

Analog Game Design

parts and crafts * CSCL * fall 2017

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Class description

An 8-week class on game design focused on making non-digital games (card games, board games, games of physical skill, etc). The class will consist of four main activities:

- Playing and analyzing existing games
- Inventing and prototyping new games
- Playtesting and refining game designs
- Reading and discussion on games and design

The first 4 weeks will be focused on exercises, discussions, and gameplay and the last 4 will be devoted to design, developing and prototyping.

Target Audience and Class Structure

A mixed-age group of students ages 7-13 in our school alternative program. Class will meet once/week but students have ample time to work on projects outside of class, playtest them, and discuss them with me and with their peers.

Course objectives

To learn the elements of a game design, how to produce a set of ideas and rules that are understandable and playable, and to be able to describe why a given design or game is fun.

To practice the iterative design process and learn that feedback, playtesting, and modification are the primary steps of game design. To iterate on a design until it feels complete.

Materials Needed

Board game design requires no special tools or materials. Our primary tools will be markers, pens, highlighters, scissors, knives and rulers. Our primary materials will be index cards, cardboard and paper.

It will be useful to have a bin of old game pieces from abandoned board games as well as small objects to use as tokens.

Week 1

What's a game?

- Game brainstorm
- What makes a game?
- 1,000 Blank White Cards

Week 2

Rules and Cards

- 1,000 Blank White Cards recap
- What rules are good rules?
- Play and discuss: Fluxx

Week 3

Time, Space, Fun

- Fun and skill
- Space, time, turns, grids
- Pente, Blokus

Week 4

Theme

- Game theme brainstorm
- Retheme a game
- King of Tokyo vs King of New York

Week 5

Challenge

- Luck vs skill
- Decision vs execution
- Sports and marble mazes

Week 6

Design + Prototype

- How to describe a game
- Game design brainstorm
- Get to work!

Weeks 7

+ 8

Design + Prototype

- Playtest
- Discuss
- Design
- Prototype
- Repeat!

Week 1

- Game brainstorm
- What makes a game?
- What's a game?
- 1,000 Blank White Cards

Questions: What are our favorite games? How do they work? What are some things we think are fun that aren't games? What differentiates games from other kinds of fun?

Activities: Brainstorm a list of games that we like and descriptions of these games. Make a list of things we like doing that aren't games and compare the lists. Play a few rounds of 1,000 Blank White Cards -- a combination card game and game-design activity.

Gameplay: 1000 Blank White Cards is a party game played with cards in which the deck is created as part of the game. Gameplay consists for alternating phases of deck creation and play.

During the deck creation phase players write rules on cards to create a deck to play with.

The play phase begins with a simple basic rule-set and grows more complex based on the rules written on the player-produced cards.

Discussion: Gameplay should involve multiple iterations of both phases with a discussion in between. There is a tendency for cards to "break" the game and discussion usually includes the production of meta-rules that govern that kinds of rules that can be written onto the cards. The goal of our discussion is to identify cards that players liked and didn't like and why. Cards that are universally hated should be removed between rounds.

Further Challenges: Using the 1,000 Blank White Cards framework, and the "draw 1 play 1" ruleset, design a small deck of cards (15-30) and play at least three games with different groups.

Be prepared to summarize these games to the class and what cards worked and didn't work.

Goals:

- To start the class with a fun group writing/drawing game design activity.
- To describe the elements of a game.
- To think of gameplay as "good" and "bad" and describe why.
- To discuss the role of rules in a game.

Week 2

- 1,000 Blank White Cards recap
- What rules are good rules?
- Rules and Cards
- Play and discuss: Fluxx

Questions: What makes a rule a good rule? What makes a rule understandable? What makes a rule fun? Why is 1,000 Blank White Cards a card game? Can you imagine a version without cards?

Activities: Warm-up round of 1,000 Blank White cards. Discussion on gameplay. Because rules in 1,000 Blank White Cards tend to borrow heavily from other games, ask players how they came up with the cards they made and what other games have similar rules.

