More Than a Game: A Review of How Role Playing in Crisis Simulations Has Impacted Public Relations Students

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Abstract

Often the best way to experience real-world tests is through simulations. Simulations allow people to translate their knowledge and skills to appropriate behavior. As an example of experiential learning, simulations give students a "real-world" experience without the fallout of a real-world failure. For three years, the Mass Communication Department at a small, liberal arts university in the southwestern part of the United States staged crisis simulation events using game-based learning.

This study reviews how public relations students perceived their learning experiences during the crisis simulation and ultimately their learning outcomes using a directed interview of students. While students found the event engaging and motivational, most felt like they were not prepared enough to serve as the crisis communications team for the university, even though the event was simulated. Students said they were excited yet nervous to participate in the event, but after it began, some of them reached a state of flow and became focused. After completing their roles as the communications team, most students felt a sense of accomplishment and that they could handle a crisis in real life; therefore, the learning objectives set forth for the public relations students were achieved.

This study fills a hole in mass communication and journalistic practice by reviewing how game-based mechanics used during a crisis simulation can offer an effective pedagogical tool that can be replicated from year-to-year in a variety of settings.

Keywords: Game-Based Learning, Gamification, Simulations, Crisis Communications, Public Relations, Student Motivation, Student Engagement

Introduction

For three years prior to the COVID-19 pandemic, the Mass Communication Department at a small, liberal arts university in the southwestern part of the United States staged crisis simulation events using game-based learning, so students could practice their crisis communication skills and strategies. These games consistently included students in the Public Relations Campaigns and Programs class, who represent the university as the crisis communications team. Students in two additional classes served as reporters and editors during these events, covering the university as it was being inundated with zombies in year 1, superheroes and super villains in year 2, and students who were protesting in year 3. Students in each of these classes created individual and group podcasts to review their participation immediately after the events, but no further study of how this crisis simulation game impacted these students or improved their skills was undertaken. This study provides such an assessment of this yearly game looking at the event from the perspective of game-based learning theory with a focus on crisis communication and experiential learning theory. The purpose of this study is to review student perceptions of this crisis simulation by reviewing directed interviews with student participants. Students and former students provided detailed feedback about their feelings before, during, and after the crisis simulation game during these interviews.

People play games because they are challenging and fun. Research shows a strong relationship between fun and engagement in a gamified learning experience, which makes gamified educational tools an attractive way to capture and hold the attention of students (Bisson & Luckner, 1996; Chatterjee, 2010; Kapp, 2012; Parsons & Taylor, 2011; Prensky, 2002; Sailer, et al., 2017; Wiggins, 2016). As faculty seek more ways to attract and hold the attention of students to improve learning, integrating a gamified experience such as a crisis simulation game may become more attractive as well.

Literature Review

Much of learning is about trying to solve problems, failing to find the solution, then trying again. In public relations education, getting students comfortable with the idea of trying and failing in class before undergoing real-world tests is imperative so their first encounter with a public relations problem or even crisis occurs in the classroom without the threat of job loss (Olson, 2010; Olson, 2012; Veil, 2010).

Often the best way to experience these real-world tests is through simulations. In the real-world of crisis communications, an entire industry exists to create simulations that test crisis communication plans (Crisis simulations, n.d.; What is a crisis?, n.d.; Focus on, n.d.; Put your crisis plan to the test, n.d.). Even governmental entities such as the CDC and the Organisation for Economic Cooperation and Development have issued reports and training materials to create desktop simulations for crisis and emergency management planners to test their plans and prepare for crisis. With the idea that the old adage "an ounce of prevention is worth a pound of cure," these entities focus on simulating real-world, potential crises to put their plans to the test and correct any failures before a crisis happens.

The real-world nature of simulations make them effective learning tools. "The ultimate test of the knowledge and skill acquisition is usually not in the knowing but in the ability to use knowledge appropriately—in the translation of knowledge into behavior" (Ruben, 1999, pp. 499). So simulations allow professionals and students alike the ability to translate their knowledge and skills to appropriate behavior during a simulated crisis.

