ABSTRACT

THE EFFECTS OF PEER REPORTING AS POSITIVE AND NEGATIVE
REINFORCEMENTS OF CLASSROOM BEHAVIOR

By Laura B. Russ

Positive peer reporting (PPR) has significant empirical support for providing a positive influence on students' classroom behavior. PPR consists of peers providing positive compliments for their classmates' appropriate behaviors. The current study examined the effects of PPR, as well as two other peer reporting strategies on classroom engagement and work completion. Negative peer reporting consisted of peers providing corrective statements for their classmates' inappropriate behaviors. For these two conditions, positive and corrective statements were delivered following the class activity. Due to unclear effects for either strategy, an alternative peer reporting strategy was instituted, which provide immediate, within-session praise contingent on appropriate behavior. Each reporting strategy was implemented across two classrooms of second grade students. Results indicate negative effects on both academic engagement and work completion across all reporting strategies in comparison to baseline. On an individual basis, there are differential effects among the experimental conditions.

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Introduction

Children of all ages are influenced by their peers both in the classroom and in social settings. Peers often give both positive and negative attention to each other for certain behaviors, and peer comments can function as both positive reinforcement for positive behaviors and negative behaviors. There is strong evidence that peer attention may be used to promote prosocial skills in children within educational settings. The most important and educationally relevant behavior in schools is academic engagement. It is important that teachers use this influence of peer attention to promote positive on-task behaviors and work completion while in class.

Positive peer reporting (PPR, also referred to as "tootling") has emerged as one method for successfully incorporating peer attention into social interventions. PPR consists of reinforcing classroom peers using a group contingency for making praise statements regarding the social behavior of target students. This arrangement of contingencies is in direct contrast to a "typical" classroom setting in which children respond only to inappropriate behavior, and usually do so by providing negative peer reporting (or tattling). The current study used an alternating treatment design to compare the effects of peer attention contingent on misbehavior (tattling) and peer attention contingent on positive classroom behavior (tootling). The study examined the effects of tattling versus tootling on task engagement and work completion, on two groups of children, and across two academic settings. Participants were children enrolled in a summer academic reading program. This research is beneficial to professional practice by reviewing the effects of an alternative intervention method for on-task engagement and work completion, while also examining the use of classroom peers as effective change agents.

Literature Review

Student behaviors are highly influenced by peer attention (Carden Smith & Fowler, 1984; Patterson & Anderson, 1964; Skinner, Neddenriep, Robinson, Ervin, & Jones, 2002). Peers are ideal change agents of social skills, as they interact with one another in various contexts (Skinner et al., 2002). Peers have been found to increase positive behavior (Feldman, 1992) and decrease disruptive behavior (Carden-Smith & Fowler, 1984).

Dishion, Patterson, and Griesler (1994) suggest that children reinforce behavior comparable to their own. Children seek acceptance by their peers and therefore are likely to act in similar ways. Children who display appropriate classroom behaviors associate with similar peers, reinforcing those behaviors. Contingent positive responses to behavior reinforce those behaviors (Dishion et al., 1996).

Behavioral Reporting

Reporting strategies have been used as effective behavioral interventions for students. Skinner, Cashwell, and Skinner (2000) found that peer reports of behavior were reinforced by group contingencies. Students provided acknowledgements of appropriate behaviors, referred to as "tootling." Appropriate behaviors increased when students' reports were reinforced. An additional study had similar findings (Cashwell, 2001).

Solomon and Wahler (1973) examined the use of classroom peers as a control of disruptive behavior. Five control students were trained on differential reinforcement and extinction. These students provided behavior modification techniques for five students who displayed in appropriate behaviors. Results suggest that the five disruptive students produced fewer inappropriate behaviors and more prosocial behaviors.

Positive Peer Reporting

Positive peer reporting (PPR) has been shown to increase the occurrence of positive interactions as a direct function of peer praise statements (Bowers, McGinnis, Ervin, & Friman, 1999; Bowers, Woods, Carylon, & Friman, 2000; Moroz & Jones, 2002). PPR is a behavioral intervention in which students are asked to provide praise for another student's appropriate behavior. The procedure for PPR includes selecting a target student, training peers to recognize and develop positive reports, and providing a specific time in which the students can give those positive reports (Skinner et al. 2002).

Previous studies have indicated that PPR is effective in increasing positive social interactions (Bowers et al., 1999; Bowers et al., 2000; Ervin, Miller, & Friman, 1996), decreasing negative interactions (Bowers et al. 1999), and increasing cooperative statements (Jones, Young, & Friman, 2000).

PPR has been found to be an effective behavioral intervention, which promotes appropriate, positive classroom behaviors. Ervin et al. (1996) conducted a study that provided classroom peers with the opportunity to praise a socially rejected student for appropriate behavior. Observations display that the negative peer interactions of the target student significantly decreased from baseline to PPR.

A study was conducted by Ervin, Johnston, and Friman (1998), which allowed peers in a first grade general education classroom to use PPR to reinforced positive behavior of an isolated student. The class was reinforced for participation in the PPR session based on a group contingency. Observations indicate that the child's negative peer interactions decreased from baseline to the PPR intervention.

Jones et al. (2000) reviewed the effects of peer reporting in a school setting. Cooperation, participation, and encouragement were observed during cooperative learning activities on a daily basis. Academic effects were evaluated for three students in the class. The PPR session was conducted immediately following each class. Results suggest that the appropriate interactions of each child during the observation period improved. Significant improvements were also reported on peer social ratings.

