

**A Study on How Different Level Designs Can
Impact Player Experience**

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Declaration

I, Khoo Zi Jian, declare that this research paper entitled “A Study on How Different Level Designs Can Impact Player Experience” is solely based on my own work except where for where citations have been acknowledged. I hereby declare that this project has never been submitted previously to any other party and will be submitted under the Degree of Bachelor of Arts (Honours) Game Design, under the Universiti Tunku Abdul Rahman.

Signature:

A handwritten signature in black ink, consisting of a stylized 'K' followed by a horizontal line and a small flourish.

Name: Khoo Zi Jian

Date: 22 May 2026

Acknowledgments

First and foremost, I would like to express my gratitude to my university, Universiti Tunku Abdul Rahman (UTAR) for giving me an opportunity to learn and build up my confidence to chase my dream.█

Secondly, I would also like to express my sincere gratitude to three of my supervisors, Dr Simon Ang Kok Yew, Ms Christie Chow Mee Mooi, and Puan Nik Norazira Binti Abdul Aziz for providing me as well as to my team of the support for professional guidance and feedback throughout the development of our final year project, including this thesis report.█

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Abstract

This study explores how level design affects player immersion and engagement across different video game genres. While many studies focus on gameplay mechanics and storytelling, the role of level design—such as the structure, atmosphere, and visual presentation of game environments—has received less attention. Using the narrative-driven puzzle game *Dream Nightmare* as a case study, this research combines development observations and player questionnaires to examine how factors like spatial layout, pacing, environmental cues, and storytelling influence the player experience.

The findings reveal clear differences between complex game genres, such as Metroidvania games that encourage exploration, backtracking, and interconnected progression, and simpler genres like endless runners that rely more on repetition and randomized obstacles. Despite these differences, the study found that environmental storytelling elements such as lighting, sound design, and visual cues can still create strong immersion, even in mechanically simple games. Both the survey results and thematic analysis showed that players appreciate a balance between freedom and guidance, with environmental storytelling playing an important role in maintaining engagement and emotional connection.

This research contributes to both academic studies and practical game development by providing a better understanding of how level design shapes player experiences. It highlights the importance of creating levels that balance challenge, accessibility, and narrative elements in order to improve player satisfaction and create more engaging gameplay experiences for players.

1.0. Introduction

1.1. Project Overview

“Dream Nightmare” is a narrative driven puzzle game where the player plays as a detective with supernatural abilities that allows him to enter through another dimension known as the “dream realm” and see through the world in another perspective to discover secrets, clues, and encounter strange entities in an attempt to discover the secrets behind his abilities and the people who went missing in his town.

The game’s theme and design is made in a 3D low poly design similar to the game “Project Zomboid” and is played through in different perspectives such as top down isometric, fixed camera third-person perspective, and even a first person view based on the level that the player is in.

In the game, the player will have to go through 4 different levels to gather information and clues of the person who went missing at the place before reaching to the last level with all of the clues they have with them to discover the mysteries behind the cases and his own past and abilities, the player will have to interact with NPCs, find clues, and enter through another dimension to find and solve the cases for each levels.

Team Members and Roles

Name	Course	Role
Chua Yi Zheng	GV	Main Programmer, Mechanics Designer, Sound Designer
Khoo Zi Jian	GS	3D Artist/Animator, Technical Artist, UI Designer
Lim Si Kai	GS	2D Artist/Animator, Level Designer, 3D Artist

1.2. Background of the Study

Video game design has evolved from simple mechanics to complex interactive worlds. Level design, in particular, shapes how players perceive difficulty, immersion, and narrative flow. While gameplay mechanics and storytelling are widely studied, the spatial and aesthetic design of levels remains underexplored. According to Institution of Design (2014), player engagement is the key to revenue generation in any game to incorporate essential elements for significant player engagement and level design is considered one of the penultimate elements for player engagement.

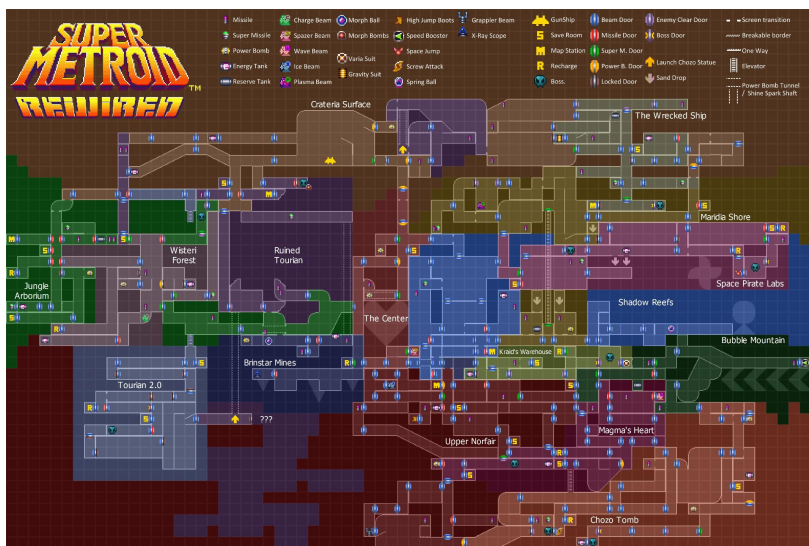
Level design isn't just about creating a start and end for your game, it's also about how your game tells a story and being presented to your players such as having the environment tell a story, giving subtle hints to your players through the level's design, and also making every aspect of the game be interconnected with one and another. It also helps with guiding your player towards a path that you want them to follow in game, in some games good level design can ensure that your player doesn't feel lost with what they need to do in the story but also helps them progress through the game without feeling frustrated.

1.3. Problem Statement

Current literature lacks systematic analysis of how specific level design elements (layout, pacing, environmental cues) influence player experience across genres. This gap limits both academic understanding and industry application. There are many games out there with each having a different genre and playstyle with one and another, and with that comes different ways to design a level for the games as well. Some games or genre such as “Metroidvania” are known to have a very sophisticated level design with areas that requires backtracking and also having subtle foreshadowing appearing throughout the level while some games like “Endless runner” would have a much simple level design since the game mostly loops back the tiles with an addon randomness towards what kind of obstacles might appear in the game. The biggest question is does games that have more simple mechanics make the level design feel less immersive and is it possible to elevate the design more?

Another problem that is presented within a game’s level design is how its environment is made to be immersive to the player experience, when designing a level itself you can’t simply build a level without considering what you want to tell the players, whether it is telling them the story of the game through its environment, or where to go through in the game so they won’t feel lost, a game’s level design must have some of these factors if not the level will feel meaningless.

Metroidvania titles such as *Hollow Knight* (Team Cherry, 2017) and *Super Metroid* (Nintendo, 1994) exemplify how complex level design sustains immersion through interconnected maps, hidden pathways, and foreshadowing. These games encourage backtracking and exploration, which aligns with Csikszentmihalyi's (1990) Flow Theory by balancing challenge and skill. In contrast, endless runners like *Subway Surfers* (Kiloo, 2012) and *Temple Run* (Imangi Studios, 2011) rely on procedural repetition and randomized obstacles. While mechanically simple, these games raise the question of whether minimal design inherently reduces immersion or if environmental cues—such as lighting shifts and sound effects—can elevate engagement. This comparative tension underscores the need to analyze how genre-specific design choices shape player experience.





1.4. Research Objectives

- O1: To analyze how different level design elements influence player immersion and engagement across genres.
- O2: To compare player experiences between complex level designs and simpler designs.
- O3: To investigate how environmental storytelling contributes to player orientation, narrative understanding, and emotional connection.

1.5. Research Question

- Q1: Do games with simpler mechanics (e.g., endless runners) inherently provide less immersive level design compared to complex genres (e.g., Metroidvania)?
- Q2: Can environmental storytelling elements (lighting, sound, foreshadowing, narrative cues) enhance immersion even in mechanically simple games?
- Q3: How do players perceive the balance between guidance (not feeling lost) and freedom (exploration) in level design?

1.6. Significance of Research

This research addresses a clear gap in academic discourse by analyzing how level design elements such as spatial layout, pacing, and environmental storytelling—shape player immersion

and engagement. The findings can help designers in creating levels that balance challenge and accessibility, making sure that players remain engaged without feeling overwhelmed or lost. By demonstrating how immersive level design can enhance player satisfaction, the research provides a framework for studios to develop innovative features that serve as unique selling points.

1.7. Limitations

Immersion and engagement are inherently subjective, influenced by personal preferences, prior gaming history, and emotional states. Conducting controlled experiments across multiple genres requires significant time and resources, which may restrict the scope of the study. Not only that the number of participants may be limited due to resource constraints, reducing the generalizability of findings.

2.0. Literature Review

Level design has long been recognized as a central component of video game development, shaping how players interact with environments, narratives, and challenges. Unlike mechanics or narrative scripts, level design operates as a silent architect of player experience, guiding movement, pacing, and emotional engagement. Scholars have approached this subject from multiple theoretical perspectives, including psychology, ludology, and design studies, yet systematic cross-genre analysis remains limited.

2.1. Theoretical Framework

A good framework that can be used to help understand player immersion is Flow Theory by Csikszentmihalyi (1990). Flow describes the psychological state in which players are fully absorbed in an activity, balancing challenge and skill. Level design plays a crucial role in sustaining this state by structuring progression, difficulty, and reward systems. For instance, Metroidvania games often employ backtracking and foreshadowing to maintain curiosity and challenge, while endless runners rely on procedural repetition to sustain engagement. The contrast between these genres illustrates how pacing and spatial complexity can either deepen or dilute immersion.

Flow Theory (Csikszentmihalyi, 1990) is exemplified in *Ori and the Blind Forest* (Moon Studios, 2015), which sustains flow through escalating platforming challenges and backtracking mechanics. The game's design ensures that players remain in a state of absorption by balancing difficulty with skill progression.

Self-Determination Theory (Ryan & Deci, 2000) is reflected in *The Last of Us* (Naughty Dog, 2013), where autonomy is fostered through exploration, competence through adaptive combat and puzzles, and relatedness through environmental storytelling. Abandoned homes, scattered notes, and visual cues allow players to emotionally connect with the narrative world without explicit dialogue. Jenkins (2004) and Nitsche (2008) argue that such environmental storytelling transforms spaces into narrative devices, a principle vividly demonstrated in these titles.



Next, Self-Determination Theory (SDT) emphasizes the role of autonomy, competence, and relatedness in motivating players (Ryan & Deci, 2000). Level design directly influences these dimensions: autonomy is fostered through non-linear

exploration, competence through adaptive difficulty, and relatedness through environmental storytelling that connects players to the game world. Jenkins (2004) and Nitsche (2008) argue that environmental storytelling—using spatial cues, lighting, and narrative objects—creates meaning beyond dialogue, allowing players to interpret and inhabit the game space as part of the narrative.

Empirical studies further validate these theoretical claims. Brockmyer et al. (2009) developed the Game Engagement Questionnaire, demonstrating that immersion correlates strongly with level complexity and environmental cues. Similarly, Abeele et al. (2016) designed the Player Experience Inventory, offering standardized measures of engagement across genres. Cowley et al. (2014) found that curiosity-driven exploration enhances satisfaction in spatially complex environments, while Denisova et al. (2016) highlighted methodological challenges in measuring immersion, noting inconsistencies across player experience questionnaires. These findings underscore the need for refined methodologies that combine subjective surveys with objective telemetry data.

2.2. Level Design Elements

According to Crudu (2025), Spatial awareness significantly influences how individuals interact within virtual worlds. This skill allows players to navigate complex settings, understand distances, and perceive relationships between objects. When it comes to level design one of the first few things that can affect a player's immersion is the size and scale of the level, often times when a level feel small or linear it can lead to players feeling

claustrophobic or bored due to how much constraint there is in the size of the level, as for levels that are large and open it can cost players to feel lost sometimes and even overwhelmed. It is important to understand how to be able to balance the scale of the level with the player immersion, the scale of the level should also match with the game's mechanic and narrative as well as the genre, sometimes different scenarios in the game's narrative will require the scale of the level to change but it is important to make sure that a level with a large scale will have a way to guide the players so they won't be lost and confused and for levels with a smaller scale will have to ensure that the environment is intentional and serves its purpose.

Spatial awareness is central to immersion, as seen in *Dark Souls* (FromSoftware, 2011), where interconnected pathways and visual landmarks guide players subconsciously through exploration. Lighting and sound are equally critical; *Dead Space* (EA Redwood Shores, 2008) uses dim corridors, ambient noise, and sudden sound cues to heighten tension and direct player attention. Challenges and rewards are exemplified in *SteamWorld Dig 2* (Image & Form, 2017), which balances adaptive challenges with satisfying upgrades, motivating continued exploration. Flow and pacing are maintained in *Uncharted 4: A Thief's End* (Naughty Dog, 2016), where intense combat sequences alternate with calm exploration and narrative-driven cutscenes, ensuring rhythm and immersion are preserved. These examples demonstrate how spatial layout, sensory design, and pacing collectively shape player engagement.