The literature in this area focuses more on crisis management rather than crisis communication, which is why a study such as this is imperative to moving the field forward in terms of education. But in public relations education, students are just learning about how crisis impacts image, reputation, and branding. Most students have yet to experience a crisis in their own lives, so creating and testing a plan only gives them a slice of what a crisis is really like as it occurs. A crisis simulation in class offers students added benefits such as the ability to respond to the element of surprise, which Olson (2010, 2012) and Veil (2010) both introduced into their classroom-based public relations crisis simulations. When students are learning to use knowledge and skills, they must have reinforcement, application, and repetition across a variety of settings so they really understand how to integrate knowledge and skill into future situations, but traditional education is one-way and very focused on information dispensing (Ruben, 1999).

Experiential methods, like simulations, can address the boring and rote nature of traditional instruction by allowing for interactivity, collaboration, and peer learning, which fosters more active learning. Sim-

ulations are a go-to teaching method to put students in a situation in real time. This taps into the idea of experiential learning as outlined by Kolb (1984). Experiential learning is "the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 38). These experiences are high quality applications for learners to develop and practice skills that researchers have recognized students need (Krishnamurthy, 2020) and that students and faculty agree are of primary importance in the use of experiential learning (Sherman, P. & Olivia Boukydis, 2020).

There is a gap in knowledge between what is experiential learning and what is a simulation with Queens University attempting to fill that gap with a guide developed by their Experiential Learning Hub (2021) to assist faculty across disciplines in the use of simulations as a pedagogical tool. There are also a limited number of studies that review the use of crisis simulations as a classroom-based pedagogical tool in public relations. To fill this gap, we have combined the research from other areas of study and from experiential learning and simulations to fill a need in today's public relations educational landscape.

Commonly used in political science, medicine, engineering, and business education, simulations allow students to gain experience in an environment where they can learn from their successes and failures (Olson, 2012; Sasley, 2010).

There is limited research on how simulations provide mixed results in terms of student motivation and knowledge acquisition. Political science offers one such example. In political science courses, simulations are chosen specifically for their immersive nature. In a department-wide simulation across three courses for five semesters (Zaino & Mulligan, 2009), 115 students participated in a large-scale simulation to understand the political process and how negotiation plays an important role. An evaluative survey was done after the simulation where 41% of students said the simulation had increased their knowledge and awareness of government and politics. The most negative feedback was associated with logistical aspects of the simulation. Eighty percent of the respondents said they would participate in the simulation again.

Buckley et al. (2016) used gamification with the specific goals of increasing student motivation and engagement. The research team used a focus group analysis to determine how students reacted to a gamified learning experience in an accounting class, and what they found was that undergraduate students understood the key aims of the learning activity better through the gamified learning experience. Graduate students had a negative emotional response to the gamified activity. Motivation also differed from undergraduate to graduate students with undergraduate students being more motivated by the gamified experience. The researchers concluded that context was a big predictor of how students engage with a gamified learning experience. Students who were more "serious" were less inclined to find the gamified experience helpful while those who were less "studious" found the experience not only helpful but enlightening.

Raymond (2010) offered a contrary perspective on simulations after using one in an introductory international relations course across three semesters taught by the same instructor. A test of the simulation as a learning exercise across three sections was compared to sections of a control group. The simulation seemed to be the only additional interactive component to the course, with other teaching methods including traditional lectures. The instructor did not design the simulation, rather members of the university's Model United Nations team designed and managed the simulation, so it appeared as though the instructor had no role in the simulation itself other than as an observer. There were assignments associated with the simulation before and after the event as well as student feedback on the simulation. The assumption of added learning was that students would perform better on their third exam than the control group. There was no difference in academic performance between those students who participated in the simulation and those who did not. Additionally, the instructor assumed that student evaluations would be higher since students would perform better on their tests. However, teaching evaluation results were actually lower. In the end, he concluded that simulations were not more effective learning tools, despite several errors in logic in this study, including that learning can be demonstrated through examinations.

Simulations have been shown to promote teamwork (Asal, 2005; Lay & Smarick, 2006); contribute to a sense of self confidence (Asal, 2005; Colley, 2022) and promote learning as fun (Kille, 2002). Promoting learning as fun is aligned with the concepts introduced in gamification.