Moroz and Jones (2002) evaluated the use of PPR in a general education classroom. The social engagement and participation of three elementary students were observed. Positive peer comments were reinforced using a group contingency on a daily basis. Significant increases in both participation and engagement were observed for all three participants.

Morrison and Jones (2007) implemented a class-wide version of PPR. Teachers were asked to complete daily checklists regarding inappropriate behaviors at a class-wide level. The use of PPR as a daily classroom tool was found to be effective for those two classrooms. Off-task behavior decreased after the implementation of this intervention.

Additional effects of PPR on the class-wide level were evaluated. Hoff and Ronk (2006) studied the effects of PPR on social interactions in a special education classroom. PPR target students were chosen randomly. PPR increased the class-wide average of positive interactions. These results suggest that peer reporting may be an effective, proactive class-wide classroom management tool.

Peer Monitoring

Peer-mediated interventions may provide a more effective intervention to student behaviors than those mediated by teachers or administrators. Since peers have more contact with one another, their presence can serve as a reinforcer for both positive and negative behaviors. In contrast to previous PPR and tootling research, "peer monitoring" studies have explored the use of peers as sources of both positive and negative reinforcement.

Smith and Fowler (1984) examined the effectiveness of a peer-mediated token system on participation and disruptive behaviors that take place in a kindergarten transition period. The students were put into teams and a team leader was chosen to monitor the team's performance; students from the groups took turns being the team leader. During the peer-mediated phase of the study, the team leaders observed their teams during transition, reminded them of appropriate behaviors when rule violations occurred (i.e., contingent negative peer attention), and gave points to the members that correctly met three transition responsibilities (i.e., contingent positive attention). Students that had received points were given a vote to choose an activity and the opportunity to participate in it, while those who did not had to continue working on fulfilling the three transitional responsibilities. Results indicate that this peer-mediated intervention was effective in dealing with the participation and disruption problems that take place during transition.

Dougherty, Fowler, and Paine (1985) further studied the use of peer monitors to decrease inappropriate peer interactions that take place during recess. Two male students enrolled in a mentally handicapped class were referred to this study due to negative interactions and aggressive behaviors. Teachers initiated the intervention of giving points to the target students when appropriate behaviors were shown. Self-monitoring and peer-monitoring during recess was used and it was revealed that the aggressive, negative behaviors were reduced. Also, results indicate that when the target student was given the role of a peer monitor his inappropriate behaviors decline even more. The role of peer monitor significantly influenced all students that were involved in helping promote positive interactions.

Later, Stern, Fowler, and Kohler (1988) examined the differential effects of peer monitor and point earner interventions. Two fifth-grade students, who displayed high levels of off-task and disruptive behaviors were given alternating treatments, peer monitoring and point earning contingent on their behaviors. Results indicate that the two interventions were equally effective for these students. Classroom behavior met that of their classmates, and the speed of their work completion also increased during both interventions.

A potential limitation of the existing literature on peer mediated interventions is that there is typically an absence of a meaningful comparison condition. All of the PPR and most peer monitoring studies have compared peer reporting to a baseline or no treatment. A potential solution to this problem plays an important role in the current study. The use of an alternating treatment design allows peer attention research to be furthered by the implementation of a different type of peer attention contingency.

The present study examined the effects of peer attention contingent on misbehavior (tattling) and peer attention contingent on positive classroom behavior (tootling). The following research questions were addressed in the current research:
1. What are the effects of contingent peer attention on student engagement?
2. What are the differential effects of contingent positive, corrective, and immediate peer comments?

Method

Participants/Setting

The participants for this research study included 11 second grade students (7 male, 4 female) from a rural area of southwestern Ohio. These students were recommended by their schools for participation in a summer academic program for children with serious reading and self-management problems. The program took place over 14 days in a typical classroom setting.

On each day of the study, all 11 students participated in both math and language arts classes. The students were divided into two groups. Each class lasted for 20 minutes.

Measurement

Ability-appropriate math worksheets and language arts sentence starters were used to measure the amount of work produced. *Work completion* was calculated as the number of digits completed (math) or the number of words written (language arts) per minute during large-group independent seatwork. Work completion was calculated and recorded for each child, in every class (see Appendix B).

Student engagement was measured using the Behavioral Observation System (BOS) by recording the percentage of 10 second intervals that each child is "on-task" (see Appendix A). On-task behavior is described as working intently on the worksheets given to each student by the teacher. On-task behavior codes were derived from five classroom rules that are presented at the beginning of the summer program and are posted in each classroom. The following are the five classroom rules:

1. Come to class on time
2. Raise your hand before talking
3. Stay in your seat
4. Keep your hands to yourself
5. Do your best work

For the purposes of this study, "off-task" behavior included (a) any verbalization without receiving permission from the teacher, (b) any motor activity, such as out-of-seat or touching others, and (c) passively looking away from work for more than 3 consecutive seconds during a 10-s interval. "On-task" behavior was coded during any interval in which no off-task occurred.

Reliability

Graduate students trained in using the BOS served as observers. Interobserver agreement (IOA) was used to be sure that the observations were correctly measuring the target behavior and that the observations were reliable. For 52% of the observations, a second observer simultaneously yet independently coded child behavior, and IOA was calculated across these observations. The average IOA for on-task behavior was 91% (range, 80-100).

