THE USE OF DIGITAL STORYTELLING TO IMPROVE THE EFFECTIVENESS OF SOCIAL AND CONFLICT RESOLUTION SKILL TRAINING FOR ELEMENTARY STUDENTS

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by
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ABSTRACT

Title: The Use of Digital Storytelling to Improve the Effectiveness of Social and Conflict
Resolution Skill Training for Elementary Students
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School safety is one of the most important issues facing administrators, teachers, and

parents. Several risk factors have been identified as antecedents to aggression including

poor social skills, difficulty dealing with anger and frustration, and inadequate problem

solving abilities. *No Child Left Behind* requires all schools receiving Title IV funds to

implement research based violence interventions. Second Step, an internationally

recognized violence prevention curriculum published by Committee for Children was

implemented in an urban elementary school with 66 African American students in grades

3 through 5 for 9 weeks. This study employed a randomized control group design with

two treatment conditions; Second Step instruction and Second Step instruction with

digital role-playing, an adaptation of digital storytelling, to increase program

effectiveness and intensify student motivation. The School Social Behavior Scales-2

(Merrell, 2002) was used to assess differences in aggression and prosocial skills.

MANOVA indicated significant differences for grade only. Older students had higher

prosocial behavior scores and younger students had lower scores on the program's

content assessment. Results indicated that the Second Step curriculum did not affect

behavior. Although the benefits of teaching students to respond empathetically to others,

solve problems, and control anger have been documented in the literature, the use of

Second Step to accomplish these goals has not been supported.

ACKNOWLEDGEMENTS

Pirke Avot 5:12: Hillel said: Be of the disciples of Aaron, loving peace and pursuing peace, loving your fellow creatures and bringing them close to the Torah.

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CHAPTER 1

INTRODUCTION

Introduction to the Problem

School violence impedes academic achievement, increases school drop out rate, and elevates the risk of social problems that may lead to poor life outcomes (Eckstrom, Goertz, Pollack, & Rock, 1996; Shapiro, Burgoon, Welker, & Clough, 2002). Students who engage in aggressive behavior when they are young are at an increased risk for later violence (Hahn et al. 2007; Hawkins, Von Cleve, & Catalano, 1991). Furthermore, children and adolescents exposed to high levels of violence may feel indifferent toward others and become desensitized to violence and aggression (Farrell & Bruce, 1997). Increasing incidences of violence in our society and the prevalence of violent movies, television programming, and aggressive video games require that children learn to effectively resolve disputes non-violently (DuRant et al. 1996).

No Child Left Behind (2001) stipulates under Title IV, 21st Century Schools, that unsafe practices must not be tolerated. School reform law requires accountability along with the use of research-based educational programs. This not only refers to academic curricula, but extends to prevention programs as well. The Safe and Drug Free School and Community Act, Title IV, Part A (U. S. Department of Education, 1994) makes federal funds available for science- based alcohol, drug, and violence prevention programs (Modzeleski, 2007; NCLB, 2001). Schools receiving Title IV money (95% of all United States school districts) are required to conduct an evaluation of school and

community risk factors for substance abuse and violence. These data are used to guide administrators in selecting suitable prevention programs.

Several types of violence prevention programs have been used in schools including, gang suppression and intervention programs both focused on youth exhibiting violent behaviors (Esbensen, & Osgood, 1999; Walker et al. 1996). In contrast, universal prevention programs include all students. School- based prevention programs that do not segregate out problematic students average a 15% decrease in violent behavior regardless of school type (elementary, middle, or high school), and socio-economic status (SES) of students. However, these effects decrease over time (Hahn et al. 2007).

Background of the Study

In 2003, one out of every 20 students in the United States was a victim of violence or theft at school (Sherman, 2005). Isolated incidences of extreme school violence become headlines, but lethal violence is rare (Aster, Pinter, Benbenishty, & Meyer, 2002; Bowen, Bowen, Richman, & Woolley, 2002; Snyder & Hoffman, 2001). Crimes of robbery, assault, aggressive behavior, and bullying are more common in schools, but it is difficult to estimate the extent of these problems. School safety ranks at the top of public opinion surveys as one of the most important problems facing schools today (Midlarsky & Klain, 2005; Rose & Gallup, 2000).

Violent crime and weapon possession among adolescents have increased overall with a higher rate for minority students, while the overall crime rate has declined (Fleming, Barner, Hudson, & Rosignon- Carmouche, 2000). According to the Surgeon

General's Report on Youth Violence (U.S. Department of Health and Human Services, 2001), several demographic and family risk factors have been linked to aggressive behavior including poverty, minority status, gender (male), living in the inner- city, inadequate family supervision, and exposure to violence (Attar, Guerra, & Tolan, 1994; Eisenbraun, 2007; Farrell & Bruce, 1997; Hahn et al. 2007; Tolan & Henry, 1996). In addition, children who have poor social skills, difficulty dealing with anger and frustration, and deficient problem solving ability are at an increased risk for violent behavior (Botvin, Griffin, & Nichols, 2006; Cummings, Kaminski, & Merrell, 2008).

Statement of the Problem

Youth orientated, culturally responsive, school-based prevention programs are necessary to combat the rise in verbal and physical aggression among adolescents (Coie et al. 1993; Commission on Violence and Youth, 1993; Cooke et al. 2007; Schick & Cierpka, 2005; Walker et al. 1996). Although many violence prevention, social and emotional learning, and conflict resolution curricula implemented in school settings meet the United States government provision for evidence based practices (U.S. Department of Education, 2001), a review of the literature has shown that most programs implemented in schools have limited effectiveness with little or no lasting effects (Hahn et al. 2007).

With the proliferation of high-tech gadgetry and the widespread use of computer applications and games among today's students, it may be beneficial to include technology to improve program effectiveness (Hektner & Csikszentmihalyi, 1996; Prentsky, 2001; Shaffer, 2006). The motivating effect of technology integration in the classroom has been well established (Bosworth, Espelage, DuBay, & Daytner, 2000;

Christmann & Badgett, 2003; Goldsworthy, Schwartz, Barab, & Landa, 2006; Sadik, 2008; Spires, Lee, & Turner, 2008).

Purpose of the Study

The purpose of this study was to evaluate the effectiveness of integrating technology with Second Step: A Violence Prevention Curriculum (Committee for Children, 2002). Second Step is a universal school-based prevention program that teaches students social and conflict resolution skills. Digital role-playing, a variation of digital storytelling where students collaboratively create, role-play, and film short scenarios was utilized as the technology component.

At the time of this investigation, teachers and school administrators expressed concerns about high levels of aggressive behaviors exhibited by many students. Office discipline referrals were significantly higher than in the previous school year. Escalating violence in the community was also a concern.

Research Questions

1. Will a social and conflict skill training program that incorporates digital role-playing increase student knowledge about social and conflict resolution skills compared to students receiving only the educational program and a control group?

2. Will students who participate in a social and conflict resolution skill training program that incorporates digital role-playing demonstrate decreased verbal and physical aggression and increased prosocial skills when compared to students receiving only the educational program and a control?

3. Will there be an interaction between group and grade resulting in greater program effects for students at specific grade levels?

Hypotheses

It was expected that upper elementary students in grades three, four, and five who received Second Step instruction with digital role-playing for nine weeks would demonstrate improvements in social and conflict resolution skills and reductions in verbal and physical aggression as determined by a student knowledge assessment (Committee for Children, 2004) and the School Social Behavior Scales, 2nd Edition (SSBS-2, Merrell, 2002) when compared to students who receive only Second Step instruction and a control group.

Significance of the Study

This experimental study will provide additional information to determine the effectiveness of proactively teaching social and conflict resolution skills to upper elementary students using Second Step. Middle school students (ages 10 to 14) have a higher probability of using physical aggression to settle disputes (DuRant et al. 1996; DuRant & Hergenroeder, 1994; DuRant, Pendergrast, & Cadenhead, 1994MacNeil, 2002) when compared to older and younger students. As this was an initial investigation of the use of digital role-playing to teach and assess student competencies for conflict resolution, it will further the research literature on the benefits of technology integration for instructional purposes.

Definition of Terms

Aggression. Intentionally putting another person at risk (Guzzo, Lacerda, & Filho, 2006).

Violence. Intentionally harming another person, animal, or oneself (Swick, 2005).

School violence. Includes antisocial behavior, victimization, aggression, intention to commit violence, and criminal activity (American Psychological Association, 1993; Flannery, 1997). School violence is determined by location (Bowen et al. 2002).

Social skills. Behaviors used to effectively interact with other people (Ormrod, 2003).

Role-playing. "Unrehearsed dramatization, in which the players try to clarify a situation by acting out the roles of the participants in the situation" (Callahan, Clark, & Kellough, 1998, p. 268).

Digital storytelling. The use of "personal digital technology to combine a number of media into a coherent narrative" (Ohler, 2008, p. 15).

Digital role-playing. Filming student authored role-plays with digital cameras.

School climate. The perceptions of emotional and physical safety students and staff have while at school and the degree to which they believe that they are valued and respected (Bosworth, Orpinas, & Hein, 2009). It includes a sense of control, respect for differences, and enthusiasm for school (Jones & Bodtker, 1999; Orpinas et al. 2000).

CHAPTER 2

LITERATURE REVIEW

This chapter reviews the literature on social and emotional learning, school-based

prevention programs, and Second Step: A Violence Prevention Curriculum (Committee

for Children, 2002). First, an overview of prevention science is presented. The next

section reviews the goals of social and emotional learning and conflict resolution

education in schools. Next, is an overview of the role of cognitive development in

perspective taking and a review of the theories underlying prevention programs. After

this is a description of role-playing. This section is followed by the current educational

focus on 21st Century Learning and digital storytelling. This review will conclude with a

description of Second Step.

The literature search investigating prevention science, social and emotional

learning, conflict resolution education and computer assisted instruction was

systematically conducted using explicit criteria. An electronic search was carried out with

EBSCO*host®,* an online reference system, to identify empirical studies from 1980 to the

present using ERIC and PsychINFO. This year was chosen because that was the time

when computers started to be present in schools in the United States (Schifter, 2008).

Evaluation and research studies of conflict resolution programs were considered from

1980 to the present due to the implementation of conflict resolution programs in the

schools beginning in the 1980s (Bodine & Crawford, 1998). Terms in the electronic

search included prevention science, violence prevention, conflict management, conflict

teaching, peace education, social and emotional learning, computer assisted instruction,

digital storytelling, and 21st century schools. The references sections of chosen studies were also reviewed for additional resources.

Prevention Science

Prevention science focuses on intervention prior to the manifestation of serious problems to prevent and reduce maladaptive behaviors in an effort to promote healthy adaptive behaviors across the life span (Reiss & Price, 1996). The discipline developed as a collaboration between the fields of medicine, psychology, social services, criminology, and education. Research in the field has focused on strategies to reduce risk and increase protective factors that influence development (Reiss & Price, 1996; Sarasti, 2009). The model proposed by the Institute of Medicine (IOM; Marazek & Haggerty, 1994) distinguishes three levels of preventive interventions determined by degree of risk; (1) universal, (2) selected, and (3) indicated interventions. The United States Department of Health and Human Services (2001) classification system for school-based prevention programs utilizes a three-tier system of (1) primary, (2) secondary, and (3) tertiary intervention levels.

Programs at the universal or primary level proactively engage the entire targeted population. Secondary programs are used as interventions for at-risk subgroups. Tertiary programs aim to reduce and reverse identified problem behaviors (Kratochwill, Albers, & Shernoff, 2004; Mrazek & Haggerty, 1994; Sprague et al. 2001; Weissberg et al. 2003). Behavioral interventions implemented in schools promote social and emotional skills to reduce risk factors for aggression as well as the risk factors for long-term antisocial behavior (Fitzgerald & Van Schoiak Edstrom, 2006; Frey, Hirschstein, & Guzzo, 2000;

Zins, Bloodworth, Weissberg, & Walberg, 2004; Zins & Elias, 2006). In addition to providing built in screening and assessment to identify students with higher risk factors who may require increased support (Reiss & Price, 1996), prevention programs implemented school-wide positively impact school climate (Walker et al. 1996).

Effective school-based prevention programs share several characteristics. In addition to being research based, risk and protective factors target multiple student outcomes such as violence prevention, conflict resolution, and bullying in addition to increasing interpersonal skills. Well functioning programs are long term and implemented over several school years. They are developmentally as well as culturally appropriate and are taught by trained individuals using clear goals and objectives. Quality programming incorporates environmental supports, including the school, families, and the community and allow for continuous evaluation and assessment (Nation et al. 2003; Zins et al. 2004).

<div align="center">Social and Emotional Learning and Conflict Resolution</div>

Social and emotional learning (SEL) programs implemented in schools and community settings grew out of the civil rights movement, women's rights, and resiliency research (Cohen, Compton, & Diekman, 2000). According to Zins and Elias (2006) SEL is "considered to be the process of acquiring and effectively applying the knowledge, attitudes, and skills necessary to recognize and manage emotions; developing caring and concern for others; making responsible decisions; establishing positive relationships and handling challenging situations capably" (p. 1). Academic benefits of SEL include reduction in grade retention, increased graduation rates, higher academic grades, and less

violent and delinquent behavior (Frey, Hirschstein, & Guzzo, 2000; Sandy & Chochran, 2000; Zins & Elias, 2006; Zins, Bloodworth, Weissberg, & Walberg, 2004). Instructional models include stand alone skill training or infusion into all facets of the school day using role-playing, direct instruction, modeling, mentoring, service learning, and storytelling (Cohen, Compton, & Diekman, 2000). Effective programs are long term and coordinated whole-school reform efforts (Weissberg, Kumpfer, & Seligman, 2003; Zins et al. 2004).

Conflict resolution is one element of SEL that focuses on teaching the skills of recognizing, indentifying, and resolving conflict (Johnson & Johnson, 1994) and evolved from peace education, social justice, nonviolence, and mediation research (Cohen et al. 2000; Jones, 2003). Conflict resolution education (CRE) programs focus on cooperative problem solving based on the assumption that conflict is a normal part of life and it is necessary to have the skills to deal with situations cooperatively as opposed to competitively (Bodine & Crawford, 1998; Jones, 2003; Van Slyck, Stern, & Zac-Place, 1996). CRE programs adopt different instructional orientations including direct instruction, curriculum infusion, peer mediation, and negotiation training. Primary program goals of CRE are to teach children positive solutions to resolve interpersonal disputes whereby decreasing maladaptive behaviors (Jones, 2003). Secondary goals include teaching students to be aware of the feelings of others, problem solving, and improvements in school climate (Garrard & Lipsey, 2007). CRE programs that focus on school safety have objectives comparable to violence prevention programs, which often include an increase in security measures to decrease incidences of high-risk behavior and violence (Jones, 2003). DuRant et al. (1996) determined that although both CRE and

violence prevention programs reduced violent behavior for minority low-socioeconomic status (SES) middle school students, CRE was found to be significantly more effective at reducing injurious fighting.