Gamification, a term coined by Nick Pelling in 2002, involves "using game-based mechanics, aesthetics and game thinking to engage people, motivate action, promote learning, and solve problems" (Kapp,

2012, p. 10). By the time students are 21, they will have played nearly 10,000 hours of video games, so it seems that students are primed for a gamified experience in the classroom (Dwyer, 2011). Gamers spend hours playing games where they solve problems and move through levels to complete a quest where they go through the process of trial, error, failure, and success. It is this focus or engagement that educators seek to harness when employing gamification. Studies show that increased engagement and motivation does occur in gamified educational settings such as simulations (Banfield & Wilkerson, 2014; Connolly et al., 2012; Dominguez et al., 2013; Hamari, Koivisto, & Sarsa, 2014; da Rocha Seixas, Gomes, & Melo Filho, 2016; Topirceau, A., 2017; Yildrim, 2017). In a systematic review of literature, Subhash & Cudney (2018) found that gamification and game-based learning show improved student attitude, engagement, and performance as the most significant benefits to this teaching modality. Attendance in classes, student confidence, and interest also increase, hence gamification is gaining acceptance as a learning method that benefits both teachers and students. Educators also use gamified learning experiences to elevate the learning retention of students to improve student achievement. Several studies in gamification have shown that gamified learning techniques do improve student achievement (Barata et al., 2013; Buckley & Doyle, 2014; Dominguez et al., 2013; Sherman & Boukydis, 20202; Yildrim, 2017).

Simulations are considered a form of gamification and provide similar immersive experiences for their participants as do other gamified learning modalities. It is from the perspective of gamification theory and experiential learning that the following research questions were developed to review student outcomes after participating in a 4-hour, crisis simulation that occurred across three courses in three years.

Research Questions

The purpose of this study is to review the perceptions of public relations students regarding the effects of participating in the crisis simulation game to see if this gamified experience produced the intended learning outcomes. Using interviews to gauge student perception of their experiences gave participants the opportunity to provide detailed feedback on student feelings before, during, and after the crisis simulation game. The research questions are:

RQ1: Did students feel prepared to face the public relations crisis that ensued in each of the three years?

RQ2: How did students feel about participating in this crisis simulation game?

RQ3: What were the public relations learning outcomes from participating in this crisis simulation game?

RQ4: What were the different experiences students had based on their roles within the public relations team?

RQ5: What did students learn as a result of participating in this gamified crisis simulation?

Methodology

Participants in this study were students who participated in the crisis simulation events in Spring 2016, 2017, and 2018. Simulations during 2019 and 2020 were done virtually because of the COVID-19 pandemic. While the simulation included three classes: Integrated Media Reporting (a required course in the Mass Communication degree program), Digital Design and Editing (a required course in the Mass Communication degree program) and Public Relations Campaigns and Programs (an elective course in the MCO curriculum), this study will only focus on the results from students who participated as public relations practitioners. Participation in the gamified crisis simulation event was a requirement in each class. The researcher sought and received Institutional Review Board approval to conduct an assessment of student learning outcomes of this event using a directed interview technique.

The directed interview technique, also known as a semi-structured interview, (Treadwell, 2017), or focused interview (Merton, Fiske, & Kendall, 1990) is a technique used to offer broad questions that may direct the purpose, tone, and focus of the interview, but allow for the flexibility of follow-up questions to provide fuller responses to the most important interview questions (Treadwell, 2017). This technique is based on the idea that respondents are subjects whose response to an event through the directed interview technique provides the data to be understood (Merton, Fiske, & Kendall, 1990), which gets to the idea of gaining insight into student views of the gamified crisis simulation. Since qualitative methods of inquiry, such as interviews, offer rich data and insight into the lived experience of individuals, the research method was an appropriate match for a preliminary assessment to dig deep into participants' overall view of the

experience, and their insights and feelings afterward (Treadwell, 2017). Questions from the directed interview included:

- Describe your participation in the crisis event or events at Texas Wesleyan University. What classes were you in and what was your role?
- How long ago was that?
- Do you remember how you felt at the time of the event?
- Looking back, how does it make you feel when you think about the event?
- At the time did you think your skills as a PR person, reporter, or editor were good enough to undertake such an event?
- Looking back, was that true?
- What did this event teach you about PR, journalism, or editing?
- What did participating in this event tell you about yourself?

