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Developing and Using Table-Top Simulations as a Teaching Tool

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Developing and Using Table-Top Simulations as a Teaching Tool

Abstract

Activities in which participants work through real-world scenarios can enhance their ability to manage complex situations and can encourage implementation of risk management strategies. Practical and credible information presented in a "hands-on" setting is engaging and memorable. This article shows how to develop and use table-top simulations.

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Background

The table-top simulation is an educational tool intended to provide students/learners an opportunity to apply knowledge about preparedness and potential disaster situations through formal discussion of a described scenario. The scenario is a "fictional" (though based on actual or potential events) emergency management situation at an agricultural operation.

Table-tops are useful and effective teaching tools when hands-on training may be impractical or impossible to conduct. They are designed to stay in the classroom, making the session more manageable, even with a large number of participants. They are useful in a variety of settings. They have been used in training sessions for the Florida State Agricultural Response Team (SART) program and the Agricultural Risk Management and Law course at the University of Florida. While hands-on experience in the midst of an emergency is high stress, table-tops provide a low-stress atmosphere, which is more conducive to discussion and understanding. Participants reduce or eliminate uncertainty about an emergency before the emergency happens.

Examples of topics include: hurricanes, wildfires, contaminated meat, a stolen truck loaded with chemicals, hostage situations, and distribution of diseased tropical fish. In the Agricultural Risk Management and Law course, students develop a business and identify potential risks for that business. A table-top simulation is then developed by the instructor for those specific businesses. Even though the simulations are fictional, they are based on composites of actual situations that have occurred. One such example involved the shooting of workers in a Florida nursery. The intent is to get students thinking of possibilities for which even small businesses need to be prepared.

Table-top simulations have long been used by public health professionals for increasing awareness of public health preparedness among medical school students and residents. They have also been used successfully by emergency management and community agencies involved in working with disasters and emergencies. More recently, they have become widely used in the business community as well, particularly addressing computer security issues. Table-tops allow for a business to identify and examine their areas of vulnerability (Lehtola, Brown, & Wang, 2005).

A current trend of businesses and government is to look at their operations in terms of business continuity. Business continuity refers to ensuring the continuity or uninterrupted provision of operations and services in case of an emergency or disaster. This concept includes analysis of a business for disaster recovery, business recovery, business resumption, and contingency planning (Emery, Borron, & Cain, 2006).

School systems are using table-tops to prepare for dealing with a crisis. They are proving to be beneficial because their use does not require the major disruption that would be involved with conducting a drill (Trump & Lavarello, 2000).

A hospital-based research study indicated that there is evidence that table-top simulations help to train key decision makers in disaster response (Hsu et al., 2004). This is significant because the management of crisis events is dependent on the performance and effectiveness of the people who are in decision-making positions.

According to Alexander (2000), simulation scenarios "require a context of hazard, vulnerability, and risk." In table-top simulations where many people are involved, the participants may be assigned specific roles, such as members of the community, the CEO, emergency manager, incident commander, media, and medical personnel. The scenario is played out and discussed as it progresses. Time must also be allocated for wrapping up and debriefing.

The basic elements of a scenario are:

- The nature of the disaster and its impact (include the who, what, when, and where)
- Any constraints, rules, and/or necessary logistical factors
- The roles of the participants
- Objectives to be reached
- Complications, set-backs, and/or secondary hazards

Using Narrative and Table-top Simulations in the Classroom or in Extension Programs

When the student teams submit the business they have selected, the instructor reviews each business, finds real-life incidents that may have happened in similar businesses, develops a scenario, and then turns the scenario over to the team. However, even though some things may seem far-fetched, scenarios are developed that pose a challenge to their "it won't happen to my small business" way of thinking. The scenario includes questions that participants have to work through. The team then has to give a presentation to the entire class about what their business is, what they had to deal with and their decisions for managing the risk(s).

The scenarios are definitely eye-opening, and participants get involved as they look at real and practical situations. The use of table-top simulations in this manner gets managers thinking in terms of business continuity as a risk management strategy they will need to develop (EDEN, 2006). By working through the table-top exercises, participants learn to develop risk management strategies to meet a variety of challenges including:

- Responding to media interest (It is recommended that a company have one spokesperson to deal with the media.)
- Ensuring business continuity
- Maintaining company credibility in the community
- If a recall must be issued, regaining a good reputation and avoiding business failure
- Handling uninsured costs and their impact on company finances
- Responding to rumors (rumor control)
- Placing high priority on safety and security of employees
- Securing facilities and equipment during and after an incident
- Thinking in terms of worst-case scenarios
- Reviewing and updating crisis plans on a regular basis
- Maintaining good communications is critical for making informed decisions
- Supplementing current contact lists with active plans

Table-tops provide a "safe" mechanism for studying, working through, and debating appropriate choices and decisions rather than having to encounter them for the first time in real-life. Examples are included in Table 1.

Table 1.
Examples of Businesses and Scenario Situations Used in the Agricultural Risk Management and Law Course

Fertilizer Sales	The high-school junior was left in charge of the store for a few hours. Strangers came in, purchased fertilizer and paid cash.
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Environmental Assessment Firm	Their truck containing chemicals was stolen and later found crashed behind a store.
Local Beef Slaughter House	Processed meat was found to be contaminated.
Beef Cattle Ranch	Approaching wildfire
Wine Distribution Co,	Employee took fellow employees hostage.
Veterinarian	Drugs were stolen to be used by people for recreational purposes. The kid that bought the drug on the street had a severe, almost fatal reaction.
Organic Farms	Non-English speaking workers were left alone in the fields. One rode on the tractor fender to get to the truck, he fell off and was run over by the rotary mower.
Environmental Remediation Co.	Contaminated soil was dumped in a land-fill that had not been approved for the dumping.
Feed Co.	A worker in a grain bin drowned in grain when the auger started up. Confined space entry and lock-out/tag-out procedures were not followed.
Aerial Application Co.	A temporary pilot for the day ended up stealing the plane loaded with chemicals.
Nursery	A disgruntled employee began shooting. ("Shooting at Fragrant Nurseries" available at Florida AgSafe (http://www.flagsafe.ufl.edu) Click on "Publications", then "Course Materials.")
Any Business	A hurricane warning has been issued for the area.
Ice Distribution Co.	Contaminated ice was used at an NFL football game.
Aquaculture	Diseased tropical fish were sold.

Summary

This article has explained how table-top simulations can be developed and used. These interactive exercises allow participants to place themselves in actual or operational conditions. People can translate this critical analysis of attitude and knowledge into changed perceptions, behaviors, and work practices that can help prevent disastrous outcomes at their farm, home, or workplace.

Additional Resources

FEMA Independent Study Course IS 139: Exercise Design
<http://training.fema.gov/EMIWeb/IS/is139lst.asp>

FEMA Independent Study Course IS 241: Decision Making and Problem Solving
<http://training.fema.gov/EMIWeb/IS/is241.asp>

The Ready Business Course Prepared by DHS and EDEN: Includes an Instructor's Guide and a PowerPoint Presentation
<http://www.eden.lsu.edu/>

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