Fount

Towards the source

Design Post Mortem

Collaborative Games - Impact Games
by
Rakibul Hasan Toor
6th Semester,
BA Digital Games
(Game Design Specialization),
Cologne Game Lab,
TH Köln,
Cologne, Germany

Introduction

This collaborative project is much different than other semesters for two reasons:

1. Switching the schedule of project module and lecture modules
2. Everything is locked down due to Corona Pandemic

These two reasons put into much more challenges in this project than others. As we could not meet personally and have to work the whole time from Home. It is a new experience for the whole team. So new and innovative solutions needed to be implemented over time. In this document, I will try to explain the problem and solution that we have faced during different phases. Besides, to keep it concise and effective, design decisions or details about the design elements will not be presented here. Rather this document is focused on workflow and solution approach to challenges that we have faced during the project. If you are interested in learning more about the game itself you check our final presentation, design document, watch gameplay trailer, or play the game.

Setting up

The First thing after joining a team, it was important to set up an online space and workspace to work together. It is important as in a regular semester the whole team likes to sit together and start the ideation phase. This time, it was different so we had to set up some tools in the very beginning to make communication easier for the whole team. Firstly, we had set up a Discord server with different channels to keep everything sorted out. Secondly, we created a Google Drive folder dedicated to this project along with permission for everyone in the team. Drive folder is also sorted out based on different aspects and specializations for the game. Besides, we have found that “G Suit by Google” provides tools such as Jamboard, Sheets, Docs, Slides etc. These tools helped us tremendously to work together in a digital space. Additionally, the whole team decided to adapt the Scrum method for project management using “Trello” to keep count on tasks and their progress. The team decided to communicate minimum two times in a week to inform the team about the progress and directions. In some weeks it has been seen that we have contacted each other several times in a week and use screen sharing to show progress or ideas or solve problems together. Being in an online space, it was not easier. However, we have managed to do it regularly.

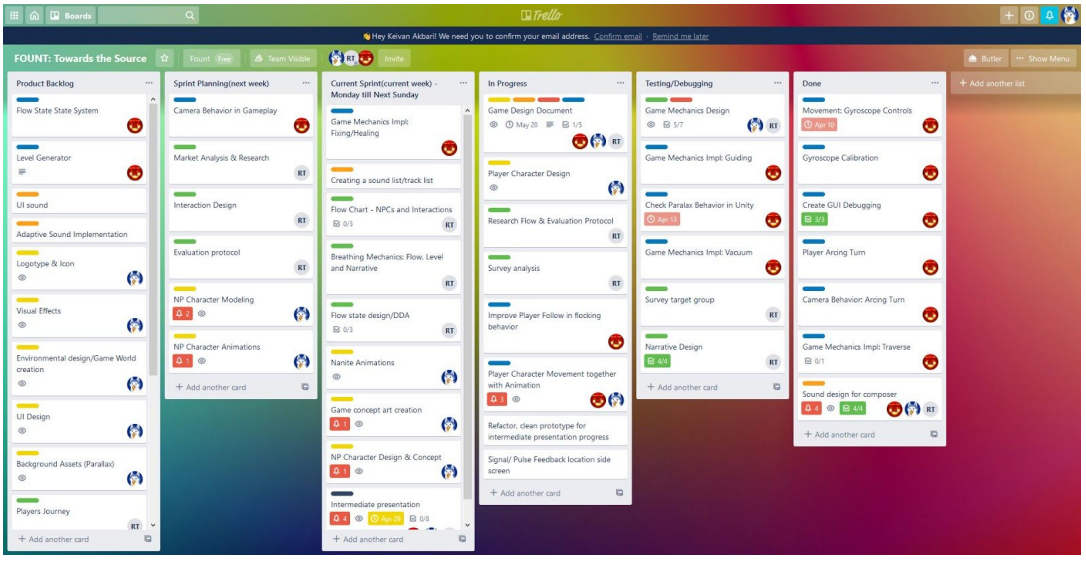

Fig 1: Trello board to keep track of the tasks and progress.

