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TEACHING BYSTANDER SKILLS THROUGH FLUENCY TRAINING

by

Emilee Hagloch

A thesis submitted in partial fulfillment
of the requirements for the degree

of

EDUCATIONAL SPECIALIST

in

Psychology

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2015

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ABSTRACT

Teaching Bystander Skills Through Fluency Training

by

Emilee Hagloch, Educational Specialist

Utah State University, 2015

Major Professor: Donna Gilbertson, Ph.D.
Department: Psychology

Research has demonstrated the effectiveness of bullying interventions targeted at bystanders; however, a fluency component has not been used in any studies to teach these skills. The present study investigated the inclusion of fluency training to teach and enhance skills that can be used when responding and defending the victim in fourth- and fifth-grade students ($N = 55$ and $N = 53$, respectively). All students participated in a modified version of the Bully Prevention in Positive Behavior Support for Elementary School program and filled out pre- and postrating scales to determine participant roles related to bullying. An experimental group also participated in fluency training sessions to teach bystander skills. Results showed that there was a significant interaction between group and time showing more growth on correct responses per minute (CRPM) for the experimental fluency group than the control group on bystander skills fluency task. Additionally, results showed that defender role scores significantly increased for the fluency group at post but not for the control group. There were no significant differences

for the reinforcer or outsider role scores. Implications of these findings for school-based practice and research are discussed.

(80 pages)

PUBLIC ABSTRACT

Teaching Bystander Skills Through Fluency Training

by

Emilee Hagloch, Educational Specialist

Utah State University, 2015

This study examined the effectiveness of an intervention that adds a fluency component to teaching bystanders how to defend other students during a bullying situation. Bystander skills were taught to fourth- and fifth-grade classrooms and fluency training was added to several of these classrooms as an experimental group. Students also filled out rating scales to find out what their participant role in bullying situations was (defender of the victim, outsider, bully, victim of the bully, assistant to the bully). Results showed that there was more growth on the fluency scores for those who participated in the fluency training as opposed to those who did not. Results also showed that the scores of the defender of the victim role increased for those students who participated in the fluency training as well.

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Emilee Hagloch

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CHAPTER I

INTRODUCTION

There has been continued concern about bullying in elementary schools for a number of years. According to student reports and observations, bullying episodes occur, on average, two times per hour on playgrounds and in classrooms (Craig, Pepler, & Atlas, 2000). Bullying can have negative effects on both the victim and the bully. Research has shown that victims of bullying are at higher risk for psychological difficulties, including: increased fighting, poorer relationships with classmates, increased loneliness, decreased ability to make friends, internalizing problems, feeling less safe in school, and increased psychosomatic symptoms (headache, stomachache, backache, dizziness; Due et al., 2005; Nansel et al., 2001; O'Brennan, Bradshaw, & Sawyer, 2009). Additionally, long-term negative effects include: depression, shyness, difficulty with trust in relationships, and increased violence (Jantzer, Hoover, & Narloch, 2006; Kaltiala-Heino, Fröjd, & Marttunen, 2010; Olweus, 2011; Ttofi, Farrington, & Lösel, 2012). Being the bully is also associated with difficulties later in life. Studies have shown that children who were once bullies are more likely to commit crimes when adults (Olweus, 2011). Given the negative effects of bullying, it is important to understand the causes of bullying and how to prevent it.

Bullying involves more than just the bully and the victim. One participant of interest is the bystander, or someone who is present that may or may not participate in the bullying. Bystander theory, based on the bystander effect (Latane & Darley, 1968), can be used to understand when and why bystanders choose to support those who need help.

Latane and Darley suggested there is a 5-step decision model that facilitates bystander support. The bystander must (a) notice the event, (b) interpret the event as a need for help, (c) decide whether to take personal responsibility, (d) decide if he or she knows how to intervene, and finally, (e) intervene. A study done by Midlarsky (1971) showed that bystanders were more likely to respond in an emergency situation if they feel competent and know how to respond.

Bystanders, play a potential supportive role for the victim in bullying episodes because bullying usually occurs within a social group context. O'Connell, Pepler, and Craig (1999) observed that peers were present 80% of the time when a bullying incident occurred at recess in elementary schools and 54% of the students that were present did not help the victim. However, only 25% of students present defended the victim by asking the bully to stop or by supporting the victim. Importantly, although few actually defend, when a bystander was observed intervening to support the victim, he or she was effective in stopping bullying 57% of the time (Hawkins, Pepler, & Craig, 2001). Alternatively, other bystanders joined in and modeled the bullying behavior 21% of the time. Those present may be reinforcing the bullying by paying attention to it or may appear to be consenting to the behavior by not taking action against it.

In order to increase bystander support for the victim, it has been hypothesized that students need to know what to do and feel competent enough to intervene. Several studies have examined the effects of an intervention that targets instruction on bystander skills. Results indicate that these types of interventions may be effective in both increasing positive bystander support, as well as decreasing bullying in schools (Kärna et al., 2011;

Ross & Homer, 2009). Some limitations of these studies, however, indicate that the results for bystander behavior may not be retained long-term. Additional research is needed to increase the retention of these skills.

Given that skill acquisition requires effective instruction, there are different types of effective instruction that addresses four stages of learning: acquisition, fluency performance, retention and generalization of the skill. Prior instruction on bystander behaviors has been focused on the teaching of acquisition of skills. Fluency, another key instructional target, is defined as the fluid combination of accuracy plus speed that increases proficient automatic performance on tasks (Binder, 1996). Fluent, competent task performance has been studied through an instructional method called fluency training. Fluency training can be defined as a method of practicing over and over until fluency is achieved, making the learned behavior more natural and automatic. Fluency has shown to be effective because it is more likely than acquisition training to lead to longer retention of information and learned skills (Binder, 1996), increase endurance to use skill for longer periods of time despite distractions and without extrinsic reinforcement (Binder, 1996; Brady & Kubina, 2010; McDowell & Keenan, 2001), facilitate acquisition of higher-level skills (Binder, 1996) and have greater ability to apply skills or generalize skills in real life settings (Johnson & Layng, 1992). Although fluent performance is critical on any type of skill, fluency training has mostly been studied and shown to be an effective instructional method in school settings for: reading (Kuhn & Stahl, 2003; Martens et al., 2007), math (Singer-Dudek & Greer, 2005), and several populations, including, students with autism (Holding, Bray, & Kehle, 2011; Weiss,

Pearson, Foley, & Pahl, 2010), and ADHD (McDowell & Keenan, 2001). It has also been shown to generalize to vocational skills, physical and cognitive skills in traumatic brain injury patients (Chapman, Ewing, & Mozzoni, 2005), and for students in residential settings with neuropsychiatric diagnoses (Hartnedy, Mozzoni, & Fahoum, 2005).

Fluent performances of social skills have also been theorized to be an important factor in contacting natural reinforcement, thus, social deficits may be due to a fluency deficit (Gresham, Sugai, & Horner, 2001). Accurate but not yet fluent skills render an unpolished or awkward performance that may not be proficient enough to function as needed. Gresham and colleagues propose that students with fluency deficits in social skills do not need to be retaught skills to enhance accuracy, but need more practice, rehearsal or differential reinforcement for fluent behavioral performances (Gresham et al., 2001). Results from one study showed that using a fluency criterion in a social skills intervention with preschool children may be effective for increasing social interactions (Ducharme & Holborn, 1997). Although there is substantial support in fluency training on academic performance, presently, fluency training has not been used as an instructional strategy in other social skills intervention studies. Given that fluency as well as acquisition training is a critical part of functional skill development, research on the effects on fluency training on bystander skills is warranted. The purpose of this study was to examine the degree that fluency training can be used to enhance skills that can be used when responding and defending a victim during a bully situation. Moreover, the study examined the effect on fluency training of bystander behaviors on student-rated bystander roles.

CHAPTER II

LITERATURE REVIEW

Bullying in the School Setting

Bullying has been a source of concern in the schools for a number of years. Bullying can be defined as: intentional and repeated acts that take physical (e.g., hitting, theft), verbal (e.g., harassment, threats, name calling), and relational (e.g., spreading rumors, influencing social relationships) forms, and typically occur in situations where there is a power or status difference (Olweus, 1993). According to the Bureau of Justice Statistics (Robers, Truman, & Zhang, 2012), students ages 12-18 were victims of about 828,000 nonfatal victimizations at school, including 470,000 thefts and 359,000 violent victimizations, 91,400 of which were serious violent victimizations (Robers et al., 2012). O'Brennan and colleagues (2009) showed that more than 36% of students in grades 4-12 reported being frequently involved in bullying.

Impacts of Bullying

Bullying is known to be a source of distress for the victim and may be associated with difficulties across many domains. Some difficulties include increased fighting, poorer relationships with classmates, increased loneliness and decreased ability to make friends (Nansel et al., 2001). Furthermore, victims of bullying report more internalizing problems (i.e., sadness, loneliness, and worry), feeling less safe at school, and more isolated from school than children who are not involved in bullying (O'Brennan et al.,

2009). Younger children who are frequently involved in bullying are also more likely to report impulsive, aggressive behaviors (Nansel et al., 2001). Effects of bullying appear to be consistent across nationalities. Results from an international cross-sectional survey of 28 countries conducted by Due and colleagues (2005) indicated that children ($N = 123,227$) ages 11, 13, and 15 who are involved in bullying are more likely to show signs of physical symptoms (headache, stomachache, backache, dizziness) as well as psychological symptoms (bad temper, feeling nervous, feeling low, difficulties in getting to sleep, morning tiredness, feeling left out, loneliness, helplessness).

