Playtesting Games: Iterating Failures to Success

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Game Design as Scaffold into Learning through Failure

We often cite games as good for learning because they provide safe environments for players to explore their rule systems through trial and error—I.E. testing certain actions based on incremental mental models of how the games work and further incrementing those models through reflecting on failure. Yet, even though we know learning through failure is often the best way to learn, it can be difficult to think about structuring our learning environments (such as K12 classrooms) to include safe spaces for failure. As it happens, the perfect scaffold from game systems to classroom systems could be a design experience since it is common in design (and engineering) to iterate incremental changes for a final product. Indeed, usually the first prototypes, alpha builds, and drafts of our work start off truly sucking. It's only through collecting, synthesizing, reflecting, and acting on feedback—from trying the mechanics of the system, from peer reviewers, from playtesters—that our work improves. This process of incremental progress through design iterations can mirror the exploration process in games.

Workshop Logistics

This workshop provided hands-on experience with game design's playtesting cycle (cf. Fullerton, 2014). Participant-players playtested tabletop and digital games in progress, providing valuable feedback to participant-designers while also learning and reflecting on the playtesting process (see Figure 1).

Figure 1: Initial stages. Each game had its own table similar to a roundtable session.

To fit in the one-hour format, the workshop consisted of two 30-minute playtesting cycles, each including time for playing (20-25 min) and time for feedback (5-10 min). At the very end, the workshop organizers attempted a full-room debrief, but players were too engaged in their games and wanted to keep going rather than break out of their groups.

Part of the original plan was to allow for games of varying durations within the workshop schedule. We guessed that there would be certain groups that cycled through more than two iterations and groups that would want to eat up the whole session time. While this did happen with a couple of groups, surprisingly, a majority of the gaming experiences did only take half an hour and were able to host two sequential playtest groups.

Figure 2: One of the games (Science, It's Elementary!) in progress with a designer (foreground, left) using the provided handout.

The workshop organizers prepared a 2-page handout for design teams to use as their games were played (see Figure 2). This included space for notes from in-game observation and then sets of in-game and post-game questions, culled from Fullerton (2014, pp. 295). One participant-designer came alone, so we assigned one of the workshop organizers to take notes for her while she led players through her game. Also, one group created an online survey for participants to take after playing. It worked extremely well, and future playtesting workshops will incorporate this officially.

Featured Games

The games that were tested came from multiple sources (see Table 1). Some were tabletop games under development during the Games, Simulations, and Virtual Worlds for Learning course in Pepperdine University's Doctorate in Learning Technologies program. The GLS conference bisected the course term, providing the perfect opportunity for students of the course to test out their in-progress games for learning. Other games included some featured in the Educational Game Arcade and/or other in-development games by the same designers.

The workshop organizers invited teams that were working on issues with learning goals (rather than basic user interface issues) and that could be explored in just a short amount of time. Designers were also encouraged to welcome moments of frustration and failure with their games. Some groups were apprehensive since this was the first time their games were shared with the public, but this feeling quickly dissipated once players and designers got "stuck in" with the work of seeking improvements.

Game name	Author/Affiliation	Genre	Digital?	Time to play	# of players
Cognitive Overlord	Pepperdine	Metacognitive skills	N	30 min, 2 sessions	2 - 4
Knowledge Tree	Pepperdine	Math and logic	N	30 min, 2 sessions	3 - 6
Research Ninja	Pepperdine	Internet research skills	N	30 min, 2 sessions	2 - 6
Perspectives	Pepperdine	Social-Emotional	N	30 min, 2 sessions	4 - 6
Science, It's Elementary!	Pepperdine	Science	N	50 min, 1 session	2 - 5
Go Extinct!	Ariel Marcy, STEAM Galaxy Studios	Science	N	30 min, 2 sessions	3 - 6
MicroRangers	Barry Joseph, AMNH	AR Mobile Game	Y	30 min, 1 sessions	1 or team
Down With Food	Chris Berizko, UCI	Science - digestive system	Y	15 min, ~4 sessions	1
Dreamkindlers	Gabriel Recchia, UM	Social-Emotional Health	N	15 min, ~4 sessions	2
Gaming Manifesto	Barry Joseph, AMNH	Infographic for the future	Y	30 min, 1 sessions	3 - 6
We've Got Issues	Several (O'Donnell), MSU	Card Game	N	15 min	4 - 7

Table 1: The list of games, designers, and game details featured in the workshop.

Conclusion

By the end of the workshop, both participant-players and participant-designers gained experience with the process of rapid playtesting iterations. Other, slower forms of playtesting afford other kinds of feedback, but this rapid format gave us a more manageable chunk/concept/process that we could think about incorporating into our other learning experiences. Plus, it gave invaluable insight for our participant-designers as they sought to improve their games, **and** it was a lot of fun!

References

Fullerton, T. (2014). Chapter 9: Playtesting. In *Game design workshop, 3rd edition.* A K Peter/CRC Press.