Interventions with an emphasis on social and emotional learning improve children's interpersonal skills, peer and adult relations, increase academic achievement and reduce problem behaviors (Catalano et al. 2002; Greenberg et al. 2003). For prevention programs to have maximum impact, interventions must occur prior to children exhibiting problematic behaviors (Coie et al. 1993; Frey, Hirschstein, & Guzzo, 2000; Nation et al. 2003). Given that aggressive behavior increases in the middle school grades (DuRant et al. 1996; DuRant & Hergenroeder, 1994; DuRant, Pendergrast, & Cadenhead, 1994), social and conflict skills training in the elementary grades is optimal. Valos, Paxton, Zullig, and Huebner (2006) discovered in a large sample of middle school students in South Carolina ($N = 2138$), that a significant number of students had engaged in violent behavior and had statistically significant scores for reduced life satisfaction.

<center>Developmental View of Perspective Taking</center>

A prerequisite for positive social interactions is the ability to take the perspective of another person. Selman (Selman, 1976 a; 1980; Selman, Jaquette, & Lavin, 1977; Selman & Schultz, 1990) proposed a five-stage model that identified five levels of perspective taking that children go through as they mature. Selman's theory emphasizes the importance of cognitive development and the role maturity plays in children's social relationships (Worzbt, O'Rourke, & Dandeneau, 2003).

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Level 0: Egocentric Perspective Taking, from birth to six years, children assume that other people's thoughts and feelings are the same as their own. In this stage, they are unable to take the perspective of others.

Level 1: Subjective Perspective Taking, age six to eight, children are becoming aware that others may have different views of the same event. However, they are unable to consider their own perspective and that of another at the same time.

Level 2: Reciprocal Perspective Taking, age eight to ten, children realize that others may have a different point-of-view than their own and acknowledge that others recognize their perspective as well. Children are able to anticipate how others may react to their ideas and actions, but cannot reflect on their own perspective and another's perspective at the same time.

Level 3: Mutual Perspective Taking, age10 to 12, children are able to consider two points-of-view at the same time and they understand that others can do the same. They are also able to take the perspective of a neutral third party observer.

Level 4: Societal Perspective Taking, age 12 to 15, adolescents interpret their behavior and the behavior of others from the view of the society they live in and use this perspective when making social decisions than affect themselves and others.

Most lower middle elementary students (kindergarten through second grade) are functioning at the second level of Selman's model, subjective perspective taking. By the next stage, reciprocal perspective taking, many upper elementary school students (grades

three through five) are able to acknowledge that people sometimes do things

unintentionally and that their actions may not reflect their actual feelings.

The ability to take the perspective of another person in to consideration when

making decisions in social situations is a prerequisite skill for empathy. Experience plays

an equally important role in children's social development to facilitate acquisition and

practice of perspective taking skills. Children who have difficulty getting along with

peers, initiating, and maintaining friendships often have difficulty with perspective taking

(Worzbt, O'Rourke, & Dandeneau, 2003).

<center>Social Information Processing</center>

Children use prior knowledge and cognitive schema to sort out social situations

based on past experience. Social information processing theory (Crick & Dodge, 1994)

considers the mental steps children engage in before enacting competent social behavior.

Crick and Dodge (1994) propose that children have a learned set of skills that are

determined by experience and influenced by maturity to access when presented with a

challenging interpersonal situation. Children first evaluate and interpret internal and

external cues considering prior knowledge about the person and situation, taking the

other person's perspective into account if possible. Outcome goals are chosen based on

affects and goal orientation. In the case of a novel situation, an attempt will be made to

create an appropriate goal. Responses are considered and chosen using outcome

expectations, suitability in the current context, and a determination of self-efficacy.

Research has documented that young children can be taught appropriate social skills

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(Grossman et al. 1997; Johnson, Johnson, & Dudley, 1992; McMahon, Washburn, Feliz, Yakin, & Childrey, 2000).

Social Cognitive Theory

Social cognitive theory focuses on learning within a social context. According to Bandura (1986), a person is motivated to engage in appropriate behavior when it will elicit a favorable response or lead to a desired outcome. Behaviors are also acquired through observation and modeling the actions of others (Bandura, 1986). Children may demonstrate increased aggression when observing a violent model (Farrell & Bruce, 1997), but modeling can also influence prosocial behavior. Four conditions are necessary for effective learning from models; attention to relevant stimuli, retention, feedback, and motivation (Bandura, 1986). Through feedback, children develop standards to judge the actions of others and become adept at selecting models that represent their own standards (Papalia, Olds, & Feldman, 2004). Learning from peers increases the probability that appropriate skills will be generalized outside of the school environment (Edwards et al. 2005).

Social cognitive theory suggests that when children and teens are exposed to violence, it increases the likelihood that they will engage in future acts of violence (Dulmus & Hilarski, 2002; Farrell & Bruce, 1997). To look at the effects of living in violent neighborhoods, Farrell and Bruce (1997) administered self-report assessments at three time intervals to 436 mostly African American middle school students living in low SES neighborhoods. Girls who experienced higher levels of exposure to violence had greater frequency of aggressive behavior. Boys' level of exposure and frequency were

stable over time. The relationship between exposure and frequency in this study support

the contention that witnessing violence increases students' use of violence and aggression

(Bandura, 1973). Attar, Guerra, and Tolan (1994) found that children who live in

disadvantaged neighborhoods have significantly more exposure to violence. In a sample

of 384 first, second, and fourth grade students, the researchers saw significant positive

correlations for exposure to violence and aggressive behavior.

<center>Role-playing</center>

Role-playing is effective for enabling children to understand the emotions and

feelings of others and can be used to develop empathy. Role-playing has roots in

sociodrama, which uses role-playing and reenactments to resolve conflict (McLennan,

2008; Moreno, 1953; Zachariah & Moreno, 2006). Empathy skills can be enhanced

through role reversal (Dianna, 1983, Zachariah & Moreno, 2006) allowing children to

experience another point of view. As role-playing has limited effectiveness for children

under the age of six, prevention programs often use puppets to represent people when

instructing young children (Committee for Children, 2002; Spivack & Shure, 1974;

Zachariah & Moreno, 2006). By viewing and practicing solutions to conflicts, children

develop scripts they can use in future disagreements (Crick & Dodge, 1994). Role-

playing life-like situations has benefits for the aggressor as well as the victim, permitting

the perpetrator to understand how their actions may have been hurtful. Role-playing is

advantageous for students directly involved as well as the audience who often participate

in the development of alternate solutions. Physical enactments of bullying may help some

students and teachers to recognize inappropriate social behavior (Cosssa, 2006). Role-

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playing is an instructional strategy used in many conflict resolution, violence prevention, and SEL programs. When surveyed, students often respond that this was their favorite part of the curriculum (Cossa, 2006; Edwards, Hunt, Meyers, Grogg, & Jarrett, 2005; Esbensen & Osgood, 1999; Meyer, Roberto, Boster, & Roberto, 2004).

The GREAT Program (Esbensen & Osgood, 1999) and *Get Real About Violence®* (Meyer et al. 2004) were two prevention programs evaluated with large samples that used role- playing along with other teaching strategies. Both interventions were effective in reducing delinquency and aggression. In contrast, Bullyproof (Stein, 1996) relied on direct instruction. No changes were found between the control students and those in the treatment condition. Responding in Peaceful and Positive Ways (Farrell, Meyer, & White, 2001), a conflict resolution education program with peer mediation, also used direct instruction and only saw fewer school disciplinary referrals. A common element of successful interventions, even though effect sizes in most studies were small, was the use of role- playing as an instructional strategy.

21st Century Learning

In 1983, A Nation at Risk, a report commissioned by the Secretary of Education to examine the quality of education in the United States, recommended the teaching of computer science to enable all high school graduates to use computers for research and communication. *No Child Left Behind* (2001) Title IV- 21st Century Schools Part D- Enhancing Education Through Technology requires that students be technologically literate by the end of eighth grade. The primary objective of this section is the use of

technology to advance academic achievement for elementary and high school students by encouraging technology integration in all areas of education.

Computer-based conflict resolution programs have been implemented in schools with favorable results. Bosworth, Espelage, DuBay, and Daytner (2000) assessed the effects of SMART Talk, a 13-week computer-based anger management and conflict resolution intervention with 558 middle school students. There was a statistically significant increase in intentions to use nonviolent strategies and reduced acceptance of violence.

To investigate the value of technology to teach children to resolve conflict and improve social problem solving skills, Goldsworthy, Schwartz, Barab, and Landa (2006) field-tested the STARstreams curriculum in a two-week intervention. Fifth and sixth grade students viewed four, two-minute conflict scenarios with embedded conflict resolution strategies and participated in web-based debates. Pretest and posttest assessments revealed significant increases in self- efficacy for problem solving and resolving conflict. Results were statistically significant for satisfaction with the online format of the videos and discussions. Even though this exploratory study was of short duration and used a limited group of participants, the Internet based program increased students' conflict resolution and social problem solving skills while promoting technological proficiency.

Digital Storytelling

Storytelling is a traditional teaching method to help children make sense of new ideas and concepts (Sadik, 2008). Parents and teachers use stories to teach children through fables, myths, and fairy tales. Narratives are frequently used in higher education and in the work place to facilitate acquisition of new skills. Stories are a form of vicarious learning and can be used as a substitute for actual experience to provide background knowledge (Jonassen & Hernandez-Serrano, 2002). Jonassen and Hernandez-Serrano (2002) propose using stories as exemplars for problem solving, vicarious rehearsal, and for guidance in new situations.

The past 10 years have seen increases in the availability and use of technology especially in schools (Ohler, 2008; Schifter, 2008). Digital media have become mainstream, facilitating the use of digital storytelling as an instructional technique (Ohler, 2008; Sadik, 2008). Digital storytelling combines storytelling with digital technology using pictures, video, text, music, and narration (Kajder, Bull, & Albaugh, 2005; McLellan, 2008; Ohler, 2008). With the increase in national attention on technology education in schools, digital storytelling enables students to use technology to analyze, present, and communicate ideas in all content areas (Grant & Branch, 2005; Ohler, 2008; Sadik, 2008).

Second Step

Second Step: A Violence Prevention Curriculum (Committee for Children, 2002) is a universal prevention program that focuses on increasing and improving students'

prosocial behavior and reducing aggression by teaching social skills (Larsen & Samdal, 2007; McMahon, Washburn, Felix, Yakin, & Childrey, 2000). The curriculum was created as a school-based health education program to reduce school violence and has been taught in other settings including Boys and Girls Clubs, residential treatment facilities (Committee for Children, 2002), and community-based recreation centers (Ryan, Aten, & Avinger, 2004). Second Step is widely used in the United States, Canada, Scandinavia, and parts of Europe (Larsen & Samdal, 2007).

The curriculum delineates three key skill areas that affect social competence; empathy, problem solving, and anger management. These skills are taught using modeling, coaching and cueing, group discussions, and role-playing. Second Step is considered a research based prevention program with endorsements from the United States Department of Health and Human Services National Registry of Evidence Based Programs and Practices, The Office of Juvenile Justice and Delinquency Prevention, and The Collaborative for Academic, Social, and Emotional Learning (CASEL).

Empathy

Empathy is the ability to identify emotional cues to recognize another person's perspective in order to understand and respond to what they are feeling. Children begin to exhibit this ability in early childhood and skills increase with maturity (Piaget, 1932; Ormrod, 2003; Selman, 1980). Emotions are the main element in all social dealings (Halberstadt, Denham, & Dunsmore, 2001) and are conveyed verbally, through facial expressions, and body movement to establish the meaning of a situation. Being able to express emotions and decipher the emotions of others are skills that lead to successful

social interactions. Children can be taught to recognize all emotions, not just anger, by looking for physical and verbal cues (Halberstadt et al. 2001; Merrell, 2007). Maladaptive individuals with hostile attributions often misread emotional cues as anger and this may lead to aggression (Gardner & Moore, 2008; Merrell, 2007).

Several models of emotional intelligence have been suggested (Crick & Dodge, 1996, Halberstadt et al. 2001, Mayer, Salovey, & Caruso, 2008). Mayer et al. (2008) pose that emotional intelligence is the ability to process information about your own feelings and those of others to use this information to influence your behavior. The model proposed by Crick and Dodge (1996) focuses on children developing an awareness of emotions in order to control them. In contrast, Halberstadt et al. (2001) have developed an affective model of social competence with an emphasis on communication in addition to awareness and self-regulation. The main thrust of this model is for children to acknowledge the social context of a situation in order to determine and communicate an appropriate response.

Empathy motivates prosocial behavior and can be encouraged by role-playing stressful events (Merrell, 2007). Although appropriate social behavior is the goal of teaching children empathy, many elementary students will show concern for the emotions of others without a true understanding of the other person's perspective. Children may exhibit prosocial behavior if they perceive it to be the right thing to do (Kohlberg, 1969).

Problem Solving

At the heart of most SEL, conflict resolution, and violence prevention programs is instruction in problem solving (Eisenbraun, 2007). Several theories exist regarding the relationship between problem solving skills and violent and delinquent behavior. One hypothesis holds that students who exhibit aggression have poor or undeveloped skills and engage in violence to solve problems (Bandura, 1986). An alternative view is that delinquent youth may have proficient skills but do not use them in a socially acceptable manner. This could be due to the need to survive in a hostile environment (Anderson, 1999) or lack of motivation (Bandura, 1986). The use of effective problem solving increases if students perceive that the benefits of mutual acceptance outweigh the use of aggression (Shapiro & Watson, 2000).

