

Educational Game Design - Prototyping with purpose

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WORKSHOP CONTENT

Research from different domains and theoretical perspectives has begun to invent new prosocial ways that games could be played. Scientific discovery games like *Phylo* and *Fold It* have improved scientists' understanding of protein folding by leveraging the resources of large player communities to overcome computational limitations. Action video games, psychologists note, can be potentially useful for visual attention training (Dye, Green, & Bavelier 2012). In education research, video games and their player communities are being explored as models from which to design new learning environments. Good commercial games promote good learning, researchers argue, and many in-game and out-of-game practices have value in education contexts as well as video game contexts. From multiple disciplines, researchers are exploring new ways to leverage the affordances of video games and the players that play them.

Inventing new games for research purposes poses significant design challenges, however, as such games require that game developers integrate particular and often expert-level content into a game's design. In some games, this means leveraging already-existing genres and borrowing known mechanics or tropes. The educational game *Virulent*, for example, includes strategic elements of *Starcraft* and interface elements of *Harbor Master*. Other research games have fewer prior models from which to work, however, and must invent much of the player experience on their own, as was the case with *Fold It*. Because cross-disciplinary work that incorporates elements of video game design with other areas of research has begun to show promise, methods that accelerate this process warrant further attention.

Game jams are design sessions that challenge participants to create a playable game that adheres to a particular theme within a limited amount of time. Often ranging from an hour to a week, game jams and other similarly constrained design events offer one method for prompting collaborative work between participants by way of a low-cost, prototype-focused practice that is growing in popularity amongst commercial game developers. Especially for students and independent developers, game jams have been used to push the boundaries of the medium (e.g., the Independent Game Jam), and to introduce design students to producing a game (e.g., the Global Game Jam). Similar to design-based research, jams embrace the inherently messy process of moving between a design and its use in context, orienting participants towards rapid prototype production and iteration, both of which are hallmarks of good design (Hoadley, 2002). When using non-digital media (paper, pencils), jams can be especially useful for students and content experts without programming backgrounds.

In this workshop, participants will take part in and learn to run their own game jams. The workshop will begin with a brief introduction to rapid game prototyping and its use in the commercial development followed by an hour-long game design jam during which participants will create a playable game prototype. After the jam is complete, participants will briefly review other games created during the session and will reflect on the overall process. Workshop administrators will present a brief series of cases for game jam use and then open the floor to discussion, focusing on other ways to use or modify rapid design and prototyping to further their own research or development goals and problems they have previously encountered or anticipate having. The goal of the workshop is to 1) gain a better understanding of how to conduct rapid game prototyping events (e.g., game jams) and 2) advance the discussion around how games can be leveraged and integrated into educational environments. For more on the details of the event, visit <http://www.gameslearningsociety.org/educational-game-design/>.

PARTICIPATION PROCEDURE

This tutorial is for researchers and developers interested in studying game design, developing games for learning, or using design as a springboard to other phenomena (e.g. Computer programming). Interested participants should submit

the following (max 1 page):

Name and professional affiliation

Game design experience (please be specific)

Experience using game design in learning contexts and outcome

Experience working with game design jams

One to two paragraphs explaining why you want to take the workshop and your expected goals at the end of the workshop

Participants should have some experience with or understanding of interactive or design activities, ideally using technology and/or games for education. Researchers who are already running development jams are invited to participate, but a mix of experienced and inexperienced participants will be selected.

IMPORTANT DATES

Paper submission deadline April 1st (to matthew.gaydos@gmail.com)

Acceptance notification May 1st

Workshop Date June 16th