

Liz Safran¹ • Martin Roth² • Ryota Kimura²

Games As Stories

- Stories told through entertainment can stimulate health promoting behavior¹, like disaster preparedness and response²
- Especially important where natural hazards (e.g. earthquakes) are infrequent and first-hand experience is lacking
- Games are mediated enacted experiences³ inherently involving learning⁴ in the context of play: a free, episodic, and transformative activity⁵
- Disaster-related games also include relevant content⁶⁻⁹, with varying emphases on pedagogy, fidelity, and play¹⁰
- Commercial games reach broad audiences by prioritizing fun
- **How do two commercial games, Disaster Report 1 (2002) and Disaster Report 4 (2018), approach disaster, and how do players respond to each game's balance of play, experience, and learning?**

"I loved hearing how the previous Zettai Zetsumei Toshi [Disaster Report] games were useful to the current victims...I originally made the game for entertainment purposes. But about the time we made Disaster Report 3, I started becoming aware about how the fans were finding the information helpful and tried to incorporate more of that into the design."
--Kazuma Kujo, Designer

"The parts of the disaster manual you can find throughout the game are helpful. There is also interesting content such as the notes by firemen recounting their experience of the Hanshin-Awaji [Kobe] Earthquake."

"Damage from stumbling during aftershocks is not severe, so the 'bracing action' has no meaning. Stress can be reduced by resting at a save point. It increases with contact with water, but even then never above 80, so there is no problem at any point."



"...There is no mechanism by which you lose your life due to hunger or thirst or other stressful factors, so this game does not really live up to the survival label. If you die, you can just redo everything from a bit earlier in the game, there is almost no penalty."

"The idea of the game is good. And the high degree of freedom. The fact that you can't let your guard down was good. A true survival game. And the speed of saving."



"The choices in the game are meaningless. You frequently encounter scenes that feel a bit like RPGs [role-playing games] in which you have 8 ways of saying 'yes' in a dialogue. Whatever you choose, you end up with the same result, so there is no way of intervening in the story."

Listening to the Players

- 69 player reviews posted on Japanese review sites PSmk2 and SakuinDB (2004-2023); 65 discuss Disaster Report 1
- 22 articles, reviews, and user reviews published in Japanese magazines Used Games, Famitsu, and Dengekki Play Station (2002-2018)
- Read for emergent themes and broadly representative assessments of content and gameplay experience
- Supplemented by researcher observations during play-throughs

"Pretty good game. The tense feeling that anything can happen any time was exhilarating, I sometimes plunged into death on purpose....visited many different places."

"I realized that disasters are terrifying. [In the game] you die an outrageous number of times, but I think dying during disasters must be just like that. I am not really startled by Zombies coming out of nowhere these days, but the floor crumbling under my feet in this game really got me scared."

"Is there any knowledge to be gained from playing this game that can be applied to similar dangerous real-world scenarios? Please tell me, because I didn't find any."

"Actions like 'shout' or 'duck' were really similar to what you need in real disasters. The fact that the backpack has limited space is also very realistic. I had a hard time choosing which items to take with me. Sometimes I even had to throw away things...."

Disaster Report 4

Decisions less consequential
More guidance, less agency
Stress, hunger, or thirst not lethal
"Real life" information appreciated but poorly integrated

"Conveys the terrifying nature of disaster. You learn about the rapidly growing number of victims directly after the disaster from the radio, and there are several points in the game where the fact that huge earthquakes can take lives easily is made as well."



"If there really is a huge earthquake, the water supply will definitely not be intact....The need for creating a balanced game probably took priority here, but the strangely large number of water fountains in the game render the 'water refill' mechanics of the game meaningless and as a result, the edge of the 'disaster' game is reduced significantly."

Disaster Report 1

Feeling of stress (excitement)
Need to problem-solve
Lack of guidance
Consequential decisions
Learning through dying

The Final Report

- Although less realistic, Disaster Report 1 conveys aspects of the disaster experience better than Disaster Report 4, which was intentionally more informative
- **Overemphasis on informing via guided experience can undermine a game's appeal and its relation to the experience of disaster, including improvisational dimensions better fostered through play**



References
1. Singh, Arvind, Michael J. Cody, Everett M. Rogers, and Miguel Sabido. Entertainment-Education and Social Change: History, Research, and Practice. Routledge, 2003.
2. Sifonis, Elizabeth B., Erik Nilsen, Peter Drake, and Bryan Sebald. "Effects of video game play, avatar choice, and avatar power on motivation to prepare for earthquakes." *International Journal of Disaster Risk Reduction* 10 (2024): 102184.
3. Peng, Wei. "The Medial Role of Identification in the Relationship between Experience Mode and Self-Efficacy: Enactive Role-Playing versus Passive Observation." *Cyberpsychology & Behavior* 13, no. 6 (December 2000): 649-55. <https://doi.org/10.1089/cyber.2000.0209>
4. Gee, James Paul. *What Video Games Teach Us About Language and Literacy*. Palgrave/MacMillan, 2003.
5. Hendrix, Thomas S. *Play and the Human Condition*. University of Illinois Press, 2015.
6. Tans, Zeynep. "Implementing Earthquake Risk Communication: An Evaluation of Mainstream and Educational Video Games on Earthquakes." In *Earthquakes: Risk Factors, Seismic Effects, and Economic Consequences*, 1-40. Edited by Albert P. Quinn. Nova Science Publishers, 2014.
7. Campell, Anthony Ventsenovich, and JC Galliard. "Stop Disasters 2.0: Video Games as Tools for Disaster Risk Reduction." *International Journal of Emergency and Disaster* 16, no. 4 (August 2003): 389-95.
8. Solinka-Nowak, Aleksandra, Piotr Magorzewski, Margo Cui, Adam French, Adriana Keating, Junko Mochizuki, Wei Liu, Reinhard Mecher, Michalina Kukulowska, and Lukasz Jarzabek. "An Overview of Serious Games for Disaster Risk Management: Prospects and Limitations for Informing Actions to Arrest Increasing Risk." *International Journal of Disaster Risk Reduction* 31 (October 2018): 1019-29. <https://doi.org/10.1016/j.ijdrr.2018.09.020>
9. Haselton, Steven, Bul Arus, and Maria Ana Baptista. "A Review of Digital Serious Games for Tsunami Risk Communication." *International Journal of Serious Games* 8, no. 2 (June 4, 2011): 21-47. <https://doi.org/10.2196/ijsg.2010.033>
10. Rooney, Pauline. "A Theoretical Framework for Serious Game Design: Exploring Pedagogy, Play and Fidelity and Their Implications for the Design Process." *International Journal of Game-Based Learning* 3, no. 4 (October 1, 2011): 41-60. <https://doi.org/10.4018/ijglb.201110.003>