Another element in a level design that should be considered is the lighting and sound, lighting sets the tone and directs attention while soundscapes like ambient sounds and music cues deepen

immersion and emotional impact (Dave, 2025). Lighting and sound can help set the mood for a level, oftentimes it can be used to make an environment feel relaxing with the proper lighting and ambient music and also making the environment feel harsh or intense as well. Not only that, lighting and sound can make a game's environment and its level design look visually more appealing for players and make them feel immersed and wanting to keep playing the game, it can also be used to help guide players by using sound cues to direct players to an area or using lighting to highlight key areas for the players.

Creating engaging experiences requires a careful mix of difficulty and ease of access (Crudu, 2025). Challenges and rewards in a game can help provide motivation, feedback, and progression to the player, a level that has inappropriate or unclear challenges and unfair reward can make the player feel cheated, that is why it is important to create challenges in your level that can adapt to the players skill level, guiding them when it is needed to by using any creative methods while also making sure that the rewards that are given feel fair to the players.

According to Crudu (2025), flow and pacing plays a crucial role in keeping players feel engaged to ensure smooth transitions and maintain player interest. When playing a game and its levels a rhythm can be disrupted which causes player immersion to be broken which is why it is important to make sure that the flow the player goes through in a game follows with their current skill and progression in the game.

3.0. Methodology

3.1. Research Design

This research uses a mixed-method approach by combining development observation and player questionnaires to study how level design affects player immersion, engagement, and overall experience.

The study is divided into two main parts. The first part focuses on observing the development process of the game itself. During development, different level design elements such as environment layout, lighting, pacing, environmental storytelling, and player navigation are observed and documented. This helps the researchers understand how these design choices are implemented and how they are intended to influence the player's experience.

The second part involves player testing. Players will play several sections of the game and then answer a questionnaire about their experience. Their feedback will be used to evaluate how effective the level design is in creating immersion, emotional connection, and engagement. By combining observations from development with direct player feedback, the research can gain a better understanding of how level design impacts gameplay experience.

3.2. Data Collection Method

Development Observation

One of the collection methods that would be used will be having an ongoing observation during the development of the game “Dream Nightmare”. As the game progresses through its development, notes and comments will be taken down through what its implemented into the game’s level design and how effective it is through playtesting it during the development process.

This method of observation helps provide insight into the development process and design choices made by the developer and to see how effective it is in making sure the game’s level design manages to convey its purpose to players and to help researchers to reflect and identify the pros and cons of the development process.

Player Questionnaire

Questionnaires will be designed and distributed to gather feedback from the average players to see what are their thoughts on the games that they have played before and what are their thoughts on the games level design that they have played. The questionnaire will be using a survey made in google to gather information on the person’s background on what games they have played regularly, their thoughts on the level design for the games that they have played, and suggestions they might have. These questions will be used to help compare each participant's thoughts and whether or not the outcome matches with the expected outcome of the their answers.

3.3. Sampling Techniques

This study uses purposive sampling, where participants are selected based on their gaming experience and familiarity with video games. The participants will mainly consist of university students and gamers with different levels of experience, including both casual and experienced players.

Around 15 to 20 participants are expected to take part in the study depending on the available time and resources. This sampling method is chosen because players who are familiar with games are more likely to provide useful feedback regarding level design, immersion, and gameplay experience.

3.4. Data and Analysis Methods

The collected data will be analyzed using both quantitative and qualitative methods.

Quantitative Analysis

The responses from the close-ended questionnaire questions will be analyzed using simple statistical methods such as averages, percentages, and mean scores. This will help identify overall player opinions regarding immersion, engagement, and level design quality.

Qualitative Analysis

The open-ended questionnaire responses and development observations will be analyzed using thematic analysis. The researchers will identify common patterns, opinions, and recurring themes from the participants' feedback.

By combining both quantitative and qualitative analysis, the research can provide a more complete understanding of how level design affects player experience.

3.5. Ethical Considerations

Before participating in the study, all participants will be informed about the purpose of the research and how the collected data will be used. Participation will be completely voluntary, and participants can choose to stop participating at any time if they wish.

All questionnaire responses and participant information will remain confidential and will only be used for academic purposes. No personal information will be shared in the final research findings.

In addition, the game prototype used during testing will be designed to avoid harmful or offensive content that may negatively affect participants during gameplay.

3.6. Survey Questions

Section A: Demographic

1. Age
 - Below 18
 - 18 - 21
 - 22 - 25
 - 26 - 30
 - Above 30
2. Gender
 - Male

- Female
 - Prefer not to say
3. How often do you play video games?
- Daily
 - Several times a week
 - Once a week
 - Occasionally
 - Rarely
4. Which genres do you play the most? (can choose more than one)
- Action
 - Adventure
 - Puzzle
 - Horror
 - RPG
 - Metroidvania
 - Endless Runner
 - Shooter
 - Simulation
 - Other
5. How many years of gaming experience do you have?
- Less than 1 year
 - 1 - 3 years
 - 4 - 6 years
 - 7 - 10 years
 - More than 10 years

Section B: Level Design, Immersion, and Engagement
(scales from 1 to 5)

1. Good level design helps increase my immersion in a game.

2. Balancing challenge and player skill can affect immersion in a game's level design.
3. Level layout affects how enjoyable a game feels.
4. The pacing of a level influences my motivation to continue playing.
5. Visual design and atmosphere in a level contributes to my immersion in a game.
6. Environmental details such as lighting, sound, and props improve my gameplay experience.
7. Interactive environments make games feel more immersive.
8. Good navigation design helps prevent frustration while playing.
9. Exploration opportunities increase my enjoyment of a game.

Section C: Simple vs Complex Level Design (scales from 1 to 5)

1. Games with simple mechanics can still provide strong immersion through level design.
2. Exploration and backtracking make games more engaging.
3. Linear levels are easier to follow but may feel less immersive.
4. Open or interconnected levels encourage curiosity and exploration.
5. Repetitive level structures reduce player engagement.
6. I prefer games that have...
 - Simple and straightforward level design
 - Complex and interconnected level design
 - A balance between both
 - No preference
7. Which type of level design feels most immersive to you?
 - Linear guided levels

- Semi - open exploration levels
- Fully open levels
- Depends on the game genre

Section D: Environmental Storytelling and Player Guidance (scales from 1 to 5)

1. Environmental storytelling improves my understanding of a game's narrative.
2. Visual cues within a level help me understand where to go.
3. Environmental storytelling can communicate story without dialogue or cutscenes.
4. Atmosphere and environmental details create emotional connection with the game world.
5. Subtle hints and foreshadowing increase my curiosity while exploring.
6. I prefer games that guide players naturally through the environment rather than direct instructions.
7. Too much freedom in exploration can make players feel lost.
8. Too much guidance can reduce immersion and exploration.
9. Environmental storytelling makes even simple gameplay feel more engaging.

Section E: Open - Ended Questions (optional)

1. In your opinion, what makes a game level immersive?
2. Describe a game with level design that you enjoyed. What made it memorable?
3. Do you prefer simple or complex level designs? Why?
4. What environmental elements (lighting, sound, layout, atmosphere, objects, etc.) affect your immersion the most?
5. Have you ever felt lost or frustrated because of a game's level design? Explain.
6. How important is environmental storytelling in your gameplay experience?

4.0. Design & Implementation

4.1. Game Overview

The development of the game “Dream Nightmare” was developed by 3 students in the span of 21 weeks, the game primarily focuses on detective work, finding clues that will help solve the mysteries behind the missing people cases in the town while using the ability to shift through another dimension to find hidden areas and facing unknown entities as well.

4.1.1. Game Story

In the game, you will play as a detective named Krin with the ability to shift through another dimension known as the Spirit Dimension which shares similarities with the real world but being dark and ominous with unknown entities lurking around. To find out the truth behind your abilities and your past, you discover a few leads that may help you figure the secrets behind your powers, 3 different cases each being related to people missing in the town, although it may seem like they are not connected with each other, they are somehow connected to one another and with each of them having subtle clues leading to the secret behind this town and your powers.

4.1.2. Game Mechanics

Dimension Shifting Mechanic

The game’s mechanic is having the ability to go through another dimension known as the Spirit Dimension, in this dimension the world is dark and ominous with things being slightly different from the real world. Players will be able to enter certain

hidden areas in this dimension and even find clues that can help guide them through the level if they ever felt lost, however there are some consequences when entering this other dimension such as unknown ghost like entities lurking around the dimension that will attack the player if they get close and they can only stay in this dimension for a certain amount of time until their spirit stamina runs out which causes them to return back to the normal world.

Enemies

There will be enemies appearing in the game when the player enters the Spirit Dimension, these enemies are fast and if they are close to the player they will attack the player and cause them to return back to the normal dimension. These ghost like entities can only be defeated if the player crafts the required holy item to banish them away, banishing enemies can even cause some events in the real world to trigger or even in the Spirit Dimension as well.

Items and Crafting

Throughout the game's level, there will be items that the players can pick up and craft into holy items in order to use it to banish the enemy, items will be scattered around the level and can be found through unlocking locked areas or going through the Spirit Dimension to find it. Holy items can only be crafted with the right items and they can be crafted on the crafting table located somewhere in the level.

Npc Interaction

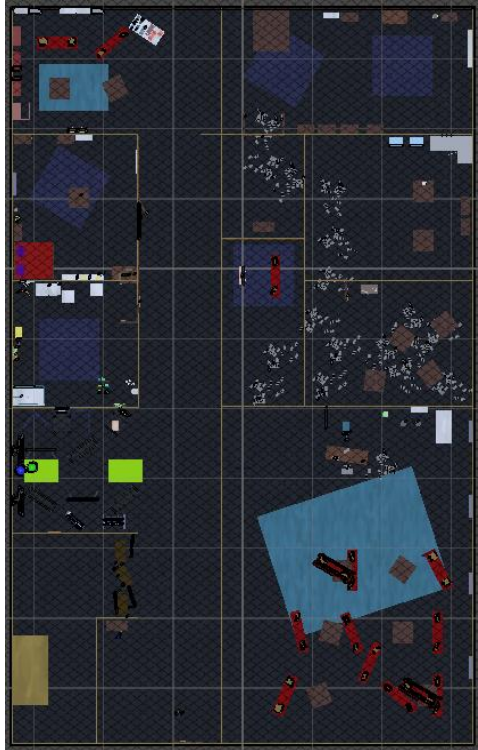
In certain levels of the game the player may encounter some NPCs in the game which they can interact with, some of these Npc can give the player hints into figuring out what to do next in the game and some of them are required to interact with to gain access to locked areas and information on the story progression.

4.1.3. Level Design

The game consists of 4 different level, 3 levels being related to the missing people cases which are the apartment, warehouse, and hotel which the player has to go through first before heading toward the final level which is the police station where the player gathers every information that they need in the previous levels and finally confronts the final level to reach the ending.

Level 1 Apartment

The first level is made to help the players get used with the controls and mechanics of the game with the objective being getting a diary in a hidden room in the level. The first level is where the player starts off, which consists of two floors, the ground floor and the 1st floor. The first floor starts off with a gym area that is messy and scattered, followed with a bath room and a bed room which cannot be entered only if the player enters through the Spirit Dimension. The ground floor seems messy and scattered to show that the place is abandoned and mysterious as if something ominous happened in the building before it was abandoned. The ground floor also have another hidden area that can only be revealed when the player enter the Spirit Dimension but it is guarded by an enemy in front of it which the player has to figure out a way to maneuver the ghost away in order to enter the hidden area where the first crafting table and some items can be found. The first floor will be unlocked once the player manages to banish the ghost away which causes the barricade to disappear in front of the stairs leading to the next floor.



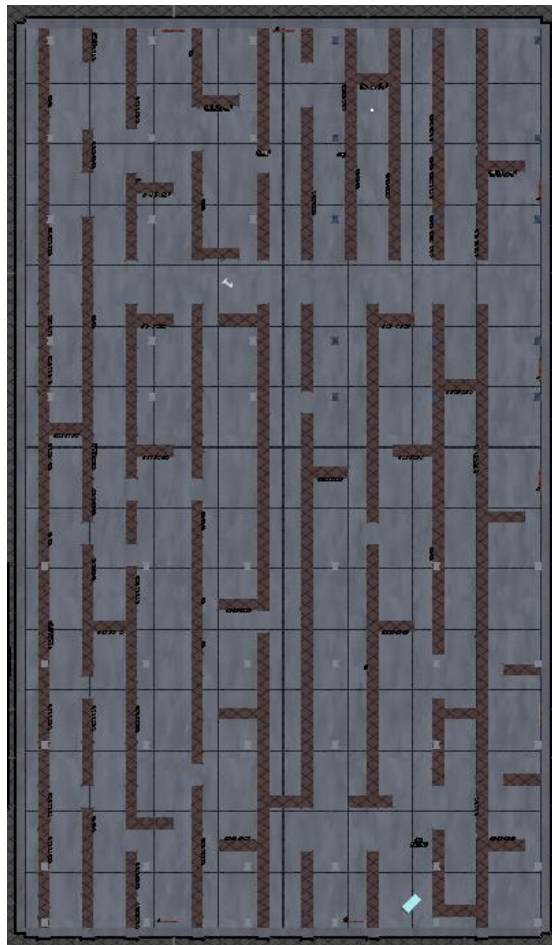
The next floor consists of a kitchen and two bedrooms and two secret areas which the player has to figure out a way to get to. One of the bedrooms will have a secret entrance leading to a ritual room with an item that the player needs to use it to craft the holy item and use it to banish the enemy in that level and reveal a secret room with a diary that has the information that they need to leave the level.



