



Assessment of Students' Crisis Communications Skill Increase Based on Classroom Instruction and Second Life™ Training

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Introduction

- Crisis communication management is important to the agriculture industry.
- The success of agriculture is often dependent on ideal weather, prevention of contamination, ability to provide clean water, and production of enough food, fiber and fuel to sustain the world.
- When issues arise preventing the success of agricultural practices, communication professionals must be prepared to manage the people involved with the crisis and reduce negative impacts—whether human, animal or environmental.

Introduction

- The nature of crisis management is not just to maintain a favorable image in the eye of the public but to protect the public.
- The potential for the use of technology to facilitate learning continues to expand and virtual education activities has become an important component.
- Leggette et al. (2012b) reported that the use of Second Life™ (SL) (a virtual environment) was able to encourage experiential learning.
- Although literature regarding the educational value of SL is limited, much potential exists with the **technology** (Leggette, Rutherford, Sudduth, & Murphrey, 2012a).

Purpose and Objectives

- Assess students' perceptions of knowledge on select crisis-related skills, tasks, and activities in order to determine the potential effectiveness of a SL simulation.
- Objectives included a pre- and post-assessment to:
 - 1) determine graduate students' perceptions of knowledge on select crisis communications competencies and
 - 2) determine graduate students' perceived expectancy performance on select SL tasks used to enhance crisis communications competencies.

Methods and Procedures

- Students enrolled in a crisis communications course at Texas Tech University during fall 2011 ($N = 15$)
- Prior to curriculum being taught students completed a questionnaire regarding perceptions of knowledge on skills, tasks, and activities related to crisis communications.
- After completion of the course and after participating in a virtual crisis simulation using Second Life™, students completed a post-test of knowledge perception on the same competency areas.
- Questionnaires referenced critical crisis communication topics and skills as identified in a previous Delphi study of experts (Edgar, Edgar, McGuire, Rutherford, Doerfert, & Murphrey, 2012).

Methods and Procedures (continued)

- The instrument consisted of seven constructs including: Knowledge, Communication Skills, Contingency Plans, Supplies and Tools, Learning and Training Needs, Area of Expertise, and Personal Traits.
- SL Performance Expectancy was also assessed.
- Individual items for each construct were scaled statements ranging from either “no experience/knowledge” (1) to “expert” (6).
- All data for selected constructs were summated and inferential analyses were performed using SPSS 20.0.
- Mean differences between the pre- and post-data were calculated and resulting standard deviations and effect sizes were noted.

Objective 1

Table 1. Difference in Competency Areas through Course Intervention

Competency	<u>M^a</u>		<u>SD</u>		Cohen's d	Cohen's d descriptor
	Pretest	Posttest	Pretest	Posttest		
Knowledge	2.53	4.59	0.82	0.98	1.57	Large
Communication	3.53	4.66	0.86	0.76	1.12	Large
Contingency	1.48	4.40	1.15	1.19	1.71	Large
Supplies	2.00	4.75	1.18	1.02	1.91	Large
Learning	1.56	4.36	1.22	0.97	2.17	Large
Expertise	2.88	4.67	0.94	0.95	1.38	Large
Personality	4.06	4.96	0.87	0.64	0.92	Large

Note. ^a Competency areas were summated and grand mean were used to calculate mean differences.

Objective 2

Table 2. Second Life (SL) Performance Expectancy Statements

Competency	M ^a	SD	Cohen's d	Cohen's d descriptor
Using SL in my education would enable me to accomplish assignments more quickly.	-1	0.7	1.42	Large
Using SL would enhance my effectiveness in learning.	-1.6	0.89	1.79	Large
Using SL would make it easier to do my assignments	-1	1	1	Large
I would find SL useful in my education.	-2	0.7	2.85	Large
If I use SL, I will spend less time on routine assignments.	-0.2	1.3	0.15	Small
Learning to operate SL would be easy for me.	-0.8	1.3	0.61	Large
My interaction with SL would be clear and understandable.	-1.4	1.51	0.92	Large
I would find SL flexible to interact with.	-0.8	0.44	1.81	Large
It would be easy for me to become skillful at using SL.	-1.2	1.78	0.67	Large
I would find SL easy to use.	-1	1	1	Large

