknowledged (e.g., good behavior tickets to be redeemed in weekly drawings for prizes) and how corrective feedback will be delivered. Bradshaw, Reinke, Brown, Bevans, & Leaf (2008) projected that approximately 80% to 90% of students will respond to the Tier I level and will not require any additional supports. Secondary supports (i.e., Tier II) are reserved for students or groups of students that do not respond to the school-wide Tier I program. It is estimated that approximately 5% to 10% of students that continue to engage in disruptive or problem behavior will require additional supports. Tertiary supports are reserved for students that need intensive, individualized, function-based supports. A small number of students (1% to 5%) that do not respond to primary and secondary efforts may require tertiary supports. These students may have significant skill deficits or severe behavior problems.

Although the SHN is not specifically referred to as a Tier II intervention within the RtI model, it meets the criteria for students that have not responded to the Tier I program. Additionally, previous literature indicates that the SHN is efficacious in addressing a variety of behavioral and academic concerns. Therefore, teacher, school administrators, and school psychologists can implement the SHN with confidence within the PBIS and RtI models in the school systems.

Summary and Purpose of the Current Study

School systems are charged with addressing behavioral and academic needs of the students. If these needs and/or deficits are not addressed, poor student outcomes may
result which may include dropping out of school. The collaborative process requires that families and the school work together to address student needs and target students classified as at-risk for failure or drop-out. The consultation process may employ a Tier II intervention such as the SHN to target disruptive classroom behaviors and/or academic productivity.

Throughout the literature, the SHN intervention has been used to target disruptive behaviors and specific academic tasks (i.e., classwork accuracy) for a variety of disorders. However, research has primarily focused on younger students (i.e., preschool and elementary aged students) and there are multiple limitations to the previous research. Limitations include lack of observational behavior data (Murray et al., 2008), training procedures including how teachers, counselors, and parents are trained to implement the SHN (Ayllon et al., 1975; Lahey et al., 1977), methodological issues including behavioral definitions of target behaviors, treatment effects, and reliability data (Bailey et al., 1970; Blechman et al., 1981; Schumaker et al., 1977), and use of multi-component interventions strategies (Cowart, 2000; Jurbergs et al., 2007; LeBlanc, 1999; McCain et al., 1994; Rosen et al., 1990; Seay et al., 2003). The literature is also sparse with regard to feedback from those using the SHN. Many studies that have used measures for feedback have done so inconsistently or neglected to collect feedback from all or any parties involved in the intervention.

Previously cited research provides evidence of the effectiveness of the SHN intervention with various problems. Currently, many teenagers are being identified as at-risk, but the literature is sparse with SHN interventions for middle and high school aged students. The present study will extend the literature by illustrating the effectiveness of
the SHN in addressing middle school students with academic and behavioral deficits who are identified as at-risk for failure or dropout.

Research Questions

1. Will appropriate behavior (i.e., on-task, raising hand, speaks at appropriate time) improve with the SHN and feedback with middle school students identified as at-risk for dropout or failure?

2. Will academic productivity (i.e., classwork completion, homework returned, classroom involvement) improve with the SHN and feedback with middle school students identified as at-risk for dropout or failure?

3. Will percentage of disruptive behavior decrease with the SHN and feedback with middle school students identified as at-risk for dropout or failure?

4. At what level of integrity will parents and teachers implement the SHN and feedback?

5. Is the SHN with feedback acceptable to students as evidenced by scores on the modified Children’s Intervention Rating Profile (CIRP)?

6. Is the SHN and feedback acceptable to parents as evidenced by scores on the modified Treatment Acceptability Rating Form-Revised (TARF-R)?

7. Is the SHN procedure acceptable to teachers as evidenced by scores on the modified Intervention Rating Profile-15 (IRP-15)?
CHAPTER II

METHODS

Setting

The current study was conducted in a middle school in a southern state that agreed to participate and was currently in the first year of implementing school-wide PBIS. The middle school included seventh through ninth grades.

Participants

Four general education students who were referred to the Teacher Support Team (TST) for academic and behavior concerns were selected for participation in this study. Approval from the Institutional Review Board at the University of Southern Mississippi was obtained (Appendix A). All students were enrolled in the ninth grade. None of the participants had previously received any Tier II interventions. All participants met the following requirements: (a) a history of problematic behavior (i.e., more than five ODRs associated with problematic behavior to the office since the beginning of the school year), (b) exhibiting problem behaviors that did not include serious or dangerous behaviors, (c) a history of poor classwork completion and/or low homework return rates as reported by the students’ teachers (d) obtained parent/guardian consent (Appendix B), (e) teacher consent (Appendix C), and (f) student assent (Appendix D). The students’ teachers and parent(s)/guardian(s) also served as participants in the study.

Rhonda was a 14-year-old African American female, who the principal described as frequently off-task (e.g., not paying attention in class) and who used inappropriate vocalizations (e.g., talking to peers during class time while working was expected). Rhonda’s teachers also reported that she was disrespectful to teachers and did not return
classwork. At the time of this study, Rhonda had received ten ODRs and three ISS detentions since the beginning of the school year. Her mother administered SHN reinforcers at home.

DeAndre was a 15-year-old African American male. His teachers described him as noncompliant with school work and frequently off-task (e.g., leaving the room without permission). DeAndre had been referred for services through TST prior to the study; however, no services had been initiated. At the time of this study, DeAndre had received fifteen ODRs and five ISS detentions since the beginning of the school year. His mother administered SHN reinforcers at home.

Darnell was a 15-year-old African American male. His teachers described him as very noncompliant with school work, frequently off-task (e.g., leaving the room without permission), and engaging in inappropriate vocalizations (e.g., talking to peers, talking back to the teacher). Darnell had received 11 ODRs and six ISS detentions since the beginning of the school year. His mother administered SHN reinforcers at home.

Takera was a 15-year-old African American female. Takera’s teachers described her as disrespectful, noncompliant with commands and classwork, and indicated that she had received 12 ODRs and seven ISS detentions throughout the school year. Her mother was the parent who administered SHN reinforcers at home.

Dependent Measures

Behavioral and academic outcomes were evaluated in the present study. Appropriate behavior and academic productivity were calculated as the percentage of daily points earned on the SHN. The percentage earned by the students determined if the criterion was met to obtain a reward. Inappropriate or disruptive behavior was measured
via behavioral observations and ODRs for each participant. Irvin, Tobin, Sprague, Sugai, and Vincent (2004) reported that ODRs are frequently used as dependent measures because they are readily available. In the current study, in-school-suspension (ISS) and out-of-school suspension (OSS) data were collected. If the student was referred for ISS, the SHN would continue to go with the student; however, if the student received OSS, the SHN would be discontinued until the student returned to school. No student was referred to ISS or OSS during the course of the present study.

Appropriate behavior and academic productivity data were recorded via the SHN and served as the primary dependent variable. Appropriate behavior included (a) on-task, defined as attending to classwork or the lecture (e.g., participant is sitting in their assigned seat, facing forward, with eyes oriented towards the teacher or work materials); (b) raises hand, defined as participant extending either the right or left arm in an upward motion in order to be acknowledged (e.g., participant raises his/her hand when they have a question or wish to answer a question); (c) speaks at appropriate time, defined as the participant producing a vocalization only when given permission (e.g., participant speaks only when called on or given permission by the teacher).

Teacher’s ratings of academic productivity included (a) classwork completion, defined as a participant completing classwork given to them by the teacher within the time allotted (e.g., participant completes assignments given during the class period); (b) homework returned, defined as the participant physically handing in a completed homework assignment to the teacher when it is due (e.g., if homework was assigned during the previous class period, the participant returns the homework completed); and (c) classroom involvement, defined as actions exhibited that demonstrates the participant
is engaged in class activities (e.g., the participant engages in the classroom lecture by the teacher by asking questions or making comments relevant to the lecture material and/or helping others with classwork if the teacher has given permission). The primary investigator screened for academic deficits prior to the study by reviewing the student’s grades and interviewing the student’s teachers regarding academic work. No academic skill deficits were noted for any participants based on average to above average grades for each student and based on teacher report. Homework accuracy was not assessed in the current study. If homework was not assigned for the day, it was not calculated in the daily percentage of points earned.

