2016

ADPR 450: Public Relations Theory and Strategy—A Peer Review of Teaching Project Inquiry Portfolio—"Using Crisis Simulation to Enhance Crisis Management: The Role of Presence"

Ming Wang
University of Nebraska-Lincoln, mwang10@unl.edu

Using Crisis Simulation to Enhance Crisis Management Competencies:
The Role of Presence

Ming Wang*
Assistant Professor
College of Journalism & Mass Communications
University of Nebraska-Lincoln

*Please direct all correspondence to Ming Wang (mwang10@unl.edu), 330 Andersen Hall, Lincoln NE 68588.

Abstract

Simulation-based training (SBT) is a common pedagogical tool used in crisis management training. This paper explores the effects of a crisis simulation activity on students' crisis management competencies. Pre- and post-test surveys indicated that students significantly improved crisis management competencies after the crisis simulation activity. Moreover, presence was found to be positively associated with crisis management competencies, suggesting that presence is critical in designing an effective simulation activity.

Keywords: crisis simulation, crisis management, presence, public relations education, APR

Table of Contents

Using Crisis Simulation to Enhance Crisis Management Competencies:

The Role of Presence

Introduction

Effective crisis management is critical to the success of organizations. All organizations are vulnerable to crises of varying degrees of severity and damage. From the recent Volkwagen emissions-cheating scandal (Boston & Sloat, 2015) to the foodborne illness outbreak at Chipotle Mexican grill (Jargon & Newman, 2016), crises, if not managed properly, can severely damage an organization's reputation, hurt its bottom line, and stunt its long-term growth. It comes as no surprise that crisis management is a popular and important topic in public relations classes.

Crisis management is one of the multidisciplinary areas that help catapult public relations to a management function (Coombs, 2001). It plays a critical role in managing an organization's internal and external environment to help the organization more effectively build and maintain a mutually beneficial relationship with its stakeholders.

Effective crisis management should be theory driven and practice oriented. Decades of research in crisis management has provided useful theories instrumental in guiding public relations practitioners, such as contingency theory of strategic conflict management (Pang, Jin, & Cameron, 2010), stages of crisis theory (Mitroff, 1994), environmental scanning (R. D. Smith, 2013), situational crisis communication theory (Coombs, 2007) and situational theory of publics (Grunig, 2003).

Connecting theories and practice is crucial to public relations research and teaching (Cornelissen, 2004). Theories do not transfer perfectly to practice; they need

transformation (Wehmeier, 2009). Designing effective pedagogical activities to facilitate this transformation is of great interest to instructors of public relations courses.

Simulated activities provide unique opportunities for students to develop theory grounded practice in the real world through experiential learning (Kolb, 1984; Rogers, 1996) and transformative learning (Clemson & Samara, 2013).

The scope of simulation activities varies greatly, with some scenario briefs surprisingly simple while others intricately more sophisticated and detailed. Little research has explored what makes a simulation activity effective. Published work has largely discussed a specific case or scenario used for a particular class, failing to investigate which aspect of the activity is significantly related to positive learning outcomes. Booth (1990) is one of the few researchers who have delved deeper and argues that interactiveness (decisions made by participants during the simulation become real situations for other participants) and stress (participants are put under stressful conditions to simulate real-life experiences) are two important techniques to improve crisis management training.

To fill the lacuna in this research area of public relations education, this paper compares pre- and post-simulation assessment of students' crisis management competencies in a senior-level public relations theory and strategy class (ADPR 450/850) in the College of Journalism & Mass Communications at the University of Nebraska-Lincoln (UNL) to demonstrate the effectiveness of a crisis simulation activity in improving key learning outcomes. Furthermore, this project identifies presence as a key psychological outcome of the simulation activity and empirically tests whether presence is positively associated with crisis management competencies.

Crisis management competencies

Effective crisis management involves a variety of skills, such as strategic planning, problem solving, message production, information management, communication management and issues management (Coombs, 2014).

A well-known certification for public relations practitioners is the Accreditation in Public Relations (APR) credential administered by the Universal Accreditation Board (UAB). The APR program delineates a set of competencies -- detailed knowledge, skills and abilities (KSA) – in a study guide for its computer-based examination. The competencies in the 2015 guide cover such areas as research, planning, implementing and evaluating programs; ethics and law; communication models and theories; business literacy; management skills and leadership; issues management and crisis communication; media relations; history and practice of public relations; using information technology effectively; and advanced communication skills. Its issues management and crisis communication unit encompasses understanding phases of a crisis, considering multiple perspectives, engaging in issues management, developing risk management capabilities, and providing counsel to management.

To help students in the public relations and theory class develop these competencies, a class session prior to the simulation activity focused on specific theories and topic areas on crisis management, such as doing crisis assessment, defining key publics, composing key messages, compiling supporting facts, and understanding situational theory of publics.

This study employs two separate measures of crisis management competencies discussed above as key learning outcomes: *APR competencies* and *course competencies*.

Simulation-based training (SBT)

Viewed as a type of problem-based learning (Hsieh, Sun, & Kao, 2006), simulation-based training (SBT) is commonly used in public relations and management training, especially crisis management and media relations, to help practitioners apply theoretical concepts to solving practical issues (Bland, 1995; Coombs, 2001, 2014; Dutta-Bergman, Madhavan, & Arns, 2005; Lane, 1995; Shifflet & Brown, 2006). Salas, Wildman and Piccolo (2009) argue that SBT is more effective at imparting complex applied competencies, can lead to learning in a short period of time, is simple to learn, is learner-controlled, and is inherently more engaging.