Additionally, various studies give evidence that there are also long-term effects of bullying for the victim. Kaltiala-Heino and colleagues (2010) showed the long-term effects on victims of bullying by examining the relationship between bullying and depression with ninth graders ($N = 2,070$) in Finland by having students complete the Beck Depression Inventory and report either being a bully, being a victim to bullying, and/or being excluded by peers. Results after the 2-year follow up (11th grade) showed that all types of involvement in bullying among boys was predictive of depression, and all types of bullying and being isolated from peers was predictive of depression among girls. Results from a study conducted to examine the correlation in long-term effects of bullying indicate that adults who report being bullied when young report greater shyness ($R^2 = .24, p < .01$) as well as difficulty with current trust ($R^2 = .31, p < .01$) and friendship satisfaction ($R^2 = -.23, p < .01$; Jantzer et al., 2006). Additionally, research shows that being bullied when younger can lead to increased violence as an adult. Results from a meta-analysis, including 15 studies that presented data on the association of bullying

perpetration with aggression and violence later in life, showed that being a victim when young increases likelihood of being violent later in life by one third, even after controlling for other childhood risk factors (Ttofi et al., , 2012).

Being a bully is also associated with difficulties later in life. Research shows that children who were bullies when younger are more likely to commit crimes and be violent when older. A longitudinal study with adolescents ($N = 780$) by Olweus (2011) examined the relationship between being a bully and crime convictions later in life. Results showed the total number of convictions was 925 and the bullies accounted for 278 of them, or 30%. The average number of convictions was 0.92 for the nonbullies and 3.81 for the bullies. Out of the 58 identified bullies in the sample, 55% of them were convicted of crime later in life and about 36% had been convicted of at least three crimes. Because of the negative impact bully behavior may have on multiple participants, it is important to look at reasons why bullying continues to happen, despite efforts of schools to intervene.

Reasons for Bullying and Peer Effects

The issue of why bullies bully and what characteristics bullies share has been a topic of discussion in research. Several reasons that bullies engage in bullying behavior have been proposed and these reasons are linked to peer behaviors that maintain bullying. First, studies have shown that bullies are often victims themselves. About half of those who bully, report to be victims as well (Nansel et al., 2001; Veenstra et al., 2005). Duncan (1999) found that bullies often come from families where parents use more physical forms of discipline, indicating that some school bullies are victims at home.

Bullying behaviors are being modeled to the victim who, perhaps, interprets the bullying as an acceptable, functional behavior. Second, research shows that the most common reported reasons for bullying included the desire to feel powerful and the desire for attention (Olweus, 1993; Ziegler & Rosenstein-Manner, 1991). Bullies often feel they will achieve success through their aggression (Veenstra et al., 2005). In fact, research has shown that some bullies are considered the “popular” kids and are shown to have high social class (Parkhurst & Hopmeyer, 1998), which indicates that if the bully perceives their behavior as increasing their social status, they are unlikely to stop the behavior. Veenstra and colleagues found that other bullies are disliked by other students; however, these students are less isolated and alienated than victims. When peers do not personally like those who bully others, they are still likely to side with the bully in part to protect their social status, reputation, and physical safety (Juvonen & Galvan, 2008; Salmivalli, Voeten, & Poskiparta, 2011). This behavior, in turn, reinforces the bully.

Peer attention that abets those who bully play an important role in maintaining the bullying behavior. Alternatively, research has shown that these factors may also result in peers’ attention towards defending the victim. Rigby and Johnson (2006) reported that believing that friends expected them to support the victims significantly contributed to explain students’ willingness to defend. In a recent study, Pozzoli and Gini (2012) expanded this finding by reporting that actual defending behavior among early adolescents was positively predicted by the perceived peer pressure for intervention, above and beyond the effects of some individual characteristics (attitudes toward bullying, personal responsibility for intervention, and coping responses). Knowing the

role that peers can play on bullying situations can help us further look at the process of bullying.

Bystander Effect

In school settings, bullying episodes between a bully and victim frequently takes place in the presence of student bystanders. A bystander is an individual who is a witness of acts of aggression, who may or may not take part in an event or situation (Stueve et al., 2006). Research indicates that bystanders more often fail or are slower to help a victim in an emergency situation when there are others present, as opposed to being the only one in the vicinity (Thornberg, 2010). This phenomena is known as the bystander effect.

Bystander effect has been tested and replicated in number of situations.

In one study that examined this phenomenon, participants were asked to wait (either alone or with others) in a room. As smoke began to fill the room where they were sitting, reactions of the participants were recorded. Results revealed that 75% of participants, who waited alone, intervened, while only 10% of those who waited with two passive bystanders reported the event. This study suggests social influence and pluralistic ignorance explanations for bystander inactivity, meaning that individuals look to others for information about a situation before labeling it as an emergency (Latane & Darley, 1968).

This phenomenon has also been shown to be applicable in child populations. A field study done by Thornberg (2007) examined support from bystanders during a real life situation of a fifth-grade student who had gotten hurt. He observed that a majority of

the children in the class ignored the child and continued with their expected routine. Thornberg conducted interviews with the children afterward to gain information on why the children did not try to help. Through interviews, he found a number of reasons why they did not help included not feeling they were skilled helpers, feeling that the responsibility should fall on the teacher to help, believing it was not their responsibility, and believing it was not important or a real emergency. This indicates that for children to help they need to feel like they are skilled to handle the situation and that they are needed. The bystander effect can also play an important part in bullying situations.

Bystanders in Bullying

Given that the bystander effect can be applicable to children and we know that bullying involves more than just the bully and victim and occurs in social contexts, bullying is not just an individual process. In addition to the bully and victim, bystanders are frequently present within the social context of bullying episodes. An observational study of elementary children at recess conducted by O'Connell and colleagues (1999) found that students join in with the bully about 21% of the time. They also found that the students do not support, help the victim, or leave the bullying situation 54% of the time. A student's presence without helping the victim may reinforce the bully by potentially communicating to the bully that (a) his/her behavior is acceptable, possibly admired, and (b) he/she does not have to fear retaliation from peers (Salmivalli et al., 2011). Other observational data obtained in school settings show that in 80% of bullying situations, bystanders are present (Hawkins et al., 2001) but only 17% of students typically defend

the victim (Salmivalli, Lagerspetz, Bjorkqvist, Osterman, & Kaukiainen, 1996).

A study conducted in Finland (Salmivalli et al., 2011), involving 8,248 students across 429 classrooms in third and fifth grades examined, the importance of bystander behaviors and attitudes on outcomes of bullying in bullying situations. Participants were asked to fill out an internet-based questionnaire that measured self-reported bullying, bystander behaviors, anti-bullying attitudes, and empathy toward victims. Results indicate that student reports of frequency of bullying in a classroom was negatively associated with reports of defending and positively associated with reinforcing. These results imply that bystanders may influence the frequency of bullying. Similarly, it has been shown that when bystanders intervene to support the victim, they are effective in stopping bullying 57% of the time (Hawkins et al., 2001).

Bystander Theory

Given the bystander role in bullying, one aspect of bullying that has gained interest in research recently is the phenomenon of the bystander theory, which is based on the bystander effect. Darley and Latane (1968) suggested there is a five-step decision model that facilitates bystander support. The bystander must (a) notice the event, (b) interpret the event as a need for help, (c) decide whether to take personal responsibility, (d) decide if he or she knows how to intervene, and finally, (e) intervene. Pozzoli and Gini (2012) examined whether or not this model is supported when explaining defending and passive bystanding behavior in bullying situations during late childhood and early adolescence. They focused mainly on the second, third, and fourth steps of the model.

Fourth, fifth, seventh, and eighth graders ($N = 759$) were recruited from 18 primary and 12 middle schools. Participants completed a series of self-report questionnaires that measured: defending and passive bystanding behavior during bullying episodes, attitudes toward bullying, personal responsibility, coping responses to observations of bullying and perceived peer and parent normative pressure. Overall, results indicated that the model is useful for distinguishing a number of personal correlates of defending and passive bystanding behavior. Specifically, results indicated that having positive attitudes toward victims led students to feel a higher personal responsibility for intervening. Additionally, both attitudes and responsibility were positively associated with the student's choice to adopt coping strategies and negatively associated with adopting distancing strategies. Results also indicated that the expectations of peers and parents significantly predicted both positive defending behaviors and individual attitudes, as well as responsibility, and coping skills. Particularly, perceived peer pressure significantly predicted passive bystanding behavior ($r = -.10, p < .05$), attitudes toward bullying ($r = .09, p < .05$) and approach coping strategies ($r = .09, p < .05$), while perceived parent pressure significantly predicted defending ($r = .10, p < .01$), passive bystanding ($r = -.11, p < .01$) and distance coping strategies ($r = -.12, p < .01$) in primary school kids. Given the positive associations between bullying and defending bystander behaviors, it may be helpful for bullying prevention interventions to target the bystander and promote positive bystander behavior that may reduce bullying.

Interventions Targeted at Bystanders

Several studies have examined the effects of bullying interventions targeted at bystander support that would support victims and stop bullying during bullying situations. Ross and Horner (2009) investigated the effects of a Bully Prevention-Positive Behavior Support (BP-PBS) intervention on bully and bystander behaviors in three elementary schools. Six students, two from each school, were nominated to participate by administrators based on aggressive behaviors towards peers. The focus of the program was teaching students what respectful behavior looks like and how to handle situations in which someone is not respectful toward you or someone else. Students were taught a three-step response (stop, walk, talk) to decrease potential social reinforcement, which is peer attention, from bystanders when disrespectful behavior is occurring. As part of the program, students first learn how to say “stop” to disrespectful behavior from a peer or when observing another student getting disrespect from peers. If this step is not effective, the students learn to walk away or help a peer walk away in order to immediately eliminate peer attention. The last step teaches them to talk to an adult when the stop and talk steps do not work and how to reply when a trained staff responds to a student with a problem behavior. This BP-PBS program is designed to be a school wide program with the focus being both prevention and student support. The results of this study showed a decrease in the frequency of aggression from an overall mean of 3.1 at baseline to an overall mean of 0.9 (72% decrease) incidents once the BP-PBS intervention had been fully implemented. The intervention was also associated with increases in appropriate responses to problem behaviors. Results showed an increase for victims saying “stop” by

28%, walking away was a 10% increase, delivering a positive response an 11% decrease, and delivering a negative response showed a 19% decrease. Results for bystanders showed similar outcomes of 21% and 11% increases observed of bystanders saying “stop” and helping the victim walk away, respectively. Delivering a positive response and a negative response showed 22% and 10% decreases, respectively. These results support the hypothesis that an intervention focused on training students to support themselves and support others may increase bystander support during disrespectful situations and decrease overall disrespectful behavior.