Ideation

In the ideation phase, we have created a Google Jamboard to work together and throw up our ideas. Few different subtopics came into mind such as - Human vs Nature, Fake News, Speedrunner/Platformer and Flow. We have explored each of the ideas and tried to define the impact and scope. After examining the scope vs time vs impact - we have decided to go with the idea of reducing anxiety in this pandemic situation. It has been hypothesised that anxiety in people may increase in the situation and creating a flow state may help them cope up with it. Keeping it in mind, we started to divide our work based on our own specialization. It was the time to dive deep into the theory and research on design impact.

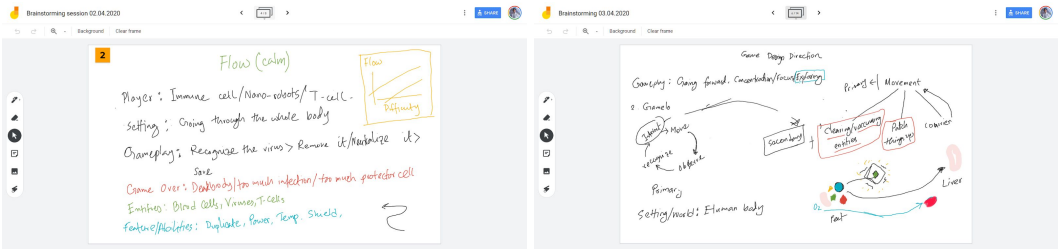

Fig 2: Using "Google Jamboard" to create mind maps and decide on ideation.

Theoretical Research

For this semester, it was needed to understand the impact and how to manage it in a small scope like this. So, searching through different online journals, articles give a primary idea. In the end, it seems that I have managed to collect 40

articles/papers/thesis. Given the time, I have gone through only Introduction and Conclusion/Discussion of most of them and selected only a few to follow and read thoroughly (check References section 1-6). to keep track of citations and get a clear perspective on design decisions, an excel sheet has been created. It also helped to keep track of summary. You can check the excel sheet here.

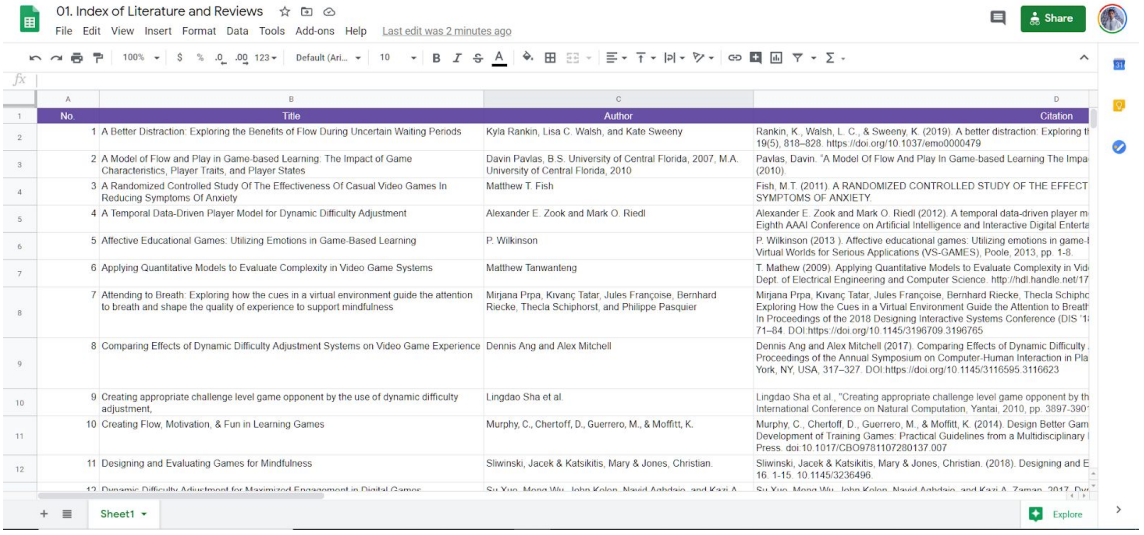

Fig 3: An excel sheet has been created to keep track of literature, citations and review