Dyer (1995) recommended that "once people are involved in developing, implementing, and evaluating the crisis response, then planning for ongoing simulations with the crisis plan can be a much more viable part of organizational practice" (p. 40). A survey of 122 organizations found that desktop simulation exercise was the second most popular crisis management team training activity and also the second most common type of media training (Lee, Woeste, & Heath, 2007). No wonder it is a common pedagogical tool.

Using simulation activities in classroom teaching is also not new. Asal and Blake (2006) claim that "simulations, particularly human-to-human interactions, offer social science students the opportunity to learn from firsthand experience, and can be an important and useful addition to an educator's teaching repertoire" (p. 1). A crisis management unit is a great fit for the active learning of analytic skills through a simulation activity (Coombs, 2014).

Despite their popularity in workplace training and classroom teaching, simulation activities have surprisingly suffered from a lack of rigorous empirical evidence on their effectiveness (Raymond & Sorensen, 2008). Some claim that simulation, as an active learning tactic, is an effective pedagogical tool (Dorn, 1989; Shellman, 2001), motivating students to study the materials harder (Rogers, 1996) and understand abstract concepts better (E. T. Smith & Boyer, 1996). However, much of this evidence relies upon instructors' subjective impressions or select qualitative feedback from students (Fuller, 2016; Olson, 2012; Raymond & Sorensen, 2008; Shellman, 2001).

Some other research has reported less optimistic results. For instance, a gaming simulation in an economics class lead to surprisingly less thorough understanding of the course content than a conventional introductory course (Wentworth & Lewis, 1975).

In previous studies of teaching crisis management with simulation activities, the results are largely positive.

Fuller (2016) analyzed student classroom discussions and a written case analysis, finding that students successfully applied concepts of mindfulness and mindlessness to a data breach crisis simulation, but the study did not assess crisis management competencies. Anderson, Swenson and Kinsella (2014) used a social media crisis simulation to teach crisis management. Through a post-test survey, students reported positive overall impressions, but without a pre-test for comparison, it is hard to judge how much students improved on their crisis management competencies.

One relevant study is the one conducted by Aertsen, Jaspaert and Van Gorp (2013), who had students in a corporate communication class apply theories to handle a simulated crisis on campus so that they could develop theoretically based practical skills.

On the positive side, students gained a better understanding of the tasks of a communication professional. However, they also showed an eagerness to communicate without fully assessing the situation, struggled with internal communication and coordinated actions, and overlooked the predictive power of theories.

Another relevant study was reported by Baglione (2006), who detailed two participatory exercises for a crisis simulation activity: the telephone conversation and a press conference. Students played the role of company representatives, calling the reporter, played by the instructor, to explain the crisis. This was followed by a press conference hosted by the students to address questions from the media, again role-played by the instructor. Interestingly, students and the instructor then switched roles where the students, playing the role of the media, posed questions to the instructor, who now represented the company. The purpose of the role switch was to demonstrate to the students the proper way of presenting to the media. Ultimately, students reported the simulation exercises boosted learning and provided a higher level of learning. They also indicated that role-playing improved crisis management skills, as well as confidence, preparation and creativity in managing a crisis. Students also noted that the simulation activity made the class more realistic.

Given the popularity and promise of simulation activities in teaching crisis management, the next section describes the motivations for and details of the simulation crisis used in a senior-level public relations theory and strategy course.

Background of the class

The course that implemented this simulation activity was a senior-level class on public relations theory and strategy that targeted at upperclassmen and graduate students. This class reviews the history of public relations, dominant theories in the field, and a variety of public relations practices, including crisis management, media relations, investor relations, community relations, employee relations, public affairs relations and international public relations.

The Benchmark Portfolio identified the following challenges:

- Even though some students "liked the course as it was" (student evaluation), many still felt the lectures were too long.

- Some students suggested even more discussions. One wrote "I think that more discussion of the reading materials along with the in-class power points would reinforce the strategies and theories" (student evaluation).

- In completing a crisis management plan assignment, students often failed to distinguish between key messages and supporting facts.

As a result, the Benchmark Portfolio proposed adding more interactive activities and providing more structured guidelines to group discussions. This crisis simulation activity was designed with these proposed changes in mind.

The class introduced the public relations industry and discussed public relations models and theories before devoting two weeks to the crisis management strategies module. The first week introduced students to key topics in crisis management: issues management, crisis assessment, analysis of key publics, situational theory of publics, and key messages and supporting facts. The second week began with discussions of crisis

management strategies and plan, after which the students participated in a crisis simulation activity.

Crisis simulation activity: Bed bugs on campus

The simulation activity followed a three-step process recommended to maximize its effectiveness: instructions, simulation and debriefing (Baglione, 2006).

Effective teamwork is critical to crisis management (Waller, Lei, & Pratten, 2014). Students worked in small groups of four to six students, acting as public relations agencies to work on a variety of tasks throughout the course of the semester. For this activity, they were told to work in their own agencies to advise the client who approached them for counsel on the crisis.

To maximize realism of the scenario and involvement in the activity, a bed bug on campus crisis was chosen. This event did happen to UNL several years ago, but most of the students in the current class were not aware of the occurrence of the event after these years, let alone specific details in the briefs. Hence, prior knowledge should not bias study results.

The crisis escalated through three stages: Beg Bug Suspected, Bed Bug Rumors, and Bed Bug Confirmed (see **Figure 1** for scenario synopsis and key discussion questions for each stage; see **Appendix I** for full briefs and discussion questions for the three stages).

Figure 1
Crisis Synopsis and Discussion Points

Stage 1: Bed Bug Suspected

A student in a residence hall reported seeing parasitic insects on her bed. University Housing needs more than a week to investigate the existence of bed bugs.

