

Game Elements

First Lecture

Abstraction of Concepts and Reality

- Complexity : Imagine you are trying to duplicate this city



Abstraction of Concepts and Reality

- ▶ Game based on this complex subject matter work, not because they include all the complexities, but precisely because they reduce the complexity and use broad generalizations to represent reality.
- ▶ Games are based on models of the real world. This is known as “Operating model”.

Abstraction of Concepts and Reality

- ▶ Abstracted reality has a number of advantages over reality:
 - It helps the player manage the conceptual space being experienced. It minimizes the complexity.
 - Cause and effect can be more clearly identified.
 - Abstracting reality removes unimportant factors.
 - It reduces the time required to grasp the concepts.

Rewards structures

- ▶ Badges, points, and rewards are not all bad; it's just that they are not the only component to gamification.
- ▶ While it's fun to obtain a high score, it is just as fun to let others know you are the one who received it.
- ▶ The leaderboard is a list of the top scores in the game.
- ▶ Games provide players with instant reward in the form of points.

Rewards structures

- ▶ Many games have extra abilities or prizes that can be earned for accomplishing certain tasks.
- ▶ Make them as easy to get as possible early in a game so the players are hooked.
- ▶ It is better to link activities within the game to reward than to have random rewards.

Time

- ▶ Time used as a motivator for player activity and action.
- ▶ Time can also be a resource that needs to be allocated during a game.
- ▶ Without the convention of compressed time, games would be difficult and boring.

Conflict, Competition, or Cooperation

- ▶ A conflict is a challenge provided by a meaningful opponent.
 - To win a challenge, the player must defeat an opponent. (e.g. Football game)
 - This is typically accomplished by causing damage on the opponent, by scoring more points against the opponent, or by delaying the progress of the opponent.
- ▶ Competition is where opponents are constrained from impeding each other and instead give the entirety of their attentions to optimizing their own performance. (e.g. racing)
 - Winning is accomplished by being faster, cleverer, or more skilled than opponents.

Conflict, Competition, or Cooperation

- ▶ Cooperating is the act of working with others to achieve a mutually desirable and beneficial outcome.
 - This is the social aspect of games that many players enjoy. (e.g. FarmVille)
- ▶ While it is helpful to consider the elements of conflict, competition, and cooperation separately, often good game design includes elements of all three. (e.g. World of Warcraft)

Rules

- ▶ A game is just a set of defined rules. Without rules, games would not exist.
- ▶ There are different types of rules that apply to games:
 - Operational rules: these are the rule that describe how the game is played. (e.g. you can't open door until you collect the right key).
 - Constitutive rules or Foundational rules: these are the underlying formal structures dictating game functionality. (E.g. the mathematical formulas used to calculate how many times the number 6 will appear on a die)

Rules

- Implicit rules or Behavior rules: these are the rules that govern the social contract between two or more players, in other words, game etiquette.
- Instructional rules: these are the rules that you want the learner to know and adopt after the game is played).

Goals

- ▶ The difference between a game and play is the introduction of a goal. (e.g. running)
- ▶ The introduction of a goal adds purpose, focus, and measurable outcomes.
- ▶ In many games, goals are clear and visible.
- ▶ Visually understanding how far you are from a goal provides incentive, feedback, and an indication of progress as well as a measurement against others.

Goals

- ▶ A goal gives the player the freedom and autonomy to follow it using different approaches and methods.
- ▶ Goals have to be well structured and sequenced to have sustained meaning and to motivate players to achieve those goals.
 - Once a player accomplishes the goal of the game, the game is over. So a number of smaller goals leading to a larger goal are important in providing continuous play.
 - Goal can be difficult to achieve without building prerequisite skills necessary to achieve the goal.

Feedback

- ▶ One of the game key features is the frequency and intensity of real-time feedback.
- ▶ Some games provide immediate informational feedback to indicate the degree of “rightness” or “wrongness” of a response, action, or activity.
- ▶ Other games provide feedbacks to the learner to guide him/her toward the correct outcome.

Feedback

► Juicy feedback:

- Tactile: the player can almost feel the feedback as it is occurring on screen.
- Inviting: it's something the player desires to achieve.
- Repeatable: can be received again and again if some events are met.
- Coherent: within the context of the game.
- Continuous: occurs as a natural result on interacting within the context of the game environment.
- Emergent: it flows naturally from the game.
- Balanced: not overwhelmed.
- Fresh: a little surprising contains some unexpected twists and is interesting and inviting.