Successful problem solving involves observing a situation to choose an appropriate response while identifying potential consequences (Hawkins et al. 1992). The problem solving strategies taught in Second Step are largely based on the I Can Problem Solve (ICPS) model (Shure, Aberson, & Fifer, 1974; Spivack & Shure, 1974). ICPS is a universal or selective prevention program used to improve peer interactions, cooperation, and impulsivity. "Children are taught 'how' to think, not what to think to resolve interpersonal disputes with peers and adults" (Shure et al. 1974, p. 1). Strategies are based on the results of seven evaluation studies conducted by Shure and Spivack with pre-school and early elementary students. In these studies, significant improvements were seen in classroom behavior. The researchers also found reductions in the number of suspensions. Out-of-school suspensions can be a predictor for later developing high-risk

behaviors of violence and school dropout (Rusby, Taylor, & Foster, 2007; Shure et al. 1974).

In Second Step, students are taught a series of five problem solving steps. First, students identify the problem using verbal and physical clues. Next, they are prompted to come up with ideas to resolve the problem. Step three teaches children to evaluate and predict the effects of potential resolutions. Children select and carry out a solution in step four, while in step five, the outcome is evaluated and a different solution attempted if necessary (Committee for Children, 2002).

In the problem solving unit, Second Step also teaches students impulse control strategies. Steps involved with this skill are to first stop and focus on internal emotions by thinking about how your body feels. Then, calming strategies are suggested such as breathing deeply, slowly counting backward, and thinking soothing thoughts.

Anger Management

In the anger management component of Second Step, children are taught that anger is a normal emotion (Gardner & Moore, 2008; Merrell, 2007) that is sometimes necessary to trigger a reaction in a situation of real danger (Gardner & Moore, 2008), but in most situations it is a chosen response that is usually inappropriate. Anger management strategies in Second Step are based on the assumption that children need to be able to understand what anger feels like in order to recognize and control inappropriate and reactive behavior.

Students are instructed to follow four steps to self-regulate when they are angry. The first step directs children to determine how they feel and to acknowledge that they are angry. Calming down strategies are then carried out to reduce angry feelings and thoughts. In the third step, children are instructed to carry out the problem solving strategies they were taught to resolve conflict. Children are advised to think and reflect on the incident at a later time and to use these reflections to guide their behavior in future situations (Committee for Children, 2002).

Grossman et al. (1997) conducted the first large-scale experimental study of Second Step with second and third grade students in 12 elementary schools ($N = 790$; 79% Caucasian, 53% male). The program was taught one to two times per week for 20 weeks. After adjusting for demographic variables due to randomization at the school level as opposed to individual level, there were no differences on pretest and posttest measures between the intervention and control schools on any of the teacher reported or parent reported behavior scales. However, observations by blind observers in the classroom, schoolyard, and lunchroom of a randomly selected subset of students ($n = 588$) at three observation points (prior to program implementation, two weeks, and six weeks after participation) and were shown to demonstrate significant decreases in physical aggression and significant increases in prosocial behavior in the intervention schools compared to the control schools. These results were only seen on the playground and in the lunchroom and continued at the six-month follow up observation, while aggression increased in the control schools. These results were meaningful as the

lunchroom and playground are where most violent behavior occur in school settings (Frey et al. 2000).

Schick and Cierpka (2005) employed an experimental design to assess "Faustio" the German language version of Second Step with 718 students in grades four through eight in 21 schools in Germany. Parent ratings showed decreases in internalizing behaviors of anxiety, depression, and social isolation when compared to the control group. These significant outcomes for the parent ratings are in contrast to those found in the Grossman et al. (1997) investigation. Nevertheless no significant differences were found for teacher ratings and student self-report ratings. However, teachers anecdotally reported a decrease in discrimination against classmates while student interviews suggested greater peer acceptance.

To look at the influences of Second Step on teacher behavior ratings and prosocial negotiation, Frey, Nolan, Van Schoiak, Edstrom, and Hirschstein (2005) used random assignment and a control group for students in grades two and four ($N = 1253$) who attended fifteen schools in three cities. Significant declines in antisocial behavior were seen in the treatment group compared to the control group ($p < .05$, $\eta^2 = .17$) on the School Social Behavior Scale (Merrell, 1993) Students in the treatment condition made more prosocial choices when responding to structured conflict scenarios.

In a longitudinal study conducted over two years (Taub, 2002) in two rural schools with grades three to five ($N = 54$) teacher ratings on the School Social Behavior Scale (Merrill, 1993) revealed significant declines in antisocial behavior and increases in

social competence pretest to posttest at the intervention school when compared to the control school. Although the results were statistically significant, the researcher states that the differences were too small to have practical significance. It appeared that the greatest changes were for the students in the treatment group who had higher aggression scores at pretest when compared to their peers. McCabe (2000), in an investigation of young children three to five years old ($N = 80$) saw changes for students in the treatment classes who had the highest aggression scores at the start of the program when compared to the control classes. High verbal and physical aggression scores at pretest may present a larger range for behavior to change (Meyers et al. 2004).

Holsen, Smith, and Frey (2008) evaluated Second Step with fifth and sixth grade students in eleven schools in Norway. The researchers stated that due to widespread use of Second Step in Norwegian schools, it was not possible to have a control group. Social competence increased for both boys and girls in grade five and for girls in grade six. Reductions in externalizing behaviors were found for grade six boys but with small effect sizes. No patterns were seen for gender.

To evaluate the effectiveness of Second Step for all fourth and fifth grade students ($N = 455$) in a small urban district, Edwards et al. (2005) had teachers complete selected subscales of the Behavior Assessment System for Children (BASC; Reynolds & Kamphas, 1992) pre and post program implementation and found small increases for self reliance. However, effect size was low ($\eta^2 = .026$). Significant gains were found for scores on the Second Step knowledge test. Several studies with different age groups found increases in student knowledge about violence and skills to reduce conflict using

the Second Step content assessment as a pretest and posttest but saw no changes in actual aggression and prosocial behavior (Angelone, 2008; Boltzer, 2003; Nicolet, 2005; Orpinas, Parcel, McAlister, & Frankowski, 1995; Sprague et al. 2001). However, Cooke, et al. (2007), Lillenstein (2002), and Riese (2005) saw no increases for either content knowledge or problem behavior. Decreases in verbal and physical aggression, not knowledge of skills alone, should determine program effectiveness (Orpinas et al. 1995).

Few studies have been conducted to determine the effects of Second Step with minority student populations. McMahon, Washburn, Felix, Yakin, and Childrey (2000) found no significant changes in social skills for mostly African American and Hispanic preschool children ($N = 56$) on parent and teacher ratings completed prior to and following the intervention. However, classroom level observations by independent observers saw significant decreases in disruptive behavior ($\eta^2 = .17$), verbal aggression ($\eta^2 = .19$), and physical aggression ($\eta^2 = .05$).

In a district-wide evaluation study for all kindergarten thorough second grade predominately African American students ($N = 1416$), Hussey and Flannery (2007) using outcome testing for a random sample of 20% of participants ($n = 257$), found that teacher posttest ratings revealed significant decreases in aggression scores. No changes were seen in prosocial behavior scores. In this investigation the program was taught by school nurses and counselors as opposed to classroom teachers, which may have affected student motivation and teacher ratings.

For inner-city African American students in grades five through eight (N = 156), who were taught Second Step, McMahon and Washburn (2003) found significant increases in empathy. Multiple regression analysis found that increases in student self-reported empathy scores pretest to posttest predicted lower student self-reported aggression scores at posttest (R^2 = .22). Results from the Second Step Knowledge Test showed that students participating in the intervention made increases in knowledge and skills about violence with older students making greater gains. Only self reported behavior was significant. Teacher ratings of aggressive behavior revealed no changes.

In a program implemented in a community center for 15 weeks for urban, low-SES minority students (N = 159; mean age = 13.2 years), Ryan, et al. (2004) found only significantly higher scores for skill knowledge. Trends were seen using self-report measures of less intent to use violence. All students at pretest had high levels of using physical aggression to solve disputes, witnessing violence, and victimization.

Summary of Second Step Research

Although decreases in verbal and physical aggression have been evidenced in some Second Step studies (Edwards et al. 2005; Frey et al. 2005; Grossman et al. 1997; McCabe, 2000; Schick & Cierpka, 2005; Taub, 2002), effect sizes have been small bringing into question the practical significance of the observed changes in behavior (Cohen, 1988). Second Step has been shown to be effective for increasing students' knowledge of social and conflict resolution skills for most age groups (Angelone, 2008; Boltzer, 2003; Edwards et al. 2005; Nicolet, 2005; Orpinas, Parcel, McAlister, &

Frankowski, 1995; Sprague et al. 2001). However, factual knowledge does not appear to be adequate to reduce aggression or predict improvements in prosocial behavior (Angelone, 2008; Boltzer, 2003; Orpinas et al. 1995). This is problematic as decreases in antisocial behavior along with increases in prosocial behavior should be the primary goal of a social skills intervention.

Summary

Interventions in school settings have been impacted by prevention science research that advocates implementing universal SEL programs to teach students social skills to effectively interact with others. These skills are essential for increasing protective factors and reducing risk factors that impede school achievement and healthy social development. Effective interventions are developmentally appropriate and implemented prior to the onset of aggressive behaviors. Although curricula are available at various grade levels, it is debatable that programs that rely on perspective taking, a key element for empathy, are appropriate for younger students. A review of school-based prevention programs has not shown most interventions, including Second Step, to be particularly effective for positively changing actual behavior. However, role-playing appears to be a useful and established instructional strategy, Furthermore, incorporating technology has been shown to increase motivation and student engagement to have a positive impact on program effectiveness.

CHAPTER 3

METHDOLOGY

Research Design

The purpose of this investigation was to determine the efficacy of Second Step: A Violence Prevention Program (Committee for Children, 2002) for reducing verbal and physical aggression and increasing knowledge about social and conflict resolution skills for upper elementary school students. Due to the limited program effects of Second Step in the many of the reviewed studies, this inquiry added a digital role-playing component to increase program effectiveness. This study employed an experimental design using random assignment of students to one of the three conditions and a posttest upon completion of the intervention. The research questions were as followed:

1. Will a social and conflict resolution skill program that incorporates digital role-playing increase student knowledge about social skills and conflict resolution when compared to students who receive skill instruction alone and a control group?

2. Will students who participate in a social and conflict resolution skill program that incorporates digital role-playing demonstrate observed decreases in verbal and physical aggression and increases in prosocial behavior when compared to students who receive skill instruction alone and a control group?

3. Will there be an interaction between group and grade resulting in greater program effects for students at specific grade levels?

Participants and Setting

Seventy-eight students in grades three to five attending a public elementary school in the metropolitan Philadelphia, PA area were recruited to serve as participants for this study. At the time of this investigation the school enrolled 213 students, one class per grade. Students were 97.7% African American and 2.3% Latino with 90.7% receiving Title I free or reduced price lunch. The school was chosen because of the principal's willingness to implement a conflict resolution program. All students, including children receiving special education services, from each classroom in grades three, four, and five were recruited. Students received 18 to 21 lessons, depending on grade level, over nine weeks. The classroom teacher taught two or three lessons each week in place of social studies instruction.

Upon approval from Temple University's Internal Review Board, permission was obtained from the School District of Philadelphia's Research Review Committee to conduct the investigation. This investigation caused no social, physical, or psychological harm and was considered no more than minimum risk to students as the study employed standard educational practices. All students in grades three, four, and five were given a parent informed consent form to take home to their parent or guardian (Appendix A). Child assent forms were given to all eligible students (Appendix B). Parents were also given a permission to videotape form to allow their child to be filmed (Appendix C). Only students with signed parental consent, assent, and signed permission to videotape forms were included in this investigation. These students were randomly assigned to one

of the three program conditions by an independent observer and given study numbers that were not revealed to the primary investigator.

The School District of Philadelphia has a student code of conduct that states acceptable behavior and consequences for infractions. The district endorses a zero tolerance policy for violence of any type on school property. Findings for the 2005 – 2006 school year, the most recent available at the time of this study, showed a decrease in reported violent behavior of 13.4% from the previous school year. Reported infractions included assault, drug and alcohol related incidences, arson, weapon offenses, theft, and moral offenses.

Curriculum

Second Step: A Violence Prevention Program (2002) for grades pre-kindergarten to eight teaches students prosocial skills to reduce anger and aggression to decrease school violence (Van Schoiack-Edstrom, Frey, & Beland, 2002). The program has been developed with four levels; pre-school/ kindergarten, grades one to three, grades four and five, and middle school (grades six through eight). At each level the curriculum is divided into three units. The first unit, empathy, teaches students to identify their own feelings and to recognize that other people may have different perspectives. The second unit, impulse control and problem solving, aims to reduce aggression by teaching students to control their emotions and find solutions using problem solving skills. The last unit, anger management, teaches students how to identify and cope with angry thoughts and feelings. The publishers state that the unit sequence is essential as the skills learned in each unit serve as the foundation for the subsequent skills.

The first lesson in each Second Step unit, empathy, problem solving, or anger management, in the third and fifth grade curriculum begins with a video depiction of a situation that highlights the social skill that will be taught in the unit. In the fourth grade curriculum the fifth lesson in the empathy unit, the third and fourth lesson in problem solving, and the second lesson in anger management start with a short video.

Unit cards are provided for instructors with an overview of each skill. Each lesson has a corresponding over-size (18" x 12") card with a black and white photograph of age appropriate children in a real life situation that is presented to students. On the reverse side is listed the lesson's objectives and a script for the instructor to follow. The lesson format was as followed:

- Story presentation and discussion: 5 minutes. The story corresponding to the photograph is presented to students along with questions for the instructor to ask to facilitate a group discussion.

- Skill introduction: approximately 10 minutes. For all lessons in Unit 1, empathy, and the first lesson of each subsequent unit, problem solving and anger management, students are instructed in skills specific to the unit. In all other lessons, students are asked to generate steps to carry out the social skill presented via the photograph. Sample steps are provided on the lesson card to assist the teacher in guiding students.

- Role-playing: approximately 15 minutes. Using descriptions written on the lesson card, the teacher models the skill using appropriate steps proposed by students in a short role-play with a student volunteer. Using a list of

possible scenarios supplied on the lesson card, students engage in role-play as guided practice.

- Lesson wrap-up takes approximately five minutes. A summary of the lesson and encouragement to use newly acquired skills are presented to students.

Lessons were taught in the sequence specified in the program manual to be able to make meaningful comparisons to other Second Step studies.