Level 2 Warehouse

The warehouse level is the next area that the player will investigate next which consists of 3 sections which are the entrance, the office, and the maze. The objective for this level is to gather clues that was left on the site of the level. The level is played in a first person mode which makes the maze area more challenging to traverse through as some walls require the player to enter the Spirit Dimension to get past. The level starts off at the entrance where the player will enter the office to find clues related to the investigation but eventually find themselves in a maze when they try to return back to the entrance. The main clue items will be scattered around the maze which the player have to find as well as the items that they need to craft in order to banish the enemy in this level.





Level 3 Hotel

The third level consists of multiple sections and is considered one of the biggest level in the game, it consists of a ground floor for the hotel, 10 floors of rooms, one rooftop, and 4 cursed floors. The objective for this level is to get to the rooftop, the rooftop is inaccessible through the elevator and it can only be accessed by entering a sequence of numbers in the elevator. The ground floor is where the player starts off with where they are NPCs around the lobby that the player can interact with to gather information on the hotel and clues on how to find the code to the elevator.

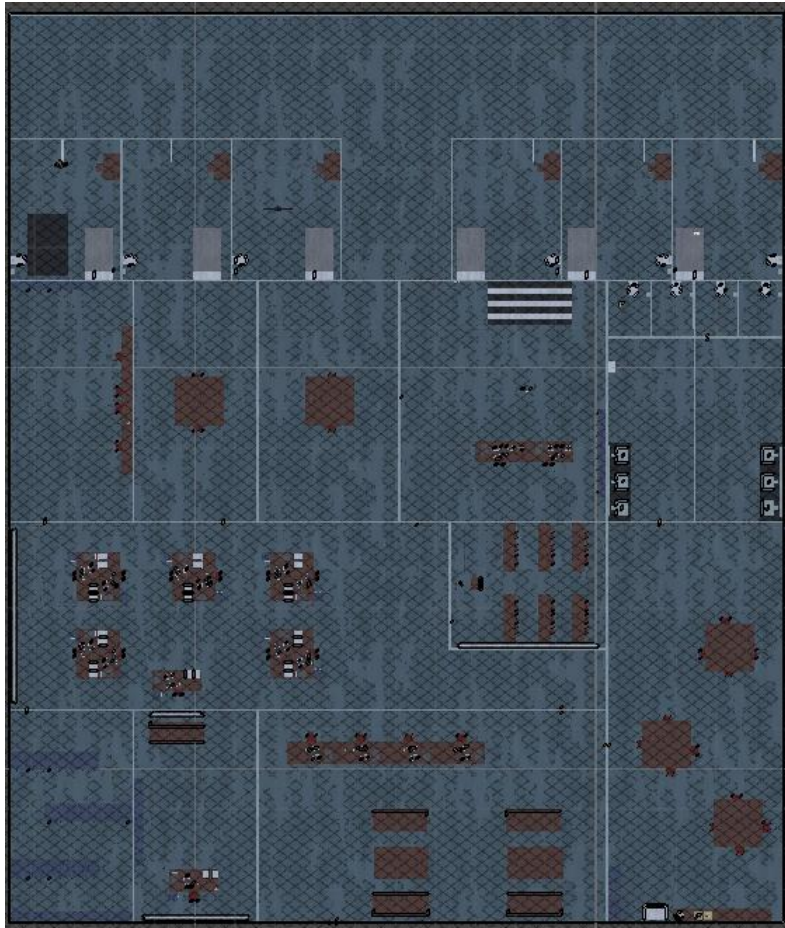


The player can enter all 10 room floors using the elevator and find a room containing the code that they need to enter the cursed floor, clues to find the codes can be found by talking to some of the Npc on the ground floor. Entering the correct sequence in the elevator will bring the player to a cursed floor where the player will have to find all of the cursed rooms in order to get one of the code needed to get to the rooftop.



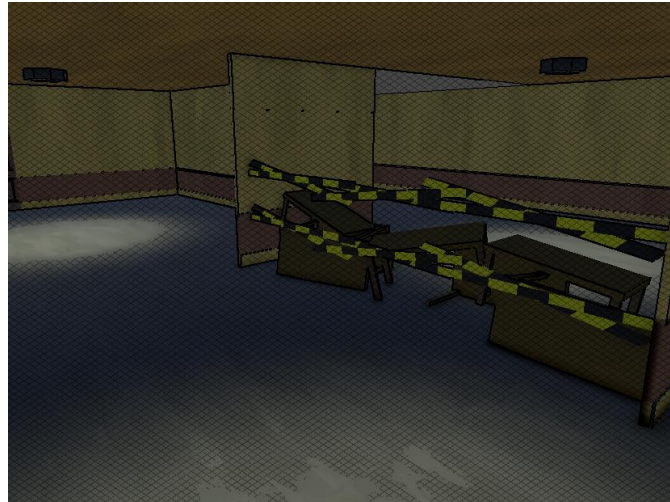
Floor 4 Police Station

The police station will be the final level for the game where the player will reach once they finish the 3 previous levels and get to this level for the ending. The level consists of sections one which is the police station and the other is the basement where the player will be for the ending. The final level will have NPCs that the player can interact with to gather information on how to get to the cells leading to the basement while also finding holy items to trigger the ending of the game.



4.1.4. Game Flow

Level 1



The first level starts off with the player at the entrance of the apartment building, the stairs towards the second level is barricaded and can only be accessed once the player banishes the enemy on the first floor.



First item that you will need to collect will be rope which is located next to the washing machine of the first room.



The next item will be the bottle which is located inside of the barricaded bed room which will require the player to transition into the Spirit Dimension to enter the room and pick up the item.



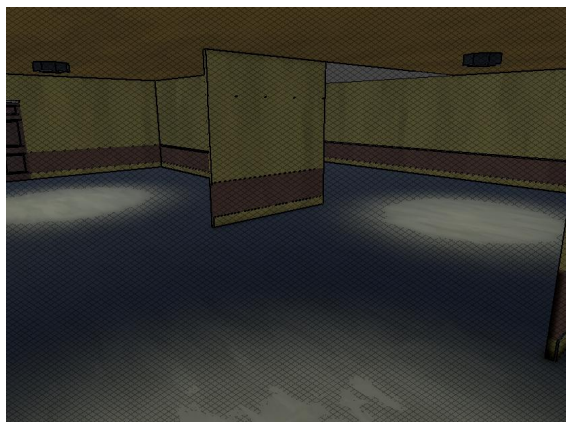
After this you would need to find a hidden wall by transitioning to the Spirit Dimension inside the room filled with sofas and tables.



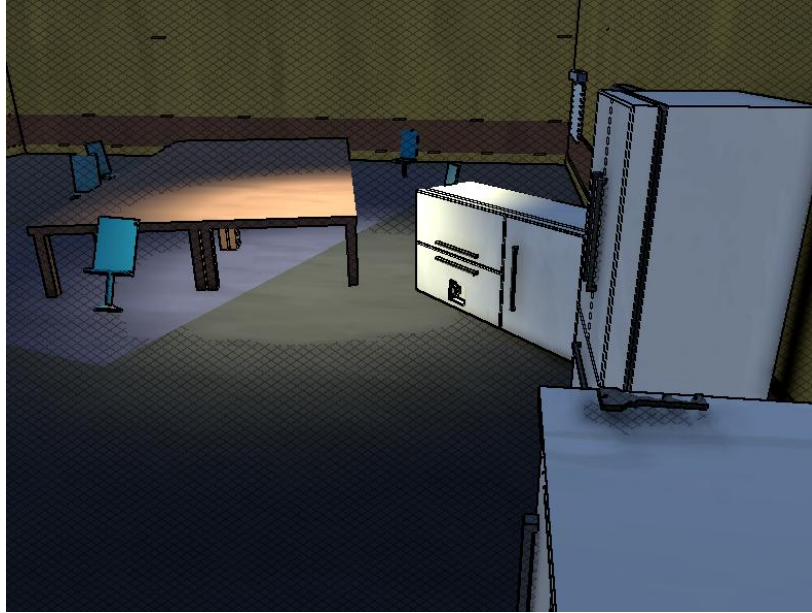
Next you will need to head over to the crafting bench and combine the bottle and the rope to create a holy bottle to banish the enemy.



The room close to the crafting table will have a paper that the player would need to grab to craft the next item.



After banishing the enemy the path towards the second floor will be opened.



On the second floor there will be a key located on top of the corner of the sink in the dining area where an enemy will be close by.



The key can be used to open the door to the next section of the second floor.



There will be a room in the next section where the player will need to switch to the Spirit Dimension to reveal a hidden area.



Through the hidden area there will be a path leading to a ritual room where the next crafting component will be a candle located on the top of the table.



Once the player used both items to create the holy talisman they can use it to banish the enemy on the second floor and reveal a hidden room which requires the player to transition to the Spirit Dimension to access it. A diary will be able to be collected from that room and the player can then proceed to the main entrance to finish the level and head on to the next level.

Level 2



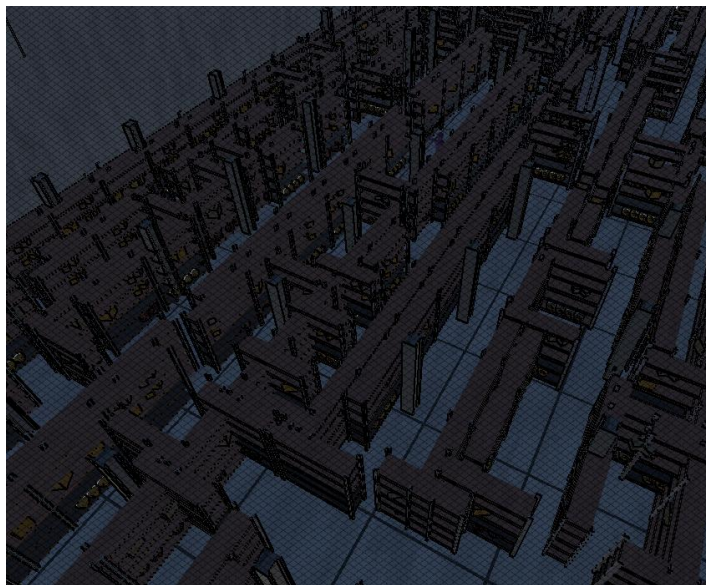
Once on the warehouse level, you will spawn inside the entrance of the warehouse and the first door that you will head to will be the wooden door in front of you which will lead you to the office.



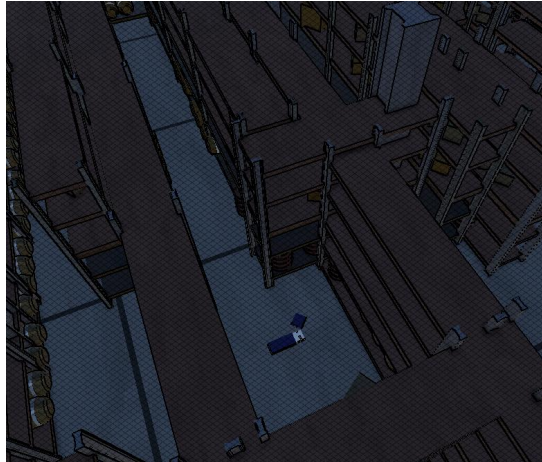
Inside the office the first evidence that you will collect will be the poster located on the meeting table.



Upon collecting the evidence you will enter this door which was supposed to lead back to the entrance but instead you will be transported into the warehouse maze where you will have to find the rest of the evidence and collect items to craft the holy item as well.