Experimental Conditions

The research took place over a 4 week summer program period. The children were split up into two classrooms. While one group was in math class, the other was in language arts. Each math and language arts session began with 5 minutes of instructions and modeling by the teacher, followed by 10 minutes of independent seatwork. Baseline and two experimental conditions, tootling and tattling, were used to evaluate the differential impact of peer attention of task engagement and work completion.

Baseline. During baseline, children were given grade level work and the following instructions:

I want you to work on math problems. Please begin here (point to the first problem) and answer each question. Do not skip any questions. If you are not sure, give your best answer. When you finish one sheet, raise your hand and I will give you another. First, write your name and today's date. [Teacher provides one model on the board.] You can do as much as you want, as little as you want, or none at all.

During each session, the teacher distributed additional worksheets when needed (after all problems had an answer), but gave no attention to any child response. If asked a question, the teacher said "Do your best work."

After 10 minutes of independent seatwork, the teacher collected all of the work. Baseline conditions were intended to sample the child's intrinsic interest and natural rates of work completion in a peer group setting. Thus, the absence of any teacher or performance related contingencies were stated clearly to the child.

Tootling. During the tootling conditions, the same general instructions stated in the baseline condition were given to the class, and the same contingencies (or lack thereof) were in place during independent seatwork. However, the following set of instructions was added:

> It is important to help others stay on task, too. While working, please watch other children, too. Later in the day, you will have a chance to praise a friend for following a rule. That child's name is on this green card.

Next, the teacher distributed a green card with one child's name to each student, making certain that a child does not receive his or her own name. These cards were mixed and passed out to the class. Each student had one peer that he/she paid attention to while working on the assignments. The green card was a reminder to look for appropriate behaviors that follow the classroom rules.

Time was set aside to provide positive peer comments after all worksheets were collected at the end of the classroom activity. Students gave positive comments to the peer that they watched throughout class. Students who gave appropriate positive feedback to their peers received a reward after the session. The teacher was sure to use the tootling checklist to verify that this experimental condition was implemented correctly.

Tattling. During the tattling condition, the same general instructions stated in the baseline condition were given to the class. However, the following set of instructions was added:

> It is important to help others stay on task, too. While working, please watch other children, too. Later in the day, you will have a chance to give reminders to a friend for not following a rule. That child's name is on this red card.

Next, the teacher distributed a red card with one child's name to each student, making certain that a child does not receive his or her own name. These cards were mixed and passed out to the class. Each student had one peer that he/she paid attention to while working on the assignments. The red card was a reminder to look for inappropriate behaviors that do not follow the classroom rules.

Time was set aside to provide corrective peer comments after all worksheets are collected at the end of the classroom activity. Students gave corrective statements to the peer that they watched during class. Students who provided appropriate corrective statements received a reward after each session. The teacher used the tattling checklist to check if this experimental condition was implemented correctly.

Each day, the experimental conditions were different between classes (math versus language arts) and were also alternated by day (e.g. Monday: Math-red cards and Language Arts-green cards, Tuesday: Math-green cards and Language Arts-red cards). During each session, on-task behavior and work completion were measured for each child during each class.

Treatment Integrity

Treatment integrity checklists were filled out daily by the teacher regarding the correct implementation of each intervention: the use of praise (tootling) and reprimands (tattling) given by the students to their peers. See attached Appendices C and D for integrity checklists.

Design and Procedures

All teachers and parents of those students involved in the summer academic program and this study received a brief description of the tootling and tattling steps. A written consent from each student's legal guardian was obtained before any part of the study took place. Teachers and

graduate students were appropriately trained in program implementation and observation measures.

An alternating treatment design was used to compare the two independent variables and their effectiveness on the dependent variables (Hains & Baer, 1989). An alternating design involves two treatments that are rapidly alternated in order to compare the effectiveness of each. Following baseline, two interventions were implemented in an alternating pattern. Each group of students had a class activity followed by positive peer comments as well as a class activity followed by corrective peer comments per day. The following day, the interventions were switched across activity, but again all students received each treatment in order to track effectiveness. During the tootling treatment, students were given an opportunity to give positive peer comments to another student at the end of a classroom activity. The tattling treatment included the same procedures but involved corrective comments rather than PPR. Prior to alternating the two treatments, a baseline phase was implemented for both classrooms. The length of baseline was staggered to help rule out the threats to internal validity, such as coincidental events (i.e., history). The study took place over a 14 day period, which included baseline and two experimental conditions.

An alternating treatment design was used because it provided an appropriate means of examining behavioral changes in response to two classroom interventions. Simultaneous comparisons of the effects of two interventions with the use of slight, quick adjustments within and across daily activities are critical for this alternating design (Hains & Baer, 1989).

The current study introduced two conditions, tootling and tattling, which were alternated to see the effects of each on work completion and on-task behavior. Eleven students were divided into two groups and the effects of baseline and alternating treatments were replicated across the two groups. The two treatment conditions represent alternative peer attention interventions, each of which has a strong empirical base. This study represented the first controlled comparison of the two strategies.