Several teaching strategies are used in the delivery of a Second Step lesson. Modeling is a part of each lesson and teachers display appropriate social behavior throughout the school day. To facilitate generalization of prosocial skills, teachers cued and coached students in the treatment groups when and how to use newly learned strategies. To address differentiation, students were able to respond non-verbally with a facial expression or gesture (Committee for Children, 2002).

Role-playing is a prominent feature of each lesson allowing students to practice new skills in a safe and supportive environment. Role-plays were followed by a teacher-facilitated discussion about whether skills were applied appropriately to achieve a successful resolution to the situation and what could be done differently. In addition to providing positive reinforcement during the lessons, teachers were directed to provide positive reinforcement throughout the school day when a student attempted to use a newly acquired social skill (Committee for Children, 2002).

Students in the control condition received the school district's social studies curriculum at the appropriate grade level for the duration of the investigation by a certified teacher when students in the two treatment groups received Second Step instruction.

Digital Role-playing

After the Second Step lessons were completed, in the ninth week of the investigation, students who were randomly selected for the technology group were instructed in digital role-playing and divided into two or three cooperative learning groups per grade. Each group consisted of three or four students who collaborated to create a short video (two to four minutes) that was an example of a social skill taught in the program, either empathy, problem solving, or anger management. Within each grade, each group was assigned a different skill to depict.

Groups collaboratively brainstormed a storyline based on their assigned Second Step skill. Students were instructed to have each story contain at least one main character and a problem. The story was sketched with dialogue using a storyboarding template (Ohler, 2008; Appendix D). Key scenes were illustrated including an introduction to the problem and the main character(s), a progression of events including a climax, and resolution (Maier & Fisher, 2007). Students were told to develop an appropriate ending or resolution and at least one inappropriate ending to their story. Students determined who would be the filmmaker and actors for each group. Student-produced videos were shown to all students in the technology condition. The audience was asked to identify the skill being demonstrated and to identify the scenario with the appropriate resolution.

Students in the instruction only condition received the concluding review lesson in the Second Step curriculum. Students in the control group continued to receive social studies instruction.

Training

Three teachers agreed to participate in this investigation (Appendix E). Prior to the start of the study, participating teachers were provided with an overview of the Second Step program (Appendix J), its intended goals and given training by the primary researcher during regularly scheduled teacher preparatory periods. Teachers were given the lesson sequence for their grade (Appendices G, H, and I), lesson presentation information, and demonstrations on modeling specific program skills. Teachers were given lesson cards, cassette tapes, and a Second Step teacher's guide at the appropriate grade level. Instructors teaching the technology component were trained in the procedures for digital storytelling and given video cameras and storyboarding templates (Appendix D). Implementation fidelity was assessed two times by trained observers for each instructional group using an implementation checklist developed for this investigation (Appendix F).

Procedure

Second Step lessons were taught two or three times each week for nine weeks in sequence, by the classroom teacher (Appendix G, H, I). Lessons were taught in the afternoon during the regularly scheduled social studies class period. Each classroom had access to a television and a videocassette recorder (VCR) on which to view the Second

Step instructional videos. Students in the digital role-play group were given storyboarding templates (Appendix D) and digital video cameras. Student short movies were viewed on computer screens or interactive smart boards. Students in the control condition received the school district's social studies curriculum taught by the primary researcher. Students in the two treatment conditions received social studies instruction on days that Second Step lessons were not scheduled. If a teacher was absent on a day that a Second Step lesson was scheduled the teacher made up the missed lesson. If a student was absent, the teacher or the primary researcher taught the lesson that was missed.

Upon completion of the Second Step lessons and the digital role-playing component, classroom teachers administered posttests to all participating students. The Second Step Knowledge Assessment (Committee for Children, 2004) is produced for each grade and contains similar questions that are modified to be appropriate for each grade level. The test is given in a paper and pencil format and was administered according to the test developer's procedures. Test administration took approximately one hour. Demographic variables were obtained from the school district's database for age, grade, gender, and race. Tests were coded with participating students' study number.

Classroom teachers completed student-rating forms for each participating student assessing social skills and problem behavior using the School Social Behavior Scale, 2nd Edition (SSBS-2, Merrell, 2002). The rating scales were given to teachers by an independent blind observer to be completed in a specific randomized order. The list containing the study numbers was destroyed immediately following the posttest and completion of the teacher ratings.

Instruments

Student Assessment of Skills and Knowledge

The Second Step Knowledge Assessment (Committee for Children, 2004) measures violence prevention knowledge and skills. The test is specific to grade level and a complete implementation manual is provided for each grade. The publisher recommends that the same assessment be given both as a pretest and posttest to ascertain gains in knowledge. Students in this investigation were only given a posttest to avoid test-retest effects (Agnew & Pyke, 1994; Murphy & Davidshofer, 2005). Test results were used to make comparisons between students in the three program conditions. The test consists of multiple-choice questions each having one correct answer and open-ended questions with up to three correct answers. Total test scores range from zero to 25. Test questions are based on concepts and skills that students learn in the Second Step lessons including empathy, point-of-view, ager management, conflict resolution, and alternatives to violence (Orpinas, Parcell, McAlister, & Frankowski, 1995). Most questions require students to respond to a brief scenario similar to those in the Second Step lessons. For all grades, there are practice questions at the start of the test. All questions and answers are read out loud by the teacher. Definitions of words and terms are not permitted.

The publishers state in the test manual that the Second Step assessment was field tested in 2003-2003 leading to revisions, and tested again in 2004. Although psychometrics have not been reported, McMahon and Washburn (2003) found moderate

internal consistency ($\alpha = .60$ pretest, $\alpha = .74$ posttest). The majority of Second Step

studies do not report findings for gender using this assessment.

Teacher ratings

The School Social Behavior Scales, 2nd Edition (SSBS-2, Merrell, 2002), were

completed by teachers for each student after the conclusion of the intervention. The SSBS

(Merrell, 1993) was developed to assess children and adolescents ages five to eighteen, in

kindergarten through twelfth grade. Teachers rate how frequently students are involved in

prosocial or antisocial behaviors on a five-point likert scale ranging from never to

frequently. Thirty-two items on the Social Competence Scale measure adaptive, prosocial

skills and includes three subscales; Peer Relations, Self Management-Compliance, and

Academic Behavior. The 32 items on the Antisocial Scale assess socially relevant

problem behaviors in three subscales; Hostile-Irritable, Antisocial-Aggressive, and

Defiant-Disruptive and asks about behaviors such as fighting and complaining. The two

scales are labeled Scale A (Prosocial Behavior) and Scale B (Antisocial Behavior) so as

to not influence teachers. Both scales take approximately 10 minutes to complete for each

student.

Raw scores are calculated for each of the three subscales in the Social

Competence and the Antisocial Behavior Scales with a total raw score calculated for each

major scale. Raw scores are converted to $T-$ scores and percentile rankings. Social

Functioning Levels are computed using $T-$ scores and the tables provided in the manual

for each of the six subscales and for the two main scales. The Social Functioning Levels

were designed to assess children's overall social and behavioral performance and are aligned with the three-tiered approach to intervention (Kratochwill, Albers, Steele, & Shernoff, 2004; Merrell, 2002; Weissberg, Kumpfer, & Seligman, 2003). Four social functioning levels can be computed for each subscale; high functioning, average, at-risk, and high risk.

The SSBS-2 (Merrell, 2002) was standardized with 2280 kindergarten through grade 12 students. The sample demographics reflected the 2000 United States Census for gender, race, socioeconomic status (SES), and special education status. The two subscales have high internal reliability consistency. Alpha and split-half coefficients for the two scales and six subscales range from .91 to .98. Test-retest reliability coefficients for the six subscales rated at 3-week intervals ranged from .60 to .82. Statistical analyses also show strong evidence of content, construct, and criterion-related validity based on content, scale structure, and comparisons to other teacher rating scales of children's social behavior (Merrell, 2002).

Analyses for gender conducted on the norming sample found girls to have higher levels of Social Competence ($M = 119.04$, $SD = 28.21$) compared to boys ($M = 105.41$, $SD = 28.91$), $t(2128.70) = 11.30$, $p < .001$, $d = .47$). Boys had higher Antisocial Behavior scores ($M = 61.41$, $SD = 29.13$) compared to girls ($M = 48.94$, $SD = 22.33$), $t(2276.89) = 11.58$, $p < .001$, $d = .48$). Separate scoring norms were not developed as gender differences similar to those found in the norming sample have been documented in the literature and were expected (Lewin, Davis, & Hops, 1999). Merrell (2002) asserts

that separate scoring norms may lead to false-positive error results for girls and false-negative errors for boys.

Research has demonstrated differences due to gender for social skills (Lewin, Davis, & Hops, 1999) and verbal and physical aggression (Hyde, 2005). Several conflict resolution evaluations have established gender disparity, finding stronger program effects for boys (Bosworth, Espelage, DuBay, & Daytner, 2000; Farrell & Meyer, 1997). Schick and Cierpka (2005), using the German version of the Child Behavior Checklist (Achenback & Edlebrock, 1983), found increases in perspective taking for boys and less internalizing behaviors along with greater cooperation for girls in Second Step intervention groups.

Numerous Second Step studies have reported no significant gender differences using various teacher rating scales. No differences were found on the School Social Rating Scale (Gresham & Elliott, 1990) (Holsen, Smith, & Frey, 2008; McMahon, Washburn, Felix, Yakin, & Childrey, 2000), the Achenbach Teacher Report Form (Achenbach, & Edlebrock,1983) (Grossman et al. 1997; Schick & Cierpa, 2008), the BASC-2 (Reynolds & Kamphaus, 2005) (Edwards et al. 2005), or the SBSS (Merrell, 1993) (Taub, 2002). Frey et al. (2005) and Grossman et al. (1997) used the SSBS but did not report gender differences.

Several Second Step interventions with elementary students have used the SSBS or the SSBS-2 (Merrell, 1993, 2002) teacher rating to assess changes in behavior due to program implementation. Frey, Nolan, Von-Schoiak-Edstrom, & Hirschsein, 2005) found declines in antisocial behavior for the intervention group in grades two and four when

compared to the control group. Taub (2002), with a sample of third, fourth, and fifth grade students, saw gains in prosocial skills for students who received Second Step training along with slight decreases in antisocial behavior for students in the intervention school. Grossman et al. (1997) saw no significant differences in teacher ratings after the intervention for second and third graders using the SSBS.

Digital Role-Play Rubric

In addition to demonstrating the ability to generate an appropriate story in the assigned skill area and working cooperatively with peers, student videos were evaluated for 21st Century skills (*NCLB*, 2001) in the following areas; digital age literacy, creative thinking, and effective communication (Jakes, 2006) using a researcher-created rubric (Appendix J) based on six traits proposed by Moskal (2003) for scoring rubrics. The rubric was developed using the International Society for Technology in Education (ISTE) National Education Tech Standards (NET-S) and Performance Indicators for Students (2007). The rubric was evaluated by an elementary certified technology instructor and was determined to be appropriate. Student produced videos were judged by the classroom teacher and another teacher participating in the investigation to achieve inter-rater reliability (Huck, 2004).

Expected Findings

It was expected that adding digital role-playing to Second Step would improve program effectiveness for decreasing anti-social behavior and increasing prosocial behavior. Due to limited findings of actual prosocial skills used by children in most of the

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published Second Step studies (Angelone, 2008; Boltzer, 2003; Cooke et al. 2007; Nicolette, 2005; Edwards et al. 2005; Lillenstein, 2002; Nicolett, 2005; Orpinas et al. 1995; Reise, 2005; Sprague, 2001) having students create videos was an attempt to intensify the role-playing experience as the stories students developed would have increased relevance for them as well as for their classmates (Bandura, 1986; Edwards et al. 2005). It was anticipated that students in the two experimental conditions would have higher scores for knowledge about social and conflict resolution skills compared to the control group, with the highest scores earned by students in the digital role-play group.

CHAPTER 4

RESULTS

The purpose of this study was to investigate the effectiveness of Second Step: A Violence Prevention Program (Committee for Children, 2002) to improve social competence and reduce verbal and physical aggression for students in third, fourth, and fifth grade. In addition to a control group who did not receive the instructional program, this investigation added a digital role-playing component to increase program effects. Students in each participating grade who were randomly selected to be in the digital role-play condition collaboratively developed, acted, and filmed a conflict scenario. The videos were assessed with a researcher-developed rubric (Appendix J). Three research questions were employed to explore differences between the two treatment conditions. It was hypothesized that students who received Second Step with digital role-playing would exhibit greater knowledge of social and conflict resolution skills, increased prosocial behavior, and decreased antisocial behavior when compared to students who received only Second Step instruction. It was also expected that students who were taught Second Step would have greater knowledge and understanding of social and conflict resolution skills and improved behavior when compared to the control group. This chapter presents the results of this study. First, descriptive statistics and preliminary data analysis are presented and then the research questions and resulting findings are given. Next, the outcome of the digital role-play rubrics are discussed.

Description of the Sample Population

Of a total of 78 students in third, fourth, and fifth grade who were eligible to participate, 66 children met the criteria to be included in this study by returning all three consent forms (parent consent, Appendix, A; student assent, Appendix B; and parent video consent, Appendix C). Sixty-two students were given the Second Step Knowledge assessment (Committee for Children, 2004) as a posttest in their homeroom. Four students did not complete the posttest due to absences on the days the posttest was administered. Age of participating students ranged from eight years, three months to eleven years, three months. Forty-eight percent of students were female, 52% male, 98% were African American and 2% Latino, with nine students (13%) receiving special education learning support services. Students were randomly assigned to one of the three conditions; Group 1: Second Step instruction with digital role-playing, Group 2: Second Step instruction alone, or Group 3: control group, by an independent observer using a computer generated random number table and given study numbers which were not revealed to the primary investigator. Table 1 shows the number of students in each group.

Table 1.

Participants in Each Group by Grade

Treatment	Group 1	Group 2	Group 3
Grade 3	9	6	8
Grade 4	6	6	6
Grade 5	7	9	9

Teachers included in the investigation were one fourth and one fifth grade

teacher. Due to an unexpected prolonged absence, the school's visual arts teacher, who

was familiar with the students, taught the third grade class. The primary investigator, a

certified special education teacher and reading specialist, taught social studies to the

control group. Implementation fidelity checks (Appendix F) were conducted for each

teacher who taught the Second Step curriculum by the school's guidance counselor, a

special education teacher, and an elementary teacher. All three teachers involved in the

implementation checks had received school district professional development in Second

Step and were familiar with the program. They were also given an overview of the

instructional program used in this investigation (Appendix H). All participating teachers

were certified and considered highly qualified according to *NCLB* (2001) criteria.