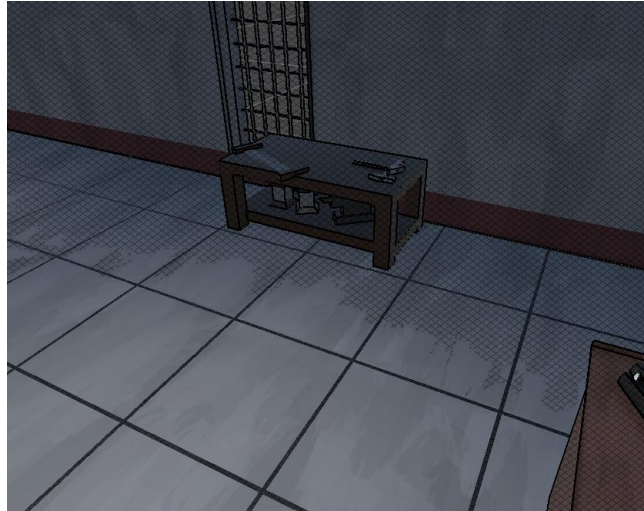
The maze will be different between both dimensions, some shelves will appear while some will disappear.



The two pieces of evidence which are the USB and the phone are located in these two separate locations within the maze.



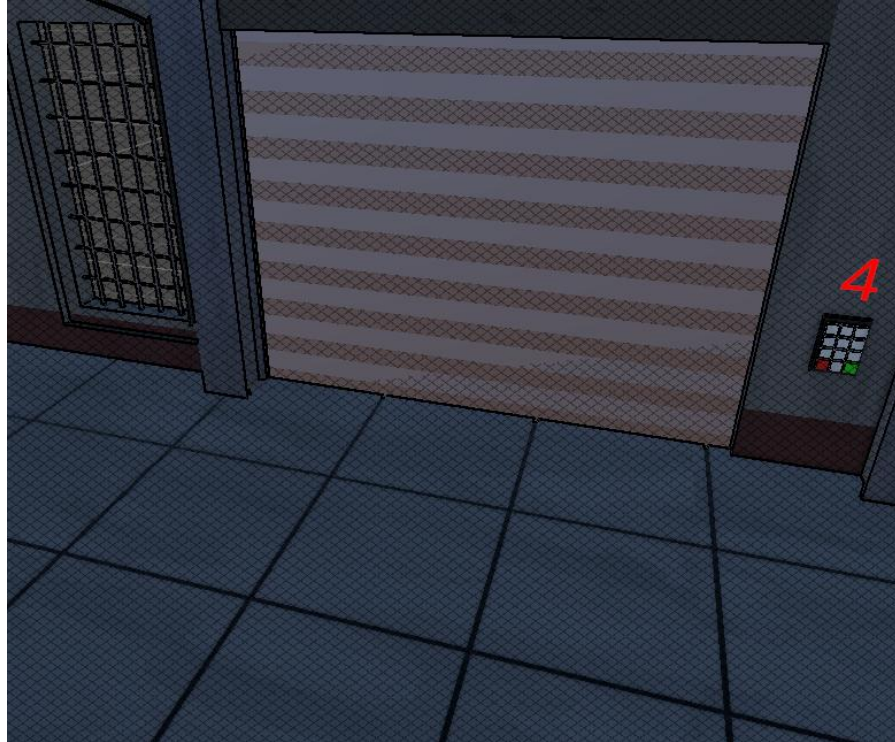
As for the two items that need to be collected to craft the holy water, they are both located within the maze separated from each other as well.



After collecting all of the items the player would need to return to the office by finding a door within the maze, returning back to the office they can then craft the holy item at the crafting table located in the office.



The player will also need to insert the USB that they found in this monitor to reveal a cutscene showcasing a man walking around the maze. They will then return back to the maze and banish the enemy and enter the door again to return back to the entrance.

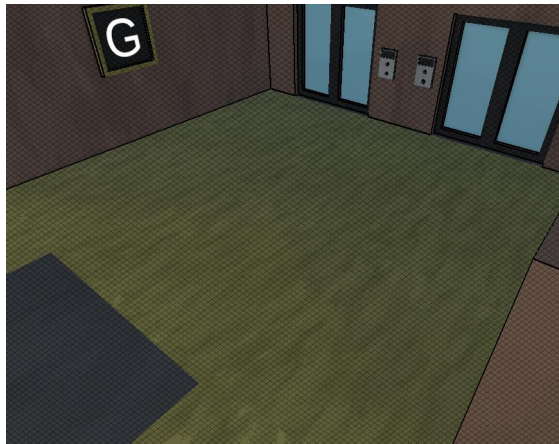


They can then head over to the entrance and key in the code within the keypad using the code after gathering all of the evidence, the code for the keypad is 2174 which opens the garage door and thus ending the level.

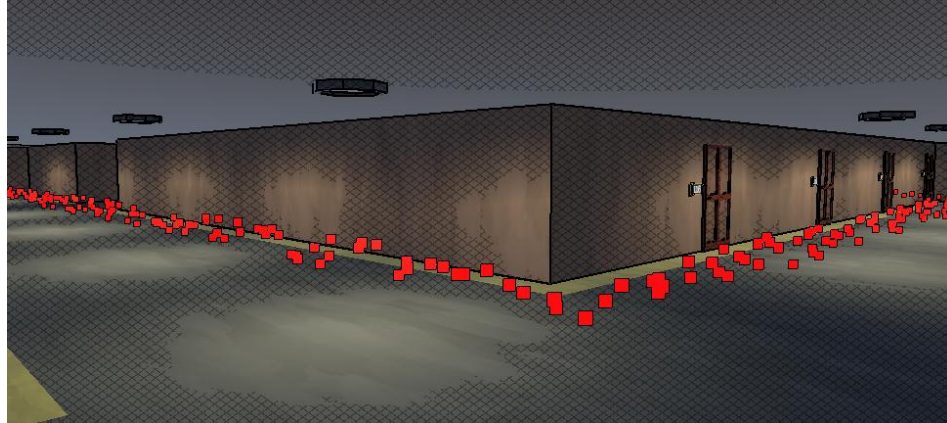
Level 3



At the start of level the player will spawn at the ground floor of the hotel where their first task is to talk to the NPC's around the lobby. There will be 4 main NPCs that will give the player clues on where to go in the level, these 4 NPCs can be found easily if the player transitions into the Spirit Dimension which will reveal an aura around them indicating that they are the ones that will give you the clues.



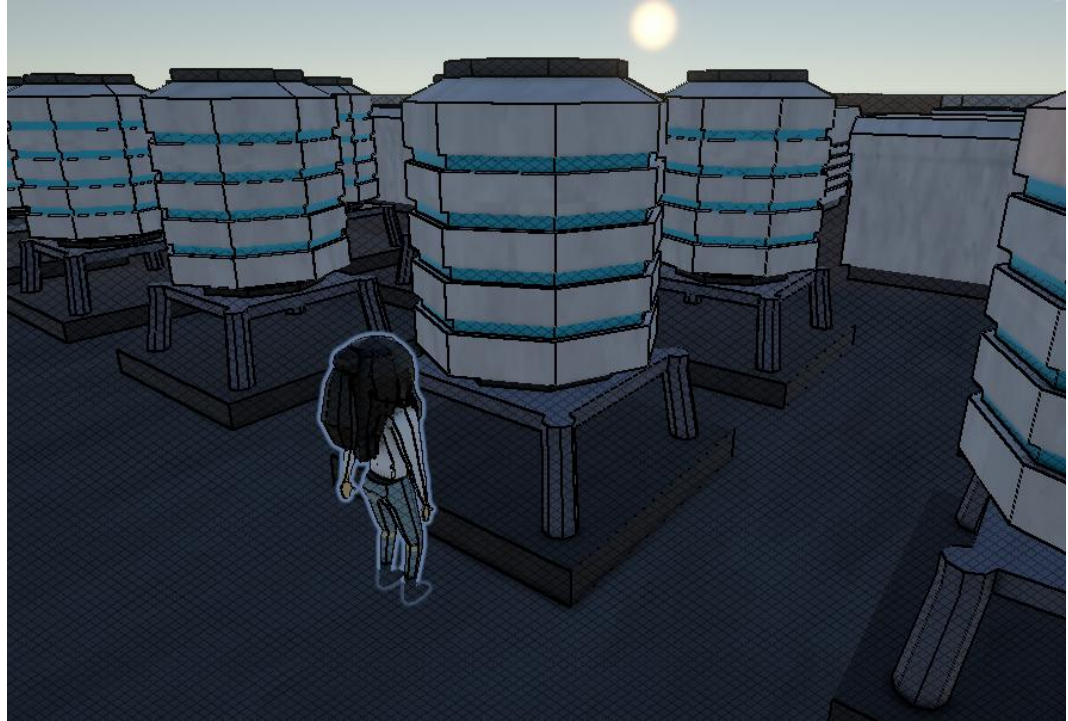
Once the player finishes talking to the NPCs they can then proceed to speak with the receptionist to gain access to the elevator. There are a total of 10 floors filled with rooms in the hotel, 1 ground floor and 1 rooftop which is where the player will need to head over to.



The player is required to find 4 cursed codes which will lead them to a curse floor each, in order to find them the player would have to find a door with an aura around them and enter the room, the code will be shown on one of the walls in the room. The cursed rooms are room 118, 404, 511, 1031.



Once the player found one of the codes, they can proceed to enter the codes in sequence in the elevator. The first code would be 6769, and the rest are 8165, 2.7.10.5, 10.6.10.9, once the code is entered in sequence in the elevator the player will be transported to a curse floor where the reality is shifted making it possible for the enemies to even spawn in the real world. The players will need to find all of the cursed doors and interact with them with each floor having a different amount, after going through all of them for each cursed floor the player can then gain access to the rooftop. The code to the rooftop is 9415.



After reaching the rooftop the player can then proceed to interact with the NPC located behind one of the water tanks, she will then talk to the player and thus ending the level after finishing the conversation.

Level 4



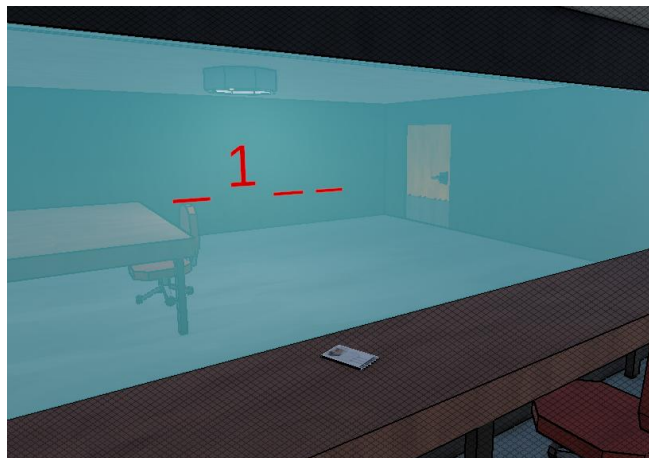
The level starts off with the player spawning inside of the police station, they will be given one of the codes to the prison which will be 7 and they will be required to find the rest of the code and also collect holy items for the basement.



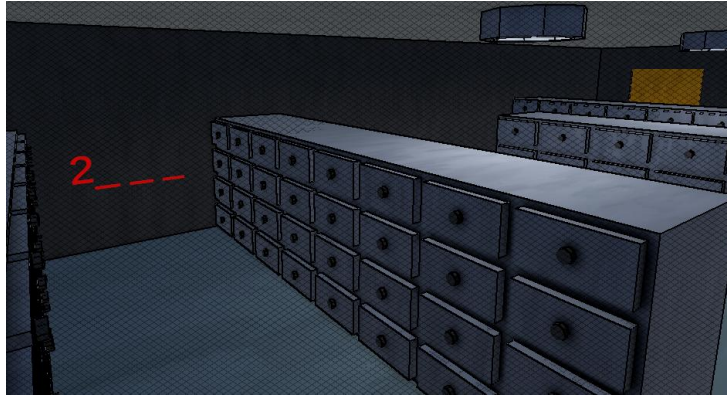
The player must first get the key to the captain's room which will be located on the table at the entrance of the police station.



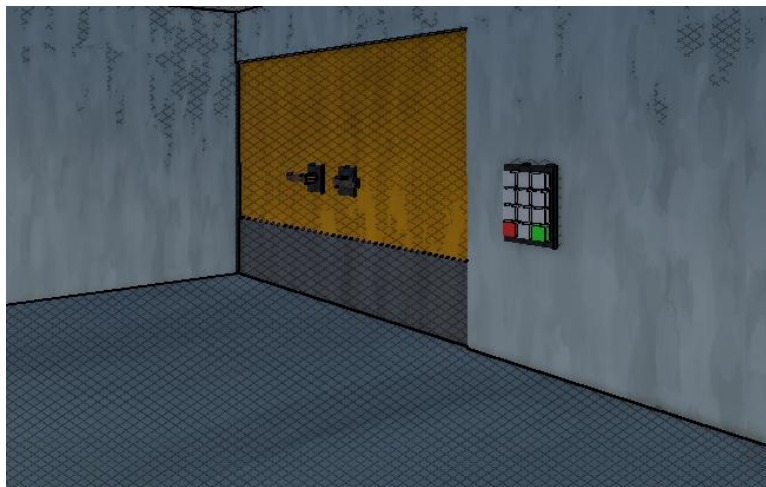
The player can then proceed to the captain's room which they can then speak to the captain to get the last code for the cell which will be 4. They can also pick up the ID card on the table to gain access to the confession room.