Due to inconclusive group effects, the positive peer reporting condition was modified for the final few sessions, and the tattling condition was eliminated. In order to evaluate whether more immediate consequences would produce effects, alternative peer reporting (APR) was introduced. During this condition, the same general instructions stated in the baseline condition were given to the class, but students were instructed to provide positive reports to their peers immediately after noticing appropriate classroom behaviors. In other words, the consequences were provided within, rather than following, the target session. Students could provide positive comments to any of their peers throughout the independent work sessions. Observers tallied the amount of positive peer reports that each student provided and the students could earn a reward if three positive comments were given to his/her peers. See attached Appendix E for an integrity checklist developed for this condition. The implementation of APR was staggered across classes in order to observe behavioral changes.

<div align="center">Results</div>

In order to evaluate the impact of the two treatment conditions and the alternative condition, visual inspection was used. Visual inspection allowed for distinction across groups and between treatment conditions. Baer (1977) indicated that, when using visual inspection, a difference between phases must be readily perceptible to the eye in order to be affirmed, so the graphic representation of collected data was visually examined in order to evaluate the effectiveness of treatment. The use of graphs for each participant provided observation of the

effects of tootling and tattling on work completion and on-task behaviors. Group means were graphed for each dependent variable to display the overall effects of each condition.

The current study was designed to answer the following research questions:
1. What are the effects of contingent peer attention on student engagement? This question was addressed by comparing the baseline levels of productivity and on-task to those levels achieved during positive, negative, and alternative peer reporting.
2. What are the differential effects of contingent positive, corrective, and immediate peer comments? This question was addressed by comparing the three peer reporting conditions.

Productivity

Figures 1 and 2 display the results of the experimental conditions on group levels of productivity for Group A and Group B. During baseline, Group A displayed high levels of productivity ($M = 23$, range, 4 to 34). During the alternating treatment phase, no differences were observed between PPR ($M = 25$, range, 10 to 44) and NPR ($M = 27$, range, 20 to 35), and a slight decrease ($M = 20$, range, 3 to 47) was observed when alternative peer reporting was instituted. The overall mean of the treatment conditions was 24, indicating that the peer reporting strategies, as a whole, produced no difference in productivity compared to baseline.

During baseline, Group B displayed high levels of productivity ($M = 38$, range, 4 to 69). During the alternating treatment phase, slight differences were observed between PPR ($M = 29$, range, 17 to 47) and NPR ($M = 16$, range, 10 to 25), and decreases compared to baseline ($M = 22$, range, 14 to 35) were observed when alternative peer reporting was instituted. The overall mean of the treatment conditions was 22, indicating that the peer reporting strategies, as a whole, produced decreases in productivity compared to baseline.

On-Task

Figures 3 and 4 display the results of the experimental conditions on group levels of on-task behavior for Group A and Group B. During baseline, Group A displayed average levels of on-task behavior ($M = 50\%$, range, 33 to 67). During the alternating treatment phase, no differences were observed between PPR ($M = 41\%$, range, 20 to 82) and NPR ($M = 41\%$, range, 32 to 50), and a decrease ($M = 34\%$, range, 8 to 80) was observed when alternative peer reporting was instituted. The overall mean of the treatment conditions was 39%, indicating that the peer reporting strategies, as a whole, produced decreases in on-task behavior compared to baseline for Group A.

During baseline, Group B displayed average levels of on-task behavior ($M = 59\%$, range, 34 to 82). During the alternating treatment phase, differences were observed between PPR ($M = 44\%$, range, 40 to 48) and NPR ($M = 62\%$, range, 38 to 86), and continued decreases ($M = 43\%$, range, 30 to 56) were observed when alternative peer reporting was instituted. The overall mean of the treatment conditions was 50%, indicating that the peer reporting strategies, as a whole, produced decreases in on-task behavior compared to baseline for Group B.

Idiographic Findings

In general, the following patterns were observed at the group level of analysis: First, the overall effect of peer reporting strategies, whether positive, negative, or alternative, was a slight reduction in both work productivity and on-task behavior. Second, none of the various peer reporting methods were generally more effective than the others. Table 1 displays the patterns of scores for individual children. The mean levels within each condition are displayed in order to examine the prevalence of the general effect among individual kids. Overall, these data indicate that there were very few exceptions to the overall ineffectiveness of the peer reporting methods

when compared to baseline. In only 2 of 10 cases (20%), the overall effect of the peer reporting procedures was substantially higher than baseline.

Within the peer reporting methods, however, approximately 7 of 10 (70%) children displayed a substantially higher score in one condition. Table 1 indicates that for these seven children, the most effective condition among the three peer reporting methods was at least 25% higher than the next highest condition. The most effective condition, however, varied from child to child. For two children, NPR was most effective. For two other children, PPR was most effective, while APR was most effective for three children. Thus, the effects of the three strategies was idiosyncratic, resulting in no differences between conditions at the overall group level.

Discussion

The current study evaluated the effects of three peer reporting strategies on student on-task behavior and work completion. Students were used as change agents for their peers in the classroom. Classroom observations assisted in determining differences in behavior and total work completion indicated variations in work production. Overall, findings display no effect on both academic engagement and work completion across all peer reporting conditions compared to baseline. When looking at individual student results, there were idiographic effects, with most children responding best to one of the three peer reporting methods.

Limitations

The results indicate that each peer reporting strategy was ineffective for on-task behavior and work completion; however there are multiple limitations to the current study that may have contributed to such results. In general, no effects were observed, resulting in null findings. These findings did not allow for interpretation.