Students and former students were interviewed in person when possible or by telephone as a secondary measure. Interviews were recorded and edited by the researcher to cut extraneous information at the beginning and end of the interview sessions in preparation for transcription. Interviews were transcribed using the transcription service ©Rev.com, and transcripts were reviewed by the researcher to correct transcriber errors. The transcripts were read and re-read to gain a fuller understanding of what the students were saying. An analysis of the transcripts was conducted using grounded theory to discover themes across all transcripts. Grounded theory is a research methodology used to generate hypotheses rather than test them (Auerbach & Silverstein, 2003). Unique topics discovered in the transcripts were assigned a code. Analysis continued until new categories no longer emerged. Common themes were identified and categorized into higher order themes. An additional analysis was performed on the transcripts using the themes that had emerged to triangulate data. When a comparison of coding saw disagreement, a fourth review of data was undertaken to solve the disagreement.

Participants and Demographics

Participants in this study were Mass Communication majors from the Public Relations Campaigns and Programs class at a small, liberal arts university in the southwestern part of the United States. The university is designated a minority-serving institution and is located in an urban setting. Students from this course in 2016, 2017, and 2018 were the population for this study. Simulations during 2019 and 2020 were done virtually because of the COVID-19 pandemic.

A total of 50 students participated in all three years' crisis simulation games. Eighteen students participated as public relations students, with 10 of those students also participating as journalists one year of the two years they participated. Two public relations students from 2016 did not respond to repeated inquiries, so 16 transcripts were analyzed for this study. In 2016, a total of 24 students participated in the gamified crisis simulation as public relations practitioners and journalists. In the public relations group of six, three students were white, one was black, one was biracial, and one was an international student. Five of the students were female and one was male. Students were all seniors. In 2017, a total of 22 students participated in the gamified crisis simulation as public relations practitioners and journalists. In the public relations group of six, four students were white and two were Hispanic. Five of the students were female and one was male. All students were sophomores, juniors, and seniors. In 2018, a total of 20 students participated in the gamified crisis simulation. In the public relations group of six, five students were white and one was black. Three of the students were female and three were male. All students were sophomores, juniors, and seniors.

Preparing for Crisis in Class

Introducing gamification into the three designated classes in Spring 2016 began in Fall 2015. Approval from administrators and administrative offices was required and obtained through a series of meetings with administrators. Prior to these meetings, a proposal was created. The overall goal in the original proposal was: "To create a live event where students practice the skills they are learning in courses in real time and learn how to critically evaluate the situation as it unfolds by producing and editing media that help explain the situation to a variety of audiences in a variety of platforms (journalism focused) and managing the crisis to solve the problems created by the situation and work to maintain a good public image (public relations focused)." Specific learning objectives were created from this general description outlining the learning objectives the gamified crisis event would address. These objectives were aligned with course objectives as well, thereby aligning the

Table 1: Intended Student Learning Outcomes for PR Students

Student Public Relations Practitioners
Create a timely, accurate and appropriate public relations crisis response to a real-time crisis
Work with media during a crisis situation to inform the public of the situation and protect brand image
Create any public relations-related collateral material in a timely manner for a real-time public relations crisis
Work with a team to plan, direct and respond to a crisis situation as it develops
Learn to adapt a crisis plan to real-life events as they happen
Practice working within the public relations team to gather information during a crisis
Practice how to remain calm and composed during a press conference
Apply rules of ethical communication in a real-time, crisis situation
Apply critical questioning to ascertain when information is fact and when it is rumor and when to release information

gamified experience with the outcomes from each of the three courses. The objectives were separated based on whether the students were acting as journalists or public relations practitioners. Table 1 (next page) contains the objectives for public relations students.

Aligning the outcomes of the gamified experience with the educational outcomes helped make the gamified experience a more effective strategy (Kapp, 2012; Kapp, 2014; Yildrim, 2017). Previous studies in gamification show that case-based learning was most frequently used in simulation-style games (Bakan & Bakan, 2018). This was also how the simulation-style game was created in 2016, 2017, and 2018. Each year, a different "case" or scenario was developed, which led students to perform one of three roles during the game: public relations practitioner, reporter, or editor. The roles students performed were based on the classes students were enrolled in as well as student and instructor choice when the student was enrolled in more than one course.