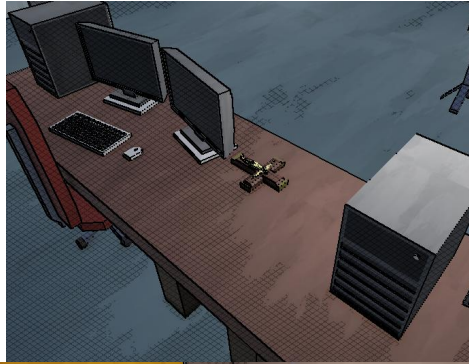
Inside the confession room the player can get the second code to the cell which is one by switching to the Spirit Dimension and revealing the code. They can then get the ID card to gain access to the evidence room.



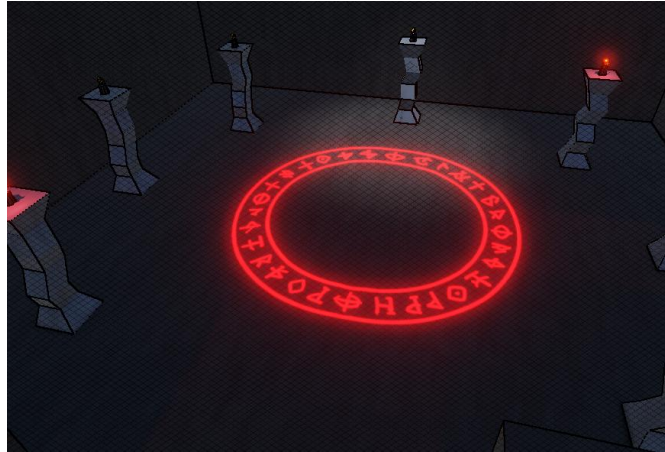
The evidence room is where the final code to the cell will be located which the player will need to transition into the Spirit Dimension to reveal the code on the wall showing the first number to the code which is 2.



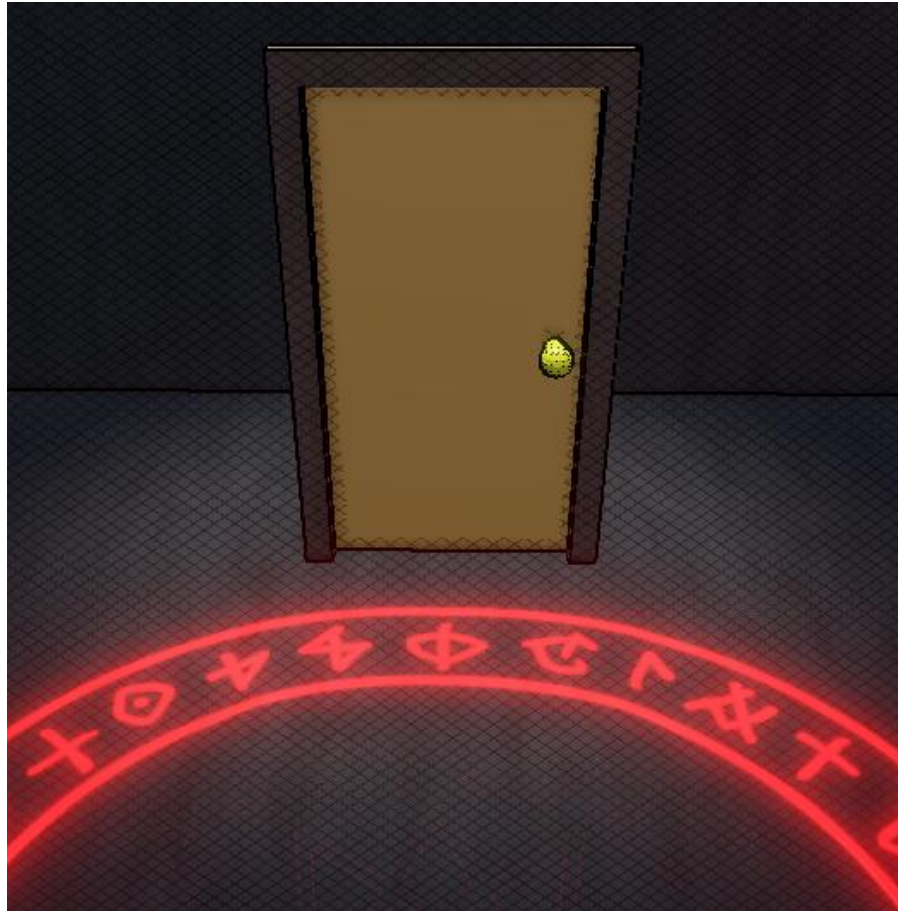
After getting the code to the cell which is 2174, the player can then proceed to the cell and enter the code onto the keypad to enter the jail cell area.



The player can then proceed to gather all four holy items scattered around the police station, the items includes a holy cross, holy water, holy talisman, and a holy bead.



The player can finally enter the basement located at the far right of the prison cell by transition into the Spirit Dimension as well. Inside of the basement the player is required to place each holy items on the correct candle stand.



After all of that and interacting with the altar with the holy bead, a door will appear which the player can interact with, thus showing a cutscene and ending the game.

4.2. Results of Development

4.2.1. Game Development Result

Spatial Layout and Navigation

The spatial design of *Dream Nightmare* was central to shaping player immersion. Each level was constructed to emphasize exploration and orientation through environmental cues. In the apartment level, interconnected rooms and hidden areas accessible only through the Spirit Dimension encouraged players to investigate thoroughly and rewarded curiosity. The warehouse maze heightened disorientation by adopting a first-person perspective, requiring players to rely on exploration and problem-solving to progress. The hotel level expanded this concept further by introducing verticality, with multiple floors and cursed areas that demanded backtracking and decoding environmental hints. These design choices ensured navigation was both challenging and intuitive, sustaining immersion through spatial complexity.

Lighting and Sound

Lighting and sound were deliberately integrated as narrative and guidance tools. In the Spirit Dimension, dim corridors, ambient noise, and sudden cues heightened tension and directed player attention. Shifts in lighting highlighted key areas, while sound effects guided players toward objectives or signaled danger. This sensory design reinforced immersion and emotional impact, making environments feel alive and purposeful. By embedding lighting and sound into the level design, the game created atmospheres that were not only visually appealing but also meaningful to progression.

Environmental Storytelling

Environmental storytelling played a crucial role in conveying narrative meaning without relying on dialogue. Abandoned apartments, scattered objects, and cursed hotel floors communicated mystery and history, while NPC interactions provided subtle hints that deepened the connection between players and the game world. This approach allowed players to interpret the environment as part of the story, enhancing emotional engagement and creating a sense of relatedness with the narrative. The design demonstrated how spaces could function as narrative devices, enabling players to uncover meaning through exploration.

5.0. Interpretation / Discussion

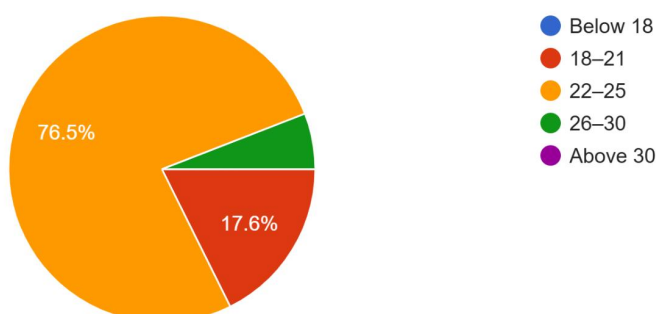
5.1. Survey Result

The survey managed to gather a total of 17 responses which is around the targeted amount for the methodology for this thesis, results and statistics for the survey is shown below.

Section A: Demographic

Age

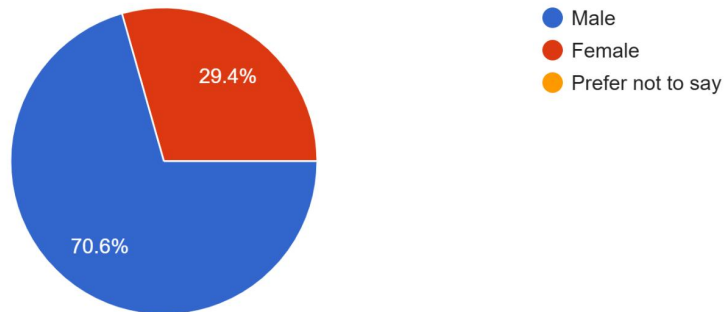
17 responses



Within 17 of the participants, the majority of the participants were aged between 22-25 years old which was 13 participants taking up 76.5% of the participants. 3 out of 17 of the participants were aged between 18 - 21 which was 17.6% of the participants while only 1 of the participants was shown to be aged between 26 - 30 years old which was 5.9% of the participants.

Gender

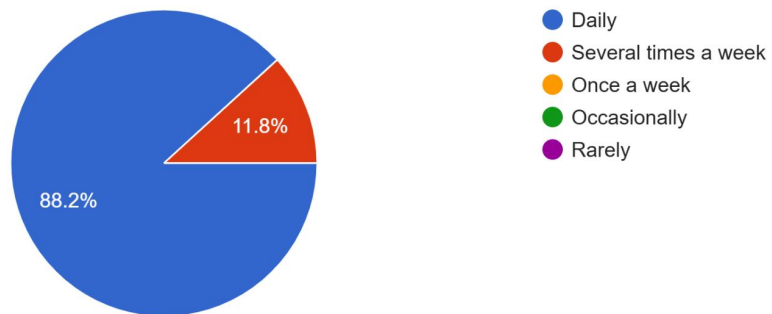
17 responses



As for the gender 12 out of 17 of the participants were male which was 70.6% of the participants while 5 out of 17 of the participants were female which was 29.4% of participants.

How often do you play video games?

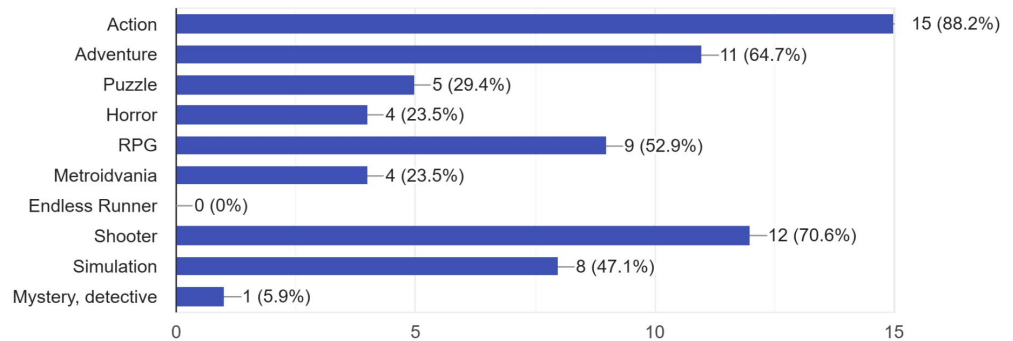
17 responses



The statistics for how often the participants play video games was shown to have a majority of the participants play games on a daily basis which were 88.2% while the rest of the 11.8% of the participants play games several times a week.

Which genres do you play the most? (can choose more than one)

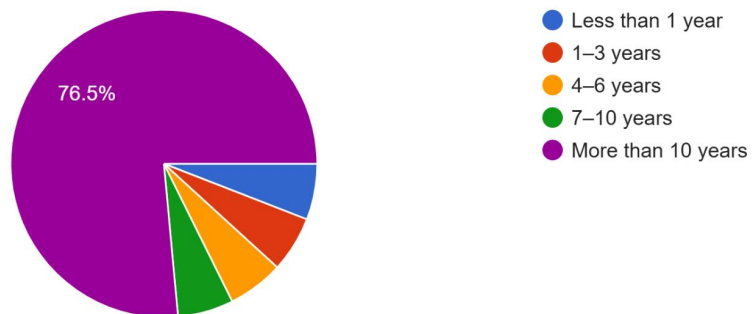
17 responses



For the genre of games that were played the most, action games were shown to have a favorable amount which was 88.2% of the participants, Shooter games were the second most played genre which were 70.6%, while the third most played genre were Adventure games with a total of 64.7% of participants. Next genre is RPG with 52.9 %, Simulation with 47.1%, Puzzle games with 29.4%, Metroidvania and Horror having the same 23.5%, and lastly Mystery/Detective genre with 5.9%.

How many years of gaming experience do you have?