Participant Survey

Only theoretical approaches couldn't seem to support our hypothesis so we have decided to make a survey about "anxiety and video games". To create such an online survey it required some theoretical knowledge which has been done in the previous phase. However, the challenge comes from General Data Protection Regulation 2016/679 (GDPR law) by European Union. So, some research has been done to compliant GDPR. A consent form has to be made in the beginning of the survey explaining the aspects of this survey and make it anonymous as much as possible. Few things were never in our hand such as data saving in a cloud server of Google. So it is required to explain that in the consent form. The next challenge came into spreading the survey. All of the team members tried to spread it in their own circle of friends and family. However, it seems that many people are not very interested in completing it. This survey also includes some aspects of gameplay and moodboard besides anxiety measurement using GAD-7 self-test for anxiety. As we were using Google Form to create the survey it was easier to collect data as it has been saved in an Google Sheet. You can check the questionnaire here. And, the survey results are in here - Part 1, Part 2. Due to time limitation, some data may not be

analyzed. However, doing it helped us to set our direction to be more specific.

Designing for Impact

After deciding on the theoretical part, it is time to implement the design concept into the prototype. It was not a smooth journey. Many of the design decisions have to be changed to make it more impactful. However, one thing was the same for the whole project that is gameplay mechanics. During development, some problems occur, some seem out of scope - but we always stick to the same mechanics. Rather removing or adding more mechanics, mechanics are modified to requirement and measure their added values to prioritize the modification. It helped us a lot to follow some instructions for “Flow state” design. Whatever is added or modified to the project, we have always considered what it brings into the major component of “Flow state”. Focusing the design in a very specific and defined aspect kept the design decisions on the track.

Besides, it seemed that we required the sound to be more precise. So we have decided to outsource our sounds from a friend Tapesh Chakraborty(check his soundcloud for his experimental works). As his previous works indicate that he is experimenting with ambient sounds and my previous experience working with him made it an easy choice to approach him for professional sound and sfxs’. Primarily we have provided him with a sound list, our gameplay concepts, and share builds time to time. As a result, we could deliver the prototype with original soundtracks and effects.

Development

In the development phase, it seemed that our scope is high compared to time. So we have decided to cut down some of it such as - level design system. Primarily, we have decided to make the level automated based on the DDA system rather than handcrafted. However, given the time limitation, I have designed the whole level. It’s important for me to keep track of difficulty throughout the levels. As we have decided to create the Dynamic Difficulty System (DDA) based on players performance according to time rather than levels, a clear algorithm or logical pattern had to be made. Despite having the algorithm, the programming task seems high and calculation may be faulty which requires more playtesting to make it more solid. It is still not foolproof and complete yet. Working and playtesting with more time is required to complete it. Additionally, while designing the levels, it has to be kept in mind that the other difficulty

parameters should not be changed at least for the prototype. As an example, to keep the other difficulty parameter the same throughout the levels in the prototype, the distance for each interactable element keeps the same(Fig 4).

