Preparing Teachers for School Tragedy: Reading, Writing, and Lockdown

Jane C. Perkins
Johnson & Wales University

This mixed method explanatory, sequential design began with a quantitative online questionnaire and assessed the perceptions of crisis preparedness of 307 Rhode Island teachers. Survey data were enhanced using qualitative data gathered from focus groups. Perceptions of school crisis preparedness were examined using survey data. Patterns and themes in the perceptions of emergency preparedness emerged. Barriers affecting teachers' confidence in current safety plans were also identified. Implications for collaborative efforts that include school and community involvement could result in a coherent plan development. Strategies to improve communication, plan development, and build confidence are discussed.

INTRODUCTION

The families of Newtown, Connecticut never suspected the children they sent to Sandy Hook Elementary School on Friday, December 14, 2012, might not be returning home. On that December day, 20 children and six adult staff members at that elementary school were shot and killed before their assailant committed suicide by shooting himself. This terrifying event is considered one of the deadliest mass shootings at a high school or grade school in U.S. history. The Sandy Hook Elementary School shooting is only one of many deadly school massacres in American history (Nicoletti, 2012).

Educators have a responsibility to provide students with rigorous curriculum in a safe learning environment. Since Thomas Jefferson founded public education, schools have been charged with a duty to protect. A review of school shootings since 1996 raises many questions about the safety of our children. If children are dying in our schools, why aren't active shooter drills treated like fire drills?

According to the United States Government Accountability Office, or USGAO (2007), there are no federal laws requiring school districts to have an emergency management plan. However, 32 of 50 states reported having their own laws or policies that made them a requirement (2007). The United States Department of Education (USDOE) and the Federal Emergency Management Agency (FEMA) do provide guidelines that support the creation and implementation of emergency management procedures (Allen, Lorek, & Mensia-Joseph, 2008). One of the selected practices that the USGAO (2007) recommended districts implement was practicing their emergency management plans with first responders on a regular (annual) basis. These drills afford school districts the opportunity to examine their capacity to respond to an emergency, and allow rescue personnel to become familiar with the school system and its personnel (Allen et al., 2008).

Since Newtown, the FBI, along with the Department of Homeland Security and other federal, state, local, tribal and campus law enforcement agencies, has hosted hundreds of meetings, exercises, and

presentations with citizen groups, private industry, and educational groups. These events have focused on best practices and lessons learned from the school shooting in Newtown, Connecticut, the theater shooting in Aurora, Colorado, and the Sikh Temple shooting in Oak Creek, Wisconsin, as well as the response to the Boston Marathon bombing (Blair & Martindale, 2012).

Research Questions
    The first two research questions addressed the quantitative portion of this mixed methods study. The third question was designed to obtain qualitative data.
    1. To what extent do RI teachers feel prepared for a major school crisis?
    2. Is there a significant relationship between teachers' preparation for a school crisis and the following demographic variables: grade level taught, years of teaching experience, and type of community where the school is located?
    3. What are the teachers' perceptions of the effectiveness of school emergency drills to enhance preparedness for a school crisis?

Problem Statement
    Alba (2011) explored the perceptions of school crisis preparedness with respect to those in key leadership positions responsible for planning, training, and implementation of these efforts in Rhode Island schools. According to his research, there were differences noted among urbanicity and grade level principal groups, as well as among district leadership and first responder personnel. Maintaining a steady state of preparedness is necessary for an emergency response plan to be effective in schools (Alba, 2011; Graham, Shirm, Liggin, Aitken, & Dick, 2006; Kano & Bourque, 2007). The ability to be prepared even in times of no crisis is possible if school administrators collaborate and train with local first responders. Alba's (2011) research identified potential barriers to implementing training scenarios with regard to administrators working with first responders. His study does not explore and correlate the perceptions of teachers with regard to self-efficacy in school crisis situations, including the differences in perceptions based on: type of school (i.e., urbanicity), grade level taught, and years of teaching experience.
    By exploring the perceptions of crisis preparedness at the teachers' level, the findings from this research could be used to develop strategies that school leaders could implement to raise self-efficacy of teachers, the true first responders. The FBI reports that the average active-shooter incident lasts twelve minutes, and 37% percent of them less than five minutes (Nicoletti, 2012). For 43% of the time, the crime is over before police arrive. In 57% of the shootings, an officer arrives while the shooting is still underway (Blair & Martaindale, 2013). This means that teachers are responsible for much more than just teaching reading and writing.

METHODOLOGY

    The study utilized an explanatory, sequential, mixed method design beginning with a quantitative online questionnaire followed by focus groups. The qualitative data were used to further understand the quantitative data. The rationale for using this strategy was "to use qualitative data to provide more detail about the quantitative results and to select participants that can best provide this detail" (Creswell & Plano Clark, 2007, p.122). Since the intent of the study was "not to merge or compare the data", the sample size of the qualitative data collection was much smaller than the quantitative data collection (Creswell & Plano Clark, 2007, p.122).

Research Questions
    The first two research questions addressed the quantitative portion of this mixed methods study. The third question was designed to obtain qualitative data.
    1. To what extent do RI teachers feel prepared for a major school crisis?