Procedural Integrity and Interrater Agreement

To ensure fidelity of program presentation, at the conclusion of each lesson

teachers filled out a procedural implementation checklist developed by the primary

investigator (Appendix F). The checklist consisted of the instructional elements contained

in a Second Step lesson. A check mark was placed after each component, either yes if

completed, or no if not completed. Three certified teachers observed two classes for each

grade, approximately 10% of all sessions, and completed the same checklist to cross

validate lesson presentation. The percentage agreement was calculated by a percentage

agreement formula [(agreements / agreements + disagreements) x 100] as suggested in

House, House, and Campbell (1981). Point-by-point agreement was conducted for the

steps on both checklists and yielded procedural integrity scores that ranged from 100% to

64%. Percentage of agreement averaged 86% for lesson presentation. House et al. (1981) suggests that for behavioral investigations, 70% agreement is necessary, 80% is adequate, and 90% is good.

The Second Step Knowledge Assessment (Committee for Children, 2004) was administered to all participating students after the completion of the intervention by homeroom teachers. The multiple-choice and open-ended assessments are differentiated by grade level. All questions were read out loud to all students. Scores were converted to percentage correct in order to make meaningful comparisons between grades.

All student assessments were identified only by study number and grade and scored by the primary researcher using the guidelines developed by Committee for Children (2004). Interscorer agreement was computed for a randomly selected 20% of the assessments. The independent rater was a certified teacher who was familiar with the program and scoring of the assessment. Interscorer agreement was 100% for the knowledge assessments.

The School Social Behavior Scales, 2nd Edition (SSBS-2, Merrell, 2002) were completed by the classroom teachers who taught the program for all participating students at the end of the study. The SSBS-2 teacher rating consist of two scales scored on a five-point likert scale; Scale A: Prosocial Behavior, and Scale B: Antisocial Behavior. Raw scores for each scale are converted to T – scores. Social Functioning Levels are computed for each scale using the tables in the test manual. The scoring of this measure is objective and was completed by the primary researcher following test manual procedures.

Descriptive Statistics

Preliminary procedures were carried out to ensure that the data were accurate and free from problems prior to conducting data analyses. Data were entered into PASW® Statistics GradPack 17.0 (SPSS) by the primary researcher. Missing data were found for the Second Step Knowledge assessment due to student absences and were determined to be random. Owing to the small number of participants, substitution of group means for the missing values were utilized rather than case deletion. This method is not as liberal as relying on prior knowledge and less conservative than using overall mean substitution as the distribution mean for the group will not change. However, the variance of the variable is reduced causing the mean to be closer to itself than to the missing value it replaces (Stevens, 2002; Tabachnick & Fidel, 2007).

Three dependent variables were evaluated; content knowledge, prosocial behavior, and antisocial behavior. Independent variables were group and grade. Preliminary assumption testing was conducted to screen for normality, linearity, and multicollinearity with no serious violations. However, the program generated what it determined as one outlier. Tabachnick and Fidel (2007) suggest that if there is only one score that is not considered severely out of range as determined by a critical value table, it may be left in. Accordingly, data were run without the outlier and yielded the same values for mean and standard deviation. The F test for the Box's test indicating the rejection of the homogeneity hypothesis due to differences in the variances of the condition groups, was significant, $F(48, 3673.68) = 1.54$, $p = .01$. The Box's Test assesses whether the variances and covariance between the dependent variables are the

same for all levels of the factor and that group sizes are approximately equal (Green & Salkind, 2003; Stevens, 2002). According to Stevens (2002) and Tabachnick and Fidel (2007), if sample sizes are unequal and Box's Test is significant at levels greater than $p <$ .001, robustness may be assumed if samples are only slightly different as the test is very sensitive to non-normality Tabachnick and Fidel (2007) suggest using the more rigorous Pillai's criterion over Wilks' lambda if smaller samples create larger variances to assess multivariate significance. For the MANOVA, Pillai's Trace was significant for grade, F $(6, 112) = 5.95$, $p < .001$; Pillai's Trace = .48; partial eta squared .24. Levene's Test of Equality of Error Variance showed that for the School Social Behavior Scale: A, prosocial teacher rating, the error variance was not equal across groups violating the assumption of the homogeneity of variances. However, MANOVA is robust for unequal variances when group sizes are approximately equal (largest / smallest < 1.5) (Stevens, 2002). The ratio of the largest to the smallest group in this study was 25 / 18, which indicated that the F statistic was robust. Mean and standard deviation for all groups by grade are presented in Table 2.

Table 2.

MANOVA Means and Standard Deviation

Dependent Variable	Grade	Instruction With Digital Role-playing Group 1		Instruction Only Group 2		Control Group 3	
		M	*SD*	*M*	*SD*	*M*	*SD*
Second Step Assessment	3	26.7	10.3	24.1	2.0	24.6	14.4
	4	49.1	22.2	35.0	17.3	40.0	22.1
	5	56.6	18.1	54.1	13.8	38.2	15.2
SSBS A: Prosocial Behavior	3	41.0	3.8	44.7	8.6	39.4	7.1
	4	42.7	8.2	41.2	6.8	40.7	5.6
	5	49.0	13.5	52.2	7.6	49.1	14.5
SSBS B: Antisocial Behavior	3	65.1	7.5	62.7	8.9	65.4	9.9
	4	60.3	9.3	61.8	8.4	63.2	10.3
	5	58.1	16.7	61.4	12.6	55.6	15.5

Research Questions

1. Will a social and conflict skill training program that incorporates digital role-playing increase student knowledge about social skills and conflict resolution when compared to students receiving skill instruction and a control group?

2. Will students who participate in a social and conflict resolution skill program that incorporates digital role-playing demonstrate observed decreases in verbal and physical aggression and increases prosocial behavior when compared to students who receive skill instruction alone and a control group?

3. Will there be an interaction between group and grade resulting in greater program effects for students at specific grade levels?

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To determine if there were any significant differences for treatment condition and grade on the knowledge assessment and teacher ratings, a three by three between groups multivariate analysis of variance (MANOVA) was performed. MANOVA analysis tests the null hypothesis, that the means for the dependent variables are the same for all groups (Green & Salkind, 2003). The omnibus test of main and interaction effects yielded a significant difference for grade level on the combined dependent variables, $F (6, 110) = 6.18$, $p < .001$; Wilk's lambda = .56; partial eta squared = .25, which indicated that 25% of the multivariate variance of the dependent variables was associated with the grade level factor. No significant effects were found for treatment group, $F (6, 110) = 1.30$, $p = .264$; Wilk's lambda = .87. In addition, no significant effects were found for the interaction of treatment group and grade level, $F (12, 145) = .65$, $p = .79$; Wilk's lambda = .87. Observed power, computed by SPSS was .99 for the interaction of the knowledge tests scores and grade level and .89 for the prosocial scale and grade level ($\alpha = .05$). The analysis revealed no significant differences due to treatment condition for skill knowledge, prosocial or antisocial behavior.

It was predicted that there would be a significant interaction between grade level and treatment condition but the analyses did not yield these results. However, a significant main effect was detected for grade level. Follow-up univariate analyses were conducted on the two dependent variables that were significant on the MANOVA, Second Step Knowledge Assessment and SSBS-2 Prosocial Behavior rating (Scale A), to identify the precise areas of significant differences. One-way between-groups analysis of variance (ANOVA) were conducted to consider the results of each dependent variable separately. Alpha levels for significance were reduced using a Bonferroni adjustment to

decrease the chances of a Type 1 error (Gravetter & Wallnau, 2004). The original alpha level of .05 was divided by the number of additional analyses that were performed (two) (Tabachnick & Fidel, 2007) to obtain a new alpha level for significance of .025. As the independent variable grade consists of three levels (grades three, four, and five), pairwise comparisons using Tukey's HSD post hoc analyses were performed to ascertain specific differences between grades. ANOVA for the Second Step Knowledge Assessment showed that Levene's Test of Homogeneity of the Variances was significant at .01 exceeding the .05 cut point violating the assumption of equal variances. However, the Robust Test of Equality of Means, specifically the Welch and Brown-Forsythe tests were significant (.007 and .001). This indicated that there were differences between grade levels on the knowledge assessment, F (2, 63) = 12.91, p < .001, η2 = .29, indicating a large effect size (Cohen, 1988). Results of Tukey's HSD indicated that students in grade three (M = -25.65, p = .008) had significantly lower scores on the knowledge assessment than students in grade four (M = 41.39, p = .008) and grade five (49.06, p = < .001). The comparison of the three groups for the SSBS-2 Prosocial Behavior rating, showed a significant between group difference. F (2, 63) = 7.42, p <.001, η2 = .19, indicating a large effect size (Cohen, 1988). Tukey's HSD post hoc test showed that the mean score on the prosocial scale for students in grade five (M = 50.20) was significantly higher than students in grade three (M = 41.39, p = .003) and grade four (41.72, p = .008).

Digital Role-play Rubrics

Students in the experimental digital role-play condition and the skill instruction comparison group were instructed in the Second Step curriculum together. At the completion of the lessons students, the experimental group were instructed in separate classrooms by grade and divided into groups of three or four. Students groups cooperatively developed, acted, and filmed a story based on an assigned Second Step unit, either empathy, problem solving, or anger management. The primary researcher and classroom teachers, using a rubric developed for this investigation, assessed the digital role-plays (Appendix J). Each cooperative group was scored together. Out of a possible total of 18 points, scores ranged from eight to fourteen (Table 3).

Table 3.

Cooperative Group Scores for the Digital Role-plays

Grade	Second Step Skill Area	Earned Score
3	Empathy	8
3	Problem Solving	13
4	Problem Solving	14
4	Anger Management	11
5	Empathy	11
5	Problem Solving	11
5	Anger Management	13

Note. Low numbers of students in grades three and four allowed for only two groups.

The digital role-play rubric contained six questions, each scored form one to three which corresponded to excellent (3), good (2), and OK (1). The primary researcher and participating classroom teachers viewed the videos and collaboratively arrived at the scores. The mean and standard deviation for each trait are displayed in the following table (Table 4).

Table 4.

Mean and Standard Deviation for Rubric Traits

Trait	M	SD
Point of View	2.0	.58
Story Content	2.3	.49
Staying in Character	1.9	.69
Appropriate Solution	2.3	.76
Working With Others	1.9	.38
Use of Technology	1.9	.38

Summary

The results of the analyses revealed that students who were taught Second Step for nine weeks, regardless of instructional enhancements, did not display increased knowledge of social and conflict resolution skills when compared to a control group, who received the school district's social studies curriculum. In addition, students in the two instructional groups were not rated by their teachers to have superior prosocial behavior

and less antisocial behaviors compared to their classmates who did not learn social and conflict resolution strategies. Therefore, it can be assumed that the treatment had no visible effect on students' behavior. Significant differences were found for grade level regardless of treatment group. Older students in grade five had superior prosocial behavior when rated by their teachers compared to students in grades three and four. Younger students in grade three earned lower scores on the knowledge assessment when compared to students in grades four and five. These findings did not support the research hypothesis that students who were taught Second Step would benefit from the experience and be observed to have better social performance, less aggression, and greater knowledge of social and conflict resolution skills. Furthermore, review of the digital role-play videos did not reveal any clear pattern for skill acquisition by grade, skill area, or specific trait.

This chapter presented the results of this investigation of Second Step and digital role-playing with a sample of third, fourth, and fifth grade students. The results of the statistical analyses were presented along with answers to each research question. In the following chapter, a discussion of the results will be offered along with the limitations of this study, implications for practice, and recommendations for future research.

CHAPTER 5

DISCUSSION

Introduction

The purpose of this investigation was to explore whether adding a technology component, specifically digital role-playing, improved the efficacy of a social and conflict resolution curriculum. Students in grades three, four, and five were instructed in Second Step: A Violence Prevention Program (Committee for Children, 1992) for nine weeks. This study employed an experimental design with students randomly assigned to either an experimental condition instructed in digital role-playing in addition to Second Step, a comparison condition receiving only Second Step, and a control group who were not taught social and conflict resolution skills. Descriptive and inferential statistics were utilized to analyze the results of the Second Step Knowledge assessment (Committee for Children, 2004) and the School Social Behavior Scales, 2nd Edition (SSBS-2, Merrell, 2002) teacher rating. Students in the experimental group produced videos that were assessed using a researcher-developed rubric (Appendix J).

This chapter presents a summary and discussion for the results of the research questions addressed in the investigation and includes inferences about the student produced digital role-plays. Results of the knowledge test and the SSBS-2 are discussed in relation to previous research. Following, cautions for interpreting the results of this study, implications for practice, and directions for future research will be considered.

Summary of Findings

Three research questions were addressed in this study. These questions and a summary of their results follow.

1. Will a social and conflict skill training program that incorporates digital role-playing increase student knowledge about social and conflict resolution skills compared to students receiving only the educational program and a control group?

A multivariate analysis of variance (MANOVA) was employed to determine if there were significant differences on the student knowledge assessment due to treatment condition. The omnibus test yielded no significant differences for treatment condition.

This finding differs from several previously conducted studies of Second Step. In quasi-experimental studies that utilized a control group, Boltzer (2003), Orpinas, Parcel, McAlister, and Frankonski (1995), Ryan, Aten, Avinger, and Miller (2004), and Sprague et al. (2001), and found gains in student knowledge on the Second Step content test when compared to a control group. McMahon and Washburn (2003) and Angelone (2008) found significant increases from pretest to posttest on the knowledge assessment.

Similar to the findings in the present study, Riese (2005), using a control group, pretest and posttest design with students in kindergarten through six grade in a rural elementary school found no differences on the Second Step content test. However, the sample was very different from that of the current investigation. Numerous Second Step studies have found gains using the curriculum's content assessment. However, to determine the effectiveness of a behavioral intervention, it is necessary to find positive

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effects for reduced aggression not just increases in content knowledge (Orpinas et al. 1995).

2. Will students who participate in a social and conflict resolution skill training program that incorporates digital role-playing demonstrate decreased verbal and physical aggression and increased prosocial skills when compared to students receiving only the educational program and a control?