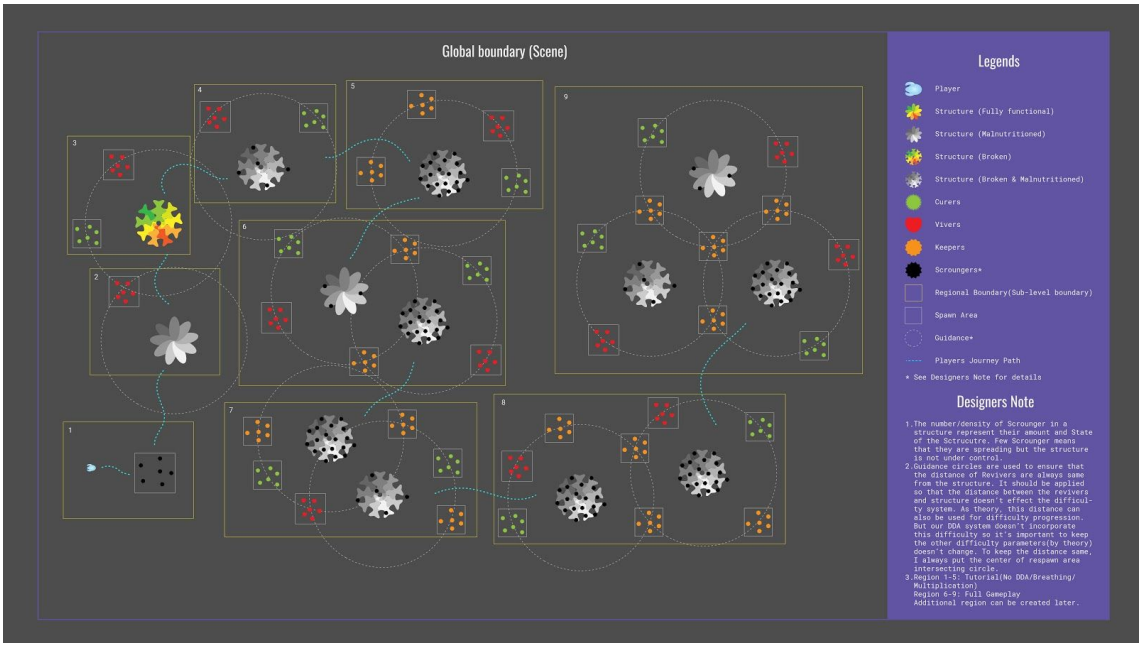

Fig 4: Level Design for Fount. The circle around the Structures are to keep distance for each of the interactable element areas same.(see in full resolution)

Evaluation Protocol Design

Without prior knowledge, it is hard to design an evaluation protocol. I have been consulted with Nurie Wieland(M.Sc. Psychologist) from Katholische Hochschule(KatHo) to understand and get knowledge about creating a protocol for psychological research. Then I have analyzed some of the methods used in similar kinds of research study. Being a similar kind of research or study, it is been decided to adapt the research method from “The Efficacy of Prescribed Casual Videogame Play in Reducing Symptoms of Anxiety: A Randomized Controlled Study” by Fisch, Russoniello & O’Brien (2014)[7]. During the development of evaluation protocol, we have found that the method to keep track of participants' anxiety they have used the STAI method or questionnaire. It’s being copyrighted and expensive - I have decided to use Hospital Anxiety and Depression Scale (HADS) as it’s free and available. However, the difference and effects should be compared if the protocol will be run in future.(check the evaluation protocol document)

Burning Out

Not but least, we all burned out at some point of the project. Using online tools may be a solution to work simultaneously and from being home, but it doesn’t give any emotion from the other side of the screen. Staying in front of the screen for many hours obviously takes some toll into our physical and mental health. Sometimes it induces back pain or gets into a “fight or flight” situation. However, how much of it for the workload or the overall situation can be a good but different research topic. As being in a foreign country, thinking about home and family members' conditions, upcoming financial depression, adopting the new way of working etc. make it harder sometimes to keep concentrating on the project. Additionally, living in a small space, at some point it became hard to differentiate between the workspace and relaxation space. Without usual person to person contact with team members, sometimes it made me feel like a cyborg. On top of that, connection problems, the usual crashing of the game engine, learning to use new tools etc didn’t make it easy. It took some initiative to keep the whole team safe from burning out and it was not a simple task. However, at the end, while the prototype becomes playable it induces positive feelings obviously. But didn’t save us from being burned out with workload or being frustrated due to the situation over the time. On the positive side would be that it kept me busy by generating flow while designing the flow itself and let me focus on the work rather than overwhelming news and information about the pandemic.

Conclusion

In summary, taking a different path than usual semester collaborative projects is obviously challenging and teaches us many different things. The experience and learning from this project provides a solid foundation for me for the next semester thesis and project. Besides the game design tasks, I have learned more about conducting research, keeping things simple and how to focus on very specific topics. It also teaches me how to cope up with different situations and going on forward - even in pandemic times. On the top of that, working in a topic like “Flow state”and “meditational psychology”, I have also learned how to keep my mental health safe in anxiety moments. Overall, our prototype is not bug-free and still has some issues, we need to go more deep with DDA and testing it throughout, some scope like automated level design based on DDA etc should not be forgotten to progress further and having a working title in the future. On the top of that, having the opportunity and time to

run the evaluation protocol would be a great learning experience and show the design faults or success for further development.

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