Multiple PPR studies have demonstrated positive impacts on child behavior (Bowers, McGinnis, Ervin, & Friman, 1999; Bowers, Woods, Carylon, & Friman, 2000; Moroz & Jones, 2002). Limitations of the current procedures may have diminished the effects of PPR, as well as the other experimental peer reporting strategies. The verbal directions (i.e., "complete as much as you want, as little as you want, or none at all") used during this study may not have been more powerful than the effects of peer attention. In other words, the novelty of the overarching negative reinforcement effect produced by this instruction may have diminished the impact of any positive reinforcement (for appropriate *or* inappropriate behavior). Using similar procedures in a typical classroom setting in which children are encouraged to complete all work (i.e., no opportunity to "escape" work) may provide a more sensitive test of the various peer reporting conditions.

Another limitation for the current study was the behavioral observation procedure. During math and language arts seatwork, the teachers completed behavior observations, which consisted of a group of teachers watching the students work. These observations provided the students with large amounts of adult attention. This attention may have diminished the value of the peer attention provided during the peer reporting sessions, which may have impacted the strength of this contingency. To resolve this limitation, future research should provide the teachers with a more subtle way of collecting the observation data.

Across both classrooms, there may have been some variation of the quality of peer reporting that was provided. The acceptance of peer reports was somewhat subjective and students sometimes provided praise or corrective statements that did not necessarily apply to the behaviors of their peers. Having one teacher lead both large group activities with more specific examples of peer reports might improve the consistency of the quality of the reporting.

Finally, the length of the program and the protected environment may have contributed to the insignificant findings that resulted from this study. The nature of the program provided students with one-to-one interaction with teachers, which may have established differing types of peer attention as reinforcers. Using these types of peer reporting procedures in a typical classroom for a longer period of time might provide additional opportunities for positive change in a more authentic classroom environment.

Thus, the overarching limitation of the current study appeared to be the novelty of the summer school classroom environment. Once the students realized that they were not required to complete the work, it appeared as though the experimental conditions were not sufficiently effective. The students quickly learned that there were no consequences for them when they did not do the work. Even students who typically enjoyed writing stories or completing math problems showed little consistency within the experimental conditions.

Future Directions

Research should be continued in the area of peer reporting. Significant research indicates that PPR is an effective classroom and social intervention (Bowers, McGinnis, Ervin, & Friman, 1999; Bowers, Woods, Carylon, & Friman, 2000; Moroz & Jones, 2002). In this, the underlying factors of peer reporting that contribute to its effectiveness are still somewhat unclear. Additional research is needed to determine whether peer reporting strategies increase appropriate behaviors, or if such strategies solely increase the awareness of these behaviors.

In relation to the current study, further research should be conducted to examine the differential effects of varying peer reporting strategies. Rewarding peers for providing positive feedback to their classmates has shown to be an effective intervention. However, there has been little research on the effects of using peers to provide corrective feedback (i.e., tattling). Also, research comparing the use of immediate contingent praise combined with a delayed peer reporting strategy would influence the procedures used in peer reporting strategies.

Continued research on peer reporting procedures should take place in a variety of different environments. Research has shown PPR to be effective in varying environments (Bowers et al., 1999; Ervin et al., 1996; Jones et al., 2000; Ervin et al., 1998; Moroz & Jones, 2002; Hoff & Ronk, 2006). Peer reporting strategies should be altered to meet the needs of each environment. Future research should continue to evaluate the use of peer reporting across diverse classroom and social environments. It would be beneficial to further understand the effects of peer reporting at individual, small group, and class-wide levels.

Finally, PPR has been used to alter both social and classroom behaviors. The current research examined the effects of peer reporting on classroom engagement and work completion. Although the findings indicated no meaningful effects on these target behaviors, future research should continue to focus on necessary classroom behaviors that may be affected by reporting strategies. By determining additional dependent variables, peer reporting may become a more significant intervention for classroom teachers responding to varying student difficulties.

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Table 1

Mean Levels of Work Production across Condition

Student	Baseline	PPR[1]	NPR[2]	APR[3]	Pattern Q1 Q2
1	29	18	28	14	No NPR
2	___	___	___	___	___
3	26	20	31	11	No NPR
4	33	65	65	57	Yes No
5	0	0	0	3	No No
6	11	12	0	23	Yes APR
7	63	46	45	48	No No
8	27	11	1	15	No APR
9	28	15	19	27	No APR
10	66	66	15	12	No PPR
11	17	5	0	4	No No
Total	30	26	20	21	No PPR

Note: The values represent mean levels of production across math and language arts for each condition.

