

Finding the fun: A tale of four (five?) games

When it comes to games, fun is usually the first thing to come to mind. We play games to have fun, but most people have also had the experience of a game that just is not enjoyable for them, even though it might be for others. So what makes a game fun, and how do designers create mechanics (rules and game-specific functions) that highlight those most critical parts of enjoyment for their players?

It takes skill to be able to identify the fun element of a game, and huge amounts of thought goes into bringing players back to it repeatedly each playthrough. Game designers call this a “loop”, or in other words, the idea of how the mechanics of the game interact to move each player back to the fun again and again. Building these loops is an interesting design challenge, and, to explore it, we partnered with a local high school to offer an elective that tasked students with designing, playtesting, and iterating on their own tabletop or board game (TBG).

The course itself was structured such that students were in teams, and the game that the teams created was entirely up to them. The very first thing they had to address was what game they wanted to make, and what made that idea fun for players. This drove passionate and meaningful discussion that was heavy in critical thought, problem solving, and empathy. How will a player interpret the experience? What will keep them coming back? In general, what would get someone engaged and keep them playing?

While the games each had different paths, they all encountered interesting design challenges based on their core gameplay loops. In this article, we will dig into what these challenges were, how students found and highlighted the fun parts of their games, and how the format of the class itself set up many opportunities for feedback, iteration, and growth in design, empathetic, and collaborative skills.

The course was about the games, though, so here are the initial designs the students set out to create:

Gerrymanderer – Players assume the roles of political parties vying for control of their respective district. Each round, called an election cycle, players take turns re-drawing the lines of their districts using a card-based system, with the goal being to outmaneuver the opponent and secure as many representatives for your party as possible.

Space Trader – Featuring a large grid map (8x8 squares), this game is about exploring an asteroid belt around a solar system of 16 planets to find resources to mine. Mined resources can be used to accomplish set goals that award victory points (generally bringing X of resource Y to planet Z). Goals vary in difficulty, and the game ends when all goals have been met at least once. The objective of the game was to gather resources and complete goals more efficiently than opponents.

Cyberpunk RPG – This game is modeled after Dungeons and Dragons (D&D) and other similar roleplaying games (RPGs). Players roleplay a character they create, chosen from archetypes called “classes”. They set their character’s name, core attributes and skills, and some details, then gather together to go on adventures. This is a continuous game, with no clear endpoint, as it is about adventuring with friends in open-ended, user-generated environments.

Racing Game – A simple “race to the finish” game that uses dice to determine movement. This game relies on heavy elements of chance to determine the outcome, very similar to the popular game Chutes and Ladders.

Problem discovery – Finding the Fun

It did not take long for groups to reach conflicts about what the core loop of their games should be; however, the course instructors suggested that everyone begin by just playing some games. This gave students an idea of just how varied the concept of fun can be for different players and the diverse ways that mechanics come together to create an engaging and enjoyable experience. Using this game-play experience, the students came back together to discuss their own games again.

While the disagreements were still present, the students agreed that the best way to drill it down was to get a working prototype going and just start playtesting their own games. Armed with a couple of short lectures from the instructor on the design essentials for TBGs, the groups used simple materials (like colored plastic pawns and tokens, index cards, and small whiteboards) to create game models and start testing.

Talking about a game is one thing, but putting the pieces on a makeshift board takes the abstract ideas that go into a game design and tests them in real play. Once the pieces were on the board, the new designers immediately began to re-assess their rules and ideas. Obvious game-breaking bugs aside, it became pretty clear to each group what the primary barrier to the fun was. This process of problem discovery and prioritization was present in all four of the game groups at this early stage in the course.

The Gerrymanderer

The fun element of this game was trying to decipher your opponent's districting strategy and pick the best plays for your own control while simultaneously limiting your opponent's. The loop here was very similar to that of Chess: develop a strategy, make your play on your turn, see your opponent's move, analyze their situation, adapt and play your next move.

With this game, the problem was obvious and substantial: tedium. The designers wanted to have enough districts that would support diverse strategies, but the problem was counting how many districts each party had at the end of every round. Counting took up as much, and in some cases more, time than the fun part of strategizing and adapting to your opponent. This tedium broke the loop and disengaged players, quickly becoming the highest priority issue for the group to solve.