Analysis of key publics; key messages and supporting facts; immediate and long-term actions

Stage 2: Bed Bug Rumors

While University Housing is still investigating, a local TV news crew sneaked into residence halls and interviewed students, concluding the university was trying to cover up the problem.

Analysis of key publics; key messages and supporting facts; situational theory of publics

Stage 3: Bed Bug Confirmed

Bed bug is confirmed in 26 residence rooms. Students and the media accused the university of lying about the issue. University Communications decides to invite the media for a debriefing session.

Key messages and supporting facts; media relations; crisis phases

Stage 1: Beg Bug Suspected. Students were given an initial brief at Stage 1, asked to read the brief and discussed the questions at the end of the brief to provide counsel to University Communications, the client. At the initial stage, a student reported seeing parasitic insects on her roommate's bed and waking up with bite marks on her legs the next morning. She reported the incident to University Housing, who brought examiners to study the situation and was told that the presence of bed bugs could not be confirmed until a week later.

The challenge for University Communications and University Housing was that investigation results would not be available for another week, which left a long period of information vacuum. Students were asked to assess the situation to decide if this was a crisis at this stage, who the key publics were, what key messages and supporting facts needed to be communicated and what plans needed to be in place for both the short-term and long-term challenges.

Stage 2: Bed Bug Rumors. Students received a Stage 2 brief in about 15 minutes, regardless of whether the teams had finished discussions or not to simulate the urgency and stress during times of crisis.

The brief stated that University Housing decided to inform the student who reported the incident and her dorm of the investigation plan and not to alert the larger public while the investigation was ongoing.

However, a local TV news crew heard of the rumor and sneaked into the residence hall where the incident occurred. She interviewed students who claimed that there were beg bugs and that the university was trying to hide the issue. She also

interviewed students on the street who said they had not heard anything about beg bug on campus.

Given the development of the crisis, students in the class were asked to assess the situation to redefine key publics and key messages along with supporting facts at this phase.

Stage 3: Bed Bug Confirmed. Students received the last brief in about 10 minutes, regardless of whether the teams had finished discussing the questions from the Stage 2 brief or not.

The update stated that after a thorough investigation, it was confirmed that the room where the incident occurred was indeed infested with beg bugs along with several other dorm rooms. The story was covered in a local newspaper where student and university sources provided their own accounts of what happened. Moreover, the story reported that one of the RAs was asked to allegedly lie about her own beg bug situation by the university.

Given that the story had been covered by several mass media outlets, students in the class were told that the university decided to invite journalists from local media organizations for a debriefing session. They were instructed to brainstorm 10 potential questions that the journalists might ask and to prepare corresponding key messages and supporting facts to address these questions.

Then the students were asked to plan for a mock press conference where each team would send one student to form a committee of university administrators, communications professionals and housing staff to field questions from the rest of the class, would role play as invited journalists. Incorporating a simulated news conference

has also been a popular tactic in teaching crisis management (Baglione, 2006; Foote, 2013; Olson, 2012) as it provides students with an opportunity to learn how to be a crisis spokespeople (Coombs, 2014).

At the end of the mock press conference, the students and the instructor discussed appropriate plans at each stage of the crisis and critically analyzed the answers from the panel at the press conference as a debriefing for the whole simulation activity.

It is expected that the entire crisis simulation would enhance both students' APR crisis management competencies and course crisis management competencies.

H1a: Students will report higher levels of APR crisis management competencies after the simulation activity than before the activity.

H1b: Students will report higher levels of course crisis management competencies after the simulation activity than before the activity.

Presence

Having expected that simulation improves learning outcomes, the researcher tackles the next question of how simulation does it. This study explores one psychological factor: presence.

Case study is another common pedagogical tactic to teach crisis management (Friedman, 2013). Simulation activities differ from case studies in that students typically analyze case studies from the perspective of objective observers whereas they are expected to engage in role-playing to be immersed in a simulation activity (Bell, Kanar, & Kozlowski, 2008).

Audience characteristics may affect how much simulation activities enhance learning. For instance, in their experiment with a computer-based crisis communication activity, Shifflet and Brown (2006) found learning styles and prior exposure to public relations to impact student performance. This study examines another audience characteristic, presence.

Presence is a concept most commonly studied in virtual environment media (Slater & Wilbur, 1997). However, defined as an individual's subjective sense of "being there" (Barfield, Zeltzer, & Slater, 1995; Minsky, 1980) and the "experience of being in one place or environment, even when one is physically situated in another" (Witmer & Singer, 1998, p. 225), the concept can be applied to other communication modes as well. Indeed, Ijsselsteijn, de Ridder, Freeman and Avons (2000) conceptualized presence more broadly as the sense of "being there" in a *mediated* environment. Schloerb (2000) discussed the subjective presence as the perception that a person was "physically present in a given environment" (1995). Witmer and Singer (p. 65) related presence to involvement and immersion, concepts that are widely studied outside the area of virtual environment. Hence, presence as a concept can be reasonably applied in a simulation activity where participants are expected to be there at the scene where the event unfolds.

Presence is a multidimensional construct that has been conceptualized as transportation, realism, immersion, social richness, social actor within a medium, and medium as social actor (Lombard, Bitton, & Weinstein, 2009). Witmer and Singer (p. 65) related presence to involvement and immersion. In this crisis simulation activity, transportation, realism and involvement are the most relevant dimensions. Previous studies on crisis simulation activities actively discuss measures to enhance realism and

involvement, such as incorporating prompts (Baglione, 2006), to transport students to the role-playing world.

Despite popular belief that presence increases task performance, there is no solid evidence to support it, claims Welch (1998). Some studies, however, do show that presence increases learning. For instance, Dunnington (2003) interviewed nursing students who participated in scenario-based human patient simulation and found that presence impacted the learning experience and outcomes. Richardson and Swan (1999) found that students reporting higher perceived social presence also perceived they learned more from a course and were more satisfied with the instructor.