[1] Positive Peer Reporting
[2] Negative Peer Reporting
[3] Alternative Peer Reporting

Q1 refers to the first research question: Are peer reporting procedures generally effective (over baseline)?
Q2 refers to the second research question: Are there differential effects of peer reporting methods?
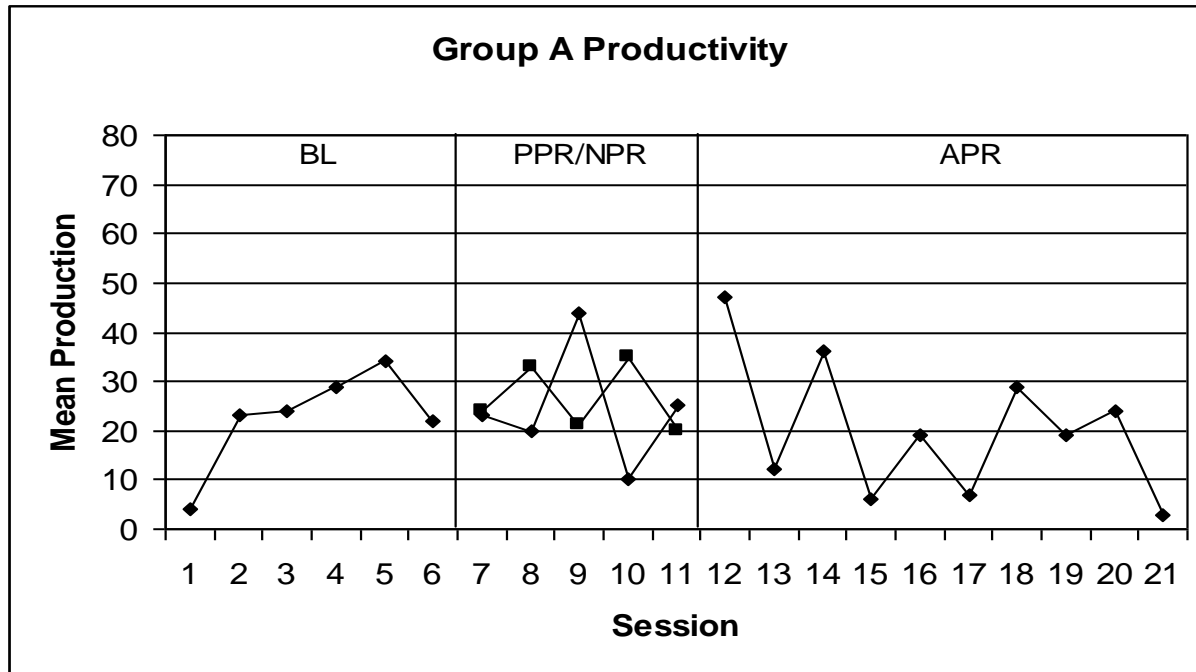
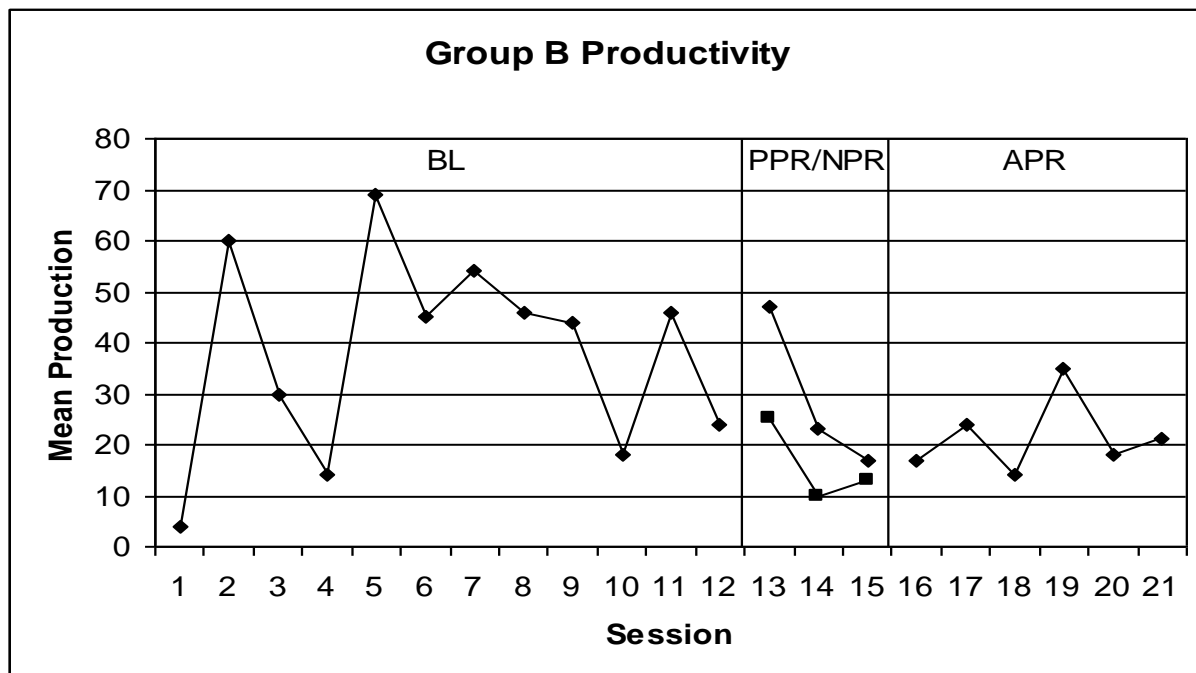Figure 1: Mean level of work production across conditions for Group A.