2. Is there a significant relationship between teachers' preparation for a school crisis and the following demographic variables: grade level taught, years of teaching experience, and type of community where the school is located?
3. What are the teachers' perceptions of the effectiveness of school emergency drills to enhance preparedness for a school crisis?

Research Methodology

The invited sample consisted of $N=682$ teachers from three different school districts in Rhode Island. In the quantitative component of the study, demographic data were collected on teachers in the three Rhode Island school districts and their perceptions of the effectiveness of school emergency drills to enhance preparedness for a school crisis. Qualitative data were collected from $N=5$ volunteer teachers from the rural and suburban districts and N=9 urban school volunteer teachers using focus groups to explore the perception of the effectiveness of school emergency drills to enhance preparedness for a school crisis (Creswell, 2009; Patton, 2002).

Instrumentation

Quantitative data were gathered through the use of a cross-sectional, self-administered, internet-based questionnaire using SurveyMonkey. This method was used for ease of delivery, participant response, and data collection (Green & Salkind, 2008). Data were downloaded to Statistical Software for Social Sciences 21.0 (SPSS) for statistical analysis (2008).

The survey instrument measured the perceptions of teacher preparedness for a school crisis. The survey questionnaire, entitled *Teachers' Perceptions of School Safety and Preparedness Survey (TPSSPS)*, was a modification of Alba's *Principals' Perceptions of School Safety and Preparedness Survey (PPSSPS)*. Questions that were targeted toward administrators and first responders were deleted from Alba's instrument. The modified instrument contained 42 items within seven dimensions. Content validity of the survey instrument was based on support from the literature on crisis preparedness and included the recommendations of $N=5$ content experts on school safety survey development. In addition, an Internet version of the survey instrument using SurveyMonkey was piloted by $N=8$ RI teachers, who examined the instrument directions, item content, and rating format for readability and ease of understanding. Revisions to the survey were made based on the feedback from the pilot administration.

Data Collection

Approval to survey the teachers in the three Rhode Island districts was sought by personally meeting with the superintendents to inform them of the purpose of the study. After approval from the superintendents of the three Rhode Island public school districts, an email was sent to those three districts' principals and invited them to preview the survey, and encouraged their teachers to complete it. To increase response rate (Huck, 2012), respondents were invited to enter a raffle at the completion of the survey for a $100 Visa Gift Card.

Data Analysis

For Research Questions 1-2, descriptive statistics (i.e., frequencies, percentages, means, and standard deviations) were calculated for the data from the survey items (Huck, 2012). Data analysis for Question 3 was presented utilizing the framework developed by Creswell (2009) and Krueger and Casey (2011). Data were reduced, inductively coded, and cross-case analyzed according to themes and patterns that emerged and were present in narrative text (Kreuger & Casey, 2011). The use of exact detail to describe a phenomenon allowed for conclusions to be drawn and transferred to other settings of "proximal similarity" (Trochim, 2006).

Summary

The purpose of this study was to utilize an explanatory, sequential, mixed method design beginning with a quantitative online questionnaire assessing the six domains of crisis preparedness. The survey data

were enhanced using qualitative data gathered using focus groups. The survey participants were $N=683$ elementary, middle, and high school teachers from an urban school district, a rural district, and a suburban district. The focus group members participated in the first phase of the study and reflected on the six domains of crisis preparedness. Data analyses included descriptive statistics, ANOVAs, and thematic analysis.

By exploring the perceptions of crisis preparedness at the teachers' level, the findings from this research can be used to develop strategies that school leaders could implement to raise self-efficacy of teachers, the true first responders.

RESULTS

The purpose of this research study was to explore the perceptions of Rhode Island teachers with regard to crisis preparedness within their schools. The results of the study may be utilized to create a context for addressing perceived barriers in addition to validating the need to develop future collaborative training efforts. The implications of this study could also outline steps to improve the organizational development and science of crisis management within schools.

Summary of the Results: Quantitative

The *Teachers' Perceptions of School Safety & Preparedness Survey* (*TPSSPS*) contained 42 items within six sections that assessed school demographics, building access and identification, internal security measures, safety preparedness development, safety preparedness activities with regard to students, safety preparedness activities with regard to teachers' perceptions of levels of preparedness, and influences on school safety and security. The perceptions of Rhode Island teachers were explored using RQ1: To what extent do RI teachers feel prepared for a major school crisis?

Notable, were descriptive data across dimension means for *Access* and Identification. A total of 72% of the teachers reported *always* to *Visitors report to the main office* ($M = 4.67$, $SD = .57$), and 71% responded *always* to *All use a buzzer to gain access* ($M = 4.37$, $SD = 1.25$). Students and staff in a recent study reported an increased feeling of safety when certain physical features were in place (Bosworth et al., 2011). They cited features such as cameras, visitor passes, fences, monitors, and the physical location of the school as important (2011).