Effective simulation activities should induce a high degree of presence among students. This heightened psychological state will improve students learning competencies.

> *H2a: Presence will be positively associated with APR crisis management competencies in a crisis simulation activity.*
>
> *H2b: Presence will be positively associated with course crisis management competencies in a crisis simulation activity.*

Method

Data were collected from a 400-level public relations theory and strategy class (ADPR 450/850) in the spring of 2016 in a large Midwestern university. Students in this class were mostly juniors and seniors in the advertising and public relations major. Thirty-three students were enrolled in the course and 27 completed the survey questionnaires.

The class introduced the public relations industry and discussed public relations models and theories before devoting two weeks to the crisis management strategies module. The first week introduced students to issues management and crisis management theories. The second week discussed crisis management strategies and plan, after which the students practiced classroom learning through a crisis simulation activity on March 7, 2016.

Students first filled out a pretest questionnaire that assessed crisis management competencies defined by APR certification exam study guide. Then students completed three phrases of the crisis simulation activity, including the mock press conference, before they answered the same set of questions in a posttest questionnaire along with a battery on presence and two open-ended questions.

Measures

APR crisis management competencies. A battery of crisis management competency questions was adapted from the Issue Management and Crisis Communication section of the 2015 *Detailed Knowledge, Skills and Abilities Tested on the Computer-Based Examination for Accreditation in Public Relations* document. Students were asked to rate on a scale from 0 ("do not understand at all") to 10 ("fully understand the topic") how much they understood the following topics: (1) the roles of responsibilities of public relations at the pre-crisis, crisis, and post-crisis phases, (2) the messaging needs of each phase (i.e., pre-crisis, crisis, and post-crisis phases), (3) considering and accommodating all views on an issue or crisis, (4) factoring multiple views into communication strategy and messaging, and (5) the importance of providing

counsel to the management team or client during all stages of a crisis (pre-crisis, crisis

and post-crisis). The mean and standard deviation of each pre-simulation and post-

simulation item are reported in **Table 1**. These questions were averaged to create an

index of APR crisis management competencies ($\alpha_{pre} = .89$, $M_{pre} = 5.92$, $SD_{pre} = 1.41$; α_{post}

$= .91$, $M_{post} = 7.65$, $SD_{post} = .95$).

        Crisis management course competencies. A battery of crisis management

questions was developed specifically to assess the topics discussed in class. These

questions are more specific than the APR crisis management competencies items.

Students were asked on a scale from 0 ("not confident at all") to 10 ("very confident")

how confident they were in: (1) doing crisis assessment, (2) defining key publics, (3)

composing key messages, (4) composing supporting facts, (5) understanding situational

theory of publics, and (6) applying situational theory of publics. The mean and standard

deviation of each pre-simulation and post-simulation item are reported in **Table 1**. These

questions were averaged to create an index of course crisis management competencies

($\alpha_{pre} = .93$, $M_{pre} = 5.18$, $SD_{pre} = 1.69$; $\alpha_{post} = .89$, $M_{post} = 7.50$, $SD_{post} = 1.01$).

Table 1
Crisis Management Competences Pre-Post Simulation Comparisons

Item	Pretest α	Pretest M (SD)	Posttest α	Posttest M (SD)
APR Crisis Management Competencies (0 to 10 scale)	.89	5.92 (1.41)	.91	7.65 (.95)
1. the roles and responsibilities of public relations at the pre-crisis, crisis, and post-crisis phrases		5.77 (1.45)		7.48 (1.01)
2. the messaging needs of each phase (i.e., pre-crisis, crisis, and post-crisis phases)		4.65 (1.66)		7.63 (1.81)
3. considering and accommodating all views on an issue or crisis		6.06 (1.98)		7.48 (1.16)
4. factoring multiple views into communication strategy and messaging		6.35 (1.78)		7.74 (1.10)
5. the importance of providing counsel to the management team or client during all stages of a crisis (pre-crisis, crisis and post-crisis)		6.77 (1.52)		7.93 (1.11)
Crisis management course competencies (0 to 10 scale)	.93	5.18 (1.69)	.89	7.50 (1.01)
1. doing crisis assessment		5.00 (1.79)		7.19 (1.42)
2. defining key publics		5.97 (1.91)		7.74 (.90)
3. composing key messages		5.81 (2.06)		7.93 (1.41)
4. composing supporting facts		5.42 (2.11)		7.93 (1.41)
5. understanding situational theory of publics		4.52 (2.05)		7.15 (1.46)
6. applying situational theory of publics		4.36 (1.94)		7.07 (1.36)

Presence. This construct was measured by asking students to indicate on a scale from 0 ("strongly disagree") to 10 ("strong agree") their agreement with the following statements: (1) I had a sense of being in the crisis scenario, (2) I felt involved in the crisis scenario, (3) The crisis scenario seemed believable to me, (4) I had a strong sense that the characters and events were real, and (5) The scenario seemed real. These questions were only asked in the posttest questionnaire. They were averaged to create an index of presence ($\alpha = .94$, $M = 8.47$, $SD = 1.19$).

Results

Analytical strategy

Repeated-measured t-tests were conducted to examine whether students reported higher post-simulation crisis management competencies than pre-simulation assessment.

To test the hypotheses on the presence effects, two ordinary least squares (OLS) regression models were run on two dependent variables: APR crisis management competencies and course crisis management competencies, controlling for respective pre-test competencies.