Figure 2: Mean level of work production across conditions for Group B.
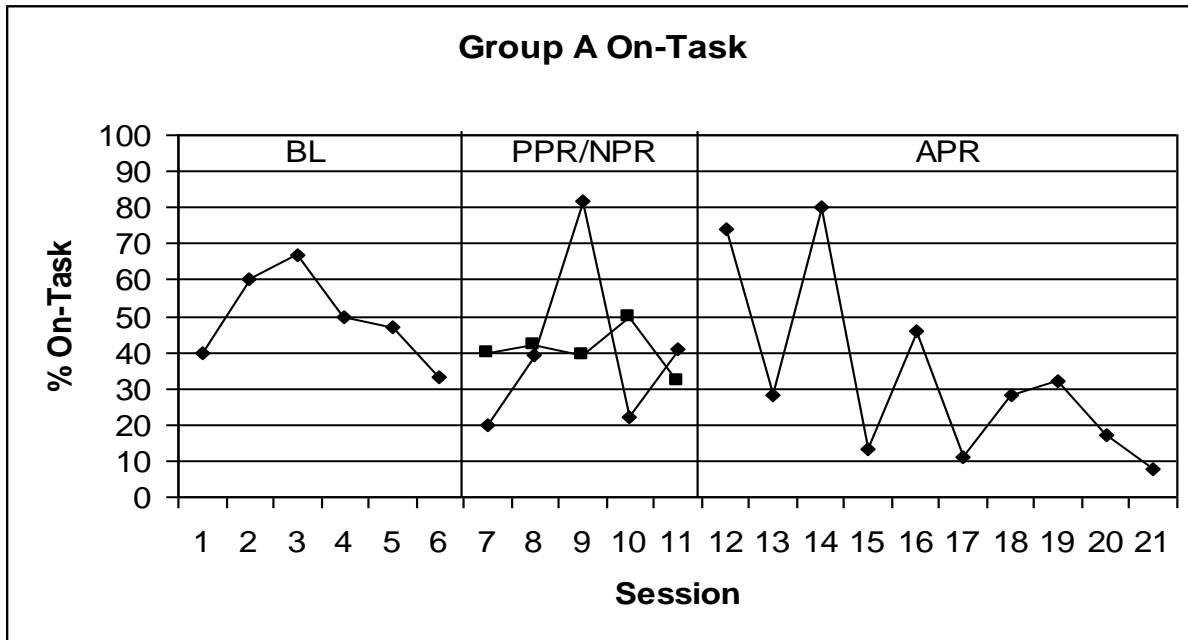
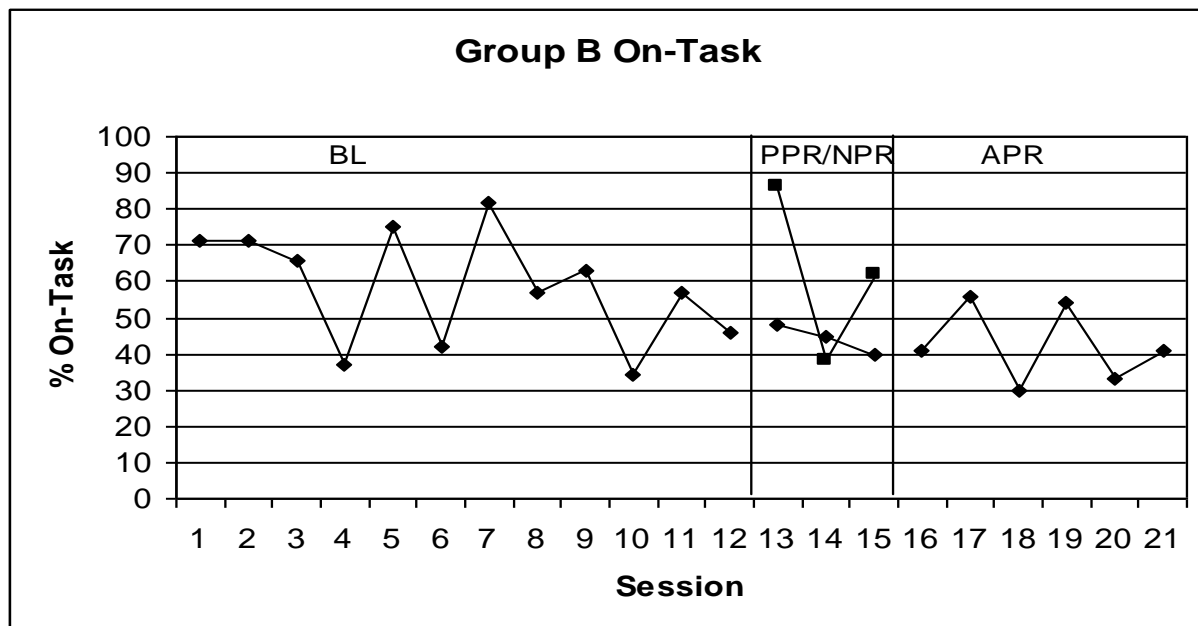Figure 3: Mean percentages of on-task behavior across conditions for Group A.

Figure 4: Mean percentages of on-task behavior across conditions for Group B.