The descriptive data across the *Safety Preparedness Development* dimension indicated that 43% of respondents *annually* (and 22% *bi-annually*) refine their school crisis plans using USDOE guidance. The data mean for *Crisis preparedness training (self or staff)*, was 2.05, but review of the percentages across the Likert-type scale noted 63% of teachers reported *never* or *rarely* (> 2 years) engage in *Crisis preparedness training*. Data for *Overall preparation* was $M = 2.73$ ($SD = 0.96$), with 40% of teachers responding neutrally. This response is consistent with *Response training* (41%) and *Having a disaster plan* (38%). Additionally, 46% of respondents indicated either 1 or 2 (1 = *not at all prepared*). Contrary to those findings, *TPSSPS* data showed that 66% of participants reported a *4* or *5* (5 = *extremely well prepared*) to *Conduct drills and exercises*. Based on those findings, teachers might only consider fire drills when they answered the survey question *Conduct drills and exercises*.

Review of the data specific to crisis events for which schools conducted drills indicated differences between those conducted with students versus those with that are not. A majority of teachers responded *Constantly* (>4 times annually) or *Often* (2-4 times annually) for *Fire* (90%, $M = 4.51$, $SD = 0.99$) drills with students. Additional review of the percentages across the Likert-type scale show 52% of teachers reported that bomb incident drills were drilled with students *Occasionally* (annually) or *Often* (2-4 times annually), yet 45% responded *Not in plan* or *In plan, never drilled*. Similarly, while the mean for conducting drills with regard to incidents of a hostage situation was 2.02, 27% of participants responded it was *In plan, never drilled*, however 40% of teachers reported this activity was *Not in plan*.

A majority of participants reported that the following drills were either *Not in plan* or *In plan, never drilled*: Hostages (67%, $M = 2.02$, $SD = 1.11$), *Natural disasters* (75%, $M = 1.94$, $SD = 1.00$), *Chemical/Radiological incident* (85%, $M = 1.70$, $SD = .85$), *Suicide* (86%, $M = 1.72$, $SD = .78$), *Terrorist*

Attack (94%, *M* = 1.63, *SD* = 1.01), and *Pandemic flu* (94%, *M* = 1.39, *SD* = .64). The data also indicated that teachers responded similarly to *Bomb* across the Likert-type responses for *In plan, never drilled* (26%), *Occasionally* (28%), and *Often* (24%).

These data are consistent with the 2007 Government Accountability Office National Report: *Emergency Management*, which found that while 95% of districts in the United States had written crisis plans; "more than 25% of districts have never trained, and over 66% do not train at least annually with community partners on how to implement their school plans" (GAO, 2007, p. 21).

Urbanicity

The perceptions of Rhode Island schoolteachers were further explored utilizing the following research question:

RQ2: Is there a significant relationship between teachers' preparation for a school crisis and the following demographic variables: urbanicity, grade level taught, and years of teaching experience?

One-way analyses of variance were conducted to evaluate the relationship between urbanicity groups and five dimension means of the *TPSSPS*. Significant differences were indicated for the *Access and Identification* dimension mean such that suburban schools had a greater extent (η^2 = 0.14, large effect size) of implementing external building security measures than schools in urban and rural school districts (S, *M* = 4.13; R, *M* = 3.45; U, *M* = 3.28). At the item level, differences among urbanicity groups were found for all items in the *Access and Identification* dimension. Teachers from suburban and rural districts indicated a greater extent of having *Visitors report to the main office,* keeping *External doors locked,* using a *Buzzer system,* and using *Visitor badges* than urban districts. Teachers from suburban districts indicated a greater extent of using *External cameras* than urban and rural districts (S, *M* = 4.02; U, *M* = 3.47; R, *M* = 3.16). However, urban schools had a greater extent of using *Student badges* (U, *M* = 1.22), compared to suburban (S, *M* = 1.05) and rural (R, *M* = 1.15) districts.

The NCES survey (2013) reported that 88% of public schools installed locks or put in place a system to monitor doors during school hours in an effort to control access to school buildings. The same survey reported that more than 60% of public schools reported using security cameras to monitor school access (2013).

Although not significantly different, examination of the *TPSSPS* data show suburban school teachers had a greater extent of perceiving they were prepared with regard to having a disaster plan than those in both rural and urban districts (S, *M* = 2.88; R, *M* = 2.84; U, *M* = 2.70). A similar trend was noted for *Response training (*S, *M* = 2.87; R, *M* = 2.72; U, *M* = 2.85*),* and *Overall preparedness (*S, *M* = 2.80; R, *M* = 2.75; U, *M* = 2.68*).* Data reviewed for *Safety Preparedness Activities: Students* and *Safety Preparedness Activities: Levels of Preparedness* dimensions noted that urban teachers indicated that they are slightly more prepared than their peers to conducting a variety of drills annually (S, *M* = 3.87; R, *M* = 3.98; U, *M* = 3.61), specifically fire drills (R, *M* = 4.39).

These data could support the idea that urban locations experience different levels and different types of crime than rural and suburban locations. The urban district in this study consisted of one newly constructed elementary school, in which policies and procedures were newly written and implemented to meet the newly identified safety needs of students and staff. Perhaps, the participants in this district had a heightened awareness of planning, compared with the other school districts at the time of the study.

Grade Level

One-way analyses of variance were conducted to evaluate the relationship between the grade level groups and five dimension means of the *TPSSPS.* Inspection of the ANOVA findings indicated significant differences among grade level groups *Access & Identification* (*p* = .001). Elementary schools had a greater extent (η^2 = .100, large effect size) of implementing building access and identification security measures than high schools.

