Game Design and Development
Teacher Training Workshop 2017
Design and Development

What is the difference?

As a developer I concern myself with the computer:

• How do I make it do what I want?

As a designer I concern myself with the player:

• How do I make them do what I want?

• How do I make them feel what I want?
Good design?
Five principles

1. **Player-centric design** – the player is always right.

2. **Experience-driven design** – design towards an experience.

3. **Systems-based design** – create systems with meaningful dynamic behaviour.

4. **Playful design** - design for play not work.

5. **Iterative design** – design incrementally, test often.
Principle #1
Player-centric design

- Work
- Performers:
  - Perform & Interpret
- Audience:
  - Observe & Interpret
Principle #1
Player-centric design

- Work & Perform
- Performers: Observe & Interpret
- Audience
- Players

Perform & Interpret
Principle #1
Player-centric design

Agency is the experience of being an actor rather than an observer.
Player-centric design

Understand the player:

• What do they want?

• How do they behave?

• How do they feel?

The player is always right.

There is no such thing as “playing it wrong”.
Principle #2
Experience-driven design

Design towards an experience:

• How do you want the player to feel?

• Which parts of your game contribute towards that feeling?

• Which parts detract from it?

Think about theme rather than premise.
Kinds of fun

1. Sensation
2. Fellowship
3. Challenge
4. Discovery
5. Exploration
6. Drama
7. Fantasy
8. Self-Expression
9. Ritual
10. Subversion

Costello & Edmonds (2007)
Principle #3
Systems-based design

The meaning of a game is found in the interaction between players and game mechanics, responding to each other.

Systems have high-level dynamics that are not immediately apparent in the description of their rules.

Learn to read systems. Analyse why they produce the dynamics they do.

Play reflectively.
Game dynamics

Consider this game:

• 4 players, 4 dice.
• Initially roll all four dice.
• Players take turns:
  1. Choose a die.
  2. Add it to your score.
  3. Re-roll it.
• Player with highest score after 10 turns wins.
<table>
<thead>
<tr>
<th>Players</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Dice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>13</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

The table shows the progression of players and dice rolls, with shaded sections indicating a roll of 6. The final column represents the dice roll values.
Principle #4
Playful design

“Play is free movement within a more rigid structure.”

Where is the play in your game?

Where is the freedom to explore, learn, express yourself?

Just saying “do these 10 things in order” is not play.
The Lens of the Toy

To use this lens, stop thinking about whether your game is fun to play, and start thinking about whether it is fun to **play with**.

Ask yourself these questions:

- If my game had no goal, would it be fun at all?
- When people see my game, do they want to start interacting with it, even before they know what to do?

*Jesse Schell - The Art of Game Design*
Good toys

Super Mario Bros
Good toys

Portal
Good toys

Tilt to Live
Principle #5
Iterative design

A game **does not exist** until it is played.

1. **Prototype** quickly to test gameplay.
2. **Play** early. Play often.
3. **Evaluate** the experience.
4. **Repeat**.
Prototyping

Play **early**. Play **often**.

Make the minimal thing necessary to test the idea.

- Storyboarding
- Paper prototyping
- White-boxing
Playtesting

You are **not** your player.

Put your game in the hands of real players as soon as possible.

- What do they **do**?
- What do they **feel**?
Iterative design

- Identify Unknown
- Prototype
- Playtest
- Evaluate
Unknowns

• What is fun to do in this system?
• What game mechanics produce the desired experience?
• What control scheme makes most sense?
• What can the target platform support?
• What art style suits the play?
• Does the level design provide a suitable dramatic arc?
• Is the player able to learn how to play?
Prototypes

Different prototypes suit different problems:

**Scrapbooking** – collecting inspiration

**Storyboarding** – communicating the early design concept

**Paper prototyping** – experimenting with mechanics

**Software prototypes** – making a toy

**Grey-boxing** – laying out levels
Storyboards

Scrolling background

Player ship
Storyboards

Scrolling background

Player ship
Storyboards

Joystick control
Storyboards

No interaction with terrain
Storyboards

Enemy
UFO
Storyboards

Fixed UFO flight path

Firing times
Storyboards

Fixed UFO flight path

Firing times
Storyboards

Fixed UFO flight path

Firing times
Storyboards

UFO fires at ship
Storyboards

UFO fires at ship
Storyboards

Hit
Storyboards

Ship explodes
On design:

On play:

On fun: