

# Chapter 4

## Rapid Play Digital Games for Emergency Management Instruction

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### ABSTRACT

*Rapid play digital games—games playable in minutes and therefore amenable to repetition and iteration—can be an effective tool for instruction when properly developed and employed. If improperly developed, they can also hide good lessons amongst irrelevant complexities or, worse, implicitly reinforce incorrect lessons. This chapter describes eight broadly applicable techniques and five specialized templates for avoiding common pitfalls. It demonstrates those methods on a simple example serving as an amalgam of such games the author’s research lab has created for government agencies.*

### RISKS AND REWARDS OF RAPID PLAY GAMES

This chapter describes *rapid play digital games* as a method for emergency management education. It discusses the theoretical benefits, common pitfalls, practical techniques to avoid those pitfalls, and some templates to kick-start design. Applying these techniques and templates will help ensure that an instructional game for professionals is effective, targeted, and affordable.

A *rapid play* game is playable in less than 30 minutes, allowing a participant to complete multiple independent scenarios in a 1–2 hour sitting (Vogt et al., 2015;

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Seater et al., 2018; Seater, 2019). This format supports highly iterative play with several key benefits:

- **Immediate feedback** and support of a try–fail–retry pattern of content exploration.
- **Repeated exposure** to improve retention and build mental models of the tradeoff space.
- **Training on rare, costly, and dangerous events** that offer inadequate or unsafe opportunities for field experience, but are complex enough to need multiple iterations to build intuition and experience.
- **Exposure to a wide variety of scenarios**, putting similar decision points in different contexts, thereby requiring different responses and pursuit of different priorities.
- **Collect quantitative performance data** to help instructors assess the needs of individual students or the broader curriculum.
- **Increased engagement** by embedding abstract lessons into concrete scenarios, following the lessons from naturalistic decision-making (Klein, 1998).

Many of these benefits are shared by other forms of education, gaming, and simulation. Their short playtime and flexibility define rapid play games and require that players experience a different scenario on each play. The category is broad, and it includes some immersive simulators (e.g., flight simulators) and some tabletop games. This chapter focuses on rapid-play *digital* games, although many of the techniques described also apply to non-digital and non-rapid games. Rapid play games bridge methods from the mod-sim and game-based instructional communities (Page, 2019).

The ability to see multiple scenarios in a single sitting is the main reason to use a rapid game over a more immersive and detailed (and longer) game. Rapid play games are valuable when building flexible mental models for decision-making in uncertain, ambiguous, and dynamic situations. A longer game (or non-game method) might be more appropriate when the learning objectives focus on ingraining procedures, training on the use of particular equipment, building team cohesion, or honing raw technical skills.

The potential benefits of rapid play games do not substitute for good design and sound requirements. The design of a rapid play game, like other game-based learning methods, is riddled with pitfalls. Four such pitfalls stand out as the most common and problematic.

- **Quiz Pitfall.** A digital game can devolve into a series of quiz questions, testing a student’s factual knowledge rather than serving as an interactive system to

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