Disruptive behavior was assessed using a 20 minute direct observation twice weekly with each participant. Disruptive behavior included: (a) inappropriate vocalizations or noise will be defined as any audible verbalization or sound made without permission (e.g., speaking without permission, speaking to or yelling at other students during classwork and/or teacher lecture, and using an object to produce sound); (b) off-task was defined as not attending to or participating in instructional activities as requested by the teacher (e.g., participant is out of their assigned seat, facing any direction other than forward, and eyes oriented towards materials not involved in the lesson or classwork); (c) inappropriate touching was defined as any physical contact between the participant and the teacher and/or a peer (e.g., striking a peer/student with any part of their body with intent to cause harm) or using an object to with the intent to cause harm (e.g., throwing a book at a student) and; (d) noncompliance was defined as a failure to initiate or terminate a response to a teacher request within five seconds of the presentation of the request (e.g., “Take your seat, begin your classwork.”). The primary
investigator and a trained graduate student conducted 10 second partial interval observations using the prescribed observation form (Appendix E) to calculate the percentage of intervals the student was engaged in disruptive behaviors. The intervals were coded as disruptive if the student exhibited the behavior at any time within the 10-s interval using a 10-s observe, five-s record partial interval method of observation to record student disruptive behavior. Additionally, three students served as control students and provided a comparison of peer behaviors within the classroom. Observation intervals alternated between the target student and a control group peer.

**Materials**

A SHN was used that included the behavioral and academic expectations for each participant. Each note included the expectations listed in columns at the top of the pages and the class periods listed down the right side of the page. Therefore, each expectation corresponded with class period and a box to record the participants earned points. For each period, the participant’s teacher rated the participant based on their performance. A “2” indicated that the expectation was met for the class period, a “1” indicated that the expectation was somewhat met but could have been improved, and a “0” indicated that the expectation was not met for the class period. Additionally, the note included a line where the daily sum was totaled, a line for additional points gained for bringing the note back to school with a parental signature, and a signature line for the participant’s parents to sign (Appendix F). Each student returned the note to school each day with the exception of Takera who was dismissed from the study.

A modified version of the *Intervention Rating Profile-15 (IRP-15)* developed by Martens, Witt, Elliott, and Darveaux (1985) was used to assess treatment acceptability.
with teachers. Participants responded to a series of items pertaining to acceptability, ease of implementation, and usefulness of the SHN (Appendix G). The IRP-15 was given to the teachers on the final day of data collection. Each teacher was instructed to indicate their perceptions of the SHN by circling the number that corresponded with their response. The IRP-15 was modified from its original version by changing four of the items from future tense to past tense because the IRP-15 was given after the intervention (e.g., “This intervention would not result in negative side effects for the child,” to “This intervention did not result in negative side effects for the child”). A six point Likert scale ranging from strongly disagree to strongly agree was used. Participants’ answers to statements were coded as follows: strongly disagree = 1, disagree = 2, slightly disagree = 3, slightly agree = 4, agree = 5, and strongly agree = 6. Freer and Watson (1999) and Sheridan (1992) have indicated that using a modified version of the IRP-15 does not compromise the integrity or psychometric properties. Principal-components factor analysis of the IRP-15 showed that all items load on a General Acceptability factor and has a reported Cronbach’s Alpha of .98 (Martens et al., 1985). Scores on the IRP-15 range from 15 to 90 with higher scores indicating greater acceptability. Teachers were assessed at the end of the intervention and provided positive acceptability ratings. All teachers indicated that they would recommend the intervention to other teachers in the district.

To assess treatment acceptability with parents, a modified version of the Treatment Acceptability Rating Form Revised (TARF-R) (Reimers, Wacker, Cooper, & DeRaad, 1992) was completed by the student’s parent (Appendix H). The TARF-R was modified from the original version by phrasing 17 out of 21 questions in the past tense.
versus the future tense because the form was given after the intervention was completed (e.g., “How willing are you to carry out this treatment?” to “How willing were you to carry out this treatment?”). The TARF-R is a revised and expanded form of the TARF. It consists of a 6-point Likert scale, 20 questions total: 17 questions refer to treatment acceptability, two questions refer to problem severity, and one question refers to understanding the intervention. Parents responded by placing a check on a Likert-type scale that was coded as follows: not acceptable = 1 to very acceptable = 6. Scores are categorized into three ranges according to cutoffs that include: high acceptability (i.e., scores 85 to 119), average acceptability (i.e., scores from 52 to 84), and low acceptability (i.e., scores 17 to 51). No psychometric information was available for a modified version of the TARF-R. Parents were asked to place a checkmark on the answer that best indicated how they felt about the treatment. The total score is obtained by adding all items, with a higher score indicating greater levels of acceptably by parents. The internal consistency of the TARF-R is reported to be 0.92 (Reimers et al., 1992).

Participants were asked to complete a modified version of the Children’s Intervention Rating Profile (CIRP) developed by Witt and Elliott (1985) to assess treatment acceptability (Appendix I). The CIRP includes a five point Likert scale that range from I agree (i.e., a score of one) to I do not agree (i.e., a score of five). Scores on the CIRP can range from seven to 35. Lower scores on the CIRP are associated with intervention acceptability. The CIRP was modified from its original version to include multiple teachers since each participant rotated to a new classroom and teacher for each period (i.e., “The child’s teacher was too harsh on him/her” to “The child’s teachers were
too harsh on him/her”). No psychometric information was available for a modified version of the CIRP.

Experimental Design

A changing criterion design with a withdrawal was used for this study to evaluate the effectiveness of the SHN intervention for each participant. The primary investigator tracked the participants’ levels of appropriate behavior, academic productivity, and disruptive behavior using the SHN. Phases included baseline, SHN implementation, withdrawal, and reimplementation of the SHN. The withdrawal design demonstrates the functional relationship between the independent and dependent variable and provides information regarding the durability of change (Rusch & Kazdin, 1981).

Procedures and Training

The SHN intervention consisted of several phases: (a) baseline, to obtain data on the behaviors occurring naturally and prior to intervention, (b) the SHN phase, where the participant was provided with the note, (c) a withdrawal phase, and (d) reimplementation of the SHN. After obtaining the necessary consents, the teachers and parents of the participants were trained to implement the SHN prior to baseline data collection. The primary investigator trained each participant’s teachers and parents on the SHN procedures prior to the initiation of baseline and reminded all upon initiation of new phases. Training included a description of the SHN procedure, modeling the procedure (i.e., circling the correct number and providing feedback to the student), and having teachers practice, with the primary investigator providing feedback (Appendix J). In addition, parents were trained in a separate meeting that included prompting the participant for the note, signing the SHN, giving a reward if the criterion was met, and
giving feedback to the participant. Training continued until all teachers and parents were able to implement the intervention without error. Feedback was provided during training, and fidelity data were collected through observations. The teacher did not implement the SHN until the baseline data were stable for the participant, and they had achieved two consecutive days of correct implementation of the SHN as evidence by 83% treatment integrity, or five out of six behaviors awarded the correct point values during baseline observations. Teachers were permitted to contact the primary investigator to answer questions. During the study, two teachers contacting the primary investigator to report that Takera was not bringing the SHN to class. In addition, integrity checks were conducted to confirm that the SHN intervention was being used correctly. Upon training the teachers and parents, a second meeting was held to introduce the procedure to the participant prior to SHN implementation. Participants were unaware that they were being rated prior to baseline implementation. Instructions for the intervention were provided to the teachers and parents (Appendixes K and L)

**Baseline.** During baseline, each teacher rated the participant’s behaviors on the SHN without the participant’s knowledge that he or she was being observed (Appendix J). In addition, parents were asked to refrain from discussing the intervention with the participant until they were notified by the primary investigator indicating the SHN intervention had begun. Parents did not have access to the SHN data during the baseline phase. Teachers recorded a “2,” “1,” or “0” for each behavioral and academic expectation at the end of the class period on the SHN. The participant’s last teacher for the school day totaled the points for the day and converted the points to a daily percentage. Baseline data established each participant’s percentage of appropriate
behavior and academic productivity. Additionally, baseline data included the percentage of disruptive behaviors.

Following baseline, a conference was held between the participant and the primary investigator. The intervention and implementation procedures were explained to each participant. The participant was asked to sign a SHN contract to obtain their willingness to change their behavior (Appendix D). Because the teachers’ and parents’ were trained prior to baseline, the primary investigator contacted the teacher and parent to indicate that the SHN should be implemented with the student’s knowledge. Written instructions were provided to each teacher (Appendix K) and parent/guardian (Appendix L).