Pre- and post-simulation crisis management competencies

A repeated-measured t-test showed that students reported higher APR crisis management competencies after the crisis simulation activity ($M = 7.65$, $SD = .95$) than before the crisis simulation activity ($M = 5.78$, $SD = 1.37$, $t(26) = -11.40$, $p < .001$, $n = 27$). H1a was supported.

Similarly, a repeated-measured t-test showed that students reported higher course crisis management competencies after the crisis simulation activity ($M = 7.50$, $SD = 1.01$)

than before the crisis simulation activity (M = 5.12, SD = 1.76, $t(26)$ = -10.72, $p < .001$, n = 27). H1b was also supported.

Presence effects

The results of the two OLS regression analyses are reported in **Table 2**.

Presence was indeed positively associated with both APR (b = .35, SE = .09, $p < .001$) and course (b = .34, SE = .09, $p < .001$) crisis management competencies. Hence, both H2a and H2b were supported.

Moreover, pre-test APR competencies and presence explained 74% of the variance in post-test APR competencies while pre-test course competences explained 74% of the post-test course competences as well.

Table 2
Effects of Presence on APR and Course Crisis Management Competencies

	Model I: APR Crisis Management Competencies		Model II: Course Crisis Management Competencies	
	B (S.E.)	*β*	*B (S.E.)*	*β*
Pretest Competencies	.382*** (.082)	.551	.373*** (.061)	.649
Presence	.352*** (.094)	.442	.342*** (.090)	.404
Constant	2.471*** (.681)		2.700*** (.731)	
Adjusted R^2		.740		.737
n		27		27

Note. Entries are coefficients from OLS regressions.
* $p < .05$; ** $p < .01$; *** $p < .001$.

Discussion

Through pre- and post-simulation surveys, this study finds that simulation activities indeed improved student learning outcomes and that presence was critical in enhancing that effect.

What students learned the most

Using two different measures of student learning outcomes, the results show that the simulation activity boosted both APR and course crisis management competencies.

It is worth pointing out that the biggest improvement in learning competencies involved messaging strategy and crisis management theory. Before the simulation activity, students self-reported low ratings for key messaging and theory competency items: the messaging needs of each crisis phase, understanding situational theory of publics, and applying situational theory of publics: all ratings were below the scale midpoint of 5. Encouragingly, these items saw the biggest amount of increase in post-simulation ratings, with 2.98 points increase in "the messaging needs of each phase," 2.63 points increase in understanding situational theory of publics and 2.71 points in applying situational theory of publics (see Table 1).

The qualitative feedback from students was overwhelmingly positive and showed some recurring topics that students felt they learned the most (see **Appendix II** and **Appendix III**).

1. *The importance of crisis planning*. One student learned "just how important having a crisis plan is." Another learned to "always have a pre-plan for any possible crisis that can arise." A student also noticed that "there is a lot of

planning done before a crisis even occurs." Multiple students emphasized the importance of being prepared for every type of questions.

2. *Key messages*. One student learned the "importance of talking points in the interview." Another pointed out that "key messages + supporting facts are important." Yet another found that "messaging is very important."

3. *Crisis phases*. One student learned "the different phases that follow a crisis and which steps need to be accomplished within each of those phases." Another "saw how the crisis evolved and learned what to do in each stage." Similarly, a student learned the "key differences in the different stages of a crisis/possible crisis" and another learned "how to manage crisis in the best possible way in all phases of crisis." One student summarized the key point of the situation theory of publics by writing that "I learned the different phases that follow a crisis and which steps need to be accomplished within each of those phases."

The qualitative comments revealed that students found the simulation activity fun and hands on. Many recommended doing it again.

Presence

This study also finds that feeling "present" in the simulation scenario enhances both APR and course crisis management competencies.

In their qualitative comments, many students commented on the realism and believability of the activity, which contributed to a higher degree of psychological

presence. Students used such phrases as "real-life situation," "really believable," "real-life practice," and "being in a crisis scenario."

In designing simulation activities, instructors should strive to induce a high level of presence. The goal is transport students to the simulated scenario so that they adopt and play the role of the actors in the case. Recent research in narrative persuasion and storytelling can help the instructors design better prompts. One important technique used in this study is the repeated use of second-person voice to transport students to their roles. The prompt of the crisis simulation activity (see **Appendix I**) made frequent used of "you" to induce presence.

The role of teamwork

Since focused group discussions allow students to exchange different viewpoints, build consensus on strategic maneuvers and improve understanding of key concepts in a simulation activity, they are often deemed consequential for SBT (Hsieh et al., 2006). Many crisis simulation activities incorporate collaborative participation (Baglione, 2006).

This project also included a battery of questions on teamwork (""My team worked together on this activity," "I enjoyed working with my teams on this activity," and "I learned from my team during the activity"). When pretest crisis management competencies and presence were controlled for, teamwork was not significantly related to posttest competencies for both APR and course measures.

In a press conference simulation to practice crisis management skills, similar idea to the project here, Veil (2014) also discussed problems with students working in team. Some students in that activity felt disengaged when they did not take the role of spokespeople. This sentiment is echoed by the students in this study, which is discussed

in the following section. Only one student made a comment about teamwork in the qualitative comments ("How to effectively work through crisis w/ a team").

Limitations

This study is not without limitations.

First, all learning outcomes are self-reported and subjective measures. While no objective data are collected to assess crisis management competencies, two pieces of evidence did indicate that students grasped the competencies measured by the self-reported questions. One piece of evidence came from the class discussions of the questions before the mock press conference. To simulate the urgency of a crisis state, each team progressed through each phase of the simulation by addressing the questions posed in the prompt within the team. At the end of the third phase prior to the press conference, the whole class reconvened and discussed the questions for each phase. What the class offered during this discussion session showed that students who spoke up largely demonstrated the learning competencies. The other piece of evidence came from the mock press conference where students who grasped the learning indicators should perform satisfactorily. Admittedly, only one student from each team comprised the university panel. Nonetheless, the answers the panel provided as well as the questions that the rest of the class posed showed that students tackled the discussion questions that were meant to prepare them for the press conference.