Bringing in professionals to speak about crisis communications was an important part of the curriculum, as was having professionals available to provide feedback the day of the game. Professionals who spoke in classes prior to the crisis simulation game were apprised of the crisis situation, so they could offer students some direction on how they had handled similar crises without providing the exact nature of the crisis. One professional even shared the crisis plan that his organization used for an epidemic, such as influenza, to assist students in preparing for a zombie apocalypse in 2016. Students in the public relations course were also given insight into the university's media relations efforts by the director of media relations. The public relations team was encouraged to meet with her outside of class time as well to understand some of the emergency response measures her team had in place for crisis events. In 2017 and 2018, one of the professionals, a recent former student who visited the class to discuss crisis planning, also participated the day of the crisis, offering students a familiar face closer to their age. Prior to that, public relations professionals who had offered assistance and critiques the day of the event were retired or had owned their own firms for many years. In 2016, professionals were not allowed to assist students, only to provide feedback about student performance at the end. In 2017 and 2018, professionals were allowed to give students direction and offer feedback without restrictions. Changes in the game mechanics or rules of the game were made based on student feedback from 2016.

The gamified crisis simulation was a requirement across all three courses all three years. To help alleviate student pressure and anxiety related to performance, students received an all or nothing grade for participation. Following the game, students created individual and group podcasts that were also graded in an all or nothing fashion. In total, this amounted to 20 percent of the course grade for the public relations course. By keeping the stakes low and giving students participation points instead of a grade based on performance, the public relations team was able to concentrate on learning without the fear of failure affecting their grades. Research (Buckley, Doyle, & Doyle, 2017; Science Education Resource Center, 2019) has found that students who had higher stakes were less open to a gamified approach to the content.

Results
RQ1: Did students feel prepared to face the public relations crisis that ensued in each of

the three years?

An assumption of this research question is that the intended student learning outcomes for the simulation game were skills students would need to possess to effectively play their assigned roles. In the directed interview, students were asked two questions that directly related to whether they believed they were prepared to play the roles they were assigned. At the time, did you think your skills as a PR person, reporter or editor were good enough to undertake such an event, and looking back, was that true? The results from these two questions show that of the 16 students who participated over the three-year period and participated in this study, nine or 56% thought they had the requisite skills to play their role in the gamified crisis simulation, while seven or 44% thought they did not have the skills needed. After the crisis simulation, nine students or 56% thought their assessment of their skills was accurate, while seven or 44% thought their assessment was inaccurate. This includes two groups of students who participated in the crisis simulations for two years--once as a public relations practitioner and once as a journalist. The group of students who only participated in a public relations capacity had somewhat different assessments of their preparation. Two of six students said they felt like they were prepared to face the crisis simulation or 33%, while four or 67% felt they were unprepared. Upon reflection, the same numbers held for this group of students. Two of six or 33% said their assessment of their skills was accurate, while four of six or 67% said their assessment of their skills was inaccurate. Most students felt like they were not prepared, in terms of skills, to face the public relations crisis prior to the actual simulation, but upon reflection, most students thought their assessment of their skills was inaccurate.

RQ2: How did students feel about participating in this crisis simulation game?

To answer this question, a review of directed interview Questions 3 and 4 was undertaken. In reviewing how students felt the day of the gamified crisis simulation, 12 students or 75% said they had positive anticipation prior to and the day of the simulation. Six students or 38% noted negative anticipation prior to or during the day of the simulation. Individual students indicated both positive and negative anticipation prior to and during the event, so totals do not equal the total number of students. Seven students or 44% felt overwhelmed or confused the day of the simulation,

while four students or 25% reported feeling calm or relaxed. Three students indicated that they had feelings related to a state of flow during the simulation game (Csikszentmihalyi, 1990; Kapp, 2012). The flow theory of motivation (Csikszentmihalyi, 1990) posits that motivation is impacted by perceived skill and perceived motivation. If something is too hard or too easy, it will impact flow negatively. When gamers are in a flow state they often report a feeling of being "in the zone" where time and consciousness disappear, seeing goals clearly with extreme concentration on the task at hand (Fullagar, C. & Kelloway, E. K., 2009). It is this flow state that makes for a truly enjoyable gaming experience, and one that impacts motivation (Kapp, 2012).