17 responses

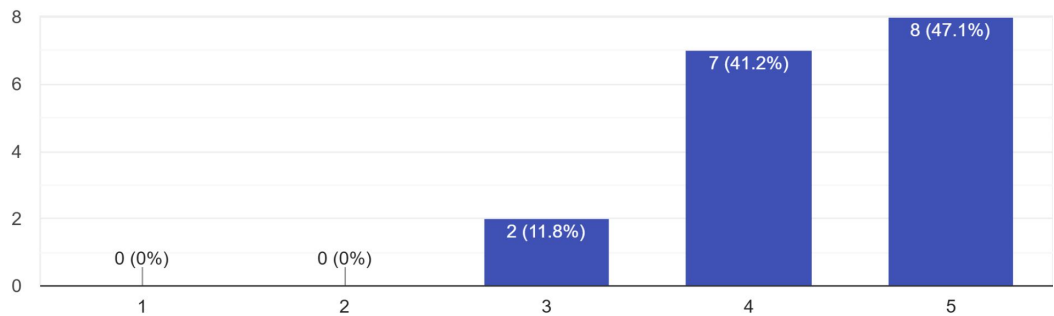


The last part of the demographic section was seeing how many years of experience participants have in playing games; the majority of the participants was shown to have more than 10 years

of experience, which was 76.5% while the rest had 5.9% for each remaining category.

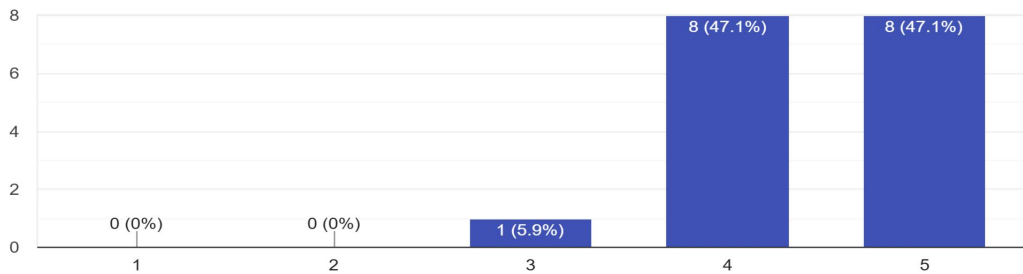
Section B: Level Design, Immersion, and Engagement

Good level design helps increases my immersion in a game.
17 responses



The statistics shows that the majority of participants strongly agree that good level design can help increase immersion for players in a game with a total of 47.1% and 41.2% of participants agreeing also. As for the rest, 11.6% respectively stay neutral with the decision.

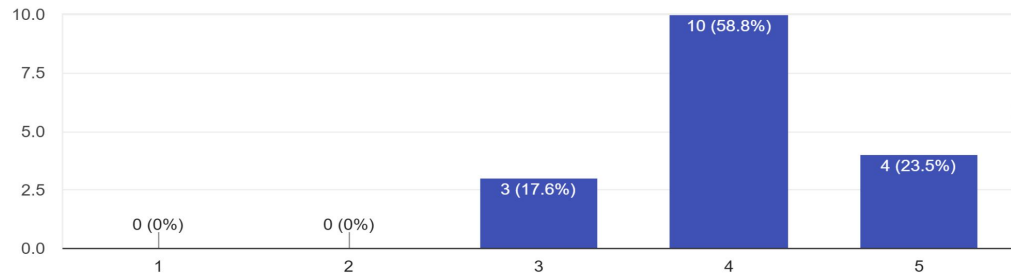
Balancing challenge and player skill can affect immersion in a game's level design.
17 responses



Participants that agree and strongly agree with balancing challenge and player skill can affect immersion in a game’s level design were both 47.1% separately while the remaining 5.9% stayed neutral with their decision.

Level layout affects how enjoyable a game feels.

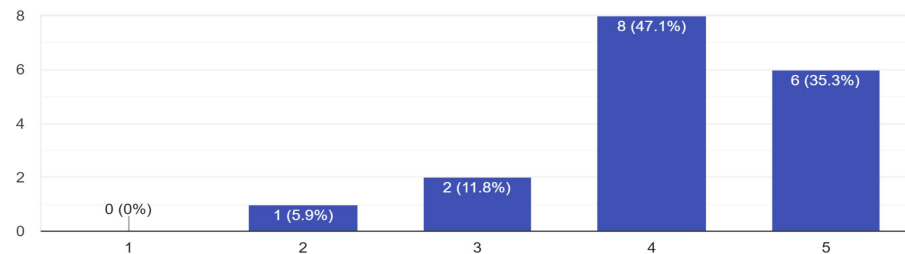
17 responses



When it comes to how level layout can affect how enjoyable a game feels, 58% of participants agree with the statement while 23.5% strongly agree with the statement that level layout affects how enjoyable a game feels. The remaining 17.6% stayed neutral with the decision.

The pacing of a level influences my motivation to continue playing.

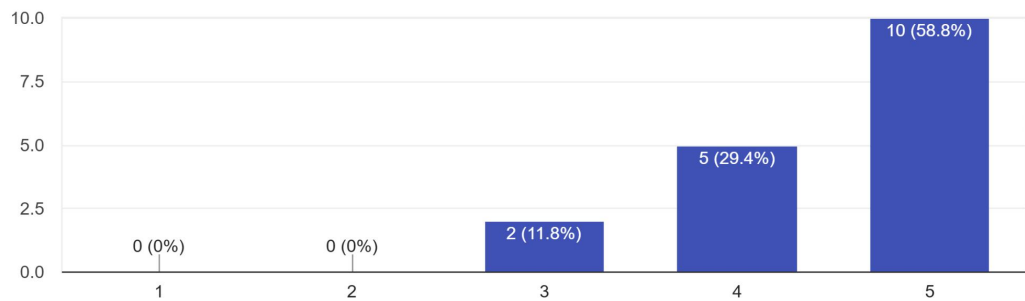
17 responses



Pacing of a level can influence players motivation to continue playing a game which 35.3% of the participants strongly agree and 47.1% agree with the statement, however there is a 5.9% of participants disagree with the statement while 11.8% stayed neutral.

Visual design and atmosphere in a level contribute to my immersion in a game.

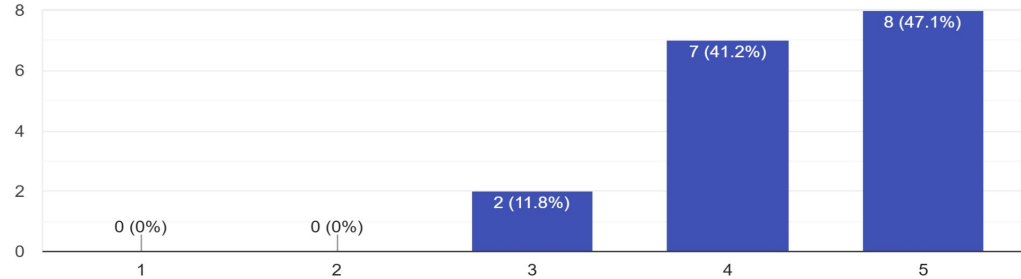
17 responses



Out of 58.8% of the participants strictly agree that visual design and atmosphere in a level can contribute to a player's immersion in a game while also having 29.4% of participants agreeing as well, 11.8% of participants stayed neutral.

Environmental details such as lighting, sound, and props improve my gameplay experience.

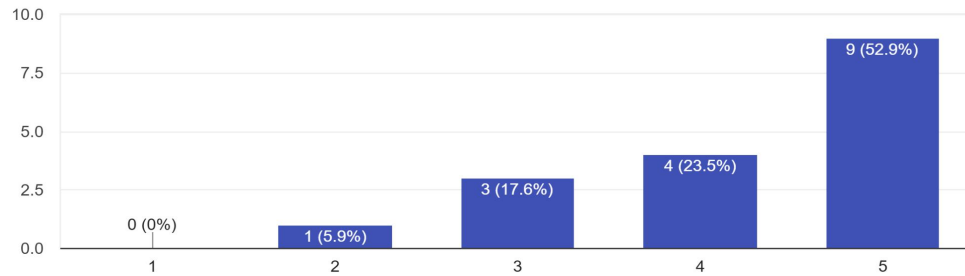
17 responses



There were 11.8% of participants remaining neutral when asked whether environment details such as lighting, sound, and props improve gameplay experience. As for the remaining participants, 41.2% agree with the statement while 47.1% of participants strongly agree with it.

Interactive environments make games feel more immersive.

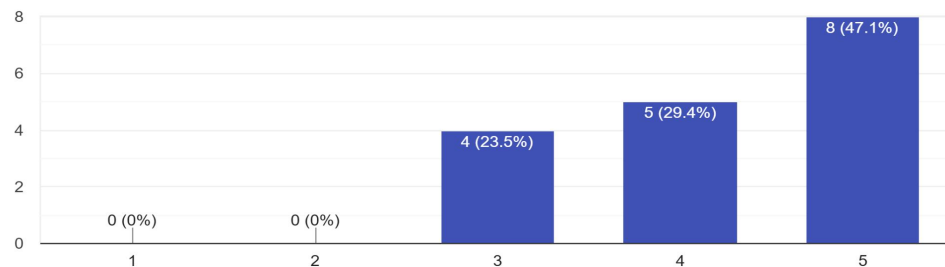
17 responses



Interactive environments can make a game feel more immersive, however there was a 5.9% of participants that disagree with it and 17.5% of participants stayed neutral with their decision. As for the rest of participants, 23.5% agree and 52.9% strongly agree that interactive environments make games feel more immersive.

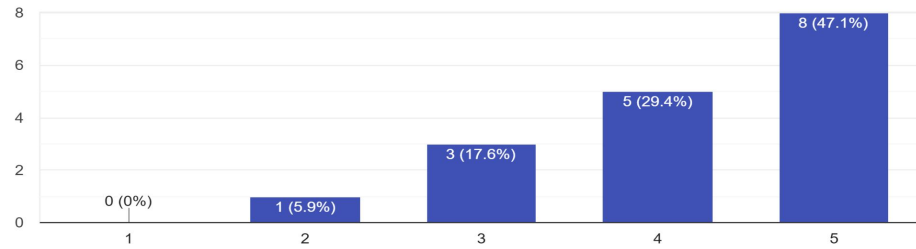
Good navigation design helps prevent frustration while playing.

17 responses



Good navigation design helps prevent frustration while playing, 29.4% agree with the statement and 47.1% of participants strongly agree with it, as for the rest of the 23.5% of participants they stayed neutral with their decision.

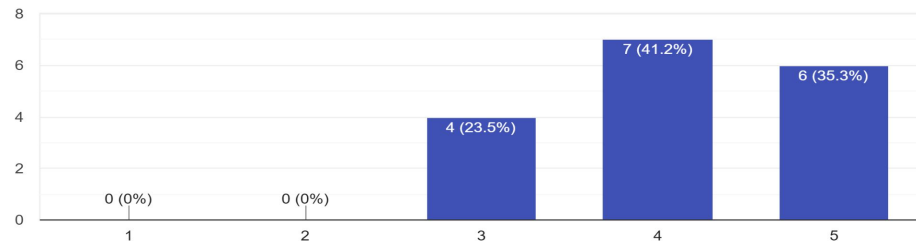
Exploration opportunities increase my enjoyment of a game.
17 responses



Lastly, for exploration opportunities can increase player enjoyment of a game, there was a 5.9% of participants that disagreed with the statement and 17.6% of participants stayed neutral. As for the rest of the participants, 29.4% of the participants agreed with the statement and 47.1% strongly agreed with it.

Section C: Simple vs Complex Level Design

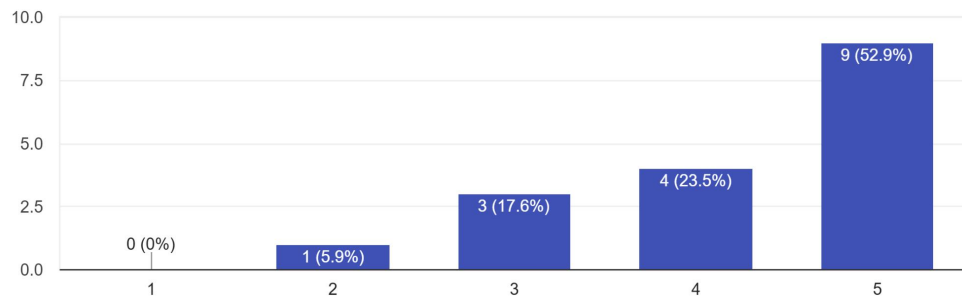
Games with simple mechanics can still provide strong immersion through level design.
17 responses



When it comes to whether or not games with simple mechanics can still provide strong immersion through level design or not, 41.2 % agreed and another 35.3% of participants strongly agreed with it while the rest of the 23.5% stayed neutral.

Exploration and backtracking make games more engaging.

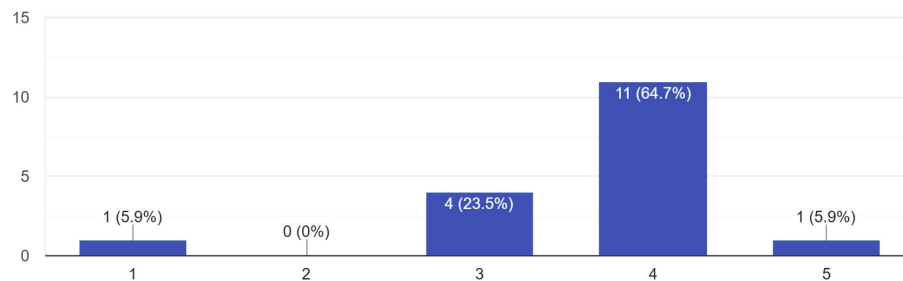
17 responses



Through statistics, a majority of participants being 52.9% of it strongly agree and 23.5% agreed that exploration and backtracking can make games more engaging. However there is a 5.9% of participants that disagreed with the statement while the rest of the 17.6% stayed neutral.

Linear levels are easier to follow but may feel less immersive.

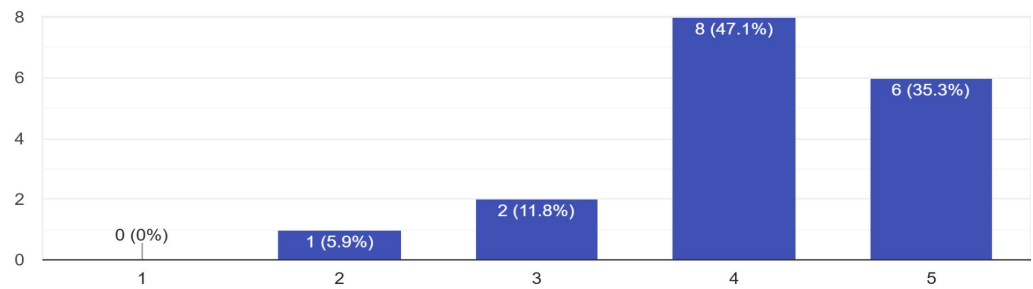
17 responses



There was a 5.9% of participants that strongly disagree that linear levels are easier to follow but may feel less immersive and 23.5% stayed neutral. As for the rest, 64.7% agreed and 5.9% strongly agreed with the statement.

Open or interconnected levels encourage curiosity and exploration.

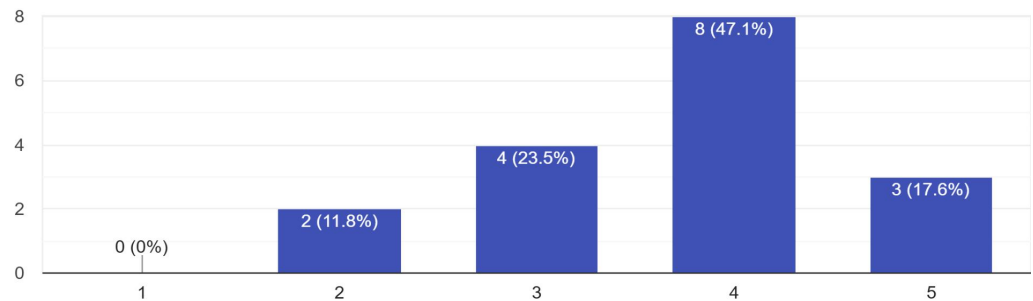
17 responses



Whether or not open or interconnected levels encourage curiosity and exploration or not, there was a 5.9% of participants that disagree with it and 11.8% stayed neutral while the rest of the majority having 47.1% of the participants agreed and 35.3% strongly agreed with the statement.

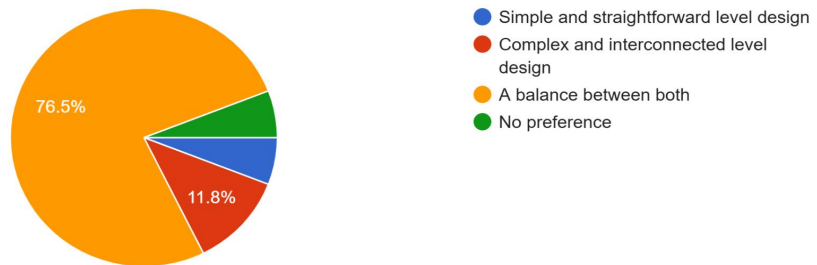
Repetitive level structures reduce player engagement.

17 responses



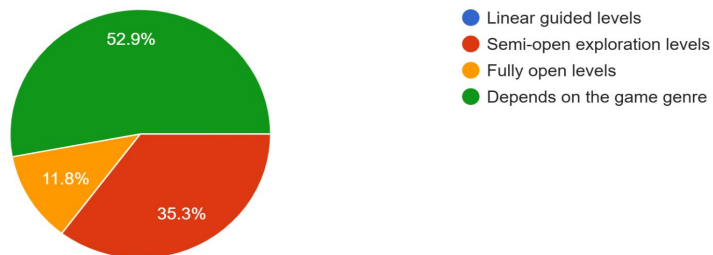
There were 11.8% of participants that disagreed that repetitive level structures can reduce player engagement and 23.5% of participants stayed neutral. 47.1% of the participants agreed with the statement and 17.6% of participants strongly agreed with it.

I prefer games that have...
17 responses



For what kind of level design that participants prefer in games, majority of the 76.5% of participants prefers a game with a balance between both having simple and straightforward level design and also complex and interconnected level design. 11.8% of participants prefer a game with complex and interconnected levels while 5.9% of participants prefer a simple and straightforward level design, the rest of the 5.9% participants have no preference.

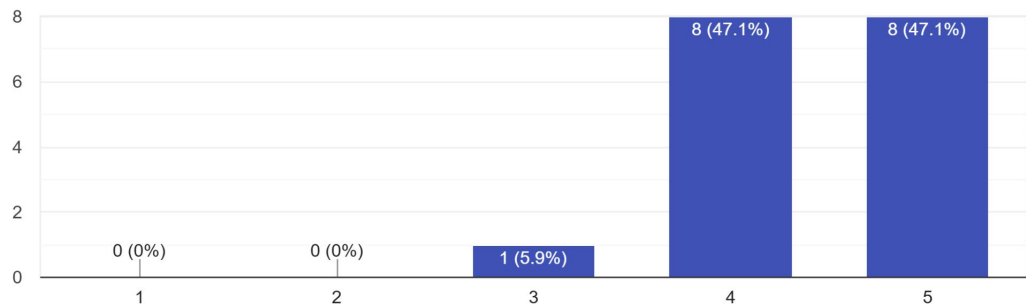
Which type of level design feels most immersive to you?
17 responses



Last but not least for this section, on what type of level design feels most immersive to participants, 52.9% thinks it depends on the game genre, 35.3% of participants prefers semi-open exploration levels while the rest of the 11.8% prefers fully open levels.

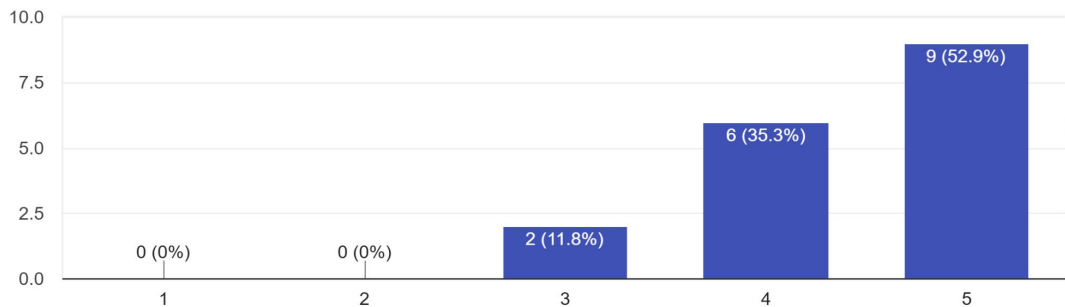
Section D: Environmental Storytelling and Player Guidance

Environmental storytelling improves my understanding of a game’s narrative.
17 responses



Majority of the participants agreed that environmental storytelling improves player understanding of a game’s narrative with 47.1% of it agreeing and another 47.1% strongly agreed with the statement while the rest of the 5.9% remained neutral.

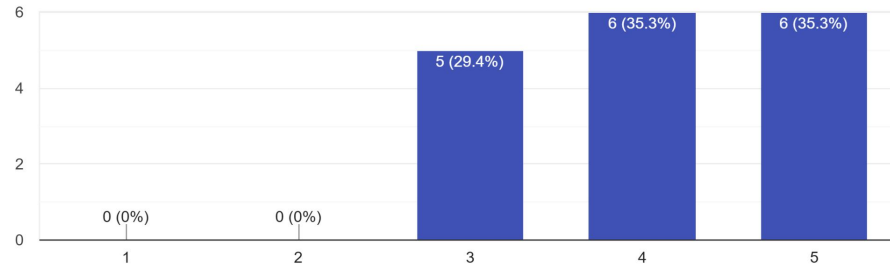
Visual cues within a level help me understand where to go.
17 responses



52.9% of the participants strongly agreed that visual cues within a level help them understand where to go in a game and 35.3% agreed with it as well, 11.8% of the participants remained neutral.

Environmental storytelling can communicate story without dialogue or cutscenes.

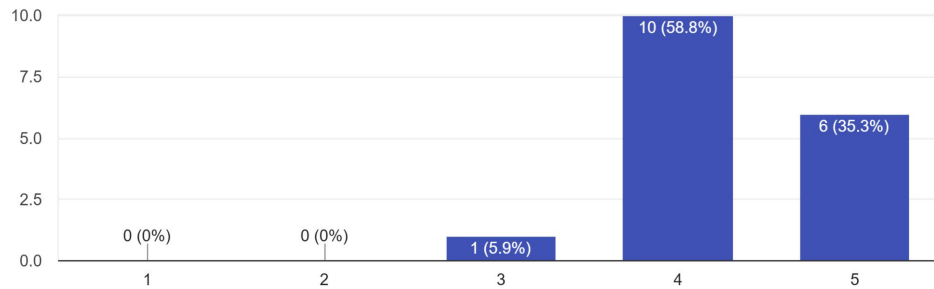
17 responses



When it comes to whether or not environmental storytelling can communicate a story without dialogue or cutscene, 35.3% of the participants agreed and another 35.3% strongly agreed with the statement with 29.4% of the participants staying neutral with their decision.

Atmosphere and environmental details create emotional connection with the game world.

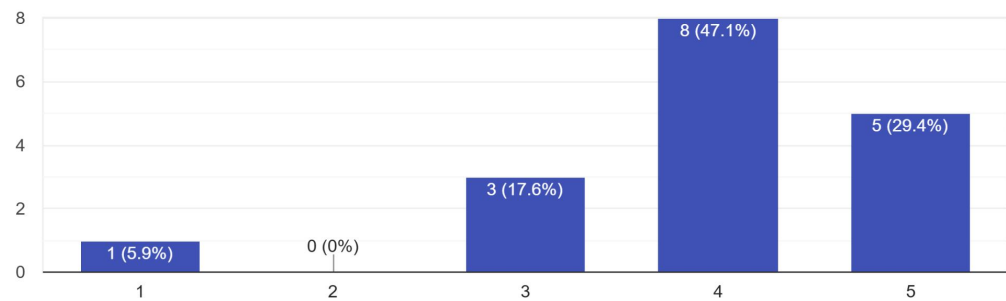
17 responses



Majority of the participants with 58.8% agreed and 35.3% strongly agreed that atmosphere and environmental details can create emotional connection with the game world, the remaining 5.9% stayed neutral.

Subtle hints and foreshadowing increase my curiosity while exploring.

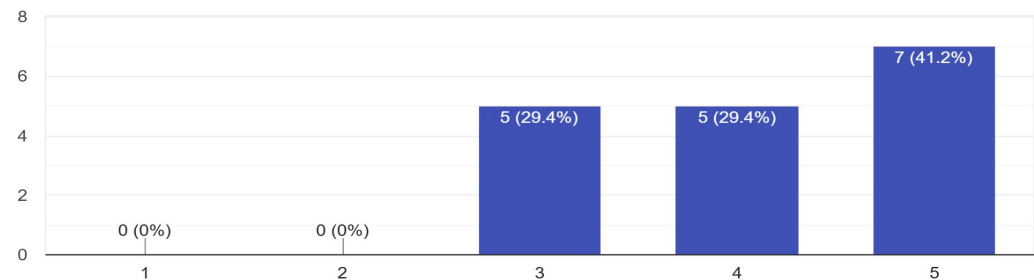
17 responses



Subtle hints and foreshadowing can increase a player's curiosity while exploring and 47.1% agreed with it and another 29.4% strongly agreed with it. However there was a 5.9% that strongly disagreed with it and the rest of the 17.6% stayed neutral.

I prefer games that guide players naturally through the environment rather than direct instructions.