Teachers were additionally told to begin providing the participant with brief feedback and praise at the end of each period. Feedback included an explanation for points earned and specific labeled praise for earning points.

Each morning, the participant’s first period classroom teacher gave the participant their SHN for the day and encouraged them to do well. After each class, the teacher provided brief feedback and specific labeled praise. Each participant was responsible for keeping his or her own SHN, presenting it to the teacher before class began, collecting it upon class completion, and taking it to and from each class. If the participant did not give the SHN to the teacher, the teacher prompted the participant for the SHN. According to the teacher’s reports, prompting for the note occurred frequently for two of the four participants (i.e., Darnell and DeAndre). If the participant did not have the SHN, he or she was provided with a new one; however, no points earned earlier during the day were considered. At the end of the school day, the participant stopped by the office and had a
copy of the note made by the secretary, which was prompted by the last period teacher of 
the school day. The copy was kept at the front office for the primary investigator to 
collect. The original copy was taken home by the participant for the parent(s) or 
guardian(s) to sign. Parents were instructed to expect a SHN and prompt the participant 
to present it so that it could be signed. The participant returned the signed SHN to the 
secretary the next day and received their new SHN from their first classroom period 
teacher for the day.

   A point goal for each participant was calculated based on baseline data. The 
initial goal was set at 10% below the participants’ median percentage points obtained 
during the baseline phase. The goal was initially lower than baseline data so that the 
participant had an opportunity to access reinforcement for meeting the goal. By allowing 
the participant to access reinforcement early in the intervention, it was anticipated that the 
participant would routinely and consistently achieve their goal. The participant’s point 
goal was re-evaluated after three days. The criterion was set at the median percentage of 
points that was obtained by the participant during the previous preceding three data 
points. If the median was lower than the previous week’s goal at any time, the goal 
remained the same as the previous week’s goal. If the participant met the daily goal, 
parents were asked to reward their child with specific labeled praise and an opportunity to 
select a reward from the reward menu (e.g., getting hair or nails done, permission for a 
friend to come to their house, and going to a restaurant of their choice) that was 
developed through consultation with the primary investigator, child, and parent. Parents 
were asked to sign an agreement (Appendix M) stating that each reward would be 
available on a daily basis if earned by the student. The reward menu consisted of a list of
ten items for each participant and was prominently displayed (i.e., on the refrigerator) in the home as a constant reminder to obtain their daily point goal.

Withdrawal Phase. A brief withdrawal phase followed each SHN intervention phase for each participant included in the current study. Staff, participants, and parents were contacted and informed that the intervention would be withdrawn for a brief time before reimplementation. During the withdrawal phase, each participant’s teachers continued to track appropriate behavior and academic productivity on the SHN; however, similar to baseline, the participants did not receive specific labeled praise or feedback regarding his or her performance. Additionally, the participant did not take a note home to his or her parents during this phase.

Reimplementation of School-home Note. The SHN was reinstated for each participant following the withdrawal. The same procedures outlined previously were used.

Termination. It is essential to set forth a criterion for termination if the participant did not respond to the SHN intervention. The participant’s goal was to obtain a daily point percentage of 83% of points earned (i.e., a score of “2” for five out of the six target behaviors). Two consecutive weeks (i.e., ten school days) of meeting this goal resulted in termination of the study. For each participant who responded adequately to the intervention process, the TST team worked in collaboration with the parent(s) or guardian(s) to determine if continuation of the intervention was beneficial. If, upon conclusion of the current study, the participant needed additional services based on a lack of adequate responding to the SHN intervention (e.g., disruptive behavior continued to
increase), the participant was referred to the TST team or behavior specialist for the school district to receive more intensive services.

**Interobserver Agreement, Treatment Integrity, and Acceptability**

*Interobserver agreement.* Interobserver agreement (IOA) data were collected for at least all phases with the exception of the withdrawal phase. Agreement was calculated by dividing the number of agreed upon behaviors within intervals by the number of agreed plus disagreed upon behaviors within intervals and multiplying by 100. IOA was calculated between the primary investigator and a trained TST team member. Data were collected for 40% of sessions for all participants. IOA data were collected for disruptive behavior and SHN implementation (Table 1 and 2).

**Table 1**

*IOA Across Phases for Each Participant*

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<td>% of Sessions</td>
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<td>40</td>
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</tr>
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Table 1 (continued).

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<td>% of Sessions</td>
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Table 2

**IOA Across Phases for Teachers Observed**

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<th>SHN</th>
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<td>100</td>
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<tr>
<td>Range</td>
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</tr>
<tr>
<td>% of Sessions</td>
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<td>33</td>
<td>50</td>
<td>40</td>
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<tr>
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<td>--</td>
</tr>
<tr>
<td>% of Sessions</td>
<td>40</td>
<td>33</td>
<td>50</td>
<td>40</td>
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<tr>
<td>Darnell</td>
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<td></td>
</tr>
<tr>
<td>Mean</td>
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<td>94.33</td>
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<td>100</td>
</tr>
<tr>
<td>Range</td>
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<td>% of Sessions</td>
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<td>Takera</td>
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<tr>
<td>% of Sessions</td>
<td>40</td>
<td>40</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note.* For Tables 1 and 2 mean and range scores represent percent agreement. BL = baseline; SHN = School-Home Note; W/D = Withdrawal; SHN = reimplementation of the SHN; % of Sessions = the percentage of sessions in which IOA data were collected.

*Withdrawal phase only included one data point for IOA.*
Treatment integrity. Treatment integrity was assessed using a treatment integrity form (Appendix N). Multiple teacher behaviors were recorded: (a) awarding goal points for the class period, (b) initialing the boxes corresponding to their class period, (c) giving participants specific labeled praise and feedback, and (d) giving an explanation in the event the participant did not obtain a “2” for each expectation. Treatment integrity for teachers was calculated by dividing the number of components completed for that class period by the number of possible components and multiplying the total by 100 to obtain a percentage. If treatment integrity fell below 100% the teacher was retrained by the primary investigator during their next available planning period. Teacher integrity was assessed during 30% of days during the SHN phase and the reimplementation phase. Treatment integrity was gathered by the primary investigator and/or a trained TST member of the school.

Parent treatment integrity was also assessed using a treatment integrity checklist (Appendix O). Parents were contacted by phone twice a week (i.e., Tuesday and Thursday) by the primary investigator during the intervention and reimplementation phases. Multiple parent behaviors were recorded: (a) did the parent prompt the student for the note, (b) did the parent sign the note c) did they provide the participant with reinforcement from the reward menu if the daily goal point was met, and (d) did they discuss the SHN with the participant and give performance feedback. The parent still received credit for prompting for the note if the participant independently presented the note without the prompt. If the child did not meet his or her daily goal, then providing reinforcement was not computed in the percentage integrity for that rating. Treatment integrity for parents was calculated by dividing the number of components completed for
that day by the number of possible components and multiplying the total by 100 to obtain a percentage. The parent was retrained if treatment integrity fell below 100%.

Retraining occurred via phone, and discussion targeted the correct implementation of the SHN with their child. Parent integrity was assessed during 30% of days during the SHN phase and the reimplementation phase (Gresham, 1989). In addition, a self-monitoring sheet was completed by parents to evaluate whether a reward was provided to the participant. (Appendix P).

*Treatment Acceptability.* All measures of acceptability were completed upon termination of the SHN. Teachers completed a modified version of the IRP-15, parents completed a modified version of the TARF-R, and participants completed a modified version of the CIRP. Teachers were asked to complete the IRP-15 when all students were terminated from the current study. Each teacher was instructed to indicate their perceptions of the SHN by circling the number that corresponded with their response. The TARF-R was given to parents when their child was terminated from the study. Parents were asked to place a checkmark on the answer that best indicated how they felt about the treatment. The CIRP was given to the student on the last day of intervention. Each student was asked to indicate their perception of the SHN by placing a checkmark on the spaces that corresponds with their response.