In reviewing answers from the six students who participated as part of the public relations crisis communications team only, four or 67% indicated they had positive anticipation prior to and the day of the simulation. Three students or 50% noted negative anticipation prior to or during the day of the simulation. Individual students indicated both positive and negative anticipation prior to and during the event, so totals do not equal the total number of students. Two students or 33% said they felt overwhelmed or confused; one student felt calm or relaxed, while two students or 33% indicated they had feelings related to a state of flow during the simulation.

In looking back on their experiences, only one of the 16 students who participated said the gamified crisis simulation was a bad experience. Nine students or 56% said they had positive experiences from their participation, while six students or 38% recalled that their experiences were both positive and negative.

RQ3: What were the public relations learning outcomes from participating in this crisis simulation game?

Prior to the first crisis simulation in 2016, a list of student learning outcomes was created for sudents. Table 1 indicates the intended student learning outcomes for public relations crisis team members.

A review of directed interview question seven, what did this event teach you about PR, journalism or editing, was undertaken to discover what the actual outcomes were for students. The themes that emerged from analysis of the interviews were technical skills needed, soft skills, job skills needed, critical thinking, the importance of accuracy, attention to detail, adaptability, confidence, teamwork, the ability to remain

Table 2: Detailed skills learned during crisis simulation game

Student roles (dual indicates 2 years)	Tech. skills needed	Job skills needed	Critical thinking	Importance of accuracy	Adaptability	Teamwork	Ability to remain calm	Interconnection in MCO
Jour/PR	0	4	3	0	2	2	0	0
PR/Jour	1	5	2	1	1	1	3	0
PR only	1	4	1	2	2	1	2	1
Totals	2	13	6	3	5	4	5	1

calm under pressure and knowledge of the interconnected nature of mass communication. These themes were collapsed into the overall categories of job skills and soft skills based on the Cengage survey (2019) conducted by Morning Consult, which defined soft skills. Sixteen students in the study learned 19 technical or job skills and 20 soft skills during the simulation game. Details of the specific skills learned follows in Table 2. Cells for the themes soft skills, attention to detail, and confidence were removed from the table because of null cells.

In comparing what students said they learned to the intended student learning outcomes, the outcomes that seemed to resonate with students were critical thinking, adaptability, teamwork, and the ability to remain calm in a crisis. Students specifically mentioned these skills as outcomes from the crisis simulation, and these skills were also listed as intended learning outcomes in five of the nine overall intended outcomes. The additional intended learning outcomes were addressed in the required public relations outputs for crisis management by the public relations team. These outcomes, collateral materials and updating social media and a website, were requirements in the assignment for individuals participating in the crisis simulation.

RQ4: What were the different experiences students had based on their roles within the public relations team?

To answer this question, further analysis was taken by grouping students based on their roles within the public relations team. Each year, one student served as the spokesperson, performing the more public-facing, media relations specific role. One student served as the chief strategist, performing the more behind-the-scenes, chief communications officer role, and additional students served as social media monitors and content producers for social media and the website, performing the typical communications coordinator roles that focus on technical skills. To accommodate these roles, students were grouped into three categories for this analysis.

A re-analysis of the interviews of the three students grouped as spokespeople offered very similar analysis of their participation in the crisis simulation game although they each participated in a different year. They realized how important teamwork was among public relations team members, especially in terms of communication within the team. They also discovered how important strategy was to communication during a crisis to effectively disseminate information to the public, in particular, the media. As the public-facing media relations practitioners, these three students had almost identical feedback about their nervousness and anxiety related to their spokesperson roles during press conferences:

Student 1: "It definitely gave me a sense of what people in public relations speaking roles deal with-- they deal with backlash. They deal with feeling nervous. They deal with not necessarily knowing what to say but having to get up there and to say it anyway. I remember that clear as day."

Student 2: "You know that people are gonna come in with these hard questions that you don't know how to answer, and it's like, 'Oh, I know I'm not gonna be able to answer these to the liking of the reporter, but I just gotta go with what I have.'"

Student 3: "If you don't have all the information, if no laws are broken and no rules, no one's hurt, don't have a press conference. Because you're going to get asked a lot of questions that you might not have the answers to as of right then."