Space Trader

Charting paths to outmaneuver opponents in a big space race sounds like a ton of fun, and that was what this group was hoping to capture. Each turn, players would decide on a destination, roll a die to move towards it, and gather the resources that could be used to complete goals. There were, effectively, two driving forces in their gameplay loop. The first was the act of racing across the solar system, and the other was gathering resources and completing the goals (like deliver X of resource Y to planet Z).

Slow pacing caused by complexity was the immediately visible challenge for this game. Initially, Space Trader featured a large board of 64 spaces (8x8 board): 16 planets and 48 asteroid "sectors" whose contents were hidden until a player went there. With a maximum movement speed of 4 spaces per turn and goals that involved very specific objectives, the game moved sluggishly at its fastest. It took forever

to move from one side of the board to another, and the time spent on this was compounded by the fact the contents of most of the squares were unknown, so there was a lot of wasted exploration. Neither of the loops worked effectively, and the fun, while there, was buried.

Cyberpunk RPG

As a game focused on role playing, players in this game derive most of their fun from interacting with each other, their imaginary environment, and the game master who controls how the game world responds to what the players are doing. This necessarily creates a social situation for the players and allows them to act out the part of someone else, solve puzzles from the game master's imagination, and react to unexpected situations that simply can't arise within the structures of a more defined game.

The downside of creating an RPG like this, as this group quickly found out, was differentiating themselves from all of the other options. Most tabletop RPGs use similar and quite complicated rulesets, as they need to cover a wide variety of unpredictable situations, so the play is often similar from game to game. What sets each apart, though, is the universe in which the game takes place. With RPGs for Harry Potter, Star Wars, and Lovecraft, alongside a host of unique franchises like Dungeons and Dragons, Shadowrun and Pathfinder, differentiating when developing a new idea can be quite a challenge.

Paper Racer

Of the games in this program, the racing game was the simplest at conception. The fun of the game was pulling ahead of opponents and taking on the risk of rolling the dice. Players who were far ahead could be reduced to the starting squares in a matter of moments, and this made for some suspense in the gameplay as one bad (or good, depending on perspective) roll could change everything.

Predictably, the simplicity of this game created the biggest challenge they faced: a lack of player interaction. When elements of chance were the only determining factors for who won, players felt as if they had no agency over their standings and no way to strategize or outmaneuver opponents. They would roll the dice on their turn and take the consequences, but beyond that the players did not interact in any meaningful way on the board.

Problem Solving: Feedback and Iteration

Having tested out their initial designs and recognized core obstacles to the fun of the game, the groups began to utilize one of the biggest advantages of the tabletop format of game design: rapid iteration. Starting by discussing the gameplay together, each team would come up with new fixes and then playtest again, followed by more analysis and discussion. The process of discovering and refining the solutions to the problems in their games helped them to highlight the fun elements and create more exciting and engaging games.

The Gerrymanderer

Tedious counting turned out to be a very difficult issue to solve. As an integral part of the game, counting districts could not be directly removed. So, the students set about trying to find creative ways to reduce the time it took to do the counting. They implemented card elements, reduced the total number of districts, used pre-set districting moves to reduce randomness, tried new and different game

boards, and explored other ways to keep running tallies rather than counting up at the end. However, no matter what they tried, the counting and calculation either took too much time, restricted the scope of the game too much, or required so many moving pieces that it was difficult to track from turn to turn.

In the end, some ideas just don't work out. It is an important skill to know when to let a failing idea go. This group decided about halfway through the course that their game just was not going to work given the resources and time that they had remaining. So, the group concluded that they needed to create a new game, one that was simple and straightforward (as a direct foil to their previous design), and could easily be picked up and played quickly. While their decision in favor of simplicity was largely driven by their limited remaining time, they also wanted to avoid the same problems they encountered with their original design.

So, with just six weeks left in the course, the group set about with a new design process. Much like the racing game, and in part owing to more limited time, the now unnamed group started with a very basic idea: stacking common objects on top of one another. What began as idle fidgeting grew into a series of growing challenges as the group bet on items that could be added to the stack. The fun in this new game quickly centered around daring and bravado. A bidding system was added in to enhance each player's stake in the performance of the stack. The resulting game was undeniably silly, but simultaneously created moments of tension and excitement, which made it fun and engaging.