Visitors report directly to the main office, Locking external doors, Buzzer system, and *Student badges* were implemented at a higher rate at the Elementary and middle school level, compared with the rate of

high school implementation. Yet, all grade level groups reported high levels of implementation for *Visitors report directly to the main office*. Ninety-five percent of teachers responded *often* and *always* to *Visitors report directly to the main office.*

No statistically significant differences were found among the grade level groups for *Service personnel badges*, however, elementary teachers (E, $M = 3.61$) tended to report asking service personnel to wear badges at a higher rate than middle school teachers (M, $M = 3.35$) and high school teachers (H, $M = 2.68$). Elementary teachers reported asking visitors to wear badges while in the building at higher levels of implementation than high school teachers (E, $M = 4.52$; H, $M = 3.80$). However, with regard to faculty and staff wearing IDs, less than half of the respondents (47%) reported *always* implemented.

These differences could indicate that elementary teachers may perceive the need to more aggressively implement the identification of adult visitors within the building due to the fact that their student populations (ages five through 12) are more vulnerable to harm imposed by intruders.

The post hoc analyses in the *Internal Security* domain showed that the statistically significant group differences were between high and elementary schools for *Perform sweeps, Require clear, or ban, book bags, Provide support staff with interior keys, Provide substitute teachers with interior keys, Universally coded interior keys, Full-time Student Resource Officer (SRO)*, and *Full-time nurse*. Middle and high school teachers indicated a greater extent of performing random sweeps for contraband (H, $M = 2.13$; M, $M = 1.80$), requiring that students use a clear book bag, or banning book bags (H, $M = 1.04$; M, $M = 2.40$), and having a full-time Student Relations Officer (H, $M = 3.64$; M, $M = 3.32$), than at the elementary level for all three items.

Providing substitute teachers with interior keys (E, $M = 2.05$; H, $M = 1.83$), and having a *Full time nurse* (E, $M = 4.83$; M, $H = 4.49$) were the only two items with a significant difference in implementation where elementary teachers reported a higher implementation rate than high school teachers. *Provide teachers with interior keys* ($M = 4.55$) was reported at a high rate of implementation across all grade levels, with 91% of ratings approaching *often* and *constantly.*

Internal security differences between high and elementary school teachers could indicate that teachers' perceive students ages 15 -18 have a higher likelihood of committing acts of crime, including violence, than those of elementary schools. This is also reflected in the data from the 2008-09 report *Indicators of School Crime and Safety: 2009* (Dinkes et al., 2010), in which it was found that nearly 75% of high schools reported to police violent crimes by students compared to only 20% of elementary schools. These statistics could be the result of high schools and middle schools having more students who are more likely to be challenging authority compared to their elementary school peers.

The Scheffé post hoc indicated that the statistically significant group differences were between high (H) and elementary (E) schools, such that elementary school teachers reported a greater extent ($\eta^2 = 0.152$, large effect size) of crisis preparedness training for themselves or staff members (E, $M = 2.28$; H, $M = 1.78$). Drills to prepare for *Natural disasters, Chemical/Radiological incident, and Terrorist attack (Level Red)* were reported implemented at a higher rate at the elementary level than at the middle and high school levels, with middle school teachers reporting the lowest rate of implementation. However, all grade level groups reported low levels of implementing drills with response rates approximating *Not in plan* or *In plan, never drilled* for the following drill types those same items: *Natural disasters* (75%), *Chemical/Radiological Threat* (85%), *Suicide* (86%), *Terrorist attack (DHS Level Red)* (94%), and *Pandemic flu* (94%).

These findings are consistent with those of the *SSOCS* (2009) in which principals surveyed reported conducting specific student drills at lower rates across all these areas: a natural disaster (83.1%), a bomb (58.4%), a shooting (52.5%), or a hostage situation (38.5%). While a majority of the 2,560 public schools principals surveyed reported that they had written plans for a specific crisis situation, such as a natural disaster (95.8%), a bombing (93.8%), a shooting (83.0%) or a hostage-taking (71.3%), only 40.0% of them had plans for a threat on national security (*SSOCS,* 2009). Similarly, 36.1% had a plan for an incident of the pandemic flu. The findings from these studies could be an indication that those involved with writing plans might have more knowledge of what drills are in the plan, as compared with teachers,

who rely on administration to communicate the procedures and details for conducting the drills in the emergency plan.

Teaching Experience

While no statistically significant differences were found among years of teaching experience groups, a trend was noted. For all four items in *Safety Preparedness Development*, teachers with 7-9 years of experience (C) indicated the lowest rate of implementation in all four items. Teachers with 4-6 years of experience (B) tended to indicate the highest level of implementation than their peers. Teachers with the least amount of experience (1-3 years, A) followed the slightly more veteran first group, and teachers with the most experience (10 or more years, D) followed the novice teachers (A).