A re-analysis of the interviews of the three students grouped as strategists offered very similar analysis of their participation in the crisis simulation game

as well. They realized how important teamwork was among public relations team members. They each saw their roles as keeping people on the public relations team calm as well as the public. All of them focused on the media relations aspect of the strategy and discussed the importance of the role of the media during a crisis. Two of the three expressed doubts about their participation and anxiety prior to the crisis simulation. The third was excited and exhilarated by her role in the simulation. All three said the role they played and their performance during the crisis simulation game imparted a sense of pride and built confidence in their skills and in themselves:

Student 4: "When I think about the first one [student participated in two crisis simulation games], it made me feel like I wanted to go into crisis PR. I loved it."

Student 5: "I don't want to be too cliché, but I'm kind of proud of myself."

Student 6: "I'm capable of doing things that I don't think I'm capable of doing. To be able to be put in an environment where I'm, in many ways, forced into a new role was really good and very beneficial for me, again, in building up confidence, I guess, in doing hard things."

A re-analysis of the interviews of the 10 students grouped as communications coordinators or technicians offered more variety in the responses from participants. Seven students said that the importance of remaining calm and relaxed during a crisis was an important skill they learned. Five students said that keeping it simple in terms of communicating with the public and media was also something they learned by participating in the event. Three students stressed the importance of teamwork, while two students stressed the importance of keeping things in perspective and being prepared prior to a crisis. One mentioned the importance of adjusting to changes and remaining adaptable during a crisis. Four students felt overwhelmed during their participation as part of the public relations team. One student was so overwhelmed, she left during the crisis simulation. She eventually returned to fill her role as part of the public relations team. Despite her feelings of being overwhelmed, she still found the crisis simulation game to be beneficial:

Student 7: "I really liked these events. Obviously not in the middle of it, but I like the concept of just having these chances to play out what we do in class and take these hands-on approaches and learn these things. Because if the first time I had gone through

something like this would have been in an actual professional setting, that would have been a horrible time to learn all these things that I was able to learn through doing the event."

RQ5: What did students learn as a result of participating in this gamified crisis simulation? This research question was an exploration into the unintended outcomes from the gamified crisis simulation. To answer this question, a review of directed interview questions seven and eight was undertaken to ascertain themes that developed across participants. A previous analysis of question seven for RQ 3 categorized student responses to the question into soft skills and job skills needed to be public relations practitioners. Soft skills learned during the gamified crisis simulation included adaptability, team work, critical thinking, and the ability to remain calm in a crisis. Job skills needed also included the ability to see how all aspects of mass communication are interconnected as well as the importance of accuracy and the actual roles students performed during the gamified crisis simulation. In total, 20 instances of soft skill transmission was determined, and 19 instances of job skill transmission was determined.

Analysis of the themes generated from Question 8 of the directed interview where students reviewed what they learned about themselves revealed that students primarily learned about their ability to handle pressure and stress in a crisis. Participation alone gave them confidence in the skills that they had. They also learned about the training they still lacked. Ten students or 63% said they learned that they were able to handle pressure and stress during a crisis, and some of those expressed surprise by this self-realization. Nine students or 56% gained confidence in their skills, and nine students or 56% said they learned about the training they still needed to be successful public relations practitioners. Six students or 38% expressed a new level of self-confidence after completing the crisis simulation, and four students or 25% said their career goals had either been confirmed or changed based on their participation in the crisis simulation. Two students expressed negative feedback related to their participation in the crisis event, but it was unclear what their role was, since both students had participated as journalists and public relations practitioners across two years and didn't specify which event was a negative experiences or if both were negative experiences.

Discussion

The intended public relations student learning outcomes of the crisis simulation game was a mix of soft skills and technical or job-related skills--teamwork, adaptability, critical thinking, and remaining calm during a crisis were stated intended outcomes just as creating collateral material, working with the media, creating and implementing a crisis plan as well as responding to the crisis in a timely manner and protecting brand image. A review of the research indicates that the crisis simulation game produced these outcomes. Not only did students rank critical thinking, adaptability, teamwork, and remaining calm in a crisis as top skills they learned during their participation, learning these skills while participating in a stressful crisis simulation seemed to increase their confidence in themselves and in their skills. Increased self-confidence and the ability to handle pressure and stress are two of the soft skills employers say they want (Cengage, 2019), but are difficult to teach. These are also two of the outcomes discovered in using gamified learning in classes (Subhash & Cudney, 2018). The very act of working through this crisis seemed to boost student confidence in their skills. Their performances also gave students a sense of pride as demonstrated in the quotes from students in RQ4. In reviewing Table 1, a focus on improving soft skills was ingrained in the intended learning outcomes for the crisis simulation game. Teaching these skills is important to students today, since 73% of employers say it's very difficult or somewhat difficult to find qualified candidates (Cengage, 2019). This same survey from Cengage puts soft skills ahead of quantitative and technical skills as what employers are demanding. A precursor of this survey conducted by Harris Poll on behalf or CareerBuilder in 2014, found that 77% of employers thought soft skills were just as important as hard skills. As more and more people enter the workplace lacking flexibility, confidence, teamwork, the ability to work well under pressure, and critical thinking, demands for these soft skills will only increase. This crisis simulation seemed to test students on these skills and give students more confidence in them after participation.

