Playing to Learn

Teaching User Research to Game Design Students

By Heather Desurvire

Until recently, many game publishers and game studios still showed some resistance to user research, particularly usability testing, as opposed to focus group research. Most game developers resisted user research primarily because they were just too close to their own products. But resistance to user research typically disappears when developers witness the process.

I have seen even the most resistant game designers become the biggest fans of usability testing after they watch the process. A certain type of magic occurs when they see prospective users interacting with their product in a safe environment. Also, many larger publishers and developers have changed their position on user research. It has become part of the design process of many smaller game studios as well.

So if user research of video games provides such a great benefit to all interested parties, why on Earth isn't it more widespread? The answer, it turns out, may lie in reaching game designers before they start their careers.

Looking Toward the Future

The University of Southern California's business schools and film programs are among the highest-ranked in the country. USC also boasts the top game studies program in the country (voted number one by the *Princeton Review*), and accepts only the most promising future game designers and game company executives. What the USC film school has done for the film industry, we believe that the Interactive Media Department will do for the game industry. The department has already graduated several students who are running their own successful development studios.

The current chair of the program, Tracy Fullerton (also the director of the USC Game Innovation Lab), has helped instill in her students the process of performing user research and the goal of educating students in the value and necessity of performing user research.

Game designers typically think they understand their users, but the end users—young children or stay-at-home moms, for instance—are frequently not like the game designers in today's marketplace. When game designers see would-be players struggling with their game in a laboratory setting, they usually become believers in the power of research, and begin to look for ways to make their game better.

The program developed at USC is designed to give game studies students first-hand experience with the power, value, and necessity of user experience research. Students have begun incorporating research in their development of games and also when they are out in the industry. In school, they gain "achievement points" on the department's blog when they perform usability testing on their games. We have used the obvious improvement of their games' player experience, but also our own knowledge of game rewards, to encourage student game designers to do research.

Step-by-Step

Teaching the power of game user research methods is a multi-step process that focuses on using research in an iterative design process. The Game Player Experience course consists of demonstrating methods of research, then allowing the students to practice these principles on other students' games in development in the program. The students are able to see how the user research can improve the games, and how subsequent user research sessions can be increasingly valuable.

Throughout the course students are taught the principles of good user experience design, usability, and accessibility. The students are given a good foundation for objectively analyzing games. The course makes use of challenges and rewards, including improving their fellow students' games and gaining recognition for contributing to that improvement. The class partners with a course on Intermediate Game Design so that as students develop a game, they are required to go through two iterations of user research over the course of a semester.

The game-research students work with the game-design students to facilitate improvements to the game. The design students must also present their experiences with the game testing. So the students present the results to both classes at the end of the semester.

A great deal of focus is placed on using constructive criticism rooted in the user research findings to facilitate balanced feedback and improve the students' confidence in both giving and receiving feedback. Comments are not always taken well; students learn through trial and error

> "The class on game playability/usability research showed me how important user research is to the player's experience in a video game through various class discussions, funny videos, and interactive examples."
>
> —*Graduate student in Computer Science*

how to give constructive feedback that is helpful and not ego bruising.

We play a lot of games in class, giving constructive criticism on the user experience of popular and not-so-popular games. One of the most memorable classes I taught presented a challenge to the students' diplomacy. I had found a game in the bargain bin of a big-box retailer. In it, gameplay involved participating in a simulated real-world, boring activity in real time. Not only was the gameplay dull, but the interface was nothing short of impossible to use. Studying this game did a fantastic job of reinforcing good design principles, and also provided a challenging exercise on how to be constructive when suggesting changes.

In the class, I focus a lot on Game Accessibility Principles (GAP) and Playability Principles (PLAY). GAP gives game designers a set of useful guidelines for creating better tutorials and initial levels of play in their games. For example, "The game should provide the player with opportunities to practice new skills in order to help commit them to memory." This is particularly useful for the casual gamer, who may have the desire to play, but not necessarily the follow-through. PLAY is a checklist of principles for increasing playability. An example of PLAY is, "The player is not penalized repetitively for the same failure in a game."

GAP and PLAY work well together as a foundation that influences and motivates design decisions. Using specific principles like these is invaluable in teaching the concepts of user research quickly, and in an accessible manner. In the Game Play Experience course, we often take a look at real games as examples of good or poor player experiences, the "why" of which can often be explained using the GAP and PLAY principles.

In addition to employing industry-accepted principles in the lessons, I often bring in video game industry veterans to talk about the usefulness of user research and its implementations in individual games. It brings legitimacy to the class and emphasizes the important aspects of user research in the real world.

This is the fourth year this course has been taught, and we continue to make changes. I've used an iterative design approach to improve it after each semester, based on student evaluations and my own review of what is working. I'm constantly tweaking the course to improve its effectiveness and its entertainment value.

Summary

Was this as hard as we thought it would be? Were we able to create this paradigm shift? I think we're beginning to. In fact, many of the students from the game design course who partnered with my students in the Game Player Experience course (as well as the students in my course), insist on player testing for their subsequent games.

Figure 1. (left) Game-user research students preparing constructive feedback. Figure 2. (right) Student presenting game-user research results.

We do not expect, nor want to encourage, the idea that one course can create a good researcher; it takes knowledge and experience in cognitive psychology, social science research, human factors, and much more to become a good user researcher. In addition, to become a good game researcher, one must play a lot of games. By learning good game user experience principles, though, and seeing those principles implemented in good game design, students learn their value first hand.UX

About the Author

Heather Desurvire, principal of Behavioristics, is a consultant and specialist in video game usability and playability whose clients include top developers and publishers, such as Disney, THQ Publishers, Electronic Arts, LucasArts, Blizzard, Sega, and others. She is on the faculty at University of Southern California's game studies program.