A multivariate analysis of variance (MANOVA) was used to ascertain any significant differences on teacher ratings of prosocial and antisocial behavior due to treatment group. The omnibus test yielded no significant differences on behavior ratings due to treatment condition.

A number of Second Step studies have found changes for aggression using teacher ratings when compared to a control group or from pretest to posttest. Frey, Nolan, Van Schoiack, Edstrom, and Hirschstein (2005), Hussey and Flannery (2007); and McCabe (2001) found deceases for students who were rated most aggressive at pretest. Several researchers have found significant increases on teacher ratings of prosocial behavior for students taught Second Step. However, these studies generally had small effect sizes and were longer in duration than the current investigation (Edwards, Hunt, Meyers, Grogg, & Jarrett, 2005; Holsen, Smith, & Frey, 2008; McMahon & Washburn, 2003). Significant changes in behavior are generally limited to a small group of students and would be hard to detect (Holsen et al. 2008; Meyers et al. 2004). Consequently, these results would produce small effect sizes.

The majority of Second Step studies that used teacher reports as a dependant variable found no significant changes for either antisocial or prosocial behavior (Boltzer, 2003; Cooke et al. 2007; Grossman et al. 1997; Lillenstein, 2002; McCabe, 2000; McMahon, Washburn, Felix, Yakin, & Childrey, 2000; Nicolette, 2005). Most children display acceptable behavior therefore it is possible that teachers may not notice small changes (Grossman et al. 1997; Hussey & Flannery, 2007; Holsen et al. 2008). Several researchers have reported that students perceived positive changes while teachers or parents did not (McMahon & Washburn, 2003; Orpinas et al. 1995; Ryan et al. 2004; Schick & Cierpka, 2005; Van Scholack-Edstrom, Frey, & Beland, 2002).

3. Will there be an interaction between group and grade resulting in greater program effects for students at specific grade levels?

 A multivariate analysis of variance (MANOVA) was employed to determine if there was a significant interaction for group and grade on the knowledge assessment and the SSBS-2. The omnibus test yielded significant differences for grade. Two separate one-way between-groups analysis of variance (ANOVA) were conducted on the significant dependent variables, knowledge assessment and prosocial teacher ratings. Post hoc tests showed that students in grade three had significantly lower scores on the knowledge assessment compared to students in grades four and five. Students in grade five had significantly higher scores on the prosocial behavior rating than students in grades three and four.

On two measures used in this investigation, skill knowledge and prosocial behavior, older students achieved significantly higher scores when compared to younger

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children. McMahon and Washburn (2003) found that older middle school students in grade eight, had significantly higher scores for the Second Step content test compared to younger students. Edwards et al. (2005) analyzed the Second Step assessment by its three constructs, empathy, problem solving, and anger management for fourth and fifth grade students and found a significant interaction for grade and anger management; fifth graders made significantly more gains than fourth graders, but only for this area.

Varying results have been reported for Second Step studies that utilized teacher behavior ratings. Taub (2002) found no differences for grade using the SSBS-2, for students in third through fifth grade. However, Hussey and Flannery (2007) found that younger children showed greater decreases in reactive aggression scores on the Aggressive Behavior Teacher Checklist (Dodge & Coie, 1987) in a sample of kindergarten through second grade students.

Digital role-play rubrics.

The evaluation of the digital role-play rubrics did not display any relationship for gains in conflict resolution expertise by grade, Second Step skill area, or specific trait. Given that students were not familiar with digital storytelling and the use of video cameras, this is not surprising. In addition, only four 45-minute class periods were allocated for story development, planning, and filming. Cooperative group scores (Table 3) for students in grade three for empathy were lower than other skill areas for all grades, indicating the difficulty younger children have with perspective taking.

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Verbal feedback from teachers and students suggested that students enjoyed working together to create the digital role-plays. Using technology appeared to increase motivation to practice the skills learned in the program even though data from the behavior ratings and the content test did not reveal any significant results. When surveyed, students often responded that role-playing was their favorite part of the Second Step curriculum (Cossa, 2006; Edwards, et al. 2005; Esbensen & Osgood, 1999; Meyer et al. 2004).

Limitations

Factors that are beyond the control of this investigation such as family and neighborhood influences may have affected students' progress for conflict resolution (Attar et al. 1994; Eisenbraun, 2007; Farrell & Bruce, 1997). This study took place in an urban public school and included a small number of children receiving special education services limiting generalization of findings to other situations.

Threats to internal validity included the Hawthorne Effect. Teachers who taught the program also completed the behavior ratings. Although ratings were given to teachers in random order and they were asked to complete them in this specific order, their participation could have created expectancy effects. It is also possible that the treatment, specifically the Second Step program, may have been disruptive to daily classroom routines. In addition, the program was abbreviated to complete the investigation before the end of the school year.

Teacher training may have compromised internal validity. Only one participating teacher received training from a certified Second Step trainer as recommended by the program developers (Committee for Children, 1992). Participating teachers were given professional development by the primary investigator along with the teacher's guide and a program overview developed for this study (Appendix H). This may have influenced program implementation and consistency of instructional delivery. However, program implementation does not appear to be a significant factor (Hussey & Flannery, 2007; Larson & Samdal (2007).

<center>Implications for Practice</center>

Need for Prevention Programs and School-wide Positive Behavior Support

Prevention science promotes a deterrence approach to problem behavior (Sugai & Horner, 2002, 2008; Walker et al. 1996). This research has resulted in establishing school-wide positive behavior support (SWPBS) programs to enhance social and academic competencies while minimizing problem behaviors for all students (Horner & Sugai, 2009). SWPBS is a decision-making framework to guide the selection and implementation of academic and behavioral practices to improve student outcomes and consists of four elements; clear outcomes and goals, use of research-based programs, data driven decision making, and system-wide change for sustained effects (Sugai & Horner, 2002). SWPBS is most effective as part of a continuum of support services involving the entire school and includes targeted interventions for students requiring increased support (Sugai & Horner, 2008). Second Step can be classified as a Tier I universal intervention or a Tier II secondary intervention for students with at-risk behaviors. Second Step may

be implemented system-wide at the school level (Office of Special Education Programs, OSEP, 2009).

Schools that implement SWPBS explicitly teach students appropriate social skills and provide clear behavioral expectations using incentives (Frey, Hirschstein, & Guzzo, 2000; Horner & Sugai, 2010; Luiselli, Putnam, Handler, & Feinberg, 2005; Sugai & Horner, 2002). Although punishing infractions may produce immediate results, reacting punitively to violations tend to ultimately increase adverse behavior and decrease academic outcomes (Sugai & Horner, 2008).

In the investigation under review, only students in three grades received the intervention. As Second Step is a universal prevention program, it is possible that different effects may have been found if the curriculum had been taught school-wide. This may have positively affected school climate, a consequence of improving social behavior (Sugai & Horner, 2008). Various factors related to school climate may contribute to children exhibiting antisocial behaviors including academic deficits, inconsistent consequences, lack of effective social skills, and ambiguous behavioral expectations (Colvin, Kameenui, & Sugai, 1993; Mayer, 1995; Sprague et al. 2001; Walker et al. 1996). In a sample of elementary students Lillenstein (2002) found no significant effects on teacher and parent behavior ratings. Despite these results, teacher interviews suggested positive changes in classroom climate.

Program Duration and Intensity

A significant issue in the current inquiry may have been program duration. A number of previous studies took place over a longer period than the current investigation (four months to over one school year) and found positive changes in behavior although with small effect sizes (Edwards et al. 2005; Frey et al. 2005; Holsen et al. 2008; Hussey, Flannery, 2007; McMahon et al. 2000; Taub, 2002). Sprague et al. (2001) saw reductions in discipline referrals in a yearlong intervention. In studies that used a control or comparison group, significant differences in aggression may have been seen due the rise in violent behavior over the course of the school year (Abner, Jones, Brown, Chaudry, & Samples, 1998; Cooke et al. 2007; Farrell & Meyer, 1997; Grossman et al. 1997; Shapiro, Burgoon, & Welker, 2002). Second Step implemented in conjunction with SWPBS requires a sustained effort over several years indicating the need for longitudinal studies to determine the program's effectiveness (OSEP, 2009).

Developmental View of Perspective Taking

In this study, older children achieved higher scores on the SBSS-2 prosocial rating scale and on the Second Step content assessment. It must be considered that the higher scores the older students attained on the prosocial ratings was not a factor of the intervention and included students in the control group. Previous studies have had varied results with regard to age about the value of Second Step for actual behavior using teacher ratings.

Evaluation of the digital role-plays, using a researcher created rubric, revealed that students in grade three had the lowest overall scores for empathy reflecting the difficulty younger children have with perspective taking and responding emotionally to other people. As the ages of students in this investigation ranged from eight to eleven, all students were most likely functioning at the concrete operations stage of cognitive development (Piaget, 1932). In this stage, age seven to twelve, children begin to think logically about events and generally make rational judgments, but only on what is observable (Ormrod, 2003; Papalia, Olds, & Feldman, 2004; Piaget, 1932).

Considering Selman's five-stage model of social perspective taking (Selman, 1976 a; 1980; Selman, Jaquette, & Lavin, 1977; Selman & Schultz, 1990), students in grade three were most likely at the second level, subjective perspective taking. Although children at this stage acknowledge that other people may feel differently when in the same situation, they are unable to experience another's thoughts and feelings. In the next level, reciprocal perspective taking, children are able to appreciate that for many social situations there is no single right or wrong outcome due to their growing ability to view situations from another person's point-of-view.

Although early elementary students and some upper elementary students may have difficulty with perspective taking resulting in inappropriate decisions in social situations, teaching children social and conflict resolution strategies in the early elementary grades may lay the groundwork for increased proficiency for these skills in later years (Crick & Dodge, 1996; Shure & Spivack, 1980; Spivack & Shure, 1974; Taub, 2002). Instruction in problem solving strategies such as brainstorming alternate solutions

and consequential thinking may enable students to navigate social problems they will most likely encounter in the future. Problem solving skills are dependent on cognitive abilities and learned strategies that increase and improve with age (Crick & Dodge, 1994).

<center>Recommendations for Future Research</center>

Pretest Measures

Due to the use of random assignment and a control group, this study did not utilize pretest measures of knowledge or behavior. Researchers may consider adding an additional randomly selected group that will be pretested to ascertain changes pre and post intervention. Committee for Children (2004) recommends both pretest and posttest administration of the content test to determine changes (Sprague, et al. 2001). Previous Second Step research has found that children who had the highest scores for aggression at pretest showed the largest reductions in antisocial behavior post-intervention (Holsen, et al. 2008; McCabe, 2000; Taub, 2002).

Technology

Surveys have found that middle school students, regardless of race or socioeconomic status (SES) prefer using computers and Internet research to all other instructional activities and that they would like more opportunities to use technology in school (Spires, Lee, & Turner, 2008). A meta-analysis of studies in which students in kindergarten through six grade received computer assisted instruction (CAI) showed increased academic improvement when compared to traditional instructional strategies

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(Christmann & Badgett, 2003). Learning is enhanced when students are intrinsically motivated (Hektner & Csikszentmihalyi, 1996) and in socially collaborative settings. Technology-supported learning environments may encourage cooperation among students (Gee, 2007; Scardamalia, Bereiter, & Lamon, 1994; Shaffer, 2006).

Limited Effectiveness of Many Programs & Need for Validation Studies

Second Step is recognized as an exemplary Safe, Disciplined, and Drug-Free Schools program (U.S. Department of Education, 2001) on the basis of program quality, educational significance, and usefulness in different situations and with different populations. However, this designation is based on the results of three studies. It is important to consider that a significant number of published studies documenting the effectiveness of Second Step have been conducted by the program developers or researchers connected to Committee for Children. Many of the reported Second Step studies did not employ random assignment (Holsen et al. 2008; Orpinas et al. 1995; Schick & Cierpa, 2005; Sprague et al. 2001; Taub, 2002), or a control group (Cooke et al. 2007; Edwards et al. 2005; Holsen et al. 2008; Hussey & Flannery, 2007; McMahon & Washburn, 2003), had limited racial and cultural diversity (Orpinas et al.1995; Taub, 2002; Van Scholack-Edstrom et al. 2002), or took place outside of the United States (Holsen et al. 2008; Larson & Samdal, 2007; Schick & Cierpka, 2005). Most studies did not take place in urban schools, a population at-risk for aggression (Attar, Guerra, & Tolan, 1994; Eisenbraun, 2007; Farrell & Bruce, 1997; Tolan & Henry, 1996). There is a need for experimental or quasi-experimental investigations of Second Step with varied populations conducted by independent researchers using validated behavioral measures.

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Conclusions

Increased recognition of bullying, vandalism, drug use, discipline issues, and inappropriate behavior continue to make school safety a high priority (Sugai & Horner, 2002). While public schools are charged with implementing effective violence prevention programs, their primary focus is on academic instruction. Universal programs that teach students social and conflict resolution skills appear to have a positive impact on academic achievement (Frey, Hirschstein, & Guzzo, 2000; Sandy & Chochran, 2000; Zins, Bloodworth, Weissberg, & Walberg, 2004; Zins & Elias, 2006).

School-based prevention programs endeavor to mediate prior to the onset of significant behavioral difficulties. Primary interventions are based on a risk and resiliency model (Doll & Lyon, 1998) to prevent and reduce violence at the school level while supporting positive future outcomes (Bell, 2001). Social and emotional learning (SEL) programs act as a protective factor giving students the skills to build emotional resilience (Telleen, Kim, Stewart-Nava, Pesce, & Maher, 2006).

The current study investigated the efficacy of Second Step to teach social and conflict resolution skills to upper elementary students. To improve program effects and intensify student motivation, a technology component was added. The results in this study did not yield significant findings owing to the curriculum. Furthermore, previous Second Step research has not been found to be particularly effective. Nevertheless, introducing developmentally appropriate SEL programs school-wide and to the youngest

students allow children to become familiar with the language of empathy and negotiation prior to the onset of antisocial behaviors, crucial skills for older students who are at an increased risk for violence. While other factors such as home environment and the media also impact school culture, the benefits of teaching students to respond empathetically to others, solve problems, and control anger have been documented in the literature to improve academic and behavioral outcomes as well as strengthen resilience. However, the use of Second Step to accomplish these goals has not been supported.