In terms of skills prior to the crisis simulation game, students generally were split on whether or not they were prepared. The responses could have been skewed by an inability to differentiate between students who had participated as both journalists and public relations practitioners and students who had participated as public relations practitioners alone. Students who had participated as public relations practitioners alone were less confident in their preparation and skill level going into the crisis simulation game. There are several likely explanations for this difference: First, students have less knowledge of public relations than journalism. A heavy emphasis on journalism-related skills through student media participation and classes at this university leaves students with far more experience in journalism prior to their participation in the crisis simulation game. Students who were public relations practitioners during the crisis may have taken no additional public relations classes prior to their participation in the crisis simulation event. This lack of prior training would certainly lead these students to feel less prepared than their journalism counterparts. Second, the journalism-related roles were more response-focused roles that relied on the strategy of the public relations team. As the lynch-pin of the crisis simulation, everything turned on how the public relations team handled the crisis, since reporting focused on the crisis itself as well as the public relations response. This could have been perceived as a greater burden on the public relations team. Third, the professional public relations practitioners who were on site to work with students were generally serious and more mature in age and outlook than the journalism pros who participated. Tone can be infectious, and in this case, it might have impacted how students perceived the event. And finally, tall tales from previous participants impacted how students perceived their roles and preparation. Several students mentioned stories they heard from former students and their own observations of a previous year's crisis as reasons for why they thought they were unprepared to face a crisis as a public relations practitioner.

A review of the roles each student played showed that students who had the more demanding leadership roles such as spokesperson and strategist did indeed have slightly different learning outcomes from those who were placed in technician positions. These leaders focused on what they learned about teamwork and strategy, while the technicians said that what they learned about remaining calm in a crisis and keeping communication simple were two of their biggest takeaways. This mirrors the focus of their roles. The leaders, specifically the spokespeople, did allude to how they had to remain calm during press conferences despite feelings of anxiety and inadequacy when

facing the media. The difference in the focus of these groups may show the difference in how Bloom's Taxonomy (Anderson et al., 2001) plays out in a hands-on crisis simulation game, where groups of students are analyzing the performance of others and gaining different insights or knowledge based on their level of participation.

This study shows that at least three students experienced a state of flow during the game. Only one student found the experience to be a bad one. Game elements that are necessary to improve the motivational aspect of games are a sense of fun and purpose that lead players to a flow state. This happened during the crisis simulation game. When players are within a state of flow, their experience of the game, and in this case learning, is at its optimal level (Kapp, 2012). Optimal learning that focuses on real-world transfer of knowledge was one of the reasons the crisis simulation game was created.

Limitations

The researcher's relationship with the students as a former professor may have skewed their responses to questions. Two students' inability to be physically present during one of the games affected their participation in and perceptions of that event and potentially skewed their perceptions of the overall effectiveness of the crisis simulation game. Because there was a limited number of subjects in this study, the effects may be overestimated or underestimated. Because 10 of the 16 subjects participated in two crisis simulation games, there is a lack of clarity among all subject participants when describing their feelings and perceptions of the crisis simulations.

Further Research

A comparison of student interviews and immediate feedback following participation in the simulation via individual and group podcasts may shed some additional light on the learning outcomes from this gamified crisis simulation. Testing skill levels before and after the gamified crisis simulation might also provide a greater indication of skill acquisition during the experience. Continuing an analysis of this crisis simulation game through additional years when more departments across campus participated may also provide additional insight.

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