Appendix A: Behavior Observation System

Date: _____ Observer: _____ IOA: Y N

Target Behavior(s) t1 = _____Verbal_____ t2 = _____Motor_____

Student:_____

1 on off t1 t2 T T- T+ P C- C+	2 on off t1 t2 T T- T+ P C- C+	3 on off t1 t2 T T- T+ P C- C+	4 on off t1 t2 T T- T+ P C- C+	5 on off t1 t2 T T- T+ P C- C+	6 on off t1 t2 T T- T+ P C- C+	7 on off t1 t2 T T- T+ P C- C+
8 on off t1 t2 T T- T+ P C- C+	9 on off t1 t2 T T- T+ P C- C+	10 on off t1 t2 T T- T+ P C- C+	11 on off t1 t2 T T- T+ P C- C+	12 on off t1 t2 T T- T+ P C- C+	13 on off t1 t2 T T- T+ P C- C+	14 on off t1 t2 T T- T+ P C- C+
16 on off t1 t2 T T- T+ P C- C+	17 on off t1 t2 T T- T+ P C- C+	18 on off t1 t2 T T- T+ P C- C+	19 on off t1 t2 T T- T+ P C- C+	20 on off t1 t2 T T- T+ P C- C+	21 on off t1 t2 T T- T+ P C- C+	22 on off t1 t2 T T- T+ P C- C+
23 on off t1 t2 T T- T+ P C- C+	24 on off t1 t2 T T- T+ P C- C+	25 on off t1 t2 T T- T+ P C- C+	26 on off t1 t2 T T- T+ P C- C+	27 on off t1 t2 T T- T+ P C- C+	28 on off t1 t2 T T- T+ P C- C+	29 on off t1 t2 T T- T+ P C- C+
30 on off t1 t2 T T- T+ P C- C+	31 on off t1 t2 T T- T+ P C- C+	32 on off t1 t2 T T- T+ P C- C+	33 on off t1 t2 T T- T+ P C- C+	34 on off t1 t2 T T- T+ P C- C+	35 on off t1 t2 T T- T+ P C- C+	36 on off t1 t2 T T- T+ P C- C+
37 on off t1 t2 T T- T+ P C- C+	38 on off t1 t2 T T- T+ P C- C+	39 on off t1 t2 T T- T+ P C- C+	40 on off t1 t2 T T- T+ P C- C+	41 on off t1 t2 T T- T+ P C- C+	42 on off t1 t2 T T- T+ P C- C+	43 on off t1 t2 T T- T+ P C- C+
44 on off t1 t2 T T- T+ P C- C+	45 on off t1 t2 T T- T+ P C- C+	46 on off t1 t2 T T- T+ P C- C+	47 on off t1 t2 T T- T+ P C- C+	48 on off t1 t2 T T- T+ P C- C+	49 on off t1 t2 T T- T+ P C- C+	50 on off t1 t2 T T- T+ P C- C+
51 on off t1 t2 T T- T+ P C- C+	52 on off t1 t2 T T- T+ P C- C+	53 on off t1 t2 T T- T+ P C- C+	54 on off t1 t2 T T- T+ P C- C+	55 on off t1 t2 T T- T+ P C- C+	56 on off t1 t2 T T- T+ P C- C+	57 on off t1 t2 T T- T+ P C- C+
58 on off t1 t2 T T- T+ P C- C+	59 on off t1 t2 T T- T+ P C- C+	60 on off t1 t2 T T- T+ P C- C+	61 on off t1 t2 T T- T+ P C- C+	62 on off t1 t2 T T- T+ P C- C+	63 on off t1 t2 T T- T+ P C- C+	64 on off t1 t2 T T- T+ P C- C+

Off-Task Behavior: t1,t2/total intervals: _____/_____ = _____

Appendix B: Student Work Completion

Student:_____

Date	Class	# Correct	# Completed	% Accurate

Appendix C: Treatment Integrity Checklist

Class-wide Positive Peer Reporting (Tootling) Session Checklist

1. At the beginning of the class, instruct students that this class will be a "green card class."
2. Remind the students that the green cards will be used as a reminder to look for things to keep doing, and will have the name of the peer they will be observing.
3. Instruct students to watch their peers throughout the class.
4. Pass out the green cards to the students, and then the worksheets.
5. At the end of class, review steps of appropriate praise.
6. Allow time for students to praise one another.
7. Be sure that the statements that are given are praise statements.
8. Be sure that all students have been given the opportunity praise their peer for appropriate behaviors.
9. Provide a reward to students who appropriately gave praise statements to their peers.

Appendix D: Treatment Integrity Checklist
Class-wide Negative Peer Attention (Tattling) Session Checklist

1. At the beginning of the class, instruct students that this class will be a "red card class."
2. Remind the students that the red cards will be used as a reminder to look for things to stop doing, and will have the name of the peer they will be observing.
3. Instruct students to watch their peers throughout the class.
4. Pass out the red cards to the students, and then the worksheets.
5. At the end of class, review steps of corrective praise.
6. Allow time for students to correct one another for inappropriate behaviors.
7. Be sure that the statements that are given are corrective statements.
8. Be sure that all students have been given the opportunity correct their peer for any inappropriate behaviors.
9. Provide a reward to the students who gave appropriate corrective statements.

Appendix E: Treatment Integrity Checklist
Class-wide Immediate Positive Peer Reporting (Tootling) Session Checklist

1. At the beginning of the class, instruct students that this class will be like a "green card class."
2. Remind the students that they will look for things that their peers should keep doing. Also, instruct the students to give positive reports to their peers immediately when noticing those appropriate behaviors.
3. Model positive reports for the students, and provide them the opportunity to give additional examples.
4. Instruct students to watch their peers throughout the entire class.
5. Pass out worksheets/journals.
6. During the session, be sure that the students are providing appropriate praise statements. If negative statements are provided, simply remind the students to tell their peers the good things that they are doing.
7. At the end of the session, provide the students who appropriately provided positive feedback with a reward.