Kärnä and colleagues (2011) conducted a large-scale study in Finland schools using a comprehensive program called the KiVa Anti-Bullying Program. The study used a large sample of 8,237 fourth through sixth graders. Participants were randomly assigned to the KiVa intervention or control condition. The teachers in the intervention group gave ten lessons to the students (20 hours altogether) throughout the school year. The intent of the program was to (a) raise awareness of the role that the group plays in maintaining bullying (b) increase empathy toward victims, and (c) promote strategies of supporting the victim. One feature of the program is an anti-bullying computer game that is to be played between lessons and consists of five levels, each of which had three components: I KNOW, I CAN, and I DO. Students were able to use the game to learn new information and test existing knowledge about bullying (I KNOW), acquire skills to act appropriately in bullying situations (I CAN), and receive encouragement to make use of their knowledge and skills in real-life situations (I DO). In addition, classroom rules were modified to incorporate anti-bullying objectives throughout the lessons, KiVa anti-

bullying posters were displayed around the school, a bully prevention guide was sent to parents, and recess monitors wore bright vests to make adult support and supervision more visible to students. Students were asked to fill out an Internet-based questionnaire that measured self-reported bullying, bystander behaviors, antibullying attitudes, and empathy toward victims.

The differences between schools that implemented KiVa and control schools were examined using multilevel modeling, after controlling for gender and age. Results showed that compared to the control group, the KiVa anti-bullying program decreased victimization as reported by peers on the mid-year assessment ($b = 0.167, p < .008$) and on the end of the year assessment ($b = 0.309, p < .001$). Victimization also decreased according to self-reports on the end of the year assessment ($b = 0.154, p < .001$). Furthermore, results show that bullying decreased according to self-reports ($b = 0.085, p = .012$) but were not statistically significant according to peer reports ($b = 0.130, p = .095$). When evaluating bystander changes relative to the school control group, the KiVa Anti-Bullying Program increased bystanders' defending behaviors ($b = 0.110, p = .046$) on the mid-year assessment; however, by the end of the year, results were no longer significant ($b = 0.080, p = .251$). Bystanders aided ($b = 0.131, p = .011$) and supported ($b = 0.168, p = .019$) the bully less, thus decreasing bystander destructive behaviors. These results indicate that a program that targets the group process of bullying in order to teach children to not tolerate bullying and defend in bullying situations may help reduce bullying but may not be retained long term.

Additionally, a recent meta-analysis was conducted by Polanin, Espelage and

Pigott (2012) examining the treatment effects of bullying prevention programs on bystander intervention behavior. Studies were included if they involved a school-based intervention that focused on changing the bystanders intervention behavior. The meta-analysis was conducted on 11 studies from the United States (7) and Europe (4) that included 12,874 children. Results revealed that in general, the intervention increased defending behavior of bystanders in bullying situations 20% of one standard deviation more than control groups ($g = .20$). Although bystander behavior has been shown to increase with school wide interventions, many students are still not using the skills as expected and therefore may not sustain intervention effects over time. Thus, additional training or instructional strategies may further increase bystander support and decrease bullying behavior.

Bystander Skills

Bystander behaviors are specific helping behaviors in social settings that need to be learned with effective instruction. Helping skills are comprised of verbal and nonverbal responses that must occur in a potentially stressful highly contextual situation. Behaviors include supporting the victim by trying to make others stop bullying, helping the victim leave the situation, or telling an adult about the bullying (Kärnä et al., 2011; Polanin et al., 2012; Ross & Horner, 2009). Gresham and colleagues (2001) hypothesized that there were various deficits in social processing that may account for the lack of effective social skills including skill acquisition, performance or fluency deficits. According to their theory, acquisition deficits are the absence of knowledge for executing

skill or failure to discriminate which social behaviors are appropriate in specific situations (e.g., “can’t do”). Performance deficits are when the skill is present in repertoire, but student fails to perform at acceptable levels (e.g., “won’t do”). Fluency deficits happen when a lack of exposure to sufficient or skilled models of social behavior, insufficient rehearsal/practice or low rates or inconsistent delivery of reinforcement of skilled performances are present. Each type of skill deficit would require different instructional strategies, similar to those required for academic skills training. For example, the authors propose that students with fluency deficits in social skills do not need to be retaught skills to enhance accuracy, but need more practice, rehearsal or differential reinforcement for fluent behavioral performances.

Prior studies have primarily focused on teaching bystander skills using modeling and role-play to assist in skill acquisition (Kärnä et al., 2011; Ross & Horner, 2009). A review of the literature for this proposal found no studies that noted or addressed performance or fluency deficits. Although skills performed in social settings, such as bystander skills, are also learned behaviors that require effective instruction, there are currently no studies found on fluency training on bystander skills rates. The following section discusses the literature on effective fluency building instruction.

Fluency and Instruction

According to Holding and colleagues (2011), learning occurs within an instructional hierarchy framework of skill building (Haring, Lovitt, Eaton, & Hansen, 1978). The first learning level is accuracy, where a student first learns how to perform a

skill correctly with modeling, prompts, and guided practice. The second level is fluency, when the skill becomes more effortless for the student with extensive practice. The third level is maintenance, where the skill will be maintained over time without any practice. The fourth and final level is generalization, which is the ability for the child to apply learned skills in new and novel ways.

Fluency is known as the fluid combination of accuracy plus speed that increases proficient automatic performance on tasks (Binder, 1996). That is, fluency is assessed as the rate in which a skill is accurately performed. Common academic fluency measures include: words read orally per minute, digits written per minute and words written per minute for reading, math and writing respectively (Binder, 1996).

Fluency building training is just like practice. Fluency training can be defined as a method that combines accuracy plus speed of responding that enables competent individuals to function efficiently and effectively in their natural environments. Other names that may be used instead of fluency training are overlearning or precision training. Motivational strategies such as contingent reinforcement and goal setting can also be employed to increase learning rates (Skinner, 2008). Overall, fluency training is brief timed practice trials to improve behavior that may or may not include goal setting, feedback, and the presence of intrinsic or extrinsic reinforcement (Kubina, 2005).

Fluency building works to make the behavior more automatic, which then makes a person able to more readily adapt behavior as needed in different situations. Additionally, a proficient behavior is more likely to be used and maintained under a more natural reinforcement schedule, which is less dense and less systematic because it is

intermittent. Proficient behavior is also more accurately used over time and with fewer errors. Increases in performance rates often lead to longer independent use of skills requiring fewer instructional strategies, such as error correction and are more responsive to delayed feedback and reinforcement (Wolery, Bailey, & Sugai, 1988). Finally, fluency training leads to a more natural and less hesitant skill, which is more easily recognized by others. Possible benefits of using fluency training include: longer retention of information and learned skills, increased endurance despite distractions and without extrinsic reinforcement resistance to distraction, faster acquisition of higher-level skills and greater ability to apply skills or generalize skills (Binder, 1996; Brady & Kubina, 2010; Johnson & Layng, 1992; McDowell & Keenan, 2001). Evidence of fluency training outcomes in the current fluency literature will be discussed in the following section.

Effects of Fluency Instruction on Skill Performance

Fluency training has primarily been studied and shown to be an effective instructional technique in the literature in school settings for reading (Kuhn & Stahl, 2003; Martens et al., 2007), math (Singer-Dudek & Greer, 2005), and vocational skills and physical and cognitive skills (Chapman et al., 2005). Fluency training has also been effective on skills with students with developmental disabilities and behavior disorders on math skills (Singer-Dudek & Greer, 2005), students with autism on identifying nouns with pictures and behavioral interventions (Holding et al., 2011; Kubina, Morrison, & Lee, 2002), students with ADHD on identifying letter sounds (McDowell & Keenan, 2001), and students with neuropsychiatric diagnoses on math and reading (Hartnedy et

al., 2005).

Singer-Dudek and Greer (2005) compared a fluency procedure with a master procedure to examine long-term maintenance on complex math skills in two separate experiments. Students were selected for participation based on prerequisite skills and randomly assigned to one of the training procedures (fluency or mastery). After initially learning the skill, students were tested 2 months later to check retention. Two months later, the students in the fluency group performed between 83% and 100% correct on the task, while the mastery students performed between 17-83% correct. These results indicate that students taught under the fluency instructional condition maintained the composite skills more readily than the mastery condition. Similar results were found for reading. Martens and colleagues (2007) evaluated the effects of a fluency-based reading program with second- and third-grade students. Improvements were calculated through CBM-R survey level probes at the beginning and end of the intervention, which was conducted across 6-8 weeks. Results showed that students in the intervention group at both grade levels showed large gains in oral reading fluency on trained passages the same day of training, and these gains were similar or even larger following the 2-day retention period relative to baseline performance without intervention. These results were also shown to generalize on untrained passages. Results of this study show the effectiveness of fluency training on both retention and generalization in reading. Results from other studies have shown retention, or maintenance (Lee & Singer-Dudek, 2012; Singer-Dudek & Greer, 2005), endurance, or accuracy (Lee & Singer-Dudek, 2012; McDowell & Keenan, 2001), and generalization (Johnson & Layng, 1992) on academic tasks.