**Data Analysis**

Percentage of points earned on the SHN and percentage of intervals with disruptive behavior across baseline, the SHN intervention, withdrawal, and reimplementation were graphed and visually analyzed for level, trend, and variability. All decisions regarding criterion changes were based on the visual analysis of percentage
of daily points earned on the SHN. Rate of ODRs for each participant was also graphed to determine if the intervention decreased the amount of ODRs reported.
CHAPTER III

RESULTS

The current study sought to answer several questions: (1) Will appropriate behavior (i.e., on-task, raising hand, speaks at appropriate time) improve with the SHN and feedback with middle school students identified as at-risk for dropout or failure? (2) Will academic productivity (i.e., classwork completion, homework returned, classroom involvement) improve with the SHN and feedback with middle school students identified as at-risk for dropout or failure? (3) Will percentage of disruptive behavior decrease for middle school students identified as at-risk for dropout or failure? (4) At what level of integrity will parents implement the SHN and feedback? (5) Is the SHN with feedback acceptable to students as evidenced by scores on the modified *Children’s Intervention Rating Profile (CIRP)*? (6) Is the SHN with feedback acceptable to parents as evidenced by scores on the modified *Treatment Acceptability Rating Form-Revised (TARF-R)*? (7) Is the SHN procedure acceptable to teachers as evidenced by scores on the modified *Intervention Rating Profile-15 (IRP-15)*?

Daily Points Earned on School-Home Note

For each participant, percentage of appropriate behavior and academic productivity were measured on the SHN. Results for each participant are discussed. The following results answer the research question: will appropriate behavior (i.e., on-task, raising hand, speaks at appropriate time) improve with the SHN and feedback with middle school students identified as at-risk for dropout or failure?” Figure 1 shows the percentage of points earned on the SHN during each phase of intervention for each participant.
Figure 1. Percentage of points earned and percent interval occurrence of disruptive behavior for Rhonda, DeAndre, Darnell, and Takera
Rhonda. Rhonda earned an average of 29.4% (range 21% to 38%) of points during baseline. Her initial criterion goal was set at 19%. She demonstrated an immediate increase in level of percentage of daily points earned on the first day of intervention implementation and earned an average of 89% of points over the phase. Since her total during the first intervention phase was above the termination criterion (i.e., 83%), the withdrawal phase was implemented. During the withdrawal phase, Rhonda earned an average of 84.5% of points. Stability was not obtained in the withdrawal phase prior to reimplementation of the SHN phase. When the intervention was re-implemented, Rhonda earned an average 94.6% (range 80% - 100%) of points over the next two weeks. Although the data were variable at the beginning of the re-implementation phase, they became more stable by the end of the phase. Rhonda obtained a mean of 94.6% of points when the SHN was re-implemented. Rhonda was terminated from the study after obtaining 10 consecutive days of at least 83% of points. Rhonda was absent two days during the study.

DeAndre. DeAndre earned an average of 21.1% (range 19% - 24%) of points during baseline. Based on the criterion, his initial goal was set at 11%. He demonstrated an immediate increase in percentage of daily points earned on the first day of intervention. He earned an average of 50.6% of points during the SHN phase prior to the first change in criterion. Based on the points earned, the next criterion point was set at the median points earned (50%). During the next criterion change, he earned an average of 59% of points over the next three school days which was higher than the criterion. Again, his next criterion was set at the median of the previous points earned (62%). During the next criterion change, DeAndre demonstrated a large increase in level in
points earned with 94% on average, above the criterion. Based on his points earned, the SHN was withdrawn. During the withdrawal phase, DeAndre demonstrated a slight decrease in points earned with an average of 81.5% over two days. Rates of disruptive behaviors were observed one time during the withdrawal phase. Stability was not obtained in the withdrawal phase prior to reimplementation of the SHN phase. When the SHN was reinstated, his criterion to earn a reinforcer was set at 83%, the criterion for termination. He earned an average of 95.2% of points for two weeks and met the criterion for termination. After obtaining 10 consecutive days of at least 83% of points, he was dismissed from the study for successfully completing the intervention. It should be noted that DeAndre was absent for two days during the reimplementation phase.

_Darnell._ Darnell earned an average of 27.8% (range 26%-30%) of points during baseline. Based on the criterion, his initial goal was set at 17%. He earned an average of 53.3% of points during the first criterion change. Based on the points earned, the next criterion was set at the median points earned (60%). During the next criterion change, he earned an average of 62.6% of points. Although Darnell earned an average 62.6% of points available, his next criterion remained at 60%. Based on the points earned, Darnell’s next criterion would have been 56% since this was the median data points earned for the criterion change; however, this criterion would have been lower than the previous criterion, therefore the criterion remained at 60% to earn reinforcement. He earned 86.3% of points during the next criterion change. Throughout the SHN phases, data were variable, but followed an increasing trend. Based on his points earned, the SHN was withdrawn. During the withdrawal phase, Darnell earned an average of 86% of points. Stability was not obtained in the withdrawal phase prior to reimplementation of
the SHN phase. When the SHN was reinstated, his criterion to earn reinforcement was set at 83%, the criterion for termination. During the reimplementation, he earned an average of 88.2% (range 80%-100%) of points. The data were again variable, but followed an increasing trend. Darnell was terminated from the study after obtaining 10 consecutive days of at least 83% of points.

*Takera.* Takera earned an average of 32.8% (range 29%-40%) points during baseline. Based on the criterion, her initial goal was set at 20%. She demonstrated an immediate increase in percentage of daily points earned on the first day of intervention implementation. She earned an average of 69.6% of points during the SHN phase prior to the first change in criterion. Based on the percentage of points earned, her new goal was set at 74%. Takera obtained two more data points, earning 75% and 50% of points earned respectively. Takera was absent four days during the study. At this point, she refused and the family refused to participate, thus she was terminated from the study. Therefore, the primary investigator referred Takera to the TST for more intensive services. The SHN was discontinued with Takera when the referral was made.

**Disruptive Behavior**

For each participant, percentage of disruptive behavior was assessed using a 20-min direct observation twice weekly. Results for each participant are discussed. The following results answer the research question: will the percentage of disruptive behavior decrease with the SHN and feedback with middle school students identified as at-risk for dropout or failure? Figure 1 depicts the percentage of intervals of disruptive behavior for each target student across phases on the study.
Rhonda. During baseline, Rhonda demonstrated disruptive behavior in 82.5% of intervals on average. When the SHN was implemented, she demonstrated a significant decrease in level to 30% of intervals. During the withdrawal phase, her percentage of disruptive behaviors decreased to 25%. When the SHN was reinstated, she demonstrated disruptive behaviors in 22.5% of intervals observed. Overall, her percentage of disruptive behaviors data continued to trend downwards over the course of the intervention, withdrawal, and reinstatement of the SHN.

DeAndre. DeAndre demonstrated disruptive behavior in 78.5% of intervals during baseline. When the SHN was implemented, his level of disruptive behavior decreased to 65%. During the next three criterion changes, his level of disruptive behavior was slightly variable, but continued in a decreasing trend (M = 65, range 60% - 70%). When the SHN was withdrawn, his percentage of disruptive behavior remained stable at 65%. When the SHN was reinstated, he demonstrated disruptive behaviors in 45% of intervals observed on average. Overall, his percentage of disruptive behaviors data continued to trend downwards over the course of the intervention, withdrawal, and reinstatement of the SHN phases.

Darnell. Darnell exhibited disruptive behavior in 72.5% of observation intervals during baseline. During the next three criterion changes, his level of disruptive behavior was slightly variable, but continued in a decreasing trend (M = 66.7%, range 55% - 75%). When the SHN was withdrawn, his percentage of disruptive behavior slightly increased to 65%. When the SHN was reinstated, he demonstrated disruptive behaviors in 40.5% of intervals observed on average. Overall, his percentage of disruptive behaviors data
continued to trend downwards over the course of the intervention, withdrawal, and reinstatement of the SHN phases.

*Takera.* During baseline, Takera demonstrated disruptive behavior in 71% of intervals observed. Although her level of disruptive behavior decreased to 67.5% on average, the level was increasing. Takera was discontinued from the study due to refusal to participate.

**ODR, OSS, and ISS Data**

For each participant, number of ODR, OSS, and ISS were collected. Results for each participant are discussed. The following results answer the research question: will percentage of disruptive behavior decrease with the SHN and feedback with middle school students identified as at-risk for dropout or failure?

*Rhonda.* Rhonda received one ODR during the baseline phase. She did not earn any ODRs, detentions, ISS, or OSS in any subsequent phases. The ODR was received for classroom disrespect.