Gameplay: Fluxx is a commercial card game with many similarities to 1,000 Blank White Cards. It contains a small number of starting rules and a deck of cards that player can play to modify the rules and goals of the game on the fly.

Students should play a few games of Fluxx with different numbers of players, ranging from 2 to 6. Ask students to think about how this player number effects how the game plays and feels. Because the game is very random, sometimes games end very quickly (within 5 minutes) and sometimes they take a very long time. If games run long, feel free to stop them before they end.

Discussion: Fluxx is very fun and very light and unpredictable and random. Criticism of the game tends to be about the lack of depth and the meaninglessness of decisions, whereas praise tends to be about surprise and novelty. In discussion of the game, students should consider the relationship between these two features. What kinds of decisions did you make during your games? When did they (or did they not) matter?

Ask students how hard it is to learn to play Fluxx? How hard is it to play well? Are there ways of gradually introducing rules and complexity to players during gameplay that don't rely on rules being written on cards?

Further challenges: Pick a flaw in the game of Fluxx that came up in your discussion. Propose a change to the rules that addresses this flaw and playtest it before the next class meeting.

Goals:

- To consider the process of learning and teaching as a fundamental part of game play and design
- To think of games as collections of rules and to imagine the effects of changes to them
- To develop a sense of how different students in the class enjoy gameplay

Week 3

Time, Space,
Fun

- Fun and skill
- Space, time, turns, grids
- Pente, Blokus

Questions: What kinds of decisions do you make in 1kBWC, Fluxx, and other card games? What are the sources of fun and satisfaction in these games? In what ways are these games like/unlike traditional card games? How is playing cards different from making moves in other kinds of games?

Activities: Brainstorm a list of card games and categorize them based on similarities and differences. For each game list the kinds of actions you can take, the zones where cards can be, and what it means for cards to be in each zone.

Gameplay: We want to move from talking about cards to talking about boards, so we're going to play two simple, abstract space-control games. Pente and Blokus.

Pente is an ancient classic abstract strategy that's related to the game of Go and was probably originally invented as a Go training tool. Blokus is a modern shape/tile-laying game. In both games players alternate placing pieces on a board to control space. Pente should be played with 2 players, Blokus can be played with up to 4. Students should get a chance to play both games if possible.

Discussion: How do the rules of Fluxx/1kBWC compare to those of Pente/Blokus? Are they simpler? More complicated? In what ways?

Describe how you felt playing Blokus and Pente. Compare this to how you felt playing 1kBWC and Fluxx. What kind of information do you have about the game state in these various games. How does the availability of this information change how you think about decision-making? How do these differences in feeling relate to the differences between board and card games?

Further Challenges: Make a game played on a grid where you alternate placing pieces and your goal is to create a certain shape or structure of pieces to win. This game should have no more than 3 additional rules beyond these. Additional kinds of pieces count as rules. Playtest it before next class.

Goals:

- To add the idea of space to our discussion of games
- To think about how the availability of information effects the experience of gameplay
- To develop an idea of simplicity and complexity in game rules

Week 4

Theme

- Game Theme Brainstorm
- Retheme a Game
- King of New York vs King of Tokyo

Questions: What does it mean for a game to have a theme? What kinds of themes are common in board games? Digital games? Card games? Why are these themes so common? Do certain themes usually go with certain kinds of gameplay systems and rules?

Activities: Game theme brainstorm, using both analog and digital games. For each game identify the characters, setting, and goals of the game and what characters in the game-world the player represents, if any. Do the games capture the theme well? If so, list a rule or mechanic that is particularly effective.

Gameplay: To talk about theme we will play King of Tokyo and King of New York, two different games by game designer Richard Garfield (most famous for designing Magic: the Gathering.) In both games you play as giant monsters competing for prestige by destroying a city. The winner of the game is the first monster to acquire a certain number of points and be crowned "King" of New York or Tokyo, respectively.

King of New York is a sequel to King of Tokyo. It has very similar rules and gameplay but is slightly more complex. Students should play both games but should play King of Tokyo first.