Although several researchers have proposed that fluency building is an important aspect of social skills training, presently, only one study was found that examined the effect of fluency training on the enhancement of positive social skills (Sheridan, Hungelmann, & Maughan, 1999). A study conducted by Ducharme and Holborn (1997) examined the effectiveness of a social skills training on five preschool children with hearing impairments in increasing social interactions using a fluency component within the instruction. Participants were chosen based on the following criteria: (a) their primary mode of communication was oral, (b) they had no additional disabilities that would interfere with performing social skills, (c) absence of diagnosed psychiatric disorder, and (d) a low mean percentage of social interaction. Instructions, modeling, prompting and reinforcement were also used to teach target behaviors. Target behaviors included: play organizing, sharing and cooperating, and assisting. Intervention involved training on target behaviors, then five minutes of play when target behaviors and number of interactions were observed and recorded. The fluency component required the child to find a playmate within 30 seconds. If, after 30s the child was unsuccessful in securing a play partner, he/she was given a more direct prompt. If, after 30 more seconds the child was still unsuccessful, he/she was shown the skill again through modeling and then asked to replicate what was just modeled. This portion of timed practice trials and feedback was part of the fluency criterion that was incorporated into the study. Thus, there was no rate-based measure indicating a number of responses per minute in this study. Generalization probes in the treatment conditions included letting the children choose their play partners and choose what they play, rather than having complete structure. Results indicated that

after the intervention, the percentage of social interactions increased during a 5 minute play time, but generalization of the skills only occurred after the generalization probes were implemented. Although a number of instructional strategies were used to enhance accuracy and generalization, researchers also believed that the use of the supplementary procedures, such as the fluency criterion, contributed to this generalization. In sum, fluency training has been studied in many academic areas, however, a study is yet to be conducted that uses fluency rate measures to examine social skills.

Bystander Skills and Fluency Building

To be functional, many skills must be performed at a certain rate of speed. Fluent performance is more likely to lead to successful efforts that will reinforce and maintain skills to be used in natural environments. For example, fluent reading with automatic word decoding skills leads to better comprehension or fluent math facts lead to more proficient completion of more complex math problems (Binder, 2010). Thus, a focus on response rate measurement can be applied to many types of skill training programs with the goal to produce proficient performance.

Bystanders must be taught skills that allow them to quickly determine when support is needed and to automatically know what to do or say in a manner that will successfully stop bullying or support the victim. Acknowledgment or praise of a bystander's efforts may also help increase future support.

Although bystander theory provides key components of helping behaviors that are most likely to be used to support those who need help, training on skills to use in social

settings is difficult for several reasons. First, various types of bullying that can occur create the need to teach a fluent repertoire of bystander behaviors that can also be modified to meet complex situations. Second, emotional arousal that can occur in bullying situations, including anxiety and anger, may also compete and inhibit supportive bystander behaviors that are not yet automatic.

Prior interventions on bystander skills trainings have focused on acquisition using modeling and role-play, which limits the number of examples and response opportunities due to time constraints. Few practice opportunities often result in a lack of application or maintenance of skill use in appropriate situations after instruction. The addition of fluency training, however, may be an efficient way to provide practice with more exemplars with different cues and situations within a shorter period of time to facilitate generalization of skills to complex social settings. Fluency practice consists of opportunities to perform a skill as many times as one can in a brief period of time (Miller, Hall, & Heward, 1995; Miller & Heward, 1992). Given that there is a strong research base that supports the positive relationship between number of response opportunities and academic learning, and a negative relationship between number of response opportunities and problem behavior (Partin, Robertson, Maggin, Oliver, & Wehby, 2010; Sutherland, Alder, & Gunter, 2003), providing students with practice to build both speed and accuracy on newly learned skills is an important teaching strategy.

According to Binder (2010), there are ceilings that limit opportunities to respond and behavior pace during instruction. These include measurement-defined ceilings and procedure-imposed ceilings. Measurement-defined ceilings are the limits imposed on

measurement sensitivity by use of percent correct and absence/presence of methods of evaluation that lack standard units of measurement and ignore the time dimension. In other words, rather than seeing percent of how many times a bystander intervenes, seeing how many times they intervene in a specified amount of time would assess proficiency. Procedure-imposed ceilings happen while teaching procedures; the materials or devices impose limits on the number of responses that a learner can make per unit of time. One purpose of fluency involves generalization, which cannot occur if students are not having opportunities to respond to sufficient exemplars of different bullying stimulus conditions or responses during training (Stokes & Baer, 1977). Fluency training practice and measurement procedures must be designed to remove measurement ceilings to allow the performance of critical components and accelerate to proficient levels. One procedure to remove ceilings may be to display a number of pictures of different situations, with different peers, in different settings and have students recognize types of bully situations and report what to do or say to different pictures. This would provide ample number of opportunities to be able to generalize. Developing proficient performance in this manner may also help with social information processing in the natural setting, that is, quick, cognitive understanding of how to perceive and interpret the meaning of social cues in the environment, generate the correct solutions to social dilemmas or problems, and make proficient behavioral decision about how to respond. Given that both acquisition and fluency building are important parts of instruction, research on fluency building strategies to increase responses rates of bystander supportive behaviors is warranted.

Purpose of the Study

To date, the majority of fluency training has focused primarily on academics (reading, math, and writing) with much less exploration on other important skills in children. The need to continue exploring the effectiveness of fluency training on improvements in other important behaviors is evident. Additionally, bystander behavior in bullying has gained more popularity recently as a means to decrease bullying in schools and has shown promising results. Studies have shown that in order to feel comfortable intervening as a bystander, a student needs to feel competent. Presently, there are no studies that combine acquisition and fluency training as a means to teach bystander behavior. Fluency training may be an effective way to teach these skills given its effectiveness in retention, as well as generalization in different bully situations. Since fluency training has been shown to enhance skill performance to be more automatic, easier to perform and fluid, it may be a good way to teach a student to be automatic and fluid in responses as a bystander in bullying situations.

The present study examined whether or not the inclusion of fluency training can be used to enhance skills that can be used when responding and defending a victim during a bully situation. It was hypothesized that students who participated in fluency training would show greater rates of bystander defending statements and rate themselves as exhibiting more defending behaviors during bully situations as compared to students without fluency training. The following research questions were addressed.

1. Is there a significant difference between class training with and without fluency building training on correct responses per minute at pre and follow-up?

2. Is there a significant difference between class training with and without fluency training on change in student reported defender bystander role ratings at pre and follow-up?

3. Is there a significant difference between class training with and without fluency training on treatment acceptably to use the bystander steps in recess setting at follow-up?

CHAPTER III

METHODS

Participants

The participants ($N = 108$) were in five regular education classes in fourth and fifth grade in a public elementary school. The total number of students in the school was 434, with 217 males and 217 females. The population of the school was 97% White students, 3% Hispanic, and 1% Asian/Pacific Islander students. The principal and teachers selected the classrooms based on concerns with physical, verbal, or relational aggression toward peers. Three fourth-grade classrooms ($n = 55$) and two fifth-grade classrooms ($n = 53$) included 54 male students and 54 female students.

Setting

Experimental training and assessment procedures were implemented in the general education classrooms. In each classroom, the general education teacher, approximately 20 to 30 students, and three to four graduate and undergraduate psychology student researchers were present during sessions.

In this setting, all students were given a modified version of the Bully Prevention in Positive Behavior Support for Elementary School program (Ross, Horner, & Stiller, 2008). This intervention was divided into three, 30-minute sessions. Students were told they would be trained to become a “URock” agent, whose mission would be dedicated to protecting citizens of their class by taking action to keep respect. The first training

session focused on instruction and practice of 4 steps for students to take when observing another student who was receiving disrespectful behaviors. The skills taught included (a) saying “stop” or using a stop gesture when someone is not respectful; (b) if, after you say “stop” and the disrespectful behavior continues, walk away with the student who was disrespected; and (c) if, after you walk away, the disrespectful behavior continues, tell an adult. Student were also taught how to verbally acknowledge positively (a) any student who supported themselves, (b) other student supporting someone else during a bully incidence, or (c) the student who stopped the disrespect when given the stop signal. Positive acknowledgments were indicated as a “URock” in the program. Examples of “URocks” include fist bumps, high fives or verbal statements, such as, “good job” or “thank you.” Students were also taught how to respond when told to “stop” by stopping what they are doing in respect to other person’s feelings, taking a breath, and going on with the current activity. Steps were role-played by researchers, giving students the opportunity to see and identify each step.

The second and third training included a review of the skills with specific examples and role plays, including supporting students who were being excluded from a group. The students were also told the steps that would take place when disrespect was reported to an adult. Students were informed playground supervisors would follow specific steps when a student reported disrespectful behaviors. The adult would begin by asking the reporting student if someone had used the first two steps, asking the other student to stop and then walking away. If these steps were not used, the adult would practice the steps with the student and two or more classmates that the student names as

potential supportive classmates. After practicing the skills, the adult would prompt students to use the response the next time. If the reporting student did say “stop” or walked away, the adult would privately meet with the student who engaged in the problem behavior to discuss how students feel when not respected, to review the importance of the “stop” signal, and to select a brief plan to resolve the current or next situation. If the report was an unsafe behavior or a violation of school rules, then standard school consequences would be given.