Objective 2 (continued)

Table 2. Second Life Performance Expectancy Statements

Competency	M ^a	SD	Cohen's d	Cohen's d descriptor
Using SL takes too much time from my normal assignments.	0	1.22	0	Trivial
Overall, I believe that SL is easy to use.	-1.2	1.09	1.1	Large
People who are important to me think that I should use SL.	0.4	1.67	0.23	Small
I have the resources necessary to use SL.	-0.4	1.14	0.35	Large
I have the knowledge necessary to use SL.	-1.2	1.64	0.73	Large
Given the resources, opportunities, and knowledge it takes to use SL, it would be easy for me to use Second Life.	-0.6	0.54	1.11	Large
I think that using SL fits well with the way I like to learn.	-1.2	1.09	1.1	Large
Using SL fits into my learning style.	-1.4	1.14	1.22	Large
I intend to use SL in the next 12 months.	3	1	3	Large

Note. ^b M^a = mean difference between pre- and post- assessments

0 = Strongly Disagree and 6 = Strongly Agree

Conclusions and Recommendations

- While participants did not indicate a certain intention to use Second Life in the next 12 months, participants did increase in knowledge, ability, and skill level on items associated with effectively managing a crisis through the use of SL.
- This research demonstrated virtual education as an effective tool in training communicators.
- Additional research should explore virtual educational platform usage at other universities and should focus on the value of virtual simulations and how technology selection and acceptance impacts learning.

Conclusions and Recommendations

- The value of virtual training methods for crisis communication education should be explored in relation to assessing perceptions, knowledge, and skills of participants, especially those involved in disseminating information to the public.
- The significance of this study for college teaching relates to the potential to use technology effectively to deliver specific training/education that may not be possible through other means.



