



# UX Design for Games


Anna Loparev  
Postdoctoral Researcher  
Wellesley College, Human-Computer Interaction Lab



## Who am I?



Do you play video games?



What is involved in designing and evaluating video games?

# How early should you think about user experience in game development?

## Activity: Brainstorm your initial goal(s)

- Target demographic
- Emotion
- Challenge
- Learning objectives
- Experience a context or scenario

- Shooter
- Platformer
- Puzzle
- Fighting/Brawler
- Survival horror
- Stealth
- Shoot 'em up
- Role Playing Game
- Simulation
- Strategy
- Sports / Racing
- Party

# What do people want?

## What NOT to ask

- How do you feel about video games?
- When you are playing a video game, do you think about the moral implications of your in-game actions?
- Shouldn't all games help people improve themselves?
- What mechanics do you like in RPGs and puzzle games?
- What do you like about first person shooters?
- Have you ever identified with the trauma a video game character endured? Which character?

## Activity: 10 Question Exploratory Questionnaire

- Remember your goals!
- Focus on open questions (and some closed ones)
- Think about things like:
  - How people feel about what's available today
  - What people want



## Activity: Review of the Design Space

- Research your genre
- What has(n't) been done?
- What do people want?
- What do people like?
- What do people complain about?



# Mechanics

## Activity: Core Mechanic(s)

- Keep design space in mind
- Base on your goals
- Only one or two things

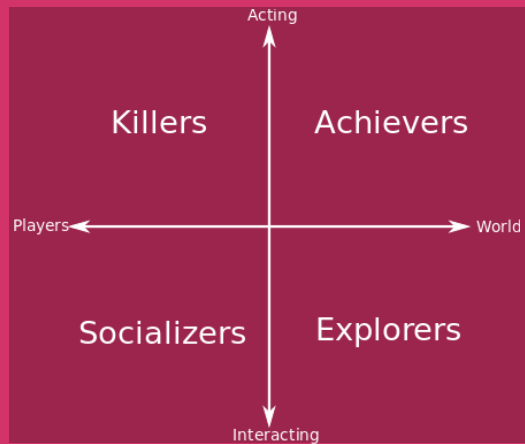
# Level Design

## Activity: Level Design (NOT Prototype)

Design a level on paper. It should:

- Introduce the core mechanic(s)
- Add challenge through stationary/dynamic obstacles
- Take longer than 5 minutes to complete
- Take into account
  - Progression
  - Tempo
  - Tension

# Personas



## Clark Andrews

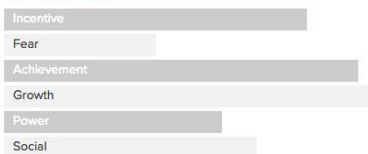
**AGE** 26  
**OCCUPATION** Software Developer  
**STATUS** Single  
**LOCATION** San Jose, CA  
**TIER** Experiment Hacker  
**ARCHETYPE** The Computer Nerd

Friendly   Clever   Go-Getter



"I feel like there's a smarter way for me to transition into a healthier lifestyle."

### Motivations



### Goals

- To cut down on unhealthy eating and drinking habits
- To measure multiple aspects of life more scientifically
- To set goals and see and make positive impacts on his life

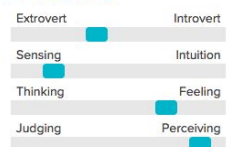
### Frustrations

- Unfamiliar with wearable technology
- Saturated tracking market
- Manual tracking is too time consuming

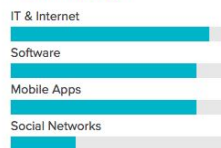
### Bio

Aaron is a systems software developer, a "data junkie" and for the past couple years, has been very interested in tracking aspects of his health and performance. Aaron wants to track his mood, happiness, sleep quality and how his eating and exercise habits affects his well being. Although he only drinks occasionally with friends on the weekend, he would like to cut down on alcohol intake.

### Personality



### Technology



### Brands





**DEMOGRAPHIC** information:

- Age 46
- \$103,000 annual salary
- BSN from UC Davis
- MHA from Walden University (online degree)
- Married, two kids
- Worked in a large hospital system in CA after nursing school

**THE PROBLEMS** she has that IHI solves:

- "I need to balance cost cutting with maintaining quality and it's very complex."
- "Getting adoption of best practices is slow and not uniform."
- "I would love to be seen as more of a 'go-to' leader within the larger organization."