At the end of the third training session, students were told that the class completed the URock agent training and earned the “private” agent rank level. As private agents, they would be given two missions to complete during recess with a classmate partner each week (see Appendix E). Each student was assigned one or two other students as a partner(s). The first mission was to invite their partner to play with them at recess. The second mission was to use the stop, walk, talk and URock steps taught to them when they saw disrespect towards their partner or peers. Each class was separated into two teams that would earn points for completed missions. At the end of each week, students were given a form to put a check mark next to the following questions if their partner did these things for them (1) “Invited me to play” or (2) “Showed me respect by giving me a UROCK or used STOP, WALK, UROCK to any disrespect I got from another student”. The forms were collected and students were asked to share successful missions. Then, the teacher randomly picked 4 forms from each team. Teams received five points for each item that had a check mark and were able to move up a military rank (Sergeant, Lieutenant, Captain, Major, 5 Star General) if they earned at least 5 points.

Materials

Pictures used in this study were purchased from an online, royalty free, international microstock photography provider. Pictures were selected to depict bullying or disrespectful situations in children who were elementary school-aged. Specifically, pictures were selected to represent the following situations: rumors/gossip ($n = 4$), teasing ($n = 4$), exclusion ($n = 8$) and physical bullying ($n = 4$). Race and gender were also taken into account to represent diversity and control for racial/gender biases in bullying situations for bullies (male = 43%, females = 57%, White students = 64%, Non-White = 36%) and victims (male = 58%, female = 42%, White Students = 68%, Non-White students = 32%). (Examples of pictures can be found in Appendix B.)

Measures

Three measures were administered in this study: rates of bystander statements, measures of students' bystander role in bullying situations and student treatment acceptability to evaluate intervention effects. These measures were completed anonymously. A description of each instrument follows.

Rates of Bystander Statements

Rates of bystander statements are calculated as the total correct responses per minute (CRPM; see Appendix A). Responses were one word to one sentence correct answers provided by one student in a group of four to six students to a question that was directed to that student. Students in a group were asked to answer four questions one

student at a time about a picture presented to them that showed a disrespectful situation at recess (e.g., not letting someone play, teasing, pushing). Questions were developed based on the 5-step model of decision making for bystander support that was presented by Darley and Latane (1968). Students were asked the following four questions per picture: (1) What is the disrespect that is happening in this picture? (2) What is this student feeling because of the disrespect that is happening? (3) What can classmates do or say to help the person getting disrespect? (4) What action or URocks can classmates do to encourage any help given by someone? Students were also asked to give three different answers to the last three questions per picture. Specifically, students were asked: what else is the person feeling, what is another way to help, or what is another action or URock to encourage any help given?

Pictures and questions were presented in the following manner. A researcher set and started a timer for 3 minutes. During the 3 minutes, a picture was shown and the researcher asked the four questions while pointing to the student who should answer each question. A student had 5 seconds to answer each question. Each student in a group had the opportunity to answer a question individually before students were asked another question. Pictures and question were administered until the timer rang.

If the student gave a correct answer, one response was counted. If a student gave an incorrect answer, no response was counted. A verbal response was tallied as a correct statement if: (a) responses to the question 1 reflect that somehow a student is being hurt by another student, such as teasing, exclusion, being left alone, spreading rumors, being pushed, shoved, ignored, or being laughed at. Responses were scored as incorrect if the

statement was about things that were not happening between two students in the picture and there is no indication that one student is somehow making another student feel bad or excluded; (b) responses to question 2 were counted as correct if they gave a feeling or occurrence the person may be feeling or thinking and an incorrect answer was tallied if no feeling was given that described what the student in the picture could be thinking or feeling; (c) responses to question 3 were counted as correct if a positive, supportive bystander behavior option was described (this included a statement to stop the disrespect, an act to remove the person from disrespect, an act to make the person feel better or comfort, or getting help from others), and finally, (d) responses to question 4 were counted correct if a supportive praise was given for anyone who would support someone in the picture. This included gestures such as thumbs up, pat on back, as well as a praise or thank you statement. An incorrect answer was a negative statement or irrelevant statement or action that does not show appreciation, thanks, or praise. For all questions, a statement was incorrect if no statement was provided within 5 seconds or if an answer was repeated.

Each time CRPM was collected, students were given new pictures. For each assessment, five new pictures were organized consisting of two exclusion, one rumor/gossip, one teasing, and one physical aggression picture.

Participant Role Scale

The Participant Role Scale is a measure intended to identify which students engage in specific participant roles during a bullying episode (see Appendix C). On a 2-point scale students rated (0 = never, 1 = sometimes, 2 = often) on how often they

participated in 48 bullying-response behaviors that corresponded to five different participant roles: defender of the victim (20 items), bully (10 items), reinforcer of the bully (7 items), assistant of the bully (4 items), and the outsider (7 items). Mean score of identified bullying-response behaviors was obtained for each scale and a student's highest of his or her five mean scores on all scales identified a student's primary role. Each of these five scales has shown good reliability and internal consistency as measured by Cronbach's alpha coefficient (Salmivalli et al., 1996): bully scale = .93, assistant scale = .81, reinforcer scale = .91, the defender scale = .93, and outsider scale = .89. Internal consistencies for the sample in this study were .91, for pre and .89 for post on the defender scale.

Prior to completing the questionnaire, students were presented with the following definition of bullying: "one child being exposed repeatedly to harassment and attacks from one or several other children; harassment and attacks may be, for example, shoving or hitting the other one, calling names or making jokes of him/her, leaving him/her outside the group, taking his/her things, or any other behavior meant to hurt the other one" (Salmivalli et al., 1996).

Child Intervention Rating Profile (CIRP)

Participants were asked to anonymously complete a modified version CIRP (Witt & Martens, 1983; see Appendix D), which was used to assess students' subjective treatment satisfactoriness of training. Questions evaluated the extent to which the program was perceived to be helpful, ability to improve behavior and school environment, value for others, and easy to implement. The modified scale consists of

eight items rates on a Likert scale ranging from 5 (“I agree very much”) to 1 (“I disagree very much”). The total score was calculated as the sum of 8 ratings (range = 1 to 40), which scores in the higher range representing a more appropriate and effective program. Turco and Elliot (1986) found the total score to have good reliability (coefficient alpha = .86). Internal consistencies for the sample was $\alpha = .72$.

Experimental Design and Procedures

Pre-Intervention Assessment

After obtaining IRB, district and principal consent, a letter of information was sent out to parents in each participating classroom to inform them of the project procedures and provided the opportunity for parents to seek additional information from school personnel and researchers conducting the study. After two weeks, classrooms were randomly assigned to the intervention condition with fluency or without fluency practice. Prior to the administration of the intervention, rates of bystander statements /minutes were assessed with classes in both groups. This was done using the fluency procedure described in the above measures section. Before this assessment, a discussion on differences between respectful and disrespectful behavior that may occur at recess was given to the entire class. Teams of four to five students were formed and each team was told that they would be working with the same team during training and selected a team name before collecting CRPM data. The PRS measure was administered to each class after collecting the CRPM data.

Administration of Intervention Training

Classwide training began after the pre-intervention assessments. The intervention was administered in three sessions that took place within 10 school days. During session 1, students participated in a 30-minute didactic instruction that taught bully bystander steps and modeled the steps through role playing. During session 2, both groups received a brief review and practiced the “URock” step, including writing a list of possible “URocks” that could be used by the students to display in the classroom. In session 2, only the intervention with fluency training group received the timed bystander statements practice with pictures, goal setting and error correction. As mentioned above, student practiced on new pictures in same teams that were formed during the pre-assessment session. During session 3, both groups received a brief review of the steps but again, only the intervention with fluency training group was given timed practice with bystander statements.

Post-intervention

After 6 to 8 weeks, acceptability and PRS were assessed with both groups. Bystander rates in CRPM were also assessed in the same teams as those formed during the preassessment session.

Independent Variables

No Fluency Training

Students in this treatment only had the intervention administered as described in the in the previous Settings section. No additional training was provided.

Bystander Fluency Training

Students in this treatment condition were presented with the entire intervention package described in the above condition but also participated in a fluency building activity. Specifically, students participated in two 3-minute fluency trainings with groups of four to five students. Fluency training consisted of a brief, timed practice that includes goal setting and corrective feedback. During this training, students were given pictures of different disrespectful scenarios and asked the four questions by a group leader as described in the above rates of bystander section. During this training, each group was given a goal to obtain. Their goal was to beat their score in the previous session. In addition, incorrect answers were corrected by the group leader by stating a correct example that had not been stated yet during the session. An incorrect answer was a statement that did not support a disrespect situation or was not given within 5 seconds. Students were given 3 minutes to give as many correct bystander statements possible. The total number of correct responses per minute given by students was calculated.

Design

Given that students were not randomly assigned to a class, a nonequivalent groups pre/post design was used to answer the research questions. Preliminary statistics were also conducted to compare two groups, intervention with and without bystander fluency training, and grade level on the CRPM and PRS pre-assessment measures.

CHAPTER IV

RESULTS

Results will be presented in three sections: (a) descriptive statistics, (b) preliminary analysis of participant group differences, and (c) statistical analysis for the three research questions. These analyses follow in the next sections.

Descriptive Statistics

Presented in Table 1 are means, standard deviations, and ranges for total group scores, control group scores, and treatment group scores on the Participant Role Scale (PRS), Child Intervention Rating Profile (CIRP), and Correct Responses Per Minute (CRPM).

Preliminary Analyses

Independent samples t-test was conducted to compare CRPM scores and PRS scores before the intervention in fourth and fifth graders. There was a significant difference, $t(22)=-2.63, p = .015$, between fourth grade ($M = 15.86, SD = 3.82$) and fifth grade on the CRPM scores ($M = 20, SD = 3.80$). There was not a significant difference, $t(87.78) = .18, p = .85$, between fourth-grade defender ($M = .9, SD = .45$) and fifth-grade defender ($M = .89, SD = .35$) role scales.

