
User Experience (UX) Research in Games

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ABSTRACT

This course will allow participants to understand the complexities of games user research methods for user experience research in games. For this, we have put together three-course sessions at CHI (80 minutes each) on applications of different user research methods in games evaluation and playtesting exercises to help participants turn player feedback into actionable design recommendations. This course consists of three interactive face-to-face units during CHI 2019.

CCS CONCEPTS

- Human-centered computing → Human computer interaction (HCI)

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| Schedule | |
|---------------|--|
| Unit 1 | Introduction |
| 0-49 | Introduction to User Experience Research in Games and the Games User Research book |
| 50-80 | Discussion: What is Game UX research and what is needed in industry? |
| Unit 2 | Exercise and Playtest Practice |
| 0-5 | Recap |
| 6-80 | Exercise: Playtest structure and reporting |
| Unit 3 | Discussion |
| 0-80 | Guided Exercise: Writing a UX report for games |

Table 1: The schedule for three 80-minute course sessions at CHI with a break in between.

KEYWORDS

Games user research; user testing; playtesting; user experience; game analytics; evaluation; game usability

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1 INTRODUCTION AND COURSE BENEFITS

The progress made in the Games User Research (GUR) field has set the foundations of rigorous and effective evaluation techniques. The first refinements were geared towards the adaptation of classical HCI evaluation techniques by altering the evaluation methods from a pure productivity focus to an entertainment focus.

Advancements were made towards showing the advantages and disadvantages of multiple techniques, and the specialization of techniques for the games industry [2,3]. Earlier CHI workshops covered these traits in the field [4].

The progress of the GUR community has produced a solid groundwork. However, the essential task of scrutinizing the techniques suitable for evaluating gaming experience has focused the process onto the application of various user research methods. Thus, understanding the advantages and disadvantages of different methods and the process for triangulation these methods to address better research questions are key areas that we address for the continued advancement of the Games User Research community:

In this course, we will first introduce several GUR methods to get participants familiar with the field and outline which methods are suitable to which study design, project size and budget. We will then help participants structure a basic playtest among themselves and show them how to integrate actionable feedback in the next development iteration of their game.

RESOURCES

To expand the course, we will provide resources that tie in with our Games User Research (Oxford University Press) book at www.gurbook.com.

2 INTENDED AUDIENCE

This course is meant to provide new insights for user experience researchers and human-computer interaction graduate students interested in game evaluation and games user research. We expect some students to be novices in the field of games user research but will assume a basic knowledge of HCI. Some people might already be experienced in designing, developing, or evaluating other artifacts (not games) or products.

3 PREREQUISITES

There are no prerequisites for this course other than visiting the online course materials before the conference to familiarize oneself with some of the course concepts. We believe that all participants will benefit from our cross-disciplinary approach that will show the real value of games user research practices for game design. We hope to bring this all together to make it visible to everyone in the course, how much better their games will work with iterative playtesting integrated into the development process.

4 CONTENT

The course has three units (see Table 1), the first one on introducing the field of games user research, the second one on a playtest exercise, and the third one on a guided exercise for creating UX reports in games. At the start of the first unit, the course instructors introduce themselves to the participants and discuss the course goals:

- Gather new insights for user experience researchers and human-computer interaction graduate students interested in game evaluation and games user research.
- Learn how to structure UX reports and playtests using key industry methods.

4.1 Unit 1 Lecture: Introduction to UX Research in Games

This lecture introduces the UX research in games, explicitly teaching game evaluation with emphases on the importance of iteration. It will discuss the basics of applied games user research with simple methods like observation, interviews, and gameplay breakdown reports. We will also dive deep into quantitative approaches, with a strong emphasis on game analytics. It will discuss different game data collection and analysis approaches as well as issues around biases and validity in data collections. This session will also cover fundamental knowledge on physiological evaluation in games as well as conducting user research on VR titles.

BACKGROUND OF INSTRUCTORS

Lennart E. Nacke, Ph.D., is an Associate Professor for Human-Computer Interaction and Game Design at the University of Waterloo. He has served on SIGCHI program and steering committees and has taught University graduate classes on HCI research methods. Dr. Nacke has co-organized workshops and chaired conferences for SIGCHI.

Pejman Mirza-Babaei, Ph.D., is the director of UXR Lab and an Associate Professor for HCI and UX research at the University of Ontario Institute of Technology. He worked as the user research director at Execution Labs, Montreal. He has been involved with the GUR community since 2009, publishing more than 50 articles and co-organizing workshops and courses. He has contributed to more than 20 published commercial games.

Anders Drachen, Ph.D., is a professor at the digital Creativity Labs, University of York and a veteran data scientist. His multiple award-winning work in the game industry as well as in data science is focused on game analytics, behavioral analytics, business intelligence, game data mining, user experience, industry economics, business development, esports and Games User Research. His research and professional work are carried out in collaboration with companies.

5 PRACTICAL WORK

5.1 Unit 2 Exercise: Playtest structure and reporting

For this playtest, we will guide participants through some interactive tasks around heuristic evaluation with example games. The example games that we will analyze will come from our own classes on games user research and game development. This is done to keep the scope manageable for the proposed teaching unit.

5.2 Unit 3 Exercise: Writing a UX report

Building on the abstracts and introductions that we have built in the previous exercise, we will then outline the rest of the CHI paper with bullet points. I will show a couple of examples (10 minutes) and then participants will write their own bullet points (20 minutes), then we will discuss in front of the class how effective those bullet points communicate the research goals using examples from participants (20 minutes). This lecture introduces the UX research in games, explicitly teaching game evaluation with emphases on the importance of iteration. It will discuss the basics of applied games user research with dots.

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REFERENCES

- [1] A. Drachen, P. Mirza-Babaei, and L. E. Nacke. 2018. *Games User Research*. Oxford University Press
- [2] P. Mirza-Babaei, V. Zammitto, J. Niesenhaus, M. Sangin, and L. Nacke. 2013. Games user research: practice, methods, and applications. In *CHI EA '13*. ACM. 3219–3222.
- [3] L. E. Nacke, P. Mirza-Babaei, M. Seif El-Nasr, H. W. Desurvire, and R. Bernhaupt. 2014. Games and entertainment community SIG: reaching beyond CHI. In *CHI '14 Extended Abstracts on Human Factors in Computing Systems*. 1123–1126.
- [4] L. E. Nacke, C. Moser, A. Drachen, P. Mirza-Babaei, A. Abney, and Z. (Cole) Zhenyu. 2016. Lightweight Games User Research for Indies and Non-Profit Organizations. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems*. 3597–3603.