*DeAndre.* DeAndre received two ODRs and one detention during the baseline phase. He did not receive any ODRs, detentions, ISS, or OSS beyond the baseline phase. The ODRs were received for disruptive behavior.

*Darnell.* Darnell received one ODR during the baseline phase and no ODRs, ISS, or OSS throughout the remainder of the study. He received one detention in the first intervention phase. The ODR was received for continued tardy to class.

*Takera.* Takera received one ODR during the baseline phase. She refused to participate during the SHN phase and was terminated from the study. No further ODR, OSS, or ISS data were collected. The ODR was received for disrespect towards teacher.
Treatment Integrity

Treatment integrity was assessed for teachers and parents included in the study. The following results answer the research question: At what level of integrity will parents and teachers implement the SHN and feedback? Teachers were directly observed using a treatment integrity form (Appendix N) and parents were contacted via phone.

**Teachers.** Teacher intervention implementation integrity data were collected by the primary investigator. Teachers observed were chosen randomly (i.e., assigning a number to each teacher and pulling the number from a hat) and each teacher was observed at least one time during the intervention. Reliability averaged 92% (range 75%-100%) across all teachers. Of thirteen teachers, three required retraining. Each teacher was retrained because they did not write a positive statement for the student.

**Parents.** Parent intervention implementation integrity data were collected by the primary investigator by phone two times per week for each participant. For the three participants that completed the intervention, all parents reported 100% implementation integrity. In addition, parent implementation integrity was collected via the parent completed measure. On average, participants returned 70% of parent completed integrity measures (range 20%-100%). Of the parent integrity sheets returned, parents reported completing 100% of steps and always indicated the reward given. When interviewed by the primary investigator, all students reported receiving reinforcement at home when the criterion was met.

Acceptability Data

Acceptability was assessed with parents, teachers, and students included in the SHN intervention. The following results answer the research questions: Is the SHN with
feedback acceptable to students, parents, and teachers as evidenced by scores on the modified $CIRP$, $TARF-R$, and the $IRP-15$? A paper copy was given to each participant with instructions. Each participant was asked to complete the form and return to a designated TST member at the school or the principal to be reviewed by the primary investigator.

*Teachers.* Teachers were asked to complete the $IRP-15$ upon completion of the intervention with all students. Of 13 teachers, 11 returned the modified $IRP-15$. The mean teacher rating on the modified $IRP-15$ was 80, indicating a high level of acceptability. All teachers indicated that they would use the intervention again and that they liked the intervention.

*Parents.* Parents were asked to complete the $TARF-R$. Parents were assessed at the end of the intervention and also provided positive acceptability ratings. The mean parent rating on the modified $TARF-R$ was 92.67, indicating a high level of acceptability. All parents returned the form at the conclusion of the study (i.e., three parents) and indicated that the treatment was reasonable; however, parents found the treatment costly due to the reinforcers that were chosen and agreed upon by the child and the parent.

*Students.* Students were asked to complete the $CIRP$. Three of the four participants completed the modified $CIRP$ after the intervention was complete. The participants agreed that the SHN was appropriate based on lower scores; however, all three students indicated that their teachers were still harsh when dealing with their behavior in class. Rhonda and DeAndre had a total score of 15, and Darnell had a total score of 13. The mean student rating was a 14.33 on a five point Likert scale, indicating a high level of acceptability.
CHAPTER IV
DISCUSSION

Prior research has found the SHN to be an effective intervention with children with a variety of disorders, disruptive behaviors, and academic difficulties (Ayllon et al., 1975; Blechman et al., 1981; Jurbergs et al., 2007; McCain & Kelley, 1994; Murray et al., 2008; Schumaker et al., 1977). However, most research has focused on elementary aged children and adolescents who do not move from class to class and teachers throughout the school day (Cox, 2005). The purpose of this study was to assess the effectiveness of the SHN with middle school students on behavior and academic productivity within the classroom. In addition, treatment acceptability with teachers, parents, and students was assessed.

Results indicate that the SHN was effective in increasing academic productivity and decreasing disruptive behaviors in the classroom for three participants. When there was an improvement in the SHN data, a decrease in disruptive behavior data occurred. These results support previous findings that the SHN is an effective intervention to use with school-aged children (Imber et al., 1979; Saudargas et al., 1977; Todd et al., 1976). In addition, the results support previous research that stated home-based reinforcement contingencies are more effective than school-based only interventions (Schumaker et al., 1977).

All students’ who completed the study demonstrated a decrease in disruptive behaviors over the course of the intervention. Two students (Rhonda and DeAndre) demonstrated an immediate and meaningful decrease in disruptive behaviors that continued in a decreasing trend throughout the study. The third student (Darnell) also
demonstrated a decrease in disruptive behavior that continued in a descending trend; however, the percentage of intervals in which disruptive behavior occurred in baseline overlapped with data in the first two criterion changes. At the beginning of the study, comparisons of the students’ observed behavior indicated that the students’ included in the current study exhibited higher percentages of disruptive behavior than did control students within the classroom. At the conclusion of the study, percentages of disruptive behavior were comparable to classmates.

Academic productivity and appropriate behavior also increased for all participants completing the study as evidence by the increase in percentage of points earned on the SHN and levels of disruptive behavior. Again, two students (Rhonda and DeAndre) demonstrated a clear and immediate increase in percentage of points earned on the SHN from baseline to intervention phases. The third student (Darnell) also demonstrated an increase across the phases; however, his baseline data were only one point away from his first data point in the first intervention phase. Although one student did not demonstrate an immediate increase in percentage of points earned, all students’ percentage of points earned increased in an upward trend across the criterion change phases.

The current study required students to meet a criterion, based on previous phase data, to receive a reinforcer at home. Once again, two students (Rhonda and DeAndre) were able to meet and/or exceed the criterion of points needed to access the reinforcer at home. Darnell, the third student, was also able to meet and or exceed the criterion for points needed; however, he remained at one criterion phase for six days as a result of not meeting the criterion goal. When the SHN was withdrawn, Rhonda’s and DeAndre’s mean percentage of points earned slightly decreased from the previous SHN phase, while
Darnell’s mean percentage of points earned remained the same (i.e., M = 86%). The results suggest that the change in criterion was obtainable by all students, and students earned more points on the daily SHN to receive the reinforcer. The results also suggest that reinforcers chosen by the students and approved by the parents were potent and highly reinforcing to the students, with the exception of the fourth student that was withdrawn from the study because the student and family refused to participate.

Acceptability was also assessed by teachers, parents, and students. This was a significant contribution to literature because, to date, there are no other studies that assessed treatment acceptability across all participants using the SHN. Overall, all participants rated the intervention as acceptable and noted an increase in appropriate classroom behavior. One interesting result was that students reported that their teachers, on average, were still harsh when addressing disruptive classroom behaviors. Although the primary investigator did not witness any harsh behavior discipline styles by the teacher, students reported that two teachers in particular would yell if they talked in class or were disruptive in class. Despite students’ report of the harsh discipline style, all teachers reported students’ positive behaviors on the SHN. Another interesting complaint was from the parents of the students. Although the parents found the intervention to be useful and reported seeing a significant change in their child’s behavior, parents indicated that the intervention was costly at times. When the primary investigator met with the student, the student was encouraged to choose reinforcers that were little to no cost. Students chose free items (e.g., have a friend stay the night or to stay up an extra hour at bedtime) and items that cost (e.g., getting hair or nails done). All choices were reviewed with the parents, and the parents agreed to the reinforcers.
Despite agreeing upon the reinforcers, parents found that the students would more often choose reinforcers that cost over the reinforcers that were of no cost. At times, parents reported that a disagreement occurred between the parent and student over which reinforcers should be earned; however, all three parents reported following through with reinforcement for meeting the daily goal on the SHN.

Limitations of the Current Study

The present study demonstrated that the SHN can decrease inappropriate behavior as well as increase academic productivity; however, a few limitations should be noted. One internal validity limitation that should be mentioned is the choice of appropriate behaviors and academic productivity listed on the SHN. The primary investigator chose the categories to be tracked on the SHN based on previous studies that addressed appropriate behavior and academic productivity (Ayllon et al., 1975; Blechman et al., 1981; Budd et al., 1981; Cowart, 2000; Gable, 2002; Lahey et al., 1977; LeBlanc et al., 1996; LeBlanc, 1999; Schumaker et al., 1977; Williams, 2007) and not through a consultation process with parents and teachers. Although the current study demonstrated that the SHN was effective for three out of four students, future studies might focus on targeting specific behaviors tailored to the student. For example, the TST team could collaborate with teachers and parents to construct a SHN that addresses specific behaviors exhibited by the student.