Statistical Analysis Results for Research Questions

Results for each research question are presented below.

Table 1

Descriptive Statistics on Participant Role Scale, Child Intervention Rating Profile, and Correct Responses Per Minute

Variable	Group	N	Number of items	Pre-intervention			Post-intervention		
				Mean	SD	Range (min-max)	Mean	SD	Range (min-max)
PRS (Defender)	Experimental	57		.85	.46	0-1.65	.97	.36	.05-1.58
	Control	36		.97	.26	.55-1.7	1.01	.34	.45-1.65
	Total	93	20	.89	.40	0-1.7	.99	.35	.05-1.65
CIRP	Experimental	63					32.19	5.25	17-40
	Control	43					31.03	5.92	13-40
	Total	106	8				31.72	5.54	13-40
CRPM	Experimental	15		17.20	4.87	11-26	29	5.86	18-36
	Control	9		18.22	3.19	13-23	25.22	5.93	18-34
	Total	24		17.58	4.27	11-26	27.58	6.06	18-36

PRS = Participant Role Scale mean item score (0 = never, 1 = sometimes, 2 = often).

CIRP = Child Intervention Rating Profile—Total score (ranging between 0 and 40).

CRPM=Correct Responses Per Minute.

Research Question 1

Is there a significant difference between class training with and without fluency building training on correct responses per minute to questions about when and how to provide prosocial bystander support when presented with pictures of bully situations at pre and follow-up?

A mixed-design ANOVA statistical test was used to investigate significant differences on CRPM scores between the control group and the group receiving fluency training at pre and post-intervention. A two (fluency training versus no fluency training) by two (Time 1 post-intervention and Time 2 post-intervention) ANOVA was performed with the pre and post-fluency scores serving as the within-subjects variable and fluency training versus no fluency training as the between-subjects variable. Results indicated there was a significant interaction between group and time, Wilks' Lambda = .81, $F(1,22) = 5.3$, $p = .03$, partial eta squared = .19. This interaction is depicted in Figure 1.

Simple effect tests of treatment groups for time levels revealed that the treatment groups did not differ for pretest, $F(1, 22) = .312$, $p = .582$, partial eta squared = .014 and posttest $F(1, 22) = 2.313$, $p = .143$, partial eta squared = .095. Simple effects of time within treatment group levels revealed that there was an increase in posttest fluency scores for the treatment group, $F = 18.020$, $p < .001$, partial eta squared = .450, though it was also significant for the control group, $F = 85.344$, $p < .001$, partial eta squared = .795.

There was also a significant main effect of time (pre-intervention vs. post-intervention) on CRPM gains, Wilks' Lambda=.21, $F(1,22) = 81.24$, $p < .001$, partial eta

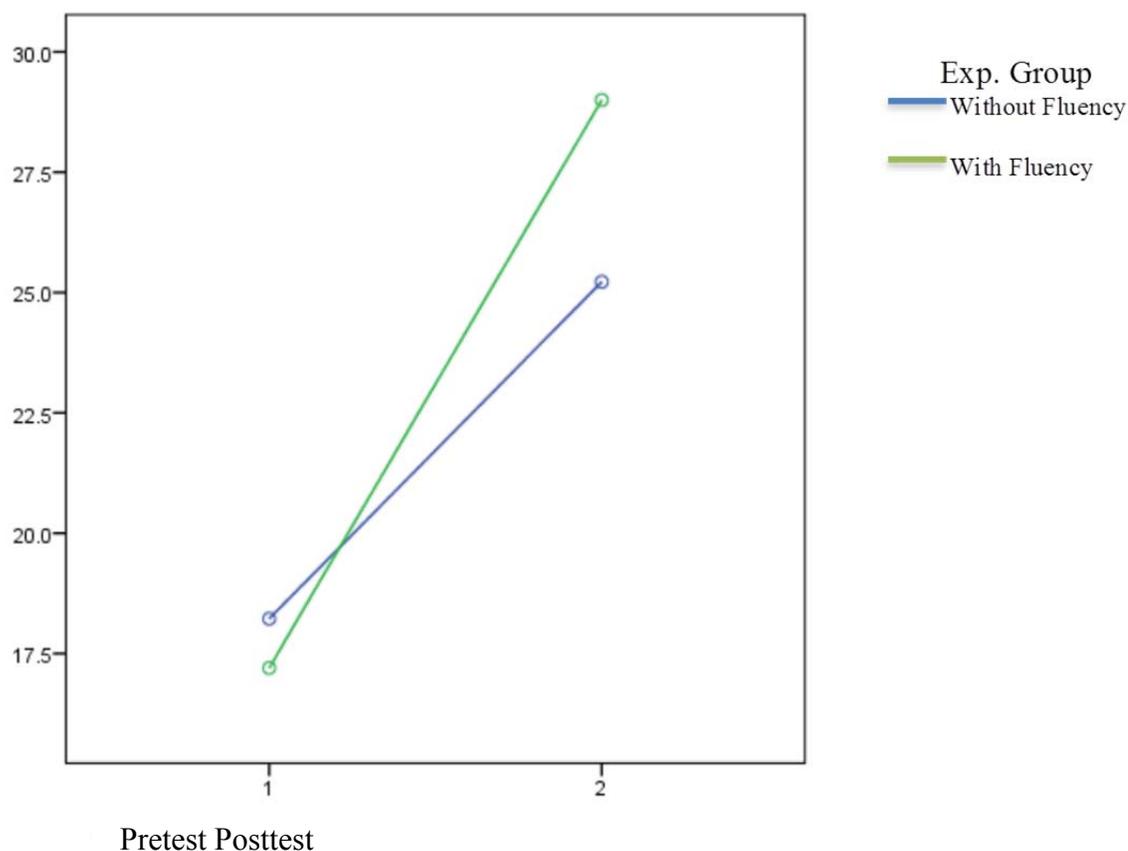


Figure 1. The interaction effect for training by time (pre and post) on defender role scores.

squared = .79, with both groups showing an increase in fluency scores from pre to post-intervention. Posttest scores were 9.425 CRPM higher than pretest scores.

Figure 1 provides a graphical representation of the mean CRPM scores of the pretest and posttest control and treatment groups. Review of graphed data shows that the treatment group showed more growth than the control group. That is, the treatment group showed lower performance at pretest but showed greater performance than the control group at the pretest. Further, the treatment group had increased to a greater mean CRPM at post although showing lower mean score at pretest.

Research Question 2

Is there a significant difference between class training with and without fluency training on change in student reported defender bystander role ratings at pre and follow-up?

In order to investigate significant differences on total role total scores between the control group and the group receiving fluency training at pre and post-intervention, mixed-design ANOVA statistical tests were used for participant roles. A two (fluency training versus no fluency training) by two (Time 1 post-intervention and Time 2 post-intervention) ANOVA was performed to assess the impact of the between subjects fluency training versus no fluency training on role scores across the within subjects factor time (pre and post).

As shown in Figure 2, results indicate there was no significant interaction between group and time (Wilk's Lambda = .99, $F(1,91) = 1.12$, $p = .30$, partial eta squared = .01). There was, however, a significant main effect for time (Wilks' Lambda = .95, $F(1,91) = 5.09$, $p = .03$, partial eta squared = .05). The main effect comparing the control and experimental groups was not significant, $F(1,91) = .32$, $p = .22$, partial eta squared = .02, suggesting no difference in PRS Defender scores between the two groups.

Research Question 3

Is there a significant difference between class training with and without fluency training on treatment acceptability for this classwide training?

In order to investigate significant differences in Acceptability scores between those who received fluency training and those who did not, an independent samples *t* test

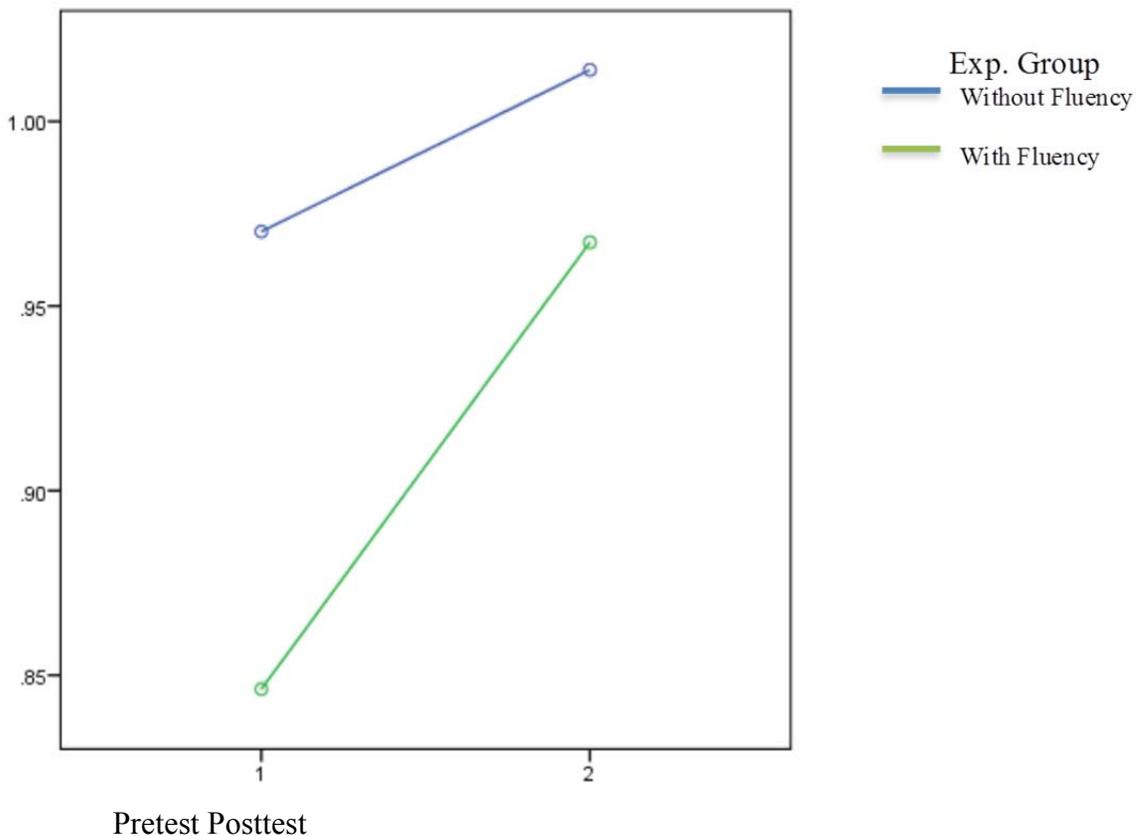


Figure 2. Defender participant role scale scores and pre and post times for training groups.

was conducted. Results indicate there were not significant differences in scores for the control group ($M = 31.03, SD = 5.92$) and the experimental group ($M = 32.19, SD = 5.24$); $t(83) = -1.03, p = .31$. The average score across all items was 4.0 indicating that both groups liked the program.