Discussion: What are the differences in the rules and gameplay of the two games? What are the ways in which the games feel different? Which game is more fun? Which game more effectively makes you feel like a giant monster? What are the gameplay differences that account for these differences?

These games are so similar in gameplay and have an identical theme so they make for a very good study in how small rule-changes can significantly alter the feel and theming of a game.

Further Challenges: Pick a relatively simple game that has a theme and retheme it. Don't change any of the rules, just change what the pieces represent, and the nouns and verbs that you use to refer to the actions. If you can prototype this game and try it out with a different theme that is great, otherwise just write up a description of both games and the substitutions you would make to switch the theme.

Goals:

- To think about how theme effects enjoyment of a game
- To compare how different rules and mechanics support and undermine themes

Week 5

Challenge

- Luck vs skill
- Decision vs execution
- Sports and other physical games

Questions: Why do games have turns? What kinds of games don't? How are sports similar to and different from board/card games? What makes a game difficult or easy? Are there different kinds of difficulty?

Activities: Most card and board games break space and time into discrete chunks -- "turns" and "spaces" or "zones." Brainstorm a list of games that don't do this.

Gameplay: The game we will play this week is a class of games where the player guides a marble through a maze by tilting a platform. The most common commercial version of this game is called "Labyrinth"

We will play a few versions of Labyrinth and then we will make you own. Students can work at a small scale with ball bearings, a medium scale with marbles, or a large scale with ping-pong balls. The goal is to build a marble-maze out of cardboard that's fun to play and difficult.

The primary tools and materials students will use are cardboard, tacky glue, hot glue, and serrated cardboard-knives for cutting the cardboard as well as rulers, t-squares, etc. Markers and paint should be available to decorate the maze and students should be encouraged to add theme to their mazes with art.

Discussion: As building the project will take the bulk of the class-time, there will not be very much time for further discussion.

Students should consider and briefly discuss how they picked the features of their design -- where walls were places, where holes were placed and why. Was it arbitrary? Did it relate to a theme? Were certain areas supposed to be more or less difficult?

How does the experience of playing the marble maze feel different from and the same as playing board games? Computer games? Sports? Other games of skill?

Further Challenges: Next week we begin our final game-design project. Come to class with a list of rules, themes, and other game ideas to talk about.

Goals:

- To widen the definition of game and think about other kinds of game-like experiences
- To build something with our hands and test it out as quickly as possible to get used to the idea of prototyping and playtesting

Week 6

Design and Prototype

- How to describe a game
- Game design brainstorm
- Prototyping
- Get to work!

Questions: Revisit initial game brainstorm: What games do we love? What games do we hate? What do we love and hate about them, and can we come up with reasons why the games we don't like were designed the ways they were? What are we excited about making? What are we excited about playing?

Activities: Brainstorm a list of game types, game themes, and interesting rules. Make a list of games and come up with short 3-sentence descriptions for each one. Compare the elements of these descriptions to come up with a good framework for describing game designs.

Design and prototyping: We're done playing games that we didn't make. Students should come up with three different game ideas with a short three sentence description for each one. After writing these descriptions they should start prototyping at least one of them.

Further challenges + Weeks 7 and 8: From here on out we're prototyping and playtesting. The next class meetings should consist entirely of students playing each other's games and giving each other feedback.

Students should be given constraints around their game designs to make sure that they are accomplishable. An abstract strategy game with 10 different pieces is a game we can make in 3 weeks of development and test out. A collectible card game with 1,000 different cards is not.

The other big constraint is gameplay time. Students should design games to be completed in 30 minutes or less. Games that are longer than that will be impossible to play enough times to get ample playtesting and development done.

This will require a primer on how to give friendly but constructive feedback and a primer on how to receive negative feedback without being offended. The most important point here is that if your players don't like your game it's probably not a good game, even if you love the idea of it.

Players are good at finding problems and bad at posing solutions. Students should describe things they liked and didn't like about games rather than changes that they think should be made to the game.

"Design is hard." "All games are bad until they're not."