Another threat to internal validity was the addition of the student contract to the SHN intervention. The primary investigator added the contract component in an attempt to hold the participants more responsible for their behaviors and involvement in the intervention. However, this is not a typical addition to the SHN since prior research
focused on primarily younger students. The potential benefits and disadvantages of a
SHN plus contract should have been referred to in the literature review or as a part of the
methodology.

The current study used a changing criterion design to demonstrate experimental
control. The students’ percentage of SHN points earned should have remained stable
around the set criterion. When the new criterion was set, the SHN points earned should
have increased to the new criterion and remained stable. Thus, current study was unable
to demonstrate experimental control. However, the current study is very applicable to the
applied setting and is more representative of a real-world implementation of an
intervention within a school setting (Parker & Hagan-Burke, 2007).

The withdrawal phase in the current study should be addressed as a limitation to
the current study and a threat to internal validity. Due to time constrains, the end of the
school year impending, and constant requests from the principal to not withdraw the
intervention, the withdrawal phase was brief, and stability was not obtained for any
participants. In addition, for all three participants who completed the study, the data were
on an increasing trend when the SHN phase was re-implemented. It is hypothesized that
the students were aware that the SHN was going to be put back into place; therefore the
participants did not return to previous phase levels of points earned or rates of disruptive
behavior. A teacher indicated that she made a statement in front of the students that the
intervention was not completed yet. Future studies should change phases based on the
data when time allows. And lastly, the principal did not want the SHN intervention to be
withdrawn and made this known to the primary investigator.
Direct observations of disruptive behavior or treatment integrity were not recorded during the brief withdrawal phase in the current study. This was due to time constraints for the primary investigator and TST members. Future studies should demonstrate greater experimental control by collecting direct observation data during all phases of the intervention.

Limitations should be discussed regarding external validity. Although the modified IRP-15 was distributed to all students’ teachers, two teachers did not return it. The two teachers that did not return the form were retrained in the baseline data phase for not writing positive statements regarding the students’ performance during the class period. Students’ also reported that the two teachers that did not return the form demonstrated particularly harsh discipline tactics regarding disruptive classroom behavior (i.e., yelling and giving multiple detentions to students in the class). No data were collected to attempt to substantiate the claims (i.e., mean of detentions given by the two teachers compared to the mean of detentions given by average teacher).

Another limitation was the timing related to the implementation of the SHN. The SHN was implemented during the last two months of school. Due to the time of year, students were required to participate in Iowa testing and would miss five periods of regularly scheduled class time in which the note was not filled out by a teacher. The SHN tracked percentage of points earned for the day; therefore, the student could still meet the criterion for reinforcement if the note was only filled out for three classes. Testing only occurred for three days for all ninth grade students. In addition, many end-of-year activities were occurring at the end of the school year (e.g., classroom parties), and students’ behavior may have been influenced due to the activity (i.e., student may
have achieved higher percentages because something they enjoyed was occurring in the classroom). Future research should attempt to implement the SHN earlier in the school year to minimize the co-occurrence of the SHN and state testing. Additionally, if the SHN is implemented earlier in the year, it may have a greater impact on year-long behaviors and increases in academic success.

In the present study, a three-point scale was used on the SHN to rate appropriate behaviors and academic productivity. A possible limitation was the scale was not sensitive enough to indicate change. In previous research, authors have reported that using a scale with six to ten points is more sensitive to behavioral change (Riley-Tillman et al., 2007; Riley-Tillman, Chafouleas, Briesch, & Eckert, 2008). If the SHN in the current study included more points on the scale, individual changes could have been discussed further.

The primary investigator called the parents to assess treatment integrity. Although this was important in the current study to demonstrate control, it is unlikely that this component could be applied in the school setting. The primary investigator independently called the parents included in the study which took time and effort outside of the school setting. It would be difficult for school psychologist and other school personnel to make phone calls to parents several times a week. This would also prove challenging if many students were given the SHN intervention. Application of the SHN in school settings should use other methods to ensure parents complete the SHN accurately.

Finally, one student reported that she was teased by another student for carrying the note. Many efforts were made by the primary investigator to minimize any bullying
that could have occurred (i.e., not addressing students during the observations, end of day check-ins occurring in the library where students were not congregated after school); however, the primary investigator did observe a teacher say to a student, “Oh, come up here and get a new note.” The primary investigator sent an email to the teacher after the incident and reminded the teachers to be discrete when handling the note. Future studies should ensure that, when working with older students, care is taken to minimize labeling and bringing undue attention to the student.

Future Research and Practice Implications

Future research may include follow-up data. Because the study occurred during the last two months of school, time did not allow for follow-up data to be collected. Future studies should focus on fading the SHN in conjunction with the collection of follow-up data to assess maintenance of behavioral change for the student.

Several office school data were collected throughout the study including ODR ISS, and OSS rates to ascertain if students were maintaining low-levels of disruptive behavior. Research on ODRs has not been extensive, and further research for ODR, ISS, and OSS reliability and validity would be advantageous. Future studies regarding the role of ODR, ISS, and OSS data and effects regarding student outcomes should be conducted.

Furthermore, there is a paucity of research in the literature regarding SHN interventions for middle and high school students. The present study showed that the SHN can be effective in decreasing disruptive classroom behaviors, increasing appropriate classroom behaviors, and increasing academic productivity for students in this age range.
Within school settings, the SHN can be a useful intervention for increasing appropriate behaviors. When using this intervention, teachers, school staff, and parents should receive training and a conjoint effort between all involved is recommended. While home collaborations may be difficult due to lack of parental involvement or availability for trainings, the home component is important for intervention effectiveness. Levels of high parent participation in planning and reinforcement delivery are associated with improved outcomes when using the SHN when compared to using a note at school without parental involvement (Chafouleas, Riley-Tillman, & Sassu, 2006). Additionally, it is important for school psychologists who coordinate the SHN ensure that accurate data is collected and implementation is occurring across the school day with all teachers involved. Although the SHN can have many components (e.g., circling correct point values, giving feedback, delivering reinforcers), the current study adds to the literature base to demonstrate the effectiveness of the SHN intervention.
APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL

INSTITUTIONAL REVIEW BOARD
118 College Drive #5147, Hannibal, MS 38461-5001
Phone: 662.283.5690 | Fax: 662.283.5691 | www.usm.edu/irb

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: R10111805
PROJECT TITLE: The Effects of School-Home Notes on Academic Productivity and Disruptive Classroom Behaviors of Junior High School Students Identified as At-Risk for Failure-Dropout
PROJECT TYPE: Renewal of a Previously Approved Dissertation Project
RESEARCHER(S): Nichol Pritchard
COLLEGE/DIVISION: College of Education & Psychology
DEPARTMENT: School Psychology
FUNDING AGENCY: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF PROJECT APPROVAL: 02/23/2012 to 02/22/2013

Lawrence A. Hosman, Ph.D.
Institutional Review Board Chair
APPENDIX B

PARENT/GUARDIAN CONSENT FORM

The University of Southern Mississippi

Title of Study: The Effects of School-Home Notes on Academic Productivity and Disruptive Classroom Behaviors of High School Students Identified as At-Risk for Failure/Dropout

Purpose: Your child is being asked to participate in a study that is studying the effects of an intervention in increasing appropriate behavior and academic productivity. This study is important because it will evaluate the effectiveness of an efficient intervention for schools to implement in order to address the behavioral needs of at-risk participants.

Participants: Your child was selected for participation because he or she received at least five office discipline referrals during the current school year, he or she was recommended by a teacher or administrator due to presenting social behavior concerns, and because his or her problem behaviors do not include serious, dangerous, or infrequently occurring behaviors.

Procedure: If you agree to allow your child to participate in this study, your child will participate in the intervention.