Second, the simulation activity was designed so that every student had an opportunity to be engaged during all stages of crisis development. The activity culminated in the press conference where a panel of six students, one from each team, addressed the questions from the rest of the class, who role-played as journalists. While

many students mentioned learning from playing the role of journalists (e.g., "I have learned what a real news conference might be like and how to ask important questions" and "I learned about the kinds of tough questions journalists should be asking"), one student noted a desire to play the role of the university panelist (e.g., "Great activity, possibly get everyone a chance to be at the press table"). The challenge of rotating everyone in the class through the organization panelist role at the press conference can be daunting. But this could possibly be achieved in class dedicated to crisis management where the instructor can use different simulation scenarios to grant every student the opportunity to role-play organizational panelist who addresses the media. One student liked the activity so much that he/she recommended doing it again during the semester (e.g., "I thought we should do it again!")

Future research

One future research area is to explore crisis simulation in a social media environment. Weber Shandwick and H+K both have developed innovative social media crisis simulation platforms that have great potential to be adopted in classrooms (2010). Public relations agencies, Weber Shandwick and H + K, have rolled out social media based crisis simulations (Kiefer, 2012; Weber Shandwick, 2010). This will be a promising area to test the effectiveness of SBT in the social media era.

Conclusion

Overall, simulation activities offer an alternative pedagogical approach to traditional assignments. This study shows that a crisis simulation activity can significantly increase students' crisis management competencies. Creating realistic,

engaging simulation activities that enhance presence can help students grasp public relations theories and enhance core public relations competencies more effectively.

Arguably, the contribution of simulation activities to learning outcomes is not confined to crisis management. It can be effectively applied in other areas of public relations, such as media relations. Instructors of public relations are strongly encouraged to incorporate simulation activities in teaching both applied and theoretical topics.

Bibliography

Aertsen, T., Jaspaert, K., & Van Gorp, B. (2013). From theory to practice: A crisis simulation exercise. *Business and Professional Communication Quarterly, 76*, 322-328.

Anderson, B., Swenson, R., & Kinsella, J. (2014). Responding in real time: Creating a social media crisis simulator for the classroom. *Communication Teacher, 28*, 85-95.

Asal, V., & Blake, E. L. (2006). Creating simulations for political science education. *Journal of Political Sciene Education, 2*, 1-18.

Baglione, S. L. (2006). Role-playing in a public relations crisis: Preparing business students for career challenges. *Journal of Promotion Management, 12*, 47-61.

Barfield, W., Zeltzer, D., & Slater, M. (1995). Presence and performance within virtual environments. In W. Barfield & T. A. Furness (Eds.), *Virtual environments and advanced interface design* (pp. 473-541). Oxford: Oxford University Press.

Bell, B. S., Kanar, A. M., & Kozlowski, S. W. (2008). Current issues and future directions in simulation-based training in north america. *International Journal of Human Resource Management, 19*, 1416-1434.

Bland, M. (1995). Training managers to handle a crisis. *Industrial and Commercial Training, 27*, 28-31.

Booth, S. (1990). Interactive simulation and crisis management training: New techniques for improving performance. *Contemporary Crises, 14*, 381-394.

Boston, W., & Sloat, S. (2015). Volkswagen emissions scandal relates to 11 million cars. *The Wall Stree Journal*. Retrieved from

http://www.wsj.com/articles/volkswagen-emissions-scandal-relates-to-11-million-cars-1442916906

Clemson, D., & Samara, K. (2013). Crisis management simulations -- narrative inquiry into tranformative learning. In A. Mesquita & I. Ramos (Eds.), *Proceesings of the 12th european conference on research methodology for business and management studies* (pp. 100-107).

Coombs, W. T. (2001). Teaching the crisis management/communication course. *Public Relations Review, 27*, 89-101.

Coombs, W. T. (2007). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory. *Corporate Reputation Review, 10*, 163-176.

Coombs, W. T. (2014). *Ongoing crisis communication*. Thousand Oaks, CA: Sage.

Cornelissen, J. (2004). *Corporate communication: Theory and practice*. London, England: Sage.

Dorn, D. S. (1989). Simulation games: One more tool on the pedagogical shelf. *Teaching Sociology, 17*, 1-18.

Dunnington, R. M. (2014). Presence with scenario-based high fidelity human patient simulation. *Nursing Science Quarterly, 27*, 157-164.

Dutta-Bergman, M., Madhavan, K., & Arns, L. (2005). *Responding to bio-terror: A strategic framework for crisis response pedagogy using 3d visualization*. New York, NY: International Communication Association.

Dyer, S. C. (1995). Getting people into the crisis communication plan. *Public Relations Quarterly, 40*, 38-41.

Foote, L. (2013). Honing crisis communication skills: Using interactive media and student-centered learning to develop agile leaders. *Journal of Management Education, 37*, 79-114.

Friedman, M. (2013). Developing and teaching the crisis communication course. *PRism, 10*, 1-21.

Fuller, R. P. (2016). The big breach: An experiential learning exercise in mindful crisis communication. *Communication Teacher, 30*, 27-32.

Grunig, J. E. (2003). Constructing public relations theory and practice. In B. Dervin, S. Chaffee, & L. Foreman-Wernet (Eds.), *Communication, another kind of horse race: Essays honoring richard f. Carter* (pp. 85-115). Cresskill, NJ: Hampton Press.