Notable was that teachers with 1-3 years of experience indicated a higher level of implementation of drills for *Hostages* ($M = 2.45$), *Chemical/Radiological incident* ($M = 1.79$), and *Terrorist attack (Level Red)* ($M = 1.47$). It is possible that recent worldwide events and school tragedies are on the newest teachers' minds, or that new teachers are reviewing policy and procedures more carefully than teachers who are more veteran. Teachers in all experience groups reported similarly to the implementation of pandemic flu drills (A, $M = 1.40$; B, $M = 1.42$; C, $M = 1.40$; D, $M = 1.39$). The descriptive analysis indicated that 66% of all teaching experience groups reported high levels of *Conducting drills and exercises* by selecting *4* or *5* (5 = E*xtremely well prepared*). However, *Having a disaster plan, Overall preparedness*, and *Response training* approximated less than moderate levels of preparedness (38%, 40%, and 41%, respectively). *Sheltering students* indicated that 60% of respondents selected *1 and 2* on the Likert-type scale (1 = *Not at all prepared*).

At the item level, significant differences among teaching experience groups were found only for using a *Buzzer system*. Teachers with 10 or more years of teaching experience indicated a greater extent of using a *Buzzer system* than teachers with 1-3 years, 4-6 years, or 7-9 years.

It is possible that since the Newtown, Connecticut school shooting, the safety awareness of all educators has been heightened by the FBI, the Department of Homeland Security, and other federal, state, local, tribal, and campus law enforcement agencies. These organizations have offered hundreds of meetings, exercises, and presentations with citizen groups, private industry and educational groups, and provided teachers with opportunities to learn about school safety and best practices to keep themselves and their students safe, regardless of teaching experience.

Summary of the Results: Qualitative

To explore teachers' perceptions of crisis preparedness, qualitative focus groups were conducted within each type of school district. Teachers were purposefully selected for the focus groups to address Research Question 3: What are the teachers' perceptions of the effectiveness of school emergency drills to enhance preparedness for a school crisis?

Procedural Coherence

As policy and procedures were discussed, there were frequent references to a need for consistency, both across grade levels and through the district.

Clear and Continuous Communication

The need for continuous communication between district leadership teams and teachers was a common theme in the focus groups. Teachers across all urbanicities and grade levels reported that they "don't know what the other schools [in their district] are doing".

Crisis Preparedness Training

Participants across all urbanicities cited value in multi-agency trainings in order to feel better prepared for a crisis, yet varying degrees of school preparedness professional development existed within districts. Police and fire presence during nonemergency times would be beneficial to the teachers, the

students, and the police. One teacher commented that, "The police don't know who we are and they don't know what our building looks like on the inside."

Authentic Drills

Another theme that emerged through the focus groups was the need for a sense of realism when conducting crisis drills at the school level. These findings are consistent with the comments made in the open-ended response items to assess *Influences on Safety and Security*. Respondents indicated that a variety of training is needed, including "scenario-based" multi-agency drills, "more frequent review of the current plans", "workshops on other drills besides fire, active shooter, and evacuations". There were multiple comments about the need for a "comprehensive plan" that includes practicing at "all times of the day" and for all situations that are threatening. The importance of realistic drills was also supported by the research of Allen et al, (2008). These researchers suggest that multi-agency drills should take place in order for school personnel and emergency responders to organize their efforts before a crisis takes place (2008).

Plan Development

Focus group conversation and comments in the *TPSSPS* indicated that there was much confusion about whether or not schools had a "safety team" and what the specifics of that job were. It seems that the teachers in this study understand the need for careful planning, clear communication, and evaluation of the plan and its components. Teachers want to al the least "be informed of planning sessions" if not asked to be a part of them. In the suburban and rural school districts, members shared the feeling that they are expected to "carry out the plan" but not "create it".

Influences on Safety and Security

Comments in the open-ended response item indicated a desire for the district to "properly train a 'trainer' who is very knowledgeable in the plan". Respondents indicated that they want an individual who can answer all their questions. It should be someone who can clearly and concisely teach and review policy and procedure with all staff." Similar comments include, "clear communication of the plans and protocols in place". This idea is consistent with the research of Gainey (2010) Hull (2010) and Nickerson et al (2006). These researchers also cited challenges such as a lack of equipment and training for staff in addition to lack of personnel with expertise in the area of emergency planning as obstacles to implementing recommended practices.

REFERENCES

Alba, D. (2011). *Perceptions of Crisis Preparedness among Rhode Island Public School Administrators and First Responders*. Unpublished doctoral dissertation, Johnson & Wales University, Providence. Retrieved from http://www.jwu.edu.

Alba, D. J., & Gable, R. K. (2011). *Crisis preparedness: Do school administrators and first responders feel ready to act?*. Paper presented at the annual meeting of the Northeastern Educational Research Association, Rocky Hill, CT.

Allen, K., Cornell, D., Lorek, E., & Sheras, P. (2008). Response of school personnel to student threat assessment training. *School Effectiveness and School Improvement, 19*(3), 319-332.

Allen, K., Lorek, E., & Mensia-Joseph, N. (2008). Conducting a school-based mock drill: Lessons learned from one community. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science, 6*(2), 191-202.

Anderson, N. (2010). Education Secretary Duncan calls Hurricane Katrina good for New Orleans schools. Retreived from http://www.washingtonpost.com/wpdyn/content/article/2010/01/29/AR2010012903259.html.

Argenti, P. (2002). Crisis communications: Lessons from 9/11. *Harvard Business Review, 80*(12), 103-110.

