

Using Interactive Narrative in Health Interventions: A Drama Manager Approach

Langxuan Yin

Northeastern University
yinlx@ccs.neu.edu

Nick Montfort

Massachusetts Institute of Technology
nickm@nickm.com

Timothy Bickmore

Northeastern University
bickmore@ccs.neu.edu

Abstract

In this work, we propose integrating a drama manager into a visual novel to guide both storytelling and health intervention. We discuss certain narrative structures that can be used to guide a visual-novel-based health intervention and can potentially benefit future drama manager research.

A Visual Novel for Health Care

There has been a growing interest in developing and evaluating “games for health” that deploy health interventions through interactive games. Researchers have attempted to use dynamically managed dialogues in these games (Marsella et al. 2003, Miller et al. 2011). Given the current findings in drama management research, we propose to incorporate a drama manager to a visual-novel-based health intervention.

Due to the practical nature of health behavior change interventions, we propose that a drama manager created for a health intervention game should be designed toward strong story and manual authorship (Riedl and Bulitko 2013). We developed a visual novel without a drama manager, *The Time Mage*, to improve self-efficacy in the player’s hospital stay. A preliminary experiment on this game provided support for using visual novels to promote the player’s health (Yin et al. 2012).

Synchronizing Storytelling and Health Behavior Change Models

There has been little consensus on the best practice of developing health intervention games, and in the broader scope of serious games. Simplistic juxtapositions of teaching and game have been notoriously disappointing (Thomas and Young 2010). In our visual novel, we plan to

use the Hero’s Journey (Campbell 2008) to guide the design of the storytelling and game play, while using the Trans-Theoretical Model (Prochaska et al. 2002) to intervene the player’s health behavior change.

To integrate game play with health intervention, we propose to use the drama manager to synchronize the two models, mapping each stage in the Hero’s Journey to a stage in the Trans-Theoretical Model. We propose a Dual-Character Storytelling technique to provide an inner layer story that closely follows the Hero’s Journey, and an outer layer story that provides content based on the Trans-Theoretical Model. We plan to develop a visual novel based on these principles to promote physical activities and test it in a longitudinal controlled experiment.

References

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