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APPENDICES

APPENDIX A

PARENT/CAREGIVER CONSENT FORM

The Use of Digital Storytelling to Improve the Effectiveness of Social and Conflict Resolution Skill Training for Elementary Students

Investigators

Frank Farley, Ph.D., Professor, Psychological Studies in Education, 215-204-6024.

Betsy D. Lipschutz, M.Ed., Doctoral Student, Psychological Studies in Education,

      1012 West Thompson Street, Philadelphia, PA 19122; 215-582-5662.

Purpose of the Study

I understand that the purpose of this research is to examine the effects digital storytelling and role-playing when used with a social and emotional learning program (Second Step: A Violence Prevention Curriculum) to improve students' social skills and reduce verbal and physical aggression. I understand that the investigator conducting this study is a doctoral student in Temple University's Psychological Studies in Education Program and this study will be used in part to fulfill the requirements of that program.

How the Children Were Selected

This study will take place in intact classrooms. I understand that my child was selected based on his or her enrollment in the third, fourth, or fifth grade classroom.

General Experimental Procedures

I understand that my child will participate in a social and emotional learning intervention (Second Step: A Violence Prevention Curriculum) in his or her classroom two to three days per week. Each intervention lesson is 30-minutes in length and will be taught by your child's regular classroom teacher. The intervention period will last 10 weeks. I understand that the lessons will take place during the regularly scheduled social studies period. All missed social studies lessons will be balanced over the duration of the study. I understand that my child will be asked if he or she would like to participate, and will not have to do so even if I consent. Children will be assessed on their knowledge of the skills they learned in the intervention and the classroom teacher will evaluate your son or daughter's behavior at the conclusion of the intervention to assess whether the program was effective. Students will film short (2-4 minute) digital movies that they will plan and act in. My child's name will never appear in connection with any of the data collected. All data will be kept confidential, and digital movies will be destroyed at the conclusion

Initials _____ Date _____

The Use of Digital Storytelling to Improve the Effectiveness of Social and Conflict
Resolution Skill Training for Elementary Students

of the study. Results of the study that may be presented or published will discuss results
without identifying my child individually.

Possible Risks

I understand that the risk for my child is the loss of time spent on a different activity. My
child may become frustrated when asked to practice material that is unfamiliar, but I
understand that the classroom teacher will reassure my child and allow him or her to stop
if upset.

Benefits

I understand that my child will receive the Second Step social and emotional learning
intervention. Information on the effectiveness of the program will be collected at the end
of the study. This information will be shared with his or her teacher.

Confidentiality/Anonymity

I understand that all papers and information from this research study will be kept
confidential according to federal, state, and local laws and regulations. My name and my
child's name will never appear in connection with any of the information collected. I
understand that files and information from the study may be reviewed by the Temple
University Institutional Review Board or by federal agencies to make sure that the
investigators are doing the study properly and obeying federal regulations. I understand
that the results of this study may be presented or published. If so, myself, my child, and
my child's school will not be identified by name or anything else that will indicate their
identity.

Disclaimer/Withdrawal

I understand that I am free to decide whether or not my child participates in this study. I
understand that even if I consent, my child is free to decide whether or not to participate.
I further understand that not participating in the research or dropping out of the research
will yield no negative consequences for my child in the future by the investigators or
Temple University.

Initials _____ Date _____

The Use of Digital Storytelling to Improve the Effectiveness of Social and Conflict Resolution Skill Training for Elementary Students

Compensation

I understand that neither my child nor I will receive any compensation for participation in this project. I understand that although my child will receive social and conflict resolution skill training, it is specific to this project. This prevention program my not be successful for my child.

Injury

I understand that if my child were injured at any time during this study, I would be free to remove him or her. I am free to discontinue participation at any time and would choose to do so were her or she injured.

Termination

I understand that my child and I are free to drop out of the research at any time and will experience no ill side effects. I understand that my child will receive the Second Step intervention program for 10 weeks.

Institutional Contacts

I understand that if I wish further information regarding my <u>child's rights as a research subject</u>, I may contact Mr. Richard Throm, Institutional Review Board Manager and Coordinator, in the office of the Vice President for Research of Temple University, 3400 N. Broad Street, Philadelphia, PA, 19140, 215-707-8757.

Questions

I understand that I may ask the investigators questions about the research and my child's participation, and that these questions will be answered to my satisfaction before I agree to have my child participate. I may also contact Frank Farley, Ph.D., Professor, Psychological Studies in Education, at 215-204-6024.

PARENT/CAREGIVER CONSENT FORM, page 4

The Use of Digital Storytelling to Improve the Effectiveness of Social and Conflict
Resolution Skill Training for Elementary Students

Final Statement and Signature

This study has been explained to me. I have read the consent form and I agree to have
my child participate. I have been given a copy of this consent form for my records.

_____

Child's Name (please print)   Date of Birth   Teacher's Name

_____

Parent/Guardian's Name (please print)   Parent/Guardian's Signature   Home Phone Number   Date

_____

Principal Investigator's Name (please print)   Principal Investigator's Signature   Date

_____ I will allow my child to participate in this study.

_____ I do not allow my child participating in this study.

APPENDIX B

STUDENT ASSENT FORM

The Use of Digital Storytelling to Improve the Effectiveness of Social and Conflict Resolution Skill Training for Elementary Students

Investigators

Frank Farley, Ph.D., Professor, Psychological Studies in Education, 215-204-6024

Betsy D. Lipschutz, M.Ed., Doctoral Candidate, Psychological Studies in Education,

215-582-5662

Mrs. L is doing a study on how students get along with each other, their families, friends, and teachers. Mrs. L is asking you to participate in this study.

As a part of this study, you will be taught *Second Step* by your classroom teacher two to three times each week for about 10 weeks. The *Second Step* lessons will take place after lunch and take 30 minutes. The lessons will be a part of your regular social studies period. You will talk about feelings and how to solve problems, watch videos, look at pictures, and act out scenes (like from a play) with your classmates. The *Second Step* lessons will be different from your other lessons because you will not get a grade.

All information will be kept confidential and you name will not be connected to any information you give. Any papers or projects that you do will be kept in a locked cabinet and only Mrs. L will have the key.

If you do not want to participate in Mrs. L's study you don't have to. You will not get into any trouble with Mrs. L or any of your other teachers. You may also drop out of the study at any time and not get into any trouble. When you are learning new things, sometimes it can be frustrating. Please tell your teacher if you become frustrated or upset at any time during the Second Step lessons and you may stop and speak with Mrs. L or another teacher if you wish.

Being a part of this study will not cause you any harm and you will probably learn useful ways to get along with your classmates and friends. *The Second Step* lessons are a lot of fun! If you have any questions, please ask your teacher if you can speak with Mrs. L in room 205.

Initials _____ Date _____

The Use of Digital Storytelling to Improve the Effectiveness of Social and Conflict
Resolution Skill Training for Elementary Students

This study has been explained to me. This form has been read to me and:

_____ I want to participate in this study.

_____ I do not want to participate in this study.

_____	_____	_____	_____
Your Signature (student)	Date	Signature of Witness	Date

APPENDIX C

PERMISSION TO VIDEOTAPE

The Use of Digital Storytelling to Improve the Effectiveness of Social and Conflict Resolution Skill Training for Elementary Students

Investigators

Frank Farley, Ph.D., Professor, Psychological Studies in Education, 215-204-6024.

Betsy D. Lipschutz, M.Ed., Doctoral Student, Psychological Studies in Education,

   1012 West Thompson Street, Philadelphia, PA 19122; 215-582-5662.

I give my child permission to be videotaped by his or her classmates during a role-playing activity. I understand that the videotaped role-play stories will be used as an assessment of program effectiveness to teach social and emotional skills. The videotapes will be viewed by other members of your child's class and his or her teacher.

The videotapes will be reviewed after the intervention has been completed by Ms. Lipschutz. I understand that the videotapes will be kept confidential according to federal, state, and local laws and regulations. My child's name will never appear in connection with any of the information collected on the videotapes. I understand that the videotapes from the study may be reviewed by the University's Institutional Review Board or by federal agencies to make sure that the investigators are doing the study properly and obeying federal regulations. Results of the study that may be presented or published with discuss results without identifying my child individually.

When will my child be videotaped?

I give my permission for my child to be videotaped by his or her classmate during week 10 of the study during the role-playing activity.

How long will the tapes be used?

I give my permission for the videotapes to shown to my child's classmates until the completion of the study. The data will be stored for three (3) years after the completion of the study.

Initials _____ Date _____

PERMISSION TO VIDEOTAPE, page 2

The Use of Digital Storytelling to Improve the Effectiveness of Social and Conflict
Resolution Skill Training for Elementary Students

What if I change my mind?

I understand that I can withdrawal my permission at any time. Upon request, the
videotapes will no longer be used. This will not affect my relationship with Ms.
Lipschutz or anyone at the school in any way.

Compensation

I understand that neither my child or I will receive compensation for participation in this
project.

Injury

I understand that if my child were injured at any time during this study, I would be free to
remove him or her. I am free to discontinue participation at any time and would choose
to do so were he or she injured.

Institutional Contacts

I understand that if I wish further information regarding <u>my child's rights as a research
subject</u>, I may contact Mr. Richard Throm, Institutional Review Board Manager and
Coordinator, in the Office of the Vice President for Research of Temple University, 3400
N. Broad Street, Philadelphia, PA. 19140, 215-707-8757.

Final Statement and Signature

This study has been explained to me. I have read the permission to videotape form and I
agree to allow my child to be taped as a participant in the study. I have been given a
copy of this consent form for my records.

_____

Child's Name (please print)   Date of Birth   Teacher's Name

_____

Parent/Guardian's Name (please print)   Parent/Guardian's Signature   Home Phone   Date

_____

Principal Investigator's Name (please print)   Principal Investigator's Signature   Date
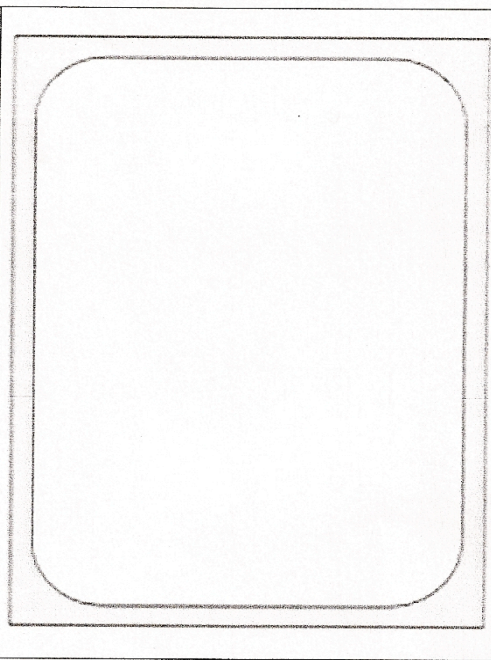
_____ I give permission for my child to be videotaped.

_____ I do not give permission for my child to be videotaped.

APPENDIX D

STORYBOARD TEMPLATE

NARRATION:	FRAME DESCRIPTION

MEDIA LIST:

APPENDIX E

TEACHER CONSENT FORM

The Use of Digital Storytelling to Improve the Effectiveness of Social and Conflict Resolution Skill Training for Elementary Students

Investigators

Frank Farley, Ph.D., Professor, Psychological Studies in Education, 215-204-6024.

Betsy D. Lipschutz, M.Ed., Doctoral Student, Psychological Studies in Education,

1012 West Thompson Street, Philadelphia, PA 19122; 215-582-5662.

Purpose of the Study

The purpose of the current study is to examine an empirically supported social and emotional learning intervention (Second Step: A Violence Prevention Curriculum) in an inclusive classroom setting to determine behavioral benefits for students. I understand that the investigator conducting this study is a doctoral student in Temple University's Psychological Studies in Education Program and that this study will be used in part to fulfill the requirements of that program.

How the Subjects Were Selected

I understand that I was selected on the basis of my employment as an elementary school teacher and my desire to participate in the implementation of an empirically supported social and emotional learning intervention (Second Step) in an inclusive classroom setting.

General Experimental Procedures

I understand that I will work with the investigators to implement an empirically supported social and emotional learning intervention (Second Step) in an inclusive classroom setting two to three days per week. Each intervention session is 30-minutes in length. The intervention period will last 10 weeks. I understand that the investigators will collect survey data on the effectiveness of the intervention. My name will never appear in connection with any of the data collected. The results of the study that may be presented or published will discuss results without identifying me individually.

Initials _____ Date _____

The Use of Digital Storytelling to Improve the Effectiveness of Social and Conflict
Resolution Skill Training for Elementary Students

Possible Risks

I understand that students with whom I work may become upset or frustrated when asked
to practice material that is difficult, but I understand that the investigator will reassure the
child and allow him or her to stop if upset.

Benefits

I understand that I will work individually with the investigators of this study. I will
receive feedback at the end of the study as to the level of treatment integrity in the
implementation of the intervention and the behavioral outcomes of the students involved
in the study.

Confidentiality/Anonymity

I understand that all papers and information from this research study will be kept
confidential according to federal, state, and local laws and regulations. My name will
never appear in connection with any of the information collected. I understand that the
files and information from the study may be reviewed by the Temple University
Institutional Review Board or by federal agencies to make sure that the investigators are
doing the study properly and obeying federal regulations. I understand that the results of
this study may be presented or published. If so, my name and the school in which I work
will not be identified by name or anything else that will indicate who they are.

Disclaimer/Withdrawal

I understand that I am free to decide whether or not I participate in this study. I further
understand that not participating in the research or dropping out of the research will not
be held against me in the future by the investigators or by Temple University.

Compensation

I understand that I will not receive compensation for participation in this project.

Injury

I understand that if I were injured at any time during this study, I would be free to
discontinue. I am free to discontinue participation at any time and will do so if I were
injured.

Initials _____ Date _____

The Use of Digital Storytelling to Improve the Effectiveness of Social and Conflict
Resolution Skill Training for Elementary Students

Termination

I understand that I am free to drop out of the research at any time and will experience no
ill side effects. I understand that I will implement the Second Step social and emotional
learning intervention program for 10 weeks.

Institutional Contacts

I understand that if I wish further information regarding <u>my rights as a research subject</u>, I
may contact Richard Throm, Coordinator for the Institutional Review Board, Temple
University at 215-707-8757.