Space Trader

Pacing is a common problem in games, and it requires a careful balance to avoid the game moving too quickly or too slowly. The space trader group was dealing with slow pacing, so their solutions were to either speed the gameplay up, or introduce new elements to keep it exciting during the long travel times between the stars and asteroids. They first started by introducing more elements, like a pirate ship that targeted the winning player or the ability for players to steal from one another, but it quickly became clear that their core gameplay loop (charting paths through space to outmaneuver opponents and complete goals) required the removal rather than the addition of stuff.

With this in mind, they made a radical change to their game by reducing the board size by 75% (from 64 spaces to 16), and revealing the contents of every space from the onset. This reduced the time of travel and fully removed the fun-killing issue of getting to a space just to find out there was nothing there. By removing so much, the game was stripped down to just the fun loop, and then they began to experiment with adding back in a few of the mechanics they had tried before. In the end, they settled on allowing players to steal from one another (enhancing the importance of planning your course to avoid opponents, a key part of the loop), and built in some mechanics to enable comebacks when players fell behind.

Cyberpunk RPG

Without the focus on gameplay mechanics that the other groups had, as their game utilized the framework of popular RPGs, this group worked to solve their problem of differentiation through story. What was interesting was that the thought process was still focused on creating an exciting loop, however instead of mechanics, the loop was dedicated to drawing players further into the story and characters. They set about designing engaging character types, interesting ways for them to interact with each other and their surroundings, a political hierarchy in their fictional universe that included both

mundane and mystic elements, and ways for each player to get invested in a character and relationships.

This approach to a gameplay loop was less overtly iterative, especially since this type of game does not have a definite “end”. However, it did prompt the students to consider, at a very deep level, what they wanted players to get out of the game. Empathy and an understanding for their audience was critical as storylines are personal experiences that are perceived differently by each player. They set about creating short scenarios that could serve to playtest their game while still introducing players to the game world and how it was different from the many other options available to players of these sorts of RPGs.

The Paper Race

Beginning with the skeleton of their game, the racing group had an essentially blank slate from which to build archetypes of player interaction. They began by discussing other ways that games have had players interact, then experimented with adapting mechanics into their board. They tested a range of ideas including implementing item cards to be used to improve your own position or hinder another player, adding a risky and optional second die roll that would set a random player (including you) back, and reducing the number of chutes/ladders that were available throughout the game board.

Eventually their game evolved into something that played like a popular video game that they had used for inspiration called Mario Kart. They kept the inclusions of the secondary die roll as well as the item cards, then developed ways for the two mechanics to interact with one another. While their core loop stayed intact, chance-based racing towards a goal, the additions augmented this loop by bringing other players into the equation and adding weight to each player’s decisions. Big choices included considering when to use an impactful item given the board standing, and the calculated risk of the secondary die roll.

Student Design Reflections

Throughout the course, the students gathered playtest data from their classmates, peers from around the school, and even professional game designers. With visits to LoneShark Games and Wizards of the Coast, both large tabletop and board game design studios in Seattle, the students began to think about how their design process compared to those of the professionals. As these visits were part of the final week, we wrapped them up into a broader discussion with the students about their exposure to the design process, what worked, and what did not.

Super Stacker

This group noted that, given their decision to change with only six weeks left, rapid and open-ended playtesting was necessary. During playtesting, the students responded to feedback with flexibility. None of the rules, save for the ones involving safety, were firm. It became more of an open-source game where the creators explored ideas for rules that testers had. While it turned out well, it was definitely unfinished, but occasionally ideas just do not work out, and the group created a fun game despite having to drop their idea around the midpoint of the class.

In their reflection on their first idea, the group noted that the concept of the gerrymandering game, while exciting and certainly relevant, was too complex of a place to start given the class structure. With

more time, technical expertise, and funding, they were confident they could have developed some way to reduce the tedium and highlight the fun aspects of their original idea, but were happy with the decision they had made given the time and resources that the class provided. From our perspective as researchers, we definitely saw the students have a realistic discussion about their goals and aspirations for their game, assess the options available to them, and make the best choice given the situation.

Space Trader

These two students identified the biggest design choice they made as cutting 75% of their game board out. What they found most interesting about this was that they had initially thought that this would reduce the feelings of agency and exploration on the part of players, but through playtesting, they realized that agency was unhindered by the smaller board, and exploration was only a peripheral part of the fun of the game. They utilized playtesting feedback to better identify and streamline the core gameplay loop of gathering and trading resources, and wound up creating a fun experience.