Arpan, L. M. (2002). When in Rome? The effects of spokesperson ethnicity on audience evaluation of crisis communication. *Journal of Business Communication, 39*(3), 314-340.

Astor, R. A., Guerra, N., & Van Acker, R. (2010). How can we improve school safety research? *Educational Researcher, 39*(1), 69-78.

Auf der Heide, E. (1989). Disaster Response: Principles of Preparation and Coordination. http://orgmail2.coe-dmha.org/dr/Images/Main.swf.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215.

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28,* 117-148.

Bandura, A. (1997). *Self-Efficacy: The exercise of control.* New York, NY: W. H. Freeman and Company.

Benbenishty, R., & Astor, R. A. (2005). *School violence in context: Culture, neighborhood, family, school, and gender.* New York, NY: Oxford University Press.

Boin, A., & Hart, P. (2003). Public leadership in times of crisis: Mission impossible? *Public Administration Review, 63*(5), 544-553.

Bolioli, T. (2001). *The population dynamics behind suburban sprawl.* Unpublished doctoral dissertation, Brown University, Providence. Retrieved from http://risprawl.terranovum.com/tbolioli_2001.pdf

Bosworth, K., Ford, L., & Hernandez, D., (2011). School climate factors contributing to student and faculty perceptions of safety in select Arizona schools. *Journal of School Health 81*(4),191-202.

Blair, J. & Martaindale, M. (2013). *United States Active Shooter Events from 2000 to 2010: Training and Equipment Implications*. Texas State University.

Brickman, H. K., Jones, S. E., & Groom, S. E. (2004). Evolving school-crisis management since 9/11. *Education Digest, 69*(9), 29-35.

Brock, S. E., Sandoval, J., & Lewis, S. (2001). *Preparing for crisis in schools: A manual for building school crisis response teams (2nd ed.).* New York, NY: Wiley.

Brock, S. E. (2000). Development of a school district crisis intervention policy. *The California School Psychologist, 5*(1), 53-64.

Burnett, J. J. (1998). A strategic approach to managing crises. *Public Relations Review, 24*(4), 475-488.

Carley, K. M., & Harrald, J. R. (1997). Organizational learning under fire. *American Behavioral Scientist, 40*(3), 310-332.

Centers for Disease Control and Prevention (2014). *Youth Risk Behavior and Surveillance Survey.* Retrieved from: www.cdc.gov/yrbss.

Civic Impulse (2015). S. 3853 111th Congress: *GPRA Modernization Act of 2010*. Retrieved from https://www.govtrack.us/congress/bills/111/s3853.

Clabaugh, G. K. & Clabaugh, A. A. (2005). Bad apples or sour pickles? Fundamental attribution error and the Columbine massacre. *Educational Horizon, 96*(4), 81-86.

Clark, G. (2010). *Human nature, the environment, and behaviour: explaining the scope and geographical scale of financial decision-making.* Geografiska Annaler: Series B, Human Geo- graphy, *92* (2): 159–173.

Clegg and Associates, Inc., & Organizational Research Services Inc (1999). Outcomes for success. 2000 Edition.

Cornell, D. G., & Sheras, P. (2006). *Guidelines for responding to student threats of violence.* Longmont, CO: Sopris West.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Los Angeles, CA: Sage.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Los Angeles, CA: Sage.

Daniels, J. A., Royster, T. E., & Vecchi, G. M. (2007). *Barricaded hostage and crisis situations in schools: A review of recent incidents.* Proceedings of Persistently Safe Schools: The 2007 National Conference on Safe Schools.

Dillman, D. A. (2000). *Mail and internet surveys: The tailored design method.* New York, NY: Wiley & Sons.

Dinkes, R., Kemp, J., Baum, K., & Snyder, T. (2009). *Indicators of school crime and safety: 2009* (NCES 2010-012). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Drabek, T. E., & McEntire, D. A. (2003). Emergent phenomena and the sociology of disaster: Lessons, trends and opportunities from the research literature. *Disaster Prevention and Management, 12*(2), 97-112.

Erickson, W. H. (2001). *Columbine Review Commission: The report of Governor Bill Owens.* Retrieved from http://www.state.co.us/columbine/Columbine_20Report_WEB.pdf

Federal Emergency Management Agency (2014). Guide for developing high quality school emergency operations plans: A closer look at active shooters. Retrieved from http://rems.ed.gov.

Fink, S. (1986). *Crisis management: Planning for the inevitable.* New York, NY: American Management Association.

Fowler, K. L., Kling, N. D., & Larson, M. D. (2007). Organizational preparedness for coping with a major crisis or disaster. *Business & Society, 46*(1), 88-103.

Gainey, B. S. (2010). Crisis Management in Public School Districts. *Organization Development Journal, 28(1),* 89-95.

Gall, M. D., Gall. J. P., & Borg, W. R. (2007). *Educational research: An introduction* (8th ed.). Boston, MA: Pearson Education, Inc.

Graham, J., Shirm, S., Liggin, R., Aitken, M., & Dick, R. (2006). Mass-casualty events at schools: A national preparedness survey. *Pediatrics, 117*(1), 8-15.