CHAPTER V

DISCUSSION

Purpose and Conclusions

The first purpose of this study was to first examine whether or not fluency training on bystander behaviors as part an anti-bullying program enhances student knowledge on prosocial bystander support when presented with pictures of bullying situations. A second purpose was to evaluate the effect of fluency building training on student reported ratings of participant role, including bully, defender, outsider, assistant of the bully, and reinforcer of the bully, during bullying episodes. Results of the study first showed that students with the fluency training had more growth in correct defending responses per minute than the control group over time thus indicating that the fluency training was effective in teaching defending responses. Moreover, although both groups reported an increase in using defending behaviors, students with fluency building showed significantly greater growth over time compared to the control group. Several reasons for these results will be discussed.

First, based on prior research, fluency training was expected to increase rates of bystander behaviors based on research has shown that high rates of active engagement increases time ontask as well as task performance (Heward, 1994). According to Miller and Heward (1992) and Miller and colleagues (1995), engagement in the form of fluency practice consists of fast paced presentation of tasks, problems or question that require high rates of responding opportunities to practice a skill or use knowledge within a brief

period of time. Feedback on performance given after the brief fast paced practice session can be incorporated in more accurate and fluent responses in the next practice session.

Second, the group responding format with fast paced prompts and responses allowed many students to actively participate while providing peer modeling of social behaviors. Observing peers practice responses models a variety of appropriate behaviors to those students who lack skills or clarifies the behaviors accepted by peers to defend others and thus enhance expectancy of positive outcomes, such as, stopping bullying or disrespect (Schunk, Hanson, & Cox, 1987). This study extended the literature on fluency building by showing growth in social defending verbal behaviors with this type of instruction given during a bully prevention program.

In addition, research has shown that practicing verbally as compared to written response can increase long-term retention, which in turn, would increase fluency (Skinner, Belfiore, Mace, Williams-Wilson, & Johns, 1997). Because our intervention added the component of verbally identifying correct responses to situations, this could have aided in the retention of the correct answers and therefore increasing fluency scores.

The hypothesis that fluency growth in training would influence defending behaviors with peers was not supported. Although students in the fluency group showed a significant increase in defending behaviors over time, students in both groups perceived themselves as better defenders at the post PRS assessment. Given that students' reports of defending behavior increased with both approaches, the program itself may have been effective enough without fluency training but fluency promoted more use defending role behaviors over time. It should also be noted that all but one student endorsed defending

role behaviors as the primary role before intervention and all endorsed the defender role at post, which, indicated that children at least perceive that they know how they should respond and are able to defend to some degree. Moreover, correct responses by both groups at the initial preprogram fluency assessment showed that some level of defender responses was present or children at least know how they SHOULD respond as defenders. One plausible explanation for the increase in implementation of the role may be that the program itself was effective in teaching or motivating students to further support others during bully episodes.

The question of why the defender role was enhanced for all students may be consistent with prior bystander literature indicating students do not defend because they are not confident in their abilities to stop the bullying or fear others will negatively react (Midlarsky, 1971; Thornberg, 2007). Students perhaps gained knowledge about how peers should react in bully situations by observing other students practicing defending behaviors in role plays and assessments. It is possible that the fluency assessment process, even just initial, and role plays may have helped provide natural peer examples that helped to increase defending roles although fluency training enhanced growth rates. Learning additional bystander supportive strategies may also be revealed in the noted increase in the mean number of responses in post CRPM relative to pre for both groups. Students may have increased their skills by learning various response options across various situations, and thus possibly increased skill use or gained confidence in their ability to intervene in different situations in natural settings.

Another plausible explanation for the increase in the defending role behaviors

may be that the program was effective in motivating students to further support others during bully episodes (Skinner, 2008). Instruction and practice during the program emphasized peer praise for a number of positive supports during a bully situation, including, praising others and self for supporting a peer or for listening to peers when being asked to stop a disrespectful act. The positive support environment of learning the skills with their peers may have also influenced these behaviors. Finally, motivational strategies, such as, goal setting to move up ranks was also employed to increase bystander role behaviors.

In sum, our results showed that practicing over and over may have helped students to learn HOW to be better defenders, but fluency building was not needed to get students to report actually USING more of the defending steps. Additionally, according to the CIRP data, almost all students endorsed the program as being effective and as an acceptable way to handle bullying situations with or without fluency training.

Limitations and Future Research

Several limitations in this study limit definitive answers for the questions posed for this research. The most prominent limitation of the study was the lack of diversity in sample size. The sample size was small, consisted of primarily White students, and only two different grade groups. Because of this lack of diversity it would be inappropriate to generalize the study to the general population. Future studies may extend the population, trying to create a more diverse and representative sample of the population.

One limitation in the data collection for the fluency portion is that the students

were in groups. Although the group model had some advantages, namely, efficiency and advantages with peer modeling, there were also some disadvantages. Because the students were in groups, we were not able to measure their individual growth. We are not able to conclusively say that all the students benefited from the program, just based on a group score.

Another significant limitation was the low internal consistency obtained for the Assistant to the Bully Scale and Reinforcer Scale, which makes results from these three scales questionable. An additional limitation with reliable results was data collection based on the self-report method. A study conducted by Salmivalli and colleagues (1996) on validity of self-report on the PRS found that self-estimated scores were significantly lower than peer-estimated ones on the Bully Scale. Self-estimated scores were significantly higher than peer-estimated scores on the reinforcer, defender, and outsider scales. On the assistant scale, there was no significant difference between self- and peer-estimated scores. A common problem with using self-report methods is the tendency for students to over- or underreport their behaviors. This is primarily due to embarrassment, denial, desire to look good, or poor memory (Cornell & Brockenbrough, 2004; Cross & Newman-Gonchar, 2004). For example, it is unclear as to whether the students are underestimating their role as a bully in their self-report, or if peers are over identifying the number of bullies. Because such surveys are almost always administered on an anonymous basis, there is no way to link student responses to additional data that could confirm or disconfirm student responses (Cornell & Brockenbrough, 2004). This makes it difficult to follow-up or ask clarifying questions with students to determine if students

simply did not understand the question or if it is the accuracy of their report (Solberg & Olweus, 2003).

Although results show that more students report themselves as defenders, it is uncertain if the defender behaviors increased in their natural environment. Observations of students defending would provide more definite information about the effectiveness of the fluency training. Additional research may include observation data to study whether or not the fluency training generalizes to situations on the playground, as opposed to a controlled environment where the students only have to come up with the correct responses, rather than actually using them.

Finally, students in this study practiced a set number of sessions instead of practicing until a set criterion or fluency aim was met. A meta-analysis on a fluency building reading intervention, repeated readings, conducted by Therrien (2004), showed greater effect sizes for studies using a performance criterion (mean effect size of 1.70) as compared to studies with a set number of practice sessions (mean effect size of .38). The purpose of fluency aims are performance rates that are positively associated with important outcomes such as retention, endurance or skill application (Binder, 1996; Kubina & Morrison, 2002). Although the fluency training group was more fluent over time after training, a higher fluency rate may have been more effective in obtaining the critical learning outcome, an increase in defending behavior roles. Students only practiced four times and in groups that limited practice opportunities. Perhaps additional practice that provide more practice opportunities per student may have increased rates that resulted in retention application of behaviors in natural situations (Kubina, Amato,

Schwilk, & Therrien, 2008)

Given the importance of bystander support to prevent bullying and bystanders considering adults are not present most of the time, and unable to intervene (Atlas & Pepler, 1998), educators and school psychologists can teach students effective ways to deal with the bullying by being a positive bystander. By focusing on the role of bystanders, results of this study provide further support for a class-wide program for increasing defending role. Additional studies are needed to examine the role of fluency training on critical learning outcomes such as defending of others receiving disrespectful behaviors in school settings.

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APPENDICES

Appendix A

Rates of Bystander Statements Assessment Form

Rates of Bystander Statements Assessment Form

TEAM and NAMES:

Today we are going to work in teams today. Your team will now have 2 minutes for your team to select a team name with your team leader.

DIRECTIONS and SET TIME:

Here is what we are doing in the teams today. A team leader will be asking you some questions about some pictures of students who are getting disrespect from other students. Remember - Disrespect is any behavior that can makes any person feel bad or alone. You will be timed so answer as fast as possible. I am looking for short, quick answers and a team will get one point for a correct answer. We are going to go fast to get lots of answers.

(Show a picture) □ For example, if I showed you this picture and asked what disrespect is happening, you would say, "These boys are laughing or making fun of that boy." That will be one point.