When we asked how they would have changed their approach, this group shared with us that the complexity they started from was probably the root of their early issues. They had learned about the importance of identifying the key elements of a project, and not getting too ambitious from the onset. It was also surprising to the students just how helpful fresh eyes, in the form of playtesters, were on their project. Neither one of them expected playtesting with external people to be as impactful as it was, and they both came away with ideas for how they would implement this learning in other academic pursuits.

RPG

The cyberpunk RPG group, being the largest and most unusual in its design process, had interesting reflections. They focused heavily on how their empathetic understanding of their audience had developed over time. Creating a working and fun game from scratch, they noted, was a very different experience from starting with an archetype like Dungeons and Dragons, and building a new fictional universe. Much like most fiction writing, you need a very clear understanding of who the audience is and what sort of design decisions would resonate most with them.

Perhaps most interesting for this team was the level of introspection that the group shared. As members of their own audience, and an active D&D group themselves, they had long and deep discussions about what made their gaming sessions fun, how they would create a welcoming yet exciting experience for a newcomer to their group, and how their peers might perceive their take on the already well developed RPG rulesets. They shared that they came away with a greater understanding of their own interests in games and beyond, as well as a better understanding of the community in which they are all actively engaged.

Paper Racer

The racing game followed what was, of the groups in the class, the most traditional design path, and the group found this to be a smooth method of design. They all referenced the influences that shaped their ideas, from Mario Kart to Candyland, discussing popular games and adapting mechanics was a big part of their strategy. While this worked for them, they did note that they would have liked to have included more original elements, but were unsure of what those would be.

Their core loop was never ambiguous, as it was in some of the other groups, so the process of design for this group was focused primarily on experimentation. The students talked a lot about the rapid iterative process, and how they would occasionally test a mechanic that would detract from their loop. Keeping this clear vision the most critical elements of their project was key to the success of this game, and taught them a lot about the design process, maintaining a vision, and assessing critical feedback.

Conclusion

Fun is not a concrete idea, it is fluid and can be difficult to pin down for an individual, even harder for any large audience. Designing a game centers around this problem, and pushes students to explore not only their own ideas of what makes something fun, but those of other people. It includes huge amounts of experimentation, creativity, feedback, and critical discussion. At the same time, it requires designers to figure out where flexibility is needed, and where ideas need to be firm.

The process of designing a tabletop game, starting with just an idea, created many types of interesting learning for the students. They shared with us their thoughts and perspectives on the diverse design challenges they faced and how they overcame them using their own grit, creative thinking, and peer feedback. The collaborative elements of the course proved to be among the most valuable, and the students all felt that there were skills gained in design that could be used elsewhere in their lives, academic and personal.

Empathy was also highlighted in discussions with the students. While most of them had approached the design of their game from their own perspective, making what they would consider fun, the act of playtesting required students to step out of that viewpoint. One of the key elements of playtesting is allowing players to make mistakes, misinterpret the rules, or even just not have fun, without intervening. The student designers talked about having to read the players' moods and try to interpret why they were feeling the way they were. Through observation and post-game discussion, they reported becoming more aware that the concept of fun, and by extension other emotions, are not always interpreted the same way, and that empathetic design is an important concept in many areas of life.

Finally, this class setting allowed enough freedom for the students to explore their own ideas. Iterative design, and the learning it creates, is not reliant on a highly structured curriculum, in fact it benefits from letting the students take the reins. When we asked the students about the level of instruction in the course, which was only ever a short 15 minute lecture on design principles, they were very clear that the flexibility available to them in their design decisions was key to their enjoyment and learning. They appreciated the situational advice of the instructor, which was specific to each project and challenge, and he became more of a co-designer and guide than a teacher. Both the students and the instructor felt this added to the overall creative and open feel of the course.

After multiple versions of this course, it is plain to us that there is immense value in students designing games. Finding the fun in an idea is, itself, a fun exercise, and creates an investment in the skills and thought processes that go into the activity. The result is a fun and engaging curriculum that creates value and engagement for students, does well on its own, and also fits nicely into a variety of subjects and teaching styles.