Hsieh, J.-L., Sun, C.-T., & Kao, G. Y.-M. (2006). Teaching through simulation: Epidemic dynamics and public health policies. *Simulation, 82*, 731-759.

Ijsselsteijn, W. A., de Ridder, H., Freeman, J., & Avons, S. W. (2000). Presence: Concept, determinants and measurement. In B. E. Rogowitz & T. N. Pappas (Eds.), *Human vision and electronic imaging v* (pp. 520-529). San Jose: Proceedings of SPIE.

Jargon, J., & Newman, J. (2016). Federal authorities investigate chipotle outbreak. *The Wall Street Journal*. Retrieved from http://www.wsj.com/articles/chipotle-sales-continue-tumbling-on-e-coli-outbreak-1452089571

Kiefer, B. (2012). H + k rolles out "flight school" crisis-simulation platform. *PR Week*. Retrieved May 5, 2016, from http://www.prweekus.com/hk-rolls-out-flight-school-crisis-simulation-platform/article/266379/

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs: Prentice-Hall, Inc.

Lane, D. C. (1995). On a resurgence of management simulations and games. *The Journal of the Operations Research Society, 46*, 604-625.

Lee, J., Woeste, J. H., & Heath, R. L. (2007). Getting ready for crisis: Strategic excellence. *Public Relations Review, 33*, 334-336.

Lombard, M., Bitton, T. B., & Weinstein, L. (2009). Measuring presence: The temple presence inventory. *Proceedings of the 12th Annual International Workshop on Presence*.

Minsky, M. (1980). Telepresence. *Omni, 2*, 45-51.

Mitroff, I. I. (1994). Crisis management and environmentalism: A natural fit. *California Management Review, 36*, 101-113.

Olson, K. S. (2012). Making it real: Using a collaborative simulation to teach crisis communications. *Journal of Excellence in College Teaching, 23*, 25-47.

Pang, A., Jin, Y., & Cameron, G. T. (2010). Contingency theory of strategic conflict management: Directions for the practice of crisis communication from a decade of theory development, discovery, and dialog. In W. T. Coombs & S. J. Holladay (Eds.), *The handbook of crisis communication* (pp. 527-549). West Sussex: Wiley-Blackwell.

Raymond, C., & Sorensen, K. (2008). The use of a middle east crisis simulation in an international relations course. *PS: Political Science and Politics, 41*(1), 179-182.

Richardson, J., & Swan, K. (2003). Examining social presence in online courses in relation to students' perceived learning and satisfaction. *Journal of Asynchronous Learning Network, 7*, 68-88.

Rogers, Y. v. d. M. (1996). Role-paying exercise for the development and international economic courses. *The Journal of Economic Education, 27*, 217-223.

Salas, E., Wildman, J. L., & Poccolo, E. F. (2009). Using simulation-based training to enhance management education. *Academy of Management Learning & Education, 8*, 559-573.

Schloerb, D. W. (1995). A quantitative measure of telepresence. *Presence, 4*, 64-80.

Shellman, S. M. (2001). Active learning in comparative politics: A mock german election and coalition-formation simulation. *PS: Political Science and Politics, 34*, 827-834.

Shifflet, M., & Brown, J. (2006). The use of instrucitonal simulations to support classroom teaching: A crisis communication case study. *Journal of Multimedia and Hypermedia, 15*, 377-395.

Slater, M., & Wilbur, S. (1997). A framework for immersive virtual environments (five): Speculations on the role of presence in virtual environments. *Presence: Teleoperators and Virtual Environments, 6*, 603-616.

Smith, E. T., & Boyer, M. (1996). Designing in-class simulations. *PS: Political Science and Politics, 29*, 690-694.

Smith, R. D. (2013). *Strategic planning for public relations* (4th ed.). New York, NY: Routeledge.

Veil, S. R. (2010). Using crisis simulations in public relations education. *Communication Teacher, 24*, 58-62.

Waller, M. J., Lei, Z., & Pratten, R. (2014). Focusing on teams in crisis management education: An intergration and simulation-based approach. *Academy of Management Learning & Education, 13*, 208-221.

Weber Shandwick. (2010). Weber shandwick launches social media crisis simulator, firebell. *PRNewswire.* from http://www.prnewswire.com/news-releases/webershandwick-launches-social-crisis-simulator-firebell-108940364.html

Wehmeier, S. (2009). Out of the fog and into the future: Directions of public relations theory building, research, and practice. *Canadian Journal of Communication, 34*, 265-282.

Welch, R. B. (1999). How can we determine if the sense of presence affects task performance? *Presence, 8*, 574-577.

Wentworth, D. R., & Lewis, D. R. (1975). Evaluation of the use of the marketplace game in junior college economics. *The Journal of Economic Education, 6*, 113-119.

Witmer, B. G., & Singer, M. J. (1998). Measuring presence in virtual environments: A presence questionnaire. *Presence, 7*, 225-240.

Appendices

Appendix I

Simulation Instructions

Instructions: The following is a hypothetical crisis communication scenario. Read the case carefully and complete the exercises.

Stage 1: Bed Bug Suspected

Last month, Jennifer White, a freshman female student in a University of Nebraska-Lincoln residence hall saw parasitic insects on her roommate's bed. She killed the insects immediately.

"[But] that night I couldn't go to sleep," Jennifer said. "I kept feeling these pinches of nerve pain all over my legs and arms."

She woke up the next morning with bite marks on her legs. She reported the incident to University Housing and suspected the marks might be caused by bed bugs. Word started to spread on campus.

University Housing and University Communications both learned of the situation and decided to bring examiners in to study the situation. Bed bugs are typically confirmed by specially-trained dogs and there is only one available in Lincoln. Given the large number of requests, the dog will not be available for at least another week.