**ONE DAY** in the life:

- Attends lots of face-to-face meetings
- Conducts office hours in ICU to give nurses and physicians time with her during the week.
- Handles a significant amount of paperwork related to regulation and compliance
- Has to be "on call" for scheduling and staffing issues at any hour of the day

**Her VALUES AND GOALS:**

- Son is a junior in high school and her daughter will be a freshman next year; family prioritizing their finances to pay for college
- Prides herself on staying on top of emails and being responsive to all levels of her organization and team
- Strong advocate for work-life balance in the office but often works several hours in the evening except for Friday and Saturday
- Attends church regularly
- Encourages her staff to grow professionally



**Her main INFO SOURCES and WATERING HOLES:**

- SCCM newsletter
- ICU Director magazine
- Office hours in departments
- Hospital cafeteria
- After work socialization with department staff on a monthly basis
- Informal chats with former colleagues in CA hospital system
- IHI Quality Innovators LinkedIn group. Hasn't posted yet; looks through ICU-relevant posts.
- Member of AACN

**Diane Director, BSN, MHA**  
**Director of Critical Care at**  
**Terre Haute Regional Hospital in Terre Haute, IN**

**THE EXPERIENCE SHE WANTS** when seeking out IHI products or services:

- Wants to be able to read comments and feedback on the IHI programs in the way that she reads Yelp reviews of restaurants
- Would like to conduct a "chat" when she is deciding whether or not to sign up for a program
- Wants to be recognized as a "fan" of IHI even if her attendance level is not what we consider high. She was an enthusiastic OS participant when she got her MHA in 2009.

**Their ROLE AND LEVEL SENIORITY** in detail:

- Reports to VP of Patient Care Services.
- Administrative responsibilities for a 32 bed ICU unit, 35 bed CVICU unit, and 4 cardiac inpatient units.
- Has budgeting power for 300 FTE staff ICU

**Her most COMMON OBJECTIONS** to IHI's products or services:

- Needs cost cutting guidance; doesn't know if Bedside to Balance Sheet is for her
- Wants more content on culture change that could enhance process improvements
- Needs more material on how to get senior leadership behind her efforts; mobility in the ICU was treated as an experiment in the eyes of the VP of Patient Care, not a way forward.
- RNs only get \$500 a year in pro. development funds for non-degree programs; puts IHI content out of reach for her staff.

**IHI Areas of Focus that she would be interested in:** Quality, Cost, Value / Patient Safety  
**IHI Rings she would engage in (by %):** Innovate (5%), Demonstrate Results (15%), **Build Capability (75%),** Disseminate Knowledge (5%)  
**IHI programs she has attended/resources used:** OS courses, Rethinking Critical Care seminar, Survey Design W+A, WIHI broadcasts on ICU subject matter

# EDMUNDO RODRIGUEZ

**26 YEARS OLD** **Common titles**  
 Insurance Agent  
 Insurance Broker  
 Junior Producer

**Validations**  
 Collateral materials  
 Training  
 Seminars

**4 YEARS**  
 In the industry

**3 KEY MOTIVATORS**  
 Breadwinner  
 Enjoys customer interaction  
 Needs to build his client portfolio



**RESPONSIBILITIES**  
 Reach a minimum yearly sales target for new business (30% commission on new business)

**VERTICALS**  
 Small Business (up to \$5M in revenue)

**COMPANY SIZE**  
 Medium size privately owned broker servicing Southern California

## Profile Overview

Ed started working as a trainee for a Los Angeles area broker four years ago. He later became an account executive for one of the agency's main producers and recently started his new sales focused role as an insurance agent/junior producer. His clients are mainly small and medium sized businesses but he also serves the personal needs of the business owners and their families. Although Ed participated in extensive insurance training, he is always eager to learn more.

## PAIN POINTS

As a junior sales person Ed still receives a large fixed compensation component (\$50K) compared to his commission/variable earnings (\$15K) but this will change in the next years. He needs to aggressively build a client portfolio since his future income will be mainly commission based.



# WHAT IS ED...

<b>DOING</b> Building a network Answering client questions, promoting his knowledge Social media as an agent Balancing work and family	<b>SEEING</b> Other successful peers and business owners and he wants to follow them
<b>SAYING</b> Explaining to clients why he is not a commodity Explaining his value Buy my products	<b>HEARING</b> Wife: Where is the money? Here are the bills. Customers: Insurance is pricey; Needs to build insurance knowledge
<b>THINKING</b> I need to build my client portfolio How to sell more and sell faster	Reach a break even point or go back to service job

## Activity: Persona

- Picture (drawn or from internet)
- Demographic: Name, Age, Gender, Occupation
- Bio: Paragraph about who they are
  - Personality: Attitudes, Extrovert vs Introvert, etc.
  - Skills: Math, leader, etc.
- What they want / Gamer type (relevant to games)
- What frustrates them (relevant to games)