Benefits/Risks to Participant: Your child’s participation in the study will provide him or her with additional teacher and staff attention and feedback, in an attempt to improve his or her behavior at school. Rewards will be provided to your child for meeting his or her behavioral goals. Participation in the study will provide the participant with clear behavior and academic expectations, increase the participants’ routine throughout the day, provide additional adult attention and feedback, and increase home-school communication. Rewards will also be provided to the participant for meeting his or her behavioral goals. Few risks are anticipated as a result of participation on the study. The potential risks include a possible increase in the participant’s inappropriate behavior upon initiating the intervention. If the participant does not respond to the intervention or his or her behavior worsens, the primary investigator will provide or refer for additional intervention services. Participants may also refuse to complete the study at any point during the experiment.

Voluntary Nature of the Study/Confidentiality: Your child’s participation in this study is entirely voluntary and you may refuse to complete the study at any point during the experiment. In addition, all information obtained during the study will be kept confidential. All information that may identify you will be withheld. Your name and other identifying information will not be used in the research papers, any submission to a professional journal for publication, or presentation. The only circumstances in which we would release information about you or your child would be if he or she tells us he or she is a harm to self or others, if one of your child is abused, if the release of information is
court ordered, or if there is a medical emergency in which release of information is important for your child’s safety.

**Contacts and Questions:** At any time you may withdraw from the study or ask any questions you may have regarding this study. Questions concerning the research should be directed at Nichol Pritchard or Dr. Joe Olmi at (601) 266-5255 or via email at Nichol.Pritchard@eagles.usm.edu or d.olmi@usm.edu. This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820. A copy of this form will be given to the participant.

**Parental Consent:** I have had the purposes and procedures of this study explained to me and have had the opportunity to ask questions. My questions have been answered to my satisfaction, and I am voluntarily signing this form to participate in this research study. My signature shows my willingness to allow my child to participate in this study under the conditions stated.

This Section to be completed by Parent/Guardian

<table>
<thead>
<tr>
<th>Signature of Parent/Guardian</th>
<th>Date</th>
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<table>
<thead>
<tr>
<th>Signature of Primary Investigator</th>
<th>Date</th>
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</table>
APPENDIX C

TEACHER/STAFF CONSENT FORM

The University of Southern Mississippi

Title of Study: The Effects of School-Home Notes on Academic Productivity and Disruptive Classroom Behaviors of High School Students Identified as At-Risk for Failure/Dropout

Purpose: You are being asked to participate in a study that is studying the effects of an intervention in increasing appropriate behavior and academic productivity with participants. This study is important because it will evaluate the effectiveness of an efficient intervention for schools to implement in order to address the behavioral needs of at-risk participants.

Participation: You are being asked to participate because one of your participants is participating in the study.

Procedure: If you agree to participate in this study, you will be participating in an intervention that provides increased attention and feedback to an at-risk participant in an attempt to increase his or her appropriate behaviors.

Benefits/Risks to Participant: Teachers and participating staff will be provided with increased consultation related to behavior strategies used in the study which can be generalized to other participants. Few risks are anticipated as a result of participation on the study. Participants may also refuse to complete the study at any point during the experiment.

Voluntary Nature of the Study/Confidentiality: Your participation in this study is entirely voluntary and you may refuse to complete the study at any point during the experiment. In addition, all information obtained during the study will be kept confidential. All information that may identify you will be withheld. Your name and other identifying information will not be used in the research papers, any submission to a professional journal for publication, or presentation. The only circumstances in which we would release information about you would be if there is a threat of harm to self or others, abuse, if the release of information is court ordered, or if there is a medical emergency in which release of information is important for someone’s safety.

Contacts and Questions: At any time you may withdraw from the study or ask any questions you may have regarding this study. Questions concerning the research should be directed at Nichol Pritchard or Dr. Joe Olmi at (601) 266-5255 or via email at Nichol.Pritchard@eagles.usm.edu or d.olmi@usm.edu. This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional
Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820. A copy of this form will be given to the participant.

**Participant Consent:** I have had the purposes and procedures of this study explained to me and have had the opportunity to ask questions. My questions have been answered to my satisfaction, and I am voluntarily signing this form to participate in this research study. My signature shows my willingness to participate in this study under the conditions stated.

This section to be completed by teacher/staff.

____________________________  ______________________________
Signature of Teacher/Staff    Date

____________________________  ______________________________
Signature of Primary Investigator    Date
APPENDIX D

STUDENT AGREEMENT FORM

I, ________________________________, agree to work on these things:

1. On-task behavior
2. Raising my hand
3. Keeping quiet
4. Completing my classwork
5. Returning my homework
6. Being Involved in class

I will be responsible for taking my school-home note to and from each class. I understand that I will have a chance to earn a reward each day when I meet my goals. A list of rewards I would like to earn includes:

1. ______________________________ 6. ______________________________
2. ______________________________ 7. ______________________________
3. ______________________________ 8. ______________________________
4. ______________________________ 9. ______________________________
5. ______________________________ 10. ____________________________

I will try hard to do my best to meet these goals every day.

________________________________
Signature of Student

Adapted from Crone, Horner, Hawken (2004)
## APPENDIX E
### OBSERVATION SHEET

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Target Student: 
Peer 1: 
Peer 2: 
Peer 3: 
Observer: 
Teacher: 
Date: 
Time: 
Activity: 

<table>
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<th>Behavior 1:</th>
<th>/40= %</th>
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<tbody>
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<td>Behavior 2:</td>
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<tr>
<td>Behavior 4:</td>
<td>/40= %</td>
<td>Behavior 4:</td>
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</table>

Total: /40= %

Target Student | Peers
---|---


APPENDIX F

SCHOOL HOME NOTE

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<th>Name: _______________________________</th>
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<th>Class Period</th>
<th>On-Task</th>
<th>Raise Hand</th>
<th>Speaks at Appropriate Time</th>
<th>Classwork Completion</th>
<th>Homework Returned</th>
<th>Classroom Involvement</th>
<th>Positive Comments</th>
<th>Teacher Initials</th>
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_Last period Teacher completes for the day:_

Points Possible = ___________ Points Earned = ___________ Percentage Earned = ___________ %

Met Goal of ______ % = Yes or No

_Parent/Guardian Completes Section Below:_

Parent/Guardian Signature__________________________ Reward(s) earned & provided _____________________

Comments: ____________________________________________________________________________________________
______________________________________________________________________________________________________
______________________________________________________________________________________________________
Please respond to each of the following statements thinking about the SHN intervention you used. Please circle the number associated with your response. Be sure to answer all statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>This was an acceptable intervention for the problem behavior(s).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Most teachers would find this intervention appropriate for a behavior problem in addition to the one(s) described.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>This intervention proved effective in helping to change the problem behavior.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I would suggest the use of this intervention to other teachers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>The behavior problem was severe enough to warrant the use of this intervention.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Most teachers would find this procedure suitable for the problem behavior described.</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I would be willing to use this intervention again in the classroom setting.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>This intervention did not result in negative side effects.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>This intervention was appropriate for a variety of children.</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>This intervention was consistent with those I have used in the classroom setting.</td>
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<td>2</td>
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<td>4</td>
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<td>6</td>
</tr>
<tr>
<td>The intervention was a fair way to handle problem behavior.</td>
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<td>2</td>
<td>3</td>
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<td>6</td>
</tr>
<tr>
<td>This intervention was reasonable for the problem behavior described.</td>
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</tr>
<tr>
<td>I liked the procedures used in this intervention.</td>
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<td>2</td>
<td>3</td>
<td>4</td>
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<td>6</td>
</tr>
<tr>
<td>This intervention was a good way to handle the behavior problem.</td>
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<td>2</td>
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</tr>
<tr>
<td>Overall, this intervention was beneficial.</td>
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Taken and adapted from, Martens et al., 1985.
APPENDIX H

TREATMENT ACCEPTABILITY RATING FORM-REVISED (TARF-R)

Please complete the items below. The items should be completed by placing a check mark on the line under the question that best indicates how you feel about the psychologist’s treatment recommendations.

1. How clear is your understanding of this treatment?

<table>
<thead>
<tr>
<th>Not at all clear</th>
<th>Neutral</th>
<th>Very clear</th>
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</table>

2. How acceptable did you find the treatment to be regarding your concerns about your child?

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<tr>
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<th>Neutral</th>
<th>Very acceptable</th>
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</table>

3. How willing were you to carry out this treatment?

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<tr>
<th>Not at all willing</th>
<th>Neutral</th>
<th>Very willing</th>
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4. Given your child’s behavioral problems, how reasonable did you find the treatment to be?