Questions

I understand that I may ask the investigators questions about the research and my
participation and that these questions will be answered to my satisfaction before I agree
to participate. This study has been explained to me. This form has been read to me and I
agree to participate. I have been given a copy of this consent form for my records.

_____   _____

Signature of Teacher   Date

_____   _____

Signature of Witness   Date

_____ I agree to participate in this study.

_____ I do not agree to participate in this study.

APPENDIX F

SECOND STEP

IMPELEMENTATION CHECKLIST

Teacher_____

Date_____   Time_____

Grade_____

Unit: _____Empathy   _____Problem Solving   _____Anger Management

Lesson # and Title_____

1. Story Presentation and Discussion

    • Video   ____ yes   ____no
    • Review of prior lessons and skills   ____yes   ____no
    • Showed photo to all students   ____yes   ____no
    • Facilitate and extend class discussion   ____yes   ____no
    • Addressed individual students' needs   ____yes   ____no

2. Role-plays

    • Teacher first model   ____yes   ____no
    • Facilitated student role-plays   ____yes   ____no
    • Use of coaching and cueing   ____yes   ____no
    • Students given appropriate feedback   ____yes   ____no
    • Alternate activity   ____yes   ____no

3. Lesson Wrap-up

    • Review of concepts / skills   ____yes   ____no
    • Non-judgmental comments   ____yes   ____no
    • Managed off-task classroom behavior   ____yes   ____no
    • Appropriate lesson pacing   ____yes   ____no

TIMELINE OF LESSONS: Grade 3

Skill Area	Week	Lesson Number and Title
Empathy	1	1. Overview
	2	2. Conflicting feelings
	3	3. Active listening
		4. Expressing concern
	3	5. Accepting differences
Problem Solving	4	1. Overview
	5	2. Making conversation
		3. Dealing with peer pressure
	6	4. Resisting the impulse to steal
		5. Resisting the impulse to lie
Anger Management	7	1. Overview
		2. Dealing with an accusation
	8	3. Dealing with disappointment
		4. Making a complaint

APPENDIX H

TIMELINE OF LESSONS: Grade 4

Skill Area	Week	Lesson Number and Title
Empathy	1	1. Introduction and overview
		2. Conflicting feelings
	2	3. Identifying other's feelings
		4. Similarities and differences
	3	5. Perceptions
		6. Intentions
		7. Expressing concern
Problem Solving	4	1. Introduction and overview
		2. Giving and receiving a compliment
		3. Identify a problem /choose a solution
	5	4. Carry out and evaluate a solution
		5. Making conversation
		6. Keeping a promise
	6	7. Dealing with fear
		8. Taking responsibility for your actions
Anger Management		1. Introduction
	7	2. Getting the facts straight
		3. Reflection
		4. Dealing with put-downs
	8	5. Dealing with criticism
		6. Dealing with being left out

APPENDIX I

TIMELINE OF LESSONS: Grade 5

Skill Area	Week	Lesson Number and Title
Empathy	1	1. Skill overview
		2. Communicating feelings/support
	2	3. Cause and effect
		4. Predicting feelings
	3	5. Fairness
		6. Active listening
		7. Accepting differences
Problem Solving	4	1. Skill overview
		2. Resisting the urge to lie
		3. Dealing with peer pressure
	5	4. Dealing with gossip
		5. Resisting the urge to cheat
		6. Resisting the urge to steal
Anger Management	6	1. Skill overview
		2. Dealing with frustration
		3. Dealing with an accusation
	7	4. Keeping out of a fight
		5. Resisting revenge
		6. Dealing with consequences
	8	7. Make/respond to a complaint
		8. Goal Setting

DIGITAL ROLE-PLAY RUBRIC

Group
Members_____

Teacher_____ Grade_____ Date _____

Second Step Skill Area:_____Empathy _____Problem Solving _____Anger Managenent

CATEGORY	3 Excellent	2 Good	1 OK
Point of View	Clear purpose and focus; engages the audience and gets idea across	Usually maintains a clear purpose and focus; somewhat engaging; usually gets idea across	Some evidence of a purpose and focus; limited engagement; idea is not always clear
Story Content	Original story that almost always stays on topic; appropriate for skill area	Somewhat original story that usually stays on topic; reasonably appropriate for skill area	Story is similar to one from the curriculum; sometimes focused; not very appropriate for skill area
Staying in Character	Student(s) stays in character throughout the performance	Student(s) stays in character through most of the performance	Student(s) tries to stay in character through some of the performance
Appropriate Solution	All the appropriate steps were used to arrive at a mutually agreeable solution	Usually follows the appropriate steps to arrive at a solution	Some of the steps are followed to end the conflict/problem
Working with Others	Almost always listens to group members; almost always cooperates with the group	Usually listens to group members; usually cooperates with the group	Sometimes listens to group members; sometimes cooperates with the group
Use of Technology	Excellent understanding and use of digital technology; excellent use of technology to communicate ideas	Good understanding and use of digital technology; good use of technology to communicate ideas	Some understanding of how to use digital technology; attempted to use technology to communicate ideas

APPENDIX K

PROGRAM OVERVIEW

SECOND STEP: A VIOLENCE PREVENTION CURRICULUM

The Second Step curriculum for grades PreK-5 consists of three units:

Unit I: Empathy Training

Unit II: Impulse Control and Problem Solving

Unit III: Anger Management

Key Concepts

Empathy Training

Students are taught to identify other peoples feelings by looking at facial, verbal, and situational cues. They are taught to take the other person's perspective and to respond appropriately with concern for the other person's feelings

Problem Solving

In the Second Step program, students are taught five sequenced steps to enact when faced with a problem situation. In the first step, students identify the problem using verbal and physical clues. For the next step, students are prompted to come up with ideas to resolve the issue. Step three teaches children to evaluate and predict the effects of the possible resolutions. Children select and act on a solution in step four, while in step five the outcome is evaluated and a different solution tried if necessary (Committee for Children, 2002).

Impulse Control

Second Step teaches students strategies to control impulses. Steps involved with this skill are to first to stop and think and focus on internal emotional states by thinking about how their body feels. Then, calming strategies are suggested such as breathing deeply, slowly counting backward, thinking about soothing things, and self-talk.

Anger Management

In the anger management component of the Second Step curriculum, children are taught that anger is a normal emotion (Gardner & Moore, 2008; Merrell, 2007; Sandy & Cochran, 2000). Anger in some instances is a necessary response to allow for a reaction in the face of real danger (Gardner & Moore, 2008) but when generalized to most situations it is a chosen reaction that is usually inappropriate. Anger management strategies in Second Step are based on the assumption that children need to be able to

understand what anger feels like to be able to recognize and control inappropriate reactive behavior.

Students are instructed to follow four steps to self-regulate when they are angry. The first step directs children to determine how they feel and to acknowledge that they are angry. Calming down strategies are then carried out to reduce angry feelings and thoughts. In the third step, children are instructed to perform the problem solving strategies they have learned to resolve conflict. Children are advised to think and reflect on the incident at a later time and use these reflections in to guide behavior in future situations (Committee for Children, 2002).

Curriculum

Second Step: A Violence Prevention Program (Committee for Children, 2002) for grades Pre-K to eight concentrates on teaching prosocial skills to reduce anger and aggressive behavior to decrease school violence (Van Schoiack-Edstrom et al. 2002). The program was developed with four levels; pre-school/ kindergarten, grades one to three, grades four and five, and middle school. At each level the curriculum is divided into three units. The first unit, empathy training, teaches students to identify their own feelings and to recognize that other people may have different perspectives. The second unit, impulse control and problem solving, aims to reduce aggressive behavior by teaching students to control their emotions and find solutions by using problem solving skills. The last unit, anger management, teaches students how to identify and cope with angry and violent thoughts and feelings. The unit sequence is essential as the skills learned in each section serve as the foundation for the subsequent skill set (Fitzgerald & Van Schoiak-Edstrom, 2006).

The first lesson in each Second Step unit, empathy, problem solving, or anger management, generally begins with a video depiction of a situation that highlights the social skill that will be taught in the unit. Lessons are presented on an over-size (18" x 12") scripted card that lists the lesson's concepts and objectives, along with notes to the teacher describing the skill set to be taught. On the reverse is a black and white photograph that is presented to students. Each lesson starts with a photograph of a representation of a life situation (Larson & Samdal, 2007) and a corresponding scenario that forms the framework for a group discussion and role-play that focuses on the specific skill that is being addressed (Grossman et al. 1997). . Written on the card are a story for the picture and a script for the teacher to follow with the purpose of using the photograph to facilitate a class discussion. For the role-playing component in every lesson, teachers first model a scenario provided on the card. Suggestions are also given for role-plays to be developed by the students to practice newly acquired skills.

The lesson format will be as followed; skill introduction: approximately five minutes; story presentation and discussion: 10 minutes; role-plays: approximately 15 minutes. The lesson wrap-up will take about five minutes. Lessons will be taught in the sequence specified in the program manual.

Several teaching strategies are employed in the delivery of a Second Step lesson, including modeling, coaching and cuing, group discussion, and role-play. Modeling is a part of each lesson. In addition, teachers model appropriate prosocial behavior throughout the school day. To facilitate generalization, coaching and cuing is practiced by teachers as a reminder and to give assistance to students when and how to use specific skills. Group discussion takes up a significant part of every Second Step lesson. Teachers facilitate class discussions using the questions provided on the lesson cards as a guide using nonjudgmental responses to extend dialogue. To address differentiation, students may respond non-verbally with a facial expression or gesture (Committee for Children, 2002).

Role-playing is also a prominent feature of each lesson allowing students to practice new skills in a safe and supportive environment. Teachers first model the role-play alone or with another student. Each role-play is followed by feedback asking students if skills were applied appropriately to achieve a successful resolution to the situation and what could be done differently. In addition to providing positive reinforcement during the lessons, teachers also provide positive reinforcement throughout the school day when a student attempts to use a newly acquired social skill (Committee for Children, 2002).

I want to thank you for participating in my study. In addition to helping me, gather data on the effectiveness of the Second Step program and the effects of adding a technology component to increase student motivation and involvement, I hope that we will see positive changes in the behavior of our students. This is a brief overview of the program. For further information on the program, please refer to the teacher's guide or ask me for assistance. I have also attached a lesson timeline. I understand that I am asking a lot of you to condense the program into such a short time but please follow as closely to the timeline as possible. I also ask that the lessons be taught after lunch for all grades to increase reliability of program implementation. Please adhere to the lesson sequence specified in the manual. Each lesson should tale about 35 minutes.

All students have been randomly assigned to one of three groups. Groups 1 and 2 will receive the Second Step program. I will take the students in Group 3 when you are teaching the program and instruct them in a grade appropriate social studies lesson. Please remember to send them to me, as they should have as little exposure to the program as possible! In the last week of the study, the students in Group 1 will be instructed in digital storytelling while the students in Group 2 remain with you for the final Second Step lesson(s). Student assessments and teacher surveys will be administered after the last lesson to all three groups.

Once again, thank you.

Betsy

PREVIOUS FINDINGS OF SECOND STEP STUDIES

Researchers	Target Population	Findings
Orpinas, Parcel, McAlister, & Frankowski (1995)	266 sixth graders in an urban middle school	No significant effects for aggression, increase in knowledge
Grossman, et al. (1997)	700 second and third grade students in 12 schools	Significant decreases in observed negative behaviors in treatment group, no significant effects on behavior scales
McMahon, Washburn, Felix, Yakin, & Childrey (2000)	109 low-SES, urban, predominately African and Latino preschool and kindergarten students	Observed decreases in problem behaviors with no differences found for behavior ratings, increase in knowledge using interviews
Mc Cabe (2000)	86 children ages 3 to 5 in 8 classrooms	Less antisocial behavior in treatment classes
Taub (2002)	54 low-SES, rural, predominately Caucasian students in grades 3 to 5	Significant improvements in social competence and anti-social behaviors for students in the treatment, school small ES

Researchers	Target Population	Findings
Sprague, Walker, Golly, White, Myers, & Shannon (2001)	7131 students in 9 treatment and 6 comparison K-8 schools in the Pacific Northwest	Reductions in discipline referrals in treatment schools, increase in knowledge
Lillenstein (2002)	285 kindergarten to grade 2 mid to high SES students in 4 schools	No significant effects for social skills or problem behaviors
VanScholack-Edstrom, Frey, & Beland (2002)	714 students in grades 6 to 8 in 5 schools in U.S. and Canada	No change in ratings or observations
Boltzer (2003)	189 third graders (control group)	No changes in aggression for control or treatment group, increase in knowledge
Mc Mahon & Washburn (2003)	156 low-SES African American students in grades 5-8 in 2 inner-city schools	Increase in self-reported empathy and increase in prosocial behavior scale

Researchers	Target Population	Findings
Ryan, Aten, Avinger, & Miller (2004)	159 urban, low-SES minority, community community center students, mean age 13 (control group)	No significant effects for behavior, higher knowledge scores for the intervention group
Edwards, Hunts, Meyers, Grogg, & Jarrett (2005)	All 455 fourth and fifth grade students in an urban district	Small significant increases in behavior rating scales and reduction of self-report bullying
Frey, Nolan, VanScholack Edstrom, Hirschstein (2005)	1253 second and forth grade students in 15 schools in 3 cities	Significant decrease in anti-social and increase in prosocial behavior for intervention group
Nicolette (2005)	109 third graders in 6 classes in 3 schools In Texas	No significant differences were found between groups for aggression or anti-social behavior
Reise (2005)	All K-6 students in 2 schools in Arizona	No significant differences or gains found

Researchers	Target Population	Findings
Schick & Cierpka (2005)	718 students in grades 4-8 in 21 schools in Germany	Significant reductions in internalizing behaviors and increases in prosocial behavior of the treatment group
Cooke, Ford, Levine, et al. (2007)	741 third and fourth grade students in 5 schools	No change in aggression
Hussey & Flannery (2007)	1,416 predominately African American K through second grade in Cleveland	Significant reductions in reactive aggression scores
Holsen, Smith, & Frey (2008)	1,153 fifth through seventh grade students in 11 schools in Norway	Significant positive effects for social competence for all fifth graders and sixth grade girls, lower levels of externalizing behavior for sixth grade boys compared to the control group
Angelone (2008)	238 sixth graders in three Pennsylvania middle schools	No increases in empathy, increase in knowledge