Prototyping

## Activity: Paper Prototype

Make a paper prototype of your level. Remember:

- Grid/Turns for time
- Dice/Cards for randomness (use computer)
- Figure out “control” scheme
- Should take more than 5 minutes for someone to play



Design Principles /  
Heuristics

# Visibility of system status



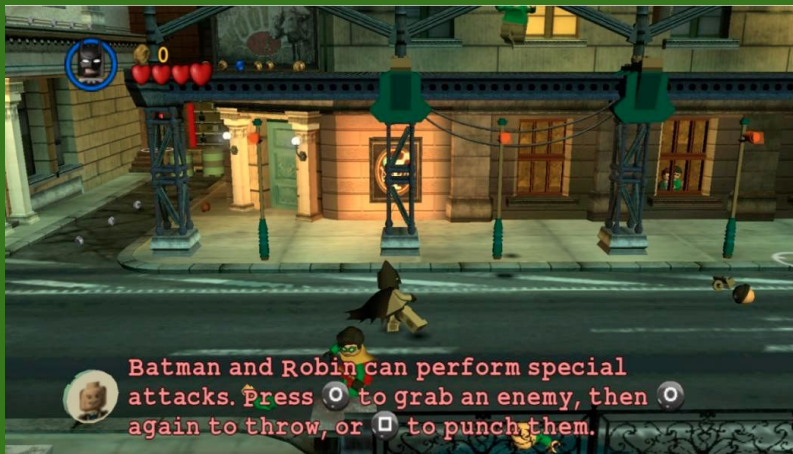
# Flexibility / Efficiency of use



# Aesthetic / Minimalist design



# Help and documentation





# Consistency and standards



# Variance



## Activity: Heuristic Evaluation (Armor Games, Archive.org, etc.)

Pick 3 small games and play them. Look for:

- Visibility of system status
- Flexibility / Efficiency of use
- Aesthetic / Minimalist design
- Help and documentation
- Consistency and standards
- Variance

How can you make the games better?



## Activity: Heuristic Evaluation (Part 2)

How do you plan to address the following in your game?

- Visibility of system status
- Flexibility / Efficiency of use
- Aesthetic / Minimalist design
- Help and documentation
- Consistency and standards
- Variance

Update menus/level/mechanics/controls.



A large pink rectangular area with a decorative corner in the top right. The corner is composed of several overlapping triangles in different shades of pink and magenta.

Playtesting

A large green rectangular area with a decorative corner in the top right. The corner is composed of several overlapping triangles in different shades of pink and magenta, matching the graphic above.

Playtesting Design



# Playtesting Preparation

## Activity: Playtesting

You will be playtesting each other's prototypes.

- Pick an aspect(s) to focus on
- Silent or think aloud?
- Write a script (We're not judging you!)
- Make a questionnaire (closed questions)
- Pick moderator/observer

Groups should pair up. Take turns playtesting and debriefing.

# The Takeaway

# Thank you!



Anna Loparev  
Wellesley College  
Human-Computer Interaction Lab

✉ [aloparev@wellesley.edu](mailto:aloparev@wellesley.edu)

🐦 [@annaloparev](https://twitter.com/annaloparev)

🌐 <http://cs.wellesley.edu/~aloparev/>

# Menu Design

## Activity: Menu Design and Integration

For your game, design and draw:

- Main menu (continue, new game, settings, etc.)
- Pause menu (status, inventory, save/quit, etc.)
- Heads-Up Display (HUD) (status)

Try to stick with your game's aesthetic.

Add these to your paper prototype.

# Platform

## Consoles

- Pros
  - Family friendly
  - Guaranteed specs
- Cons
  - High barrier to entry
  - Not everyone has
- Both
  - Limited/Specialized controls



## Computers

- Pros
  - Prolific
  - Less ecosystem restrictions\*
- Cons
  - Different OSs and specs
- Both
  - Potential for complex input



## Mobile

- Pros
  - Prolific and always close by
  - Ease of access for users
- Cons
  - Fragmented market
  - Limited screen space
- Both
  - Touch/gyroscope/GPS controls
  - Low barrier to entry
  - Short bursts of play



## Activity: Platform and Control Scheme

Pick a platform and determine player controls. Think about:

- Short vs long interaction
- Existing standards of input (research)
- Synergy of mechanic(s) and input scheme



## Activity: Narrative

- Develop a story/setting/theme for your game
- Integrate it with mechanics and level objects
- Redraw level
- Create storyboard for start/end of your level



## Activity: Secondary Mechanics and Level Design

- Develop secondary mechanic(s) to address user wants
- Modify level design to include new mechanic(s)