<table>
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<tr>
<th>Not at all reasonable</th>
<th>Neutral</th>
<th>Very reasonable</th>
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</table>

5. How costly was it to carry out this intervention?

<table>
<thead>
<tr>
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<th>Very costly</th>
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6. To what extent do you think there might be disadvantages in following this treatment?

<table>
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<tr>
<th>Not at all likely</th>
<th>Neutral</th>
<th>Many are likely</th>
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7. How likely is this treatment to make permanent improvements in your child’s behavior?

<table>
<thead>
<tr>
<th>Unlikely</th>
<th>Neutral</th>
<th>Very likely</th>
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</table>
8. How much time was needed each day for you to carry out this treatment?

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<th>Little time</th>
<th>Neutral</th>
<th>Much time was needed</th>
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9. How confident were you that the treatment would be effective?

<table>
<thead>
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</thead>
</table>

10. Compared with other children with behavioral difficulties, how serious was your child’s problem?

<table>
<thead>
<tr>
<th>Not at all serious</th>
<th>Neutral</th>
<th>Very serious</th>
</tr>
</thead>
</table>

11. How disruptive was it to the family (in general) to carry out this intervention?

<table>
<thead>
<tr>
<th>Not at all disruptive</th>
<th>Neutral</th>
<th>Very disruptive</th>
</tr>
</thead>
</table>

12. How effective was this treatment for your child?

<table>
<thead>
<tr>
<th>Not at all effective</th>
<th>Neutral</th>
<th>Very effective</th>
</tr>
</thead>
</table>

13. How affordable was this treatment for your family?

<table>
<thead>
<tr>
<th>Not at all affordable</th>
<th>Neutral</th>
<th>Very affordable</th>
</tr>
</thead>
</table>

14. How much did you like the procedures in used in the treatment?

<table>
<thead>
<tr>
<th>Did not like them at all</th>
<th>Neutral</th>
<th>Liked them very much</th>
</tr>
</thead>
</table>

15. How willing were other family members to help carry out this treatment?

<table>
<thead>
<tr>
<th>Not at all willing</th>
<th>Neutral</th>
<th>Very willing</th>
</tr>
</thead>
</table>

16. To what extent did undesirable side-effects result from this treatment?

<table>
<thead>
<tr>
<th>No side effects</th>
<th>Neutral</th>
<th>Many side effects are likely</th>
</tr>
</thead>
</table>

| Are likely | Neutral | Many side effects are likely |
17. How much discomfort did your child experience during the course of this treatment?

No discomfort       Neutral       Very much discomfort
at all

18. How severe were your child’s behavioral difficulties?

Not at all severe       Neutral       Very severe

19. How willing were you to change your family routine to carry out this treatment?

Not willing       Neutral       Very willing

20. How well did carrying out this treatment fit into the family routine?

Not at all well       Neutral       Very well

21. To what degree are your child’s behavioral problems a concern to you?

No concern at all       Neutral       Great concern

Taken and adapted from Reimers & Wacker (1988).
APPENDIX I

THE CHILDREN’S INTERVENTION RATING PROFILE (CIRP)

1. The method used to deal with the behavior problem was fair. | ____________ |
2. The child’s teachers were too harsh on him/her. | ____________ |
3. The method used to deal with the behavior may cause problems with this child’s friends. | ____________ |
4. There are better ways to handle this child’s problem than the one described here. | ____________ |
5. The method used by this teacher would be a good one to use with other children. | ____________ |
6. I like the method used for this child’s behavior problem. | ____________ |
7. I think that the method used for this problem would help this child do better in school. | ____________ |

Adapted from Witt & Elliott (1985).
APPENDIX J

BASELINE DATA INSTRUCTION-TEACHER

1. Student should NOT be informed that baseline data is being collected or told that an intervention will take place.

2. At the end of each class period, the SHN should be filled out according to the participant’s appropriate behavior and academic productivity.

3. The teacher should initial their class period and make plans for the note to be transported to the next teacher. The participant may NOT transport the note.

4. The last teacher for the day will tally the points and give it to the secretary at the end of the day.
APPENDIX K

SCHOOL-HOME NOTE PROCEDURES-TEACHER

Beginning of class:

- Participant will give the SHN to the teacher for that period
- If participant does not provide teacher with SHN, prompt the participant for it
- If participant does not have a SHN, teacher will provide a new one, but no points previously earned that day will be given
- Teacher will provide participant with brief positive comment
- Teacher will prepare participant for class by reminding participant of expectations

End of class:

- Rate participant’s behavior on different behavioral and academic expectations on SHN
  - 2 = participant met behavioral and academic expectation
  - 1 = expectation was somewhat met but could have been improved
  - 0 = participant failed to meet behavioral and academic expectation
- Teacher will briefly explain ratings to participant
- Teacher will provide praise for compliance with expectations to participant
- Teacher will provide corrective feedback for noncompliance with expectations to participant
- Teacher will note something positive participant did during class
APPENDIX L

SCHOOL-HOME NOTE PROCEDURE-PARENT/GUARDIAN

When parent/guardian or participant arrives at home:

- Participant will give parent/guardian the note
  - If the participant does not give the note to the parent/guardian, then they will be prompted to present the note
- Parent will discuss the note with the participant
  - If daily goal was met, discuss why they think they were able to obtain their goal and encourage them with praise to continue to obtain their goal
  - If daily goal was not met, discuss what the participant thinks they could do to obtain their daily goal and encourage them with praise and affirmation that they can achieve their goal
- Parent will sign the form stating that they receive the note and discussed it with the participant
- If the participant met the daily goal, the parent/guardian will administer one of the rewards on the list previously determined
- Before going to school, parent/guardian will remind participant to return the note to the secretary before class begins
- Parent/guardian will encourage participant to work hard to obtain his or her goal and give praise for their hard work
APPENDIX M

PARENT AGREEMENT FORM

I, _______________________________, agree to do the following to the best of my abilities:

1. Ask my child for their school-home note if they do not present it to me.
2. Sign the school-home note
3. Give my child a reward if they met their daily goal
4. Discuss the school-home note with my child and give feedback based on their performance

I will work with ____________________________ to keep track of my child’s progress.

I understand that I will give a reward each day when my child meets goals. I will post the list of rewards in a place when my child can see them daily. A list of rewards I will offer my child will include:

6. ______________________________ 6. ______________________________
7. ______________________________ 7. ______________________________
8. ______________________________ 8. ______________________________
9. ______________________________ 9. ______________________________
10. _____________________________ 10. ______________________________

Adapted from Crone et al., (2004)
APPENDIX N

TREATMENT INTEGRITY FORM-TEACHER

Participant: __________________________  Date:  ______________________

Teacher:  __________________________  Observer:  __________________________

Place a “1” for completed or a “0” for not completed on the line provided next

_____ Teacher awarded goal points for the class period

_____ Teacher initialed appropriate box corresponding to their class period

_____ Teacher gave specific labeled praise and feedback

_____ Teacher gave explanation in the event that a “2” was not awarded in any category

Number of points: ________

Number of possible points: ________

\[
\frac{\text{# of Points Awarded}}{\text{# of Points Possible}} \times 100 = \text{Teacher Integrity %}
\]
APPENDIX O

TREATMENT INTEGRITY FORM-PARENT/GUARDIAN

Participant: __________________________ Date: ______________________

Parent/Guardian: ___________________ Caller: ______________________

Place a “1” for completed or a “0” for not completed on the line provided next

_____ Parent prompts student for school-home note

_____ Parent/guardian sign the school-home note

_____ Administered reward if daily goal was met

_____ Discussed the note with participant and gave feedback based on performance

Number of points: ________

Number of possible points: ________

# of Points Awarded _________

\[ \frac{\text{# of Points Awarded}}{\text{# of Points Possible}} \times 100 = \] ________

# of Points Possible _________

Parent Integrity %
APPENDIX P

SELF-MONITORING SHEET-PARENT/GUARDIAN

Dear Parent, please add up points for each step you completed and then indicate which reward was given.

Participant: __________________________ Date: ______________________

Parent/Guardian: __________________

Place a “1” for completed or a “0” for not completed on the line provided next

_____ Parent prompts student for school-home note

_____ Parent/guardian sign the school-home note

_____ Administered reward if daily goal was met

_____ Discussed the note with participant and gave feedback based on performance

Number of points: ________

Reward: _________________________________________________________
REFERENCES