Assume University Communications at UNL approaches your agency for help in managing the issue. Address the following questions.

1. **Would you consider this a crisis at this stage? Why? How do you know?**
2. **Who are your active publics and aware publics?**
3. **What questions are your key publics asking at this stage? What key messages will you communicate to your active publics defined above? What supporting facts will you provide? What are the channels through which you will deliver these messages?**
4. **Make three lists of actions that need to be taken.**
   a. **Actions in the first hour of the crisis.**
   b. **Actions in the first 24 hours of the crisis.**
   c. **Longer-range actions.**

Stage 2: Beg Bug Rumors

You had decided to advise University Housing not to alert the publics at this stage because your client did not have confirmed evidence that bed bug existed on campus. You advised them to simply communicate with Jennifer White and her roommate to let them know that University Housing called for a team to investigate the potential presence of beg bugs in their room.

While your communications team patiently waited for the dog to arrive, a local TV news crew heard of the bed bug rumor and sneaked into the residence hall where Jennifer stayed. The reporter interviewed some students, who all said they believed there was a bed bug problem in the hall. They added that the university was doing nothing about it or was trying to hide it. The reporter then interviewed some students on the street and they said they had not heard anything from University Housing about the bed bug issue.

Based on this information, the local TV station aired a news story concluding that the university was trying to cover up the problem.

You watched this TV news story while you were doing environmental scanning for your client. Address the following questions.

1. **What has changed for your active publics and aware publics at this stage?**
2. **What messages will you communicate to your new active publics defined above? Your messages should be a little different from Stage 1.**

Stage 3: Bed Bug Confirmed

Two weeks later, it was confirmed that Jennifer's room was indeed infested with bed bugs. After a thorough examination of all the residence halls, 26 student rooms showed evidence of infestation.

A local newspaper reporter interviewed the housing director, who said "the Housing Department thought a student had reported a dead bedbug in her dorm room."

Jennifer, the first student who reported the incident, told the reporter that "I find it surprising they would say a single dead bug. As far as I know, dead bed bugs don't bite."

The housing director responded by saying "The reason we didn't make an effort initially to talk about it with other students was because of the way bed bugs travel. They are not known to migrate from one room to the room next door… They are not contagious like a disease that we feel we have to warn people."

The same story also reported that one of the RAs was also asked to allegedly lie about her own bed bug situation.

"It's not fair that I'd be asked to hide this from them. [My residents] could be at risk and not even know it, because Housing is trying to hide it. It's like the Iron Curtain," she said.

Given the situation, you have advised your client to invite journalists from local media organizations for a debriefing session.

1. **What potential questions will the journalists ask? Each group should prepare 10 questions.**
2. **What are your key messages for the journalists? What supporting facts can you provide for each key message? The messages should not be exactly the same as the ones proposed at Stage 1 and Stage 2. Work your key messages into your answers to the 10 questions you listed above.**
3. **Each group sends one representative to form a committee of university administrators, communications professionals and housing staff for the media debriefing session.**

Appendix II

Post-simulation Open-ended Question 1
Q: What lessons have you learned from this activity?

How to apply lessons, rather than just being lectured.

Just how important having a crisis plan is and the importance of portraying positivity to the media.

Media relations. Importance of talking points in the interview.

I learned the different phases that follow a crisis and which steps need to be accomplished within each of those phases.

I've learned to expect tricky questions in interviews and how to answer them well.

I learned how to respond to crisis and saw how the crisis evolved and learned what to do in each stage.

I have learned the importance of preparing possible questions.

It's important to prepare for every type of question.

You can never be too prepared.

HOW (underlined) you manage crises is extremely important. Reaching to publics will help.

Crisis management is critical for companies to be prepared for and to have responses to address any questions.

Always have a pre-plan for any possible crisis that can arise.

How to prep for a media interview in a crisis.

Pretty much everything involved w/ crisis management.

I have learned what a real news conference might be like and how to ask important questions.

Be prepared to handle the difficult questions.

I learned about the kinds of tough questions journalists should be asking + how communications teams should be responding. Avoid the negatives.

That there is a lot of planning done before a crisis even occurs.

How to effectively work through crisis w/ a team.

The proper interview.

I learned how to prepare questions and also answers for a press conference about a crisis scenario.

The key differences in the different stages of a crisis/possible crisis.

It was just interesting to go through steps necessary in order to provide a good crisis plan.

How to manage crisis in the best possible way in all phases of crisis.

Key messages + supporting facts are important.

Managing a crisis takes a lot (underlined) of components. Messaging is very important and you have to anticipate what reporters might ask.

Appendix III

Post-simulation Open-ended Question 2
Q: What are your other thoughts on this activity?
Much more efficient & engaging than lectures.
This was a good activity. Definitely keep it around.
I liked this activity, and liked that it was based on a real crisis on UNL campus.
It was a good way to learn what to do, by actually doing and participating.
I liked the media panel.
It helped put us in a real-life situation.
I thought we should do it again!
It was fun!
I thought it was really believable & useful real-life practice.
I thought it was an effective learning exercise and helped me feel more confident in my understanding of crisis communication & PR's role in it.
I thought it was helpful. Real world scenarios are the most beneficial in my opinion.
None.
Seeing the press conference was a good learning experience.
I thought it was fun, a good way to switch up class!
Likes the interaction at the end. Flowed well.
I thought it was beneficial and it helped to better my knowledge of being in a crisis scenario.
I thought it was conducted very well and would recommend it for next year's classes.
I enjoyed it.
Great activity, possibly get everyone a chance to be at the press table.
I enjoyed it a lot actually ☺
It was a beneficial activity overall.
I liked it, very hands on.
It was fun!