When I say go we will start and we will see how many points for each answer each team earns.

Are you ready? (Set timer for three minutes.) □ GO!

4. Each team leader will show first picture and ask... and will use a clicker to score points.

1. What is the disrespect that is happening in this picture?
2. What is this student feeling because of the disrespect that is happening?
(POINT to student getting disrespect)

And what else (is this student feeling?)

And what else (is this study feeling?)

3. What can classmates do or say to help the person getting the disrespect?
(POINT to student getting disrespect)

And what else (can classmates do or say to help?)

And what else (can classmates do or say to help?)

4. What actions or Urocks can classmates do to encourage any help given by someone?

And what else (can students do or say?)

And what else (can students do or say?)

5 . When timer rings, stop showing pictures and asking questions.

General rules and scoring

1. Get in groups of 4 to 5.
2. Present pictures to students for ____ minutes.
3. For each picture, ask 4 main questions (10 possible answers) for each picture.
4. Ask questions rotating around the group so that each person gets one question at time.
When all person in the group gets 1 question, rotate until all get a 2nd question. Continue in this manner until the timer rings.
5. For each question:

Wait three seconds for an answer.

For correct answers, give a point.

For no answers or incorrect answers, say a correct answer. No point is given.

6. For only the first question , if the first person is wrong, give a correct answer.

Direction/scoring for each question:

Q1.

Correct-statement reflects that somehow a student is being hurt by another student such as teasing, exclusion, left alone, spreading rumors, pushed, shoved, ignored, being laughed at.

Incorrect- a statement about things that is not happening between 2 students in the picture and there is no pointing out that one student is somehow making another student feel bad or excluded.

General statement- a statement that doesn't give much information about the disrespect, for example, saying "they are being mean," prompt by saying, "how."

Q 2.

Correct-A negative feelings or occurrence. There must be 3 different answers to get all three points for this question. A feeling that is presented using different words will count. For example, mad and angry = 2 points.

Incorrect- a statement that does not state what the student is thinking or feeling.

Q 3.

Correct-A statement to stop the disrespect.

An act to remove the person form disrespect-walk away

An act to make the person feel better

Tell an adult

Incorrect- a statement that does not support the other student.

Q 4.

Correct-A positive action or statement to the another student who supported them.

Gestures such as thumbs up, pat on back counts and well as a praise or thank you

statement. There must be 3 different answers to get all three points for this question.

Incorrect- a negative statement or irrelevant statement or action that does not show appreciation thanks, or praise.

Appendix B
Bullying Picture Examples



Appendix C

Participant Role Questionnaire

Participant Role Questionnaire

Bullying definition: One student (the victim) being repeatedly harassed and attacked by other students. This includes: shoving, hitting, calling names, making fun of others, leaving others out, taking things from others, or any other behavior meant to hurt another student.

Using this definition, how often do you do the following?

	Never	Sometimes	Often
1. Start bullying	0	1	2
2. Make others join in bullying	0	1	2
3. Find new ways of bothering the victim.....	0	1	2
4. Get more people be part of the bullying situation.....	0	1	2
5. Ask others to bother the victim	0	1	2
6. Make plans about bullying someone	0	1	2
7. Call those who do not join in the bullying “cry-babies”...	0	1	2
8. Make rude remarks about the victim.....	0	1	2
9. Say to others “he/she is so stupid, he/she deserves to be picked on”	0	1	2
10. Tell others not to be friends with the victim.....	0	1	2
11. Come to see what is going on when someone is being bullied	0	1	2
12. Often around when bullying happens, even if not doing anything	0	1	2
13. Giggle about the bullying.....	0	1	2
14. Laugh about the bullying.....	0	1	2
15. Encourage the bully by shouting	0	1	2
16. Say to the bully: “Show him/her!”	0	1	2
17. Say to the others: “Come look! Someone’s being picked on!”	0	1	2
18. Join in on the bullying, when someone else has started it	0	1	2
19. Assist the bully	0	1	2
20. Catch the victim (to help the bully).....	0	1	2
21. Hold the victim when he/she is bullied	0	1	2
22. Say to the victim, “Don’t let the bullies bother you”	0	1	2
23. Tell an adult about the bullying	0	1	2
24. Threaten to tell the teachers if the others don’t stop bullying..	0	1	2
25. Tell other students that it doesn’t pay to join in the bullying ..	0	1	2
26. Say to other students that the bully is stupid	0	1	2
27. Comfort the victim in the bullying situation	0	1	2
28. Attack the bully in order to defend the victim	0	1	2

29. Take revenge on the bully for the victim	0	1	2
30. Call the bullies names in order to defend the victim	0	1	2
31. Tell others to stop bullying	0	1	2
32. Go get people to come and help the victim	0	1	2
33. Say to the others that bullying is stupid	0	1	2
34. Try to make the others stop bullying	0	1	2
35. Try to fix the differences by talking.....	0	1	2
36. Comfort the victim afterward	0	1	2
37. Stay with the victim during the breaks	0	1	2
38. Go to tell the teacher about the bullying	0	1	2
39. Encourage the victim to tell the teacher about the bullying ...	0	1	2
40. Are friends with the victim during free time	0	1	2
41. Go get the teacher in charge	0	1	2
42. Aren't usually around when bullying happens.....	0	1	2
43. Stay away from the bullying situation	0	1	2
44. Pretend not to notice when bullying happens.....	0	1	2
45. Don't do anything when someone is bullied	0	1	2
46. Don't know about bullying	0	1	2
47. Don't take sides with anyone	0	1	2
48. Go away from the spot if someone is being bullied	0	1	2

Appendix D

Modified Children's Intervention Rating Profile

Children's Intervention Rating Profile

We are very interested in learning your ideas about the STOP, WALK, TALK and UROCK program that you are now finishing. Below are some sentences. You may or may not agree with the sentences. For each one, please circle the number that describes how much you agree or disagree with the statement. Use the following guide:

- 5 = I agree very much
 4 = I sort of agree
 3 = I don't agree or I disagree
 2 = I sort of disagree
 1 = I disagree very much

		I agree very much		I disagree very much		
1.	The STOP, WALK, TALK and UROCK ways I learned to deal with disrespectful behaviors were fair.	5	4	3	2	1
2.	The STOP, WALK, TALK and UROCK ways I learned to deal with disrespectful behaviors were too harsh (mean).	5	4	3	2	1
3.	The STOP, WALK, TALK and UROCK ways to deal with disrespectful behaviors might cause problems with my friends.	5	4	3	2	1
4.	There are better ways to handle disrespectful behaviors than STOP, WALK, TALK and UROCK.	5	4	3	2	1
5.	The STOP, WALK, TALK and UROCK would be good for other students to use to stop disrespect.	5	4	3	2	1
6.	I like STOP, WALK, TALK and UROCK to handle disrespect.	5	4	3	2	1
7.	The STOP, WALK, TALK and UROCK would help other students do better in school.	5	4	3	2	1
8.	The STOP, WALK, TALK and UROCK ways to deal with disrespectful behaviors were easy to use.	5	4	3	2	1

Appendix E

Weekly Class Points for Rankings

WEEKLY CLASS POINTS FOR RANKINGS

1. WRITE ON BOARD :

Team 1 green : _____ **and Team 2 blue :** _____

Invited me to play

Showed me respect by giving me a UROCK or used STOP, WALK, UROCK to any disrespect I got from another student.

2. TELL:

All week 2 or three agents were working together to complete missions:

Today everyone is going to report if they received the completed mission from their agent. To report, you will be given a slip that says:

Invited me to play

Showed me respect by giving me a UROCK or used STOP, WALK, UROCK to any disrespect I got from another student.

Check off any of the two missions that you received. Leave it blank if you did not receive the mission.

3. **PASS OUT:** Give green slips to one of the team 1 members and have them pass it out to students on Team 1 list. Likewise, give blue slips to one of the team2 members and have them pass it out to Team two.

CHECK OFF: Have students check off any of the two missions that were completed by their agent.

COLLECT: Have the team leaders collect their team slips for you.

4. **EXAMPLES:**

While passing out and collecting, ask students or teachers to give 1 or 2 examples of successful times agents showed respect, gave a UROCK or helped them that week.

5. **POINTS:**

Pick 4 green slips and 4 blue slips.

Tell them that a team needs 5 points to move up a rank.

Have team 1 and 2 helpers tally on board as you call out the point on the green/blue slips.

Team 1 green : IIIIII **and Team 2 blue :** IIIIII

6. **RANK POSTER:** Check off any rank a team earns on class poster.

My agent's successful missions
<input type="checkbox"/> Invited me to play. <input type="checkbox"/> Showed me respect by giving me a UROCK or used STOP, WALK, UROCK to any disrespect I got from another student.

My agent's successful missions
<input type="checkbox"/> Invited me to play. <input type="checkbox"/> Showed me respect by giving me a UROCK or used STOP, WALK, UROCK to any disrespect I got from another student.

My agent's successful missions
<input type="checkbox"/> Invited me to play. <input type="checkbox"/> Showed me respect by giving me a UROCK or used STOP, WALK, UROCK to any disrespect I got from another student.

My agent's successful missions
<input type="checkbox"/> Invited me to play. <input type="checkbox"/> Showed me respect by giving me a UROCK or used STOP, WALK, UROCK to any disrespect I got from another student.

My agent's successful missions
<input type="checkbox"/> Invited me to play. <input type="checkbox"/> Showed me respect by giving me a UROCK or used STOP, WALK, UROCK to any disrespect I got from another student.

My agent's successful missions
<input type="checkbox"/> Invited me to play. <input type="checkbox"/> Showed me respect by giving me a UROCK or used STOP, WALK, UROCK to any disrespect I got from another student.