Green, S. B., & Salkind, N. J. (2008). *Using SPSS for Windows and Macintosh: Analyzing and understand data (5th Ed.).* Upper Saddle River, NJ: Pearson Education, Inc.

Hale, J. E., Dulek, R. E., & Hale, D. P. (2005). Crisis response communication challenges: Building theory from qualitative data. *Journal of Business Communication, 42*(2), 112-134.

Heinen, E., Webb-Dempsey, J., Moore, L., McClellan, C., & Friebel, C. (2006). Implementing district safety standards at the site level. *NASSP Bulletin, 90*(3), 207-220.

Henkey, T. (2011). Sociology and the National Incident Management System: Oil and Water? *Journal of Homeland Security and Emergency Management, 8*(2).

Higgins, G. & Freedman, J. (2013). Improving decision making in crisis. *Journal of Business Continuity & Emergency Planning, 7*(1), 65-76.

Huck, S. (2012). *Reading statistics and research.* Boston, MA: Pearson Education, Inc.

Hull, B. (2010). Changing realities in school safety and preparedness. *Journal of Business Continuity & Emergency Planning, 5(1),* 440-451.

Hutton, T., & Bailey, K. (2007). *Effective strategies for creating safer schools and communities: School policies and legal issues supporting safe schools.* The Hamilton Fish Institute on School and Community Violence & Northwest Regional Educational Laboratory. Washington, DC.

Kahneman, D. (2011). *Thinking, fast and slow. New York, NY: Farrar, Straus and Giroux.*

Kano, M., & Bourque, L. (2007). Experiences with preparedness for emergencies and disasters among public schools in California. *NASSP Bulletin, 91*(3), 201-218.

Kano, M., & Bourque, L. (2008). Correlates of school disaster preparedness: Main effects of fund and coordinator role. *Natural Hazards Review, 9*(1), 49-59.

Kano, M., Ramirez, M., Ybarra, W., Frias, G., & Bourque, L. (2007). Are schools prepared for Emergencies? A baseline assessment of emergency preparedness at schools sites in three Los Angeles County school districts. *Education and Urban Society, 39*(3), 399-422.

Kramer, T., Jones, K., Kirchner, J., Miller, T. & Wilson, C. (2002). Addressing personnel concerns about school violence through education, assessment and strategic planning. *Education, 123*(2), 292-305.

MacNeil, W., & Topping, K. (2007). Crisis management in schools: evidence-based prevention. *Journal of Educational Enquiry, 7*(1), 64-94.

Marra, F. J. (1998). Crisis communication plans: Poor predictors of excellent crisis public relations. *Public Relations Reviews, 24*(1), 461-474.

Massey, J. E. (2001). Managing organization legitimacy: Communication strategies. *Journal of Business Communication, 38*(2), 153-168.

Mayer, M. & Furlong, M. (2010). How safe are our schools? *Educational Researcher, 39*(1), 16–26.

Mell, H., & Sztannkrycer, M. (2005). EMS response to Columbine: Lessons learned. *The Internet Journal of Rescue and Disaster Medicine, 5*(1). Retrieved from www.ispub.com/ostia/index.php?xmlFilePath=journals/ijrdm/vol5n1/columbine.xml

Miles, M. B., Huberman, A. M., & Saldana, J. (2014). Qualitative Data Analysis (3rd ed.). Thousand Oaks, CA: Sage Publications.

Modzeleski, W., Freucht, T., Rand, M., Hall, J., Simon, T., Butler, L. (2008). School-associated student homicides: United States, 1992-2006. *MMWR, 57*(2), 33-36.

National Center For Education Statistics (2011). *Crime, violence, discipline, and safety in U. S. public schools: findings from the school survey on crime and safety: 2009-10.Retrieved from* http://nces.ed.gov/pubs2011/2011320.pdf.

National Center For Education Statistics (2014). *Indicators of School Crime and Safety.* Retrieved from http://nces.ed.gov/programs/crimeindicators/crimeindicators2013.

Nieman, S., Devoe, J., & Chandler, K. (2009). *Crime, violence, discipline, and safety in U.S. public schools: Findings from the school survey on crime and safety: 2007- 08* (Publication No. NCES 2009-326). National Center for Education Statistics, Institute of Education Science, U.S. Department of Education. Washington, DC

Nickerson, A. & Brock, S. (2011). Measurement and Evaluation of School Crisis Prevention and Intervention: Introduction to Special Edition. *Journal of School Violence. 10,1-15.*

Nickerson, A. & Brock, S., & Reeves, M. (2006). School Crisis Teams Within an Incident Command System. *The California School Psychologist. 11,63-72.*

Nicoletti, J. (2012). "Detection & Disruption of Insider/Outsider Perpetrated Violence". Retrieved from http://www.fbi.gov/stats-services/publications/law-enforcement-bulletin/2013/May/active-shooter.

Olympia, R. P., Wan, E., & Avner, J. R. (2005). The preparedness of schools to respond to emergencies in children: A national survey of school nurses. *Pediatrics, 116*(2), 738-745.

Patton, M. Q. (2002). *Qualitative research & evaluation methods (*3rd Ed.*).* Thousand Oaks, CA: Sage.

Pearson, C. M., & Clair, J. A. (1998). Reframing crisis management. *Academy of Management Review, 23*(1), 155-165.

