Improvisation as a Training Framework for Emergency Managers

Nina Zumel, PhD.
Quimba Software

Zeno Franco

Larry Beutler, PhD.
Pacific Graduate School of Psychology
National Center on the Psychology of Terrorism
Introduction

**Emergency Management:** Rapidly evolving, complex task of coordinating the response to a large-scale crisis

Our Focus: Operations Center level and higher

National Incident Management System (NIMS): nationwide framework
“If you do not know what your needs are, I can’t request to FEMA what I need”

“At times FEMA, state, and local officials seemed unaware of local capacities and vulnerabilities. ... On the other hand, communication failures left local officials unaware of the full extent of assistance required”

Wachtendorf and Kendra, 2006
Operational Experience is Perishable

San Diego firestorm 2007; previous: 2003
Loma Prieta earthquake 1989; Northridge 1994

NEMA Survey: \textbf{2/3} of state Directors of Emergency Management in their position for \textbf{3 or fewer years}.

Our survey: \textbf{almost half} of respondents at their current agency for \textbf{5 or fewer years}. 
Improvisation as a Training Framework

The ability to recombine previously existing knowledge, skills, and other resources into novel combinations in response to the moment. (Weick, 2001)

Dependent upon training and proficiency within the domain of practice.

Improvisation as a group can also be successfully trained (Vera & Crossan, 2005)

Group collaboration skills

“Rules” of collaboration (in domain)
Training Goals
(Mendonça & Fiedrich 2006)

When

Infer
Present, Future States

Improvisation

Communicate

How
Example: San Diego “Firespotter Incident”

Purpose of fire spotter rule: To coordinate drops with firefighters on the ground

State spotters train with Navy, National Guard, but not Marines
What Emergency Managers Say

Online survey: www.terrorismpsychology.org

“You have a plan so you have something to deviate from.”

“Plans and procedures anchor you, but you must be flexible in your approach. Creative problem solving under pressure is the hallmark of the emergency manager.”

“Improvisation is a key skill, & comes with experience & training, but should be an emergency option based on solid knowledge & situational awareness, not used as a standard operating procedure or Course of Action.”
What are the primary issues encountered when managing a large-scale disaster involving multiple agencies?

- Communication
- Coordination
- Knowledge of Roles and Responsibilities
- Ambiguity in authority or Chain of Command
- Resource Management
Hands-On Training

Training often limited to classroom/online
Too great a time gap between training to field application

Currently, exercises often done outside the context of basic training and instruction
Consistency in Training

Inconsistency across locales

Cultural differences across organizations

Training for higher level and elected officials
Quality Planning Process

Creating, testing, and practicing EOPs

The *process* is what is important:

- Evaluation of risk
- Evaluation of available resources
- Relationship building within/across orgs
**Improvisation-based Training System**

- In context of plans, procedures, specific roles
- Frequent, cognitively accurate practice
- Support for a wide variety of situations

**Feedback support**

- **EOC Director**
- **Training Facilitator**
- **Regional EOC**
- **Cross-Organizational Training**

**Diagram: System Components**

- **Planning Section**
- **Logistics Section**
- **Simulation Server**
- **Operations**
Conclusion: Role of Policy
Thank You

Contact: Nina Zumel
zumel@quimba.com
Improvisational Construct

• Originally: validate three 4-item subscales intended to measure different aspects of improvisation
  • inventiveness
  • simultaneity of planning and action
  • suddenness of events
  • One additional question as criterion item:
    • “Improvisation is a fundamental skill for disaster managers”

• Results: poor consistency
  • both total and subscale
Improvisational Construct

• Some consistency across scales
  • Exploratory factor analysis
• Five factor solution found
Factor 1: “Expertise factor”

- Disaster management can be characterized as a process that has distinct planning and action phases
  - versus simultaneous planning and action
- I feel at my best when forced to think on my feet
- Reacting to swiftly can cause serious problems
Factor 2: “Tactical inventiveness”

- During disasters I use resources/personnel in new ways.
- I have been forced to rapidly devise a completely new approach to a problem.
Factor 3: “Inventiveness”

- My role as a disaster manager is to be inventive
- If several significant problems arise, it is best to get more resources as quickly as possible
  - versus reconsider the incident completely
Factor 4

• When faced with a complex, time sensitive problem, it is usually better to respond immediately with the resources at hand
  • versus wait to get the right resources
Factor 5

- Improvisation is a fundamental skill for disaster managers
- During a disaster my perception is that time moves faster than normal
  - versus more slowly than normal