Images of the Second Life™
Simulation
Pre- and Post-Crisis

Island development

Urban areas

Emergency Management



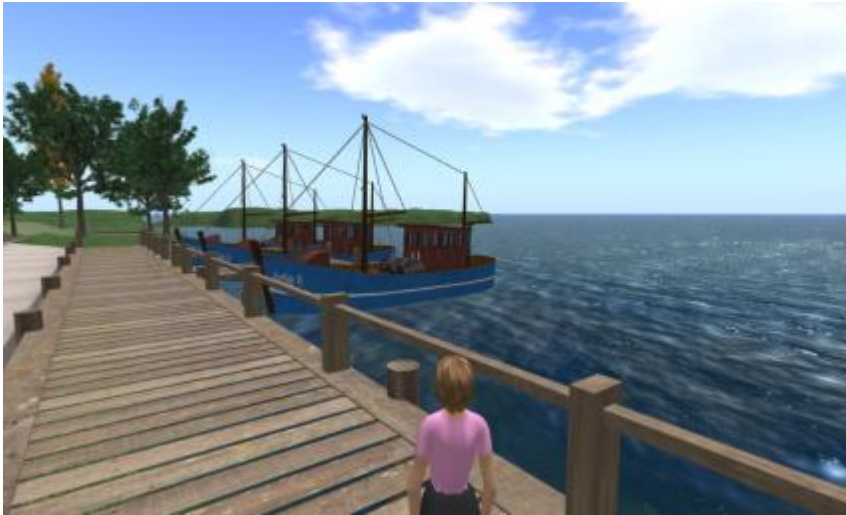
City & County offices



Suburban areas

Waterfront

Suburban recreational area



Rural Areas

Local store



Farm



Live Session

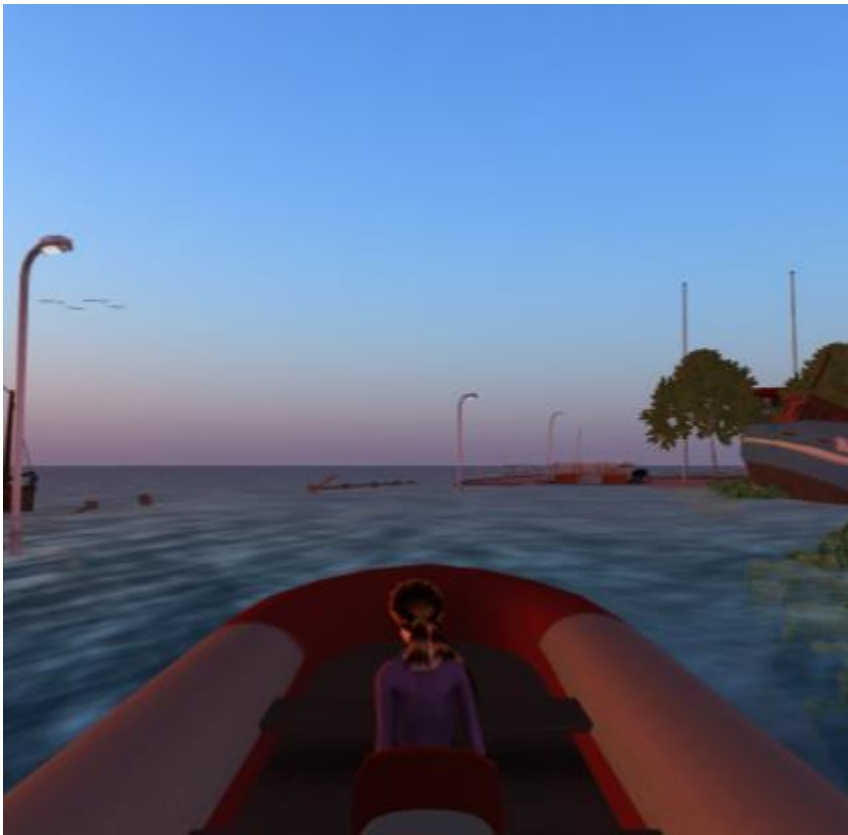
Student teams met with community members for live Q&A



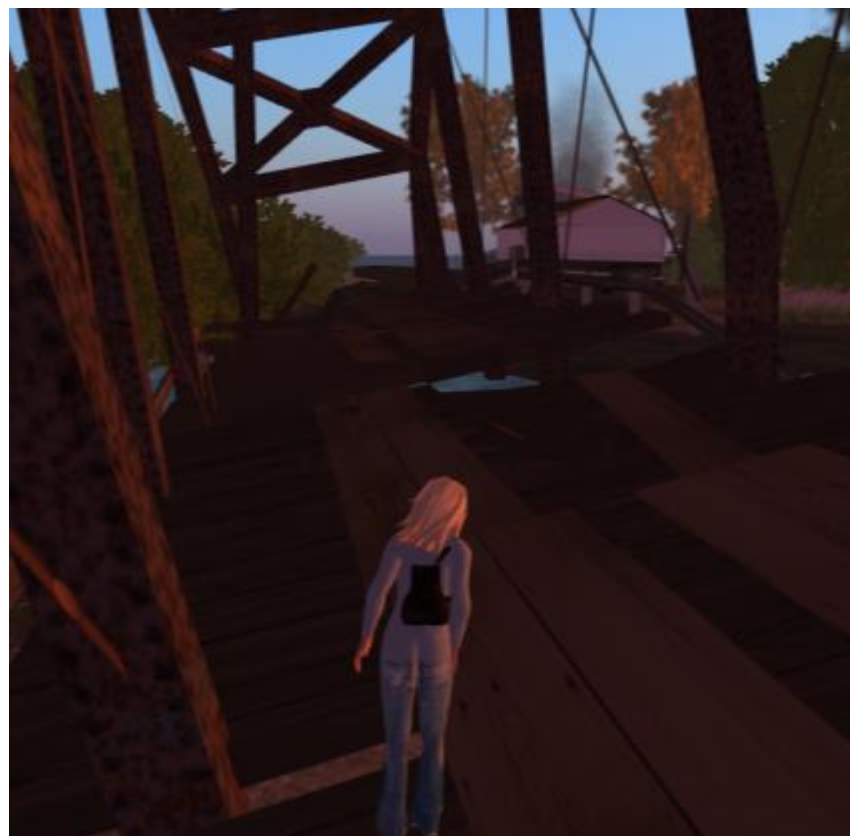
Flooding



Flooding



Post-Crisis



Post-Crisis



Live Press Conference





Thank you!

Questions?