Penrose, J. M. (2000). The role of perception in crisis planning. *Public Relations Review, 26*(2), 155-17.

Piotrowski, C, & Guyette, Jr., R.W. (2009). Lockdown: Reactions of University Faculty and Staff. *Organization Development Journal. 27*(4), 93-99.

Polit, D. F., & Beck, C. T. Nursing Research. 8th Ed, Lippincott Williams & Wilkins, Philadelphia.

Regan, M. (2013) A false sense of security. *School Administrator, 70,26-29.* Published by the AASA, The School Superintendents Retrieved from http://www.associationwww.aasa.org.

Rhode Island School Safety Steering Committee. (2013). Rhode Island model for *school emergency planning: Preparedness, response, and recovery.* Retrieved from http://www.riema.ri.gov/preparedness/schoolsafety/documents http://www.thriveri.org/documents/SEP1_Introduction_2008.pdf

Ritchie, L. A., & MacDonald, W. (2010). Enhancing disaster and emergency preparedness response, and recovery through evaluation. In L. A. Ritchie & W. MacDonald (Eds.), *Enhancing disaster and emergency preparedness response, and recovery through evaluation. New Directions for Evaluation, 126,* 3-7.

Robers, S., Zhang, J., & Truman, J. (2010). *Indicators of School Crime and Safety: 2010* (NCES 2011-002/NCJ 230812). National Center for Education Statistics, U.S. Department of Education, and Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice. Washington, DC.

Rosenthal, U., Boin, R. A., & Comfort, L. K. (2001). The changing world of crises and crisis management. In *Managing crises: Threats, dilemmas, opportunities.* Springfield, IL: Charles C. Thomas.

Rusaw, A. C., & Rusaw, M. F. (2008). The role of HRD in integrated crisis management: A public sector approach. *Advances in Developing Human Resources, 10*(3), 380-396.

Scheckner, S., Rollins, S.A., Kaiser-Ulrey, C., and Wagner, R. (2002). School Violence in Children and Adolescents: A Meta-Analysis of Effectiveness. *Journal of School Violence, 1:* 5–34.

Seeger, M. W., Sellnow, T. L., & Ulmer, R. R. (2001). *Public relations and crisis communications: Organizing in chaos.* Thousand Oaks, CA: Sage.

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2001). *Experimental and quasi-experimental designs for generalized causal inference.* Boston, MA: Houghton-Mifflin.

Smits, S. J., & Ally, N. E. (2003). Thinking the unthinkable: Leadership's role in creating behavioral readiness for crisis management. *Competitiveness Review, 13*(1), 1-23.

State of Rhode Island General Laws. (2014). Retrieved from http://www.rilin.state.ri.us/Statutes/TITLE16/INDEX.HTM

Trochim, W. M. K. (2006). Research methods knowledge base. New York, NY: Concept Systems Knowledge Base. Retrieved from http://www.socialresearchmethods.net/kb/index.php.

U.S. Department of Education, Office of Safe and Drug-Free Schools. (2003). *Practical information on crisis planning: A guide for schools and communities.* Washington, D.C: Author.

U.S. Department of Education, Department of Health and Human Services, U.S. Department of Homeland Security, U.S. Department of Justice, Federal Bureau of Investigation, Federal Emergency Management Agency (2013). *Guide for developing high-quality school emergency operations plans.* Washington, D.C: Author.

U. S. Fire Administration (2013) *Fire/Emergency Medical Services Department Operational Considerations and Guide for Active Shooter and Mass Casualty Incidents.* Washington, D.C.: Author.

U.S. General Accounting Office. (2007). *Emergency management: Most school districts have developed management plans, but would benefit from additional federal guidance* (Publication No. GAO-07-609). Retrieved from General Accounting Office Reports Online http://www.gao.gov/new.items/d07609.pdf.

U.S. General Accounting Office. (2007b). *Emergency management: Status of School Districts' Planning and Preparedness* (Publication No. GAO-07-609). Retrieved from General Accounting Office Reports Online http://www.gao.gov/new.items/d07609.pdf.

Venette, S. J., Sellnow, T. L., & Lang, P. A. (2003). Meta-narration's role in restructuring perceptions of crisis: NHTSA's failure in the Ford-Firestone crisis. *Journal of Business Communication, 40*(3), 219-237.

Vossekuik, B., Fein, R. A., Reddy, M., Borum, R., & Modzeleski, W. (2002). *The final report and findings of the Safe School Initiative: Implications for the prevention of school attacks in the United States.* Washington, D.C.: U.S. Secret Service and U.S. Department of Education.

Webster's Dictionary (2014). *Crisis.* Retrieved from http://www.merriam-webster.com/dictionary/crisis.

Werner, D. (2014). Perceptions of Preparedness for a Major School Crisis: An Evaluation of Missouri School Counselors. *Journal of School Counseling 12*(3*).*

Wang, J. (2008). Developing organizational learning capacity in crisis management. *Advances in developing human resources, 10*(3), 425-445.

Zantal-Wiener, K., & Horwood, T. J. (2010). Logic modeling as a tool to prepare to evaluate disaster and emergency preparedness, response, and recovery in schools. *New Directions for Evaluation, 126,* 51–64.