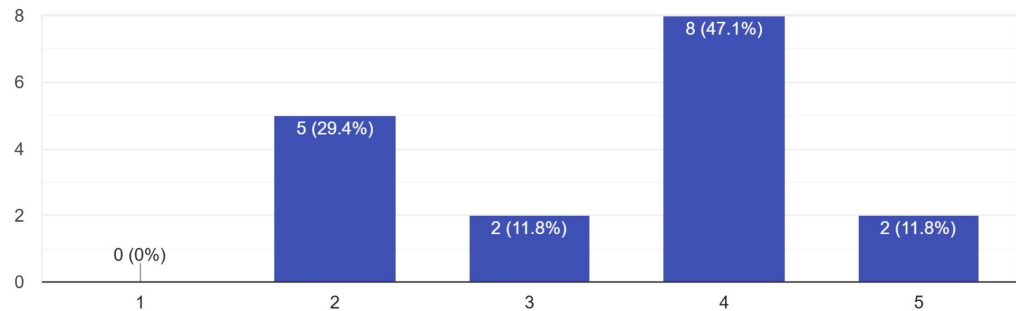
17 responses



The majority of the 41.2% of participants strongly agreed that they prefer games that guide players naturally through the environment rather than direct instructions and 29.4% agreed with it as well while the rest of the 29.4% remained neutral.

Too much freedom in exploration can make players feel lost.

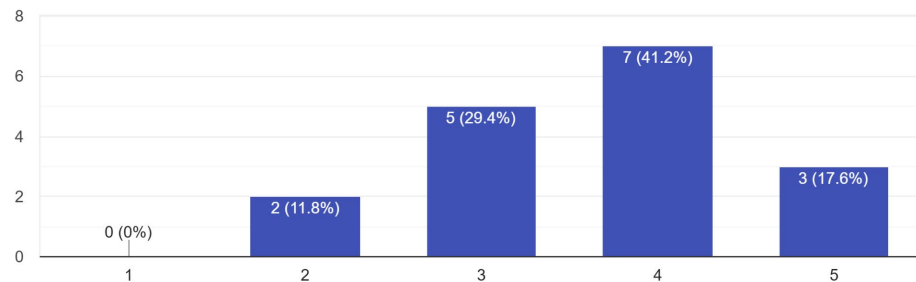
17 responses



Too much freedom in exploration can make players feel lost and 47.1% of participants agreed with it and 11.8% strongly agreed with it. However there are 29.4% of participants who disagree with the statement and the rest of the 11.8% stayed neutral with their decision.

Too much guidance can reduce immersion and exploration.

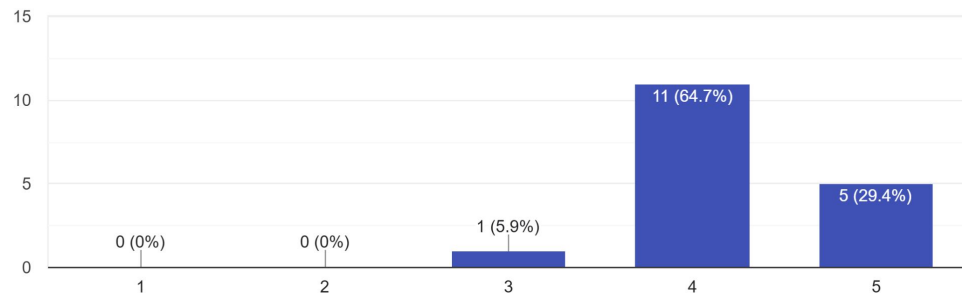
17 responses



41.2% of participants agreed and 17.6% strongly agreed that too much guidance can reduce immersion and exploration in a game, but 11.8% of participants disagreed with the statement and the rest of the 29.4% of participants stayed neutral.

Environmental storytelling makes even simple gameplay feel more engaging.

17 responses



Environmental storytelling makes even simple gameplay feel more engaging and 64.7% of participants agreed and another 29.4% strongly agreed with it while the rest of the 5.9% remained neutral.

Section E: Open-Ended Questions (optional)

In your opinion, what makes a game level immersive?

11 responses

realistic graphics, open world exploration, NPCs interaction, explorable buildings rather than just a decoration

Story telling

Challenging goal and mechanic that matches

settings and atmosphere

Depends on the game genre but generally effects like fog and dynamic lighting to create visual depth paired with appropriate ambient/sound effects.

When the narrative, environmental design, sound design, and emotional impact all matches the same vibe together

levels with great environmental storytelling. subtle visual cues for guidance without using signs, text, yellow paint that scream pls go this way baby gamer man.

Depends on how immerse you connect with the character you controlled .

Immersion to me is mechanical cohesion and world reactivity. The environment needs to be a logical extension of the gameplay mechanics, not just a pretty background, for a level to be truly immersive.

Story and purpose. What can the game level represent the story being told? What does a prop/lighting/environment serve it's purpose in its storytelling? These are what makes games immersive when done right and consistently.

Good world building

When it comes to the participation's opinion on what makes a game level immersive, one of the main ideas was environmental story telling. They value levels that tell stories naturally through props, lighting, architecture, and surroundings instead of relying on direct instructions or excessive UI guidance by using subtle guidance through cues like lighting, composition, pathways, or landmarks. Some of them feel that consistency between gameplay and world is important as immersion improves when mechanics, level design, and the game world logically fit together. Strong worldbuilding also plays a huge role in making a game feels immersive and even character connection with the level can also help players feel involved in their experience with the game.

Describe a game with level design that you enjoyed. What made it memorable?

9 responses

Left 4 Dead 2, the level allow player to explore yet doesnt lose their main route even without hints

The level design in the game "Little Nightmares II", there is a level that player need to run away from the classroom without getting caught by the teacher. It is memorable because it requires a very good timing in order to not notice by the teacher and escape.

Dark souls, map design

In Little Witch in the Woods, I really enjoy the process of finding, catching and harvesting herbs to make potion. Even though it feels repetitive after a while because you need to sell potion to buy furniture. The furniture design and overall game art makes up for it. Basically it was worth the grind.

It takes two. Every chapter has one mechanic that you can keep on using, but with different puzzles. So you have to really think about how to solve it with your partner

Dying light. Because its open world and allow for more exploration.

Titanfall 2, other than the main mechanics of wall run, double jump, sliding, big robots and fastpaced gunplay, there was one level in the campaign that lets u use a device that shoots electricity to activate platforms. So u shoot to activate the platforms as your parkouring, this demands mastery of skills with the mechanics in order to do the challenging parkours.

I had a really fun time with the level design in Green Hell. The game throws you into the middle of a dense, unforgiving Amazonian rainforest and the very layout of the map becomes one of your biggest foes.

Gris. Every color,object,animation told a story of emotions the main character goes thru throughout the story and is what made it so memorable till this day.

When asked to describe a game with a level design that the participants enjoyed and why, one of the games was “Little Witch in the Woods” where they commented on how they enjoyed the grinding process of the game and the designs for the furniture in the game. Another participant also noted that they enjoyed “It takes two” where they enjoyed how each chapter introduces a new mechanic in its level which was kept consistent throughout the chapter while also having different puzzles.

Do you prefer simple or complex level designs? Why?

10 responses

complex, i like games with more depth

simple, easy to understand

I prefer simple but challenging level design, as too complex will cause confusion and lead to less fun to me

Depends on the game genre, a simple game doesn't need a complex level design to be fun

Just right, not too complex. Because I'm not the brightest. It will frustrates me cause I don't like to read.

Complex ones with corresponding environmental designs. so that players can think for themselves the meaning behind every thing inside the world. Like scattered books/hidden notes, etc

Simple. Take Monster Hunter World, the Ancient Forest map is a maze, even after years of playing the game I still get lost in it. Sure its a big forest ur suppose to be lost in it, but not when im fighting monsters and when it escapes, i spent another 10 mins tracking it down because i got lost in this green hellscape.

Simple mechanic with complex level design. To challenge and develop different ways to play

I heavily lean toward complex, layered level designs because they prioritize player agency.

A mix of both is needed. Some ppl prefer simpler level designs as it provides less visual clutter. But in some cases, more complex level designs are needed to convey good storytelling and player engagement

When asked whether they preferred simple or complex level designs, several participants mentioned that they preferred simple level designs because they are easier to understand and less frustrating. One participant used Monster Hunter: World as an example, stating that the Ancient Forest map was too maze-like and difficult to navigate while fighting monsters. Another participant commented that they preferred simple but challenging level designs because overly complex layouts can become confusing and reduce the fun of the game.

However, some participants preferred complex level designs because they provide more depth and encourage exploration. One participant mentioned enjoying complex levels with environmental storytelling such as hidden notes and scattered books that help players understand the world better. Another participant stated that they preferred games with more depth because complex level designs give players more freedom and different ways to approach gameplay.

What environmental elements (lighting, sound, layout, atmosphere, objects, etc.) affect your immersion the most?

9 responses

layout and sound, tactile feedback for sound for reaction and layout for exploration simulate that player is in the game

Sound, atmosphere and lighting

atmosphere

Too much flashing or rapid camera movement that might cause dizziness will throw me off.

The visual no matter 2D or 3D visual must be nice.

Sound and atmosphere. If a game is dead quiet then somethings not right, not in a uncanny or scary way, it just feels something missing.

Lighting and sound

Sound design and lighting have the most immediate impact on my immersion.

Everything needs to serve a purpose. All elements are needed to make the immersion but it needs to have a purpose

When asked what environmental elements affect their immersion the most, participants mostly mentioned sound, lighting, and atmosphere as the key factors. One participant said sound and atmosphere are very important because a game that is completely quiet feels like something is missing. Another participant also noted that good lighting and sound design have the most immediate impact on immersion.

Several participants also mentioned visuals and atmosphere, saying that both 2D and 3D visuals need to look appealing to maintain immersion. Others mentioned that atmosphere overall plays a major role in keeping them engaged in the game world.

Have you ever felt lost or frustrated because of a game's level design? Explain.

8 responses

no yet

Yes, the level design in Genshin Impact Inazuma region has not very clear navigation

No

Yes. I feel lost and unable to do anything. I am stuck in one place/a puzzle and frustrated cause the game does not have a counter to my problem.

Yes, but I don't quite remember when so lets put it at that

Yes, if the level is overly complex, pathway going everywhere, no visual cues, no guides, no nothing, then yea the player will get lost. Monster Hunter World's Ancient Forest map was overly complex and literal 3D maze-like. Deep Rock Galactic, while their cave is procedurally generated and requires backtracking, sometimes their objective will also be littered randomly in the caves, buried deep underground, resulting in a lot of backtracking or stumble upon it by random chance.

Yes, there is a fine line between "good lost" (enjoyable exploration) and "bad lost" (poor design). I get frustrated when a level suffers from poor signposting and repetitive asset use.

Yes. In games where there's no fixed objective, I often get lost or don't know what step i need to take to progress within the game level

When it comes to participants ever feeling lost or frustrated due to a game's level design, most of them answered yes while a small number of them said no or could not remember a specific case. Most of them explained that that frustration usually happens when the levels are overly complex or lack clear visual cues or even provide poor guidance. Others commented that they felt lost when there are no clear objectives or when they become stuck in puzzles without any support or way forward. There was one participant in particular that noted that not all "feeling lost" is negative, explaining that there is a difference between enjoyable exploration and frustrating confusion caused by poor design.

How important is environmental storytelling in your gameplay experience?

9 responses

not so important , nowadays people only go for something simple, only people with extra time go for narrative

It helps me to be more immersed to the game

pretty important, a good environmental storytelling can help me understand the world setting of the game more quickly.

Very important. Like I said, I don't like to read. Environmental storytelling helps a lot in making me piece information together.

Very. Without appropriate environments, it's very 出戏 n cringe n weird.

Very, is as important as the narrative, it tells a story without saying a word, no wall of text, no cheesy dialogues. Just some good lighting, object placement and atmosphere can really help creating a good level design

It's very important because it respects the player's intelligence. I like to learn about the history of a world naturally through the environment instead of being forced to sit through massive text dumps or unskippable cut scenes.

Super important

important

Lastly when it comes to how important environmental storytelling is in your gameplay experience, most participants said that it is very important with only one participant in particular saying it is not very important. Many explained that environmental storytelling helps convey narrative without relying on text or dialogue. One participant said it is as important as the main narrative because lighting, object placement, and atmosphere can tell a story without words. Another participant mentioned that it helps them understand the game world faster, especially since they prefer not to read long text or dialogue.

5.2 Development and Player Feedback

During development, several key observations were made regarding the importance of spatial layout, environmental storytelling, and pacing in maintaining player immersion. One of the most effective features was the Spirit Dimension mechanic, where players could enter an alternate dimension to uncover hidden paths, clues, and ghost-like enemies. Many players felt that this mechanic provided a good balance between guidance and challenge, making exploration feel engaging without becoming overly difficult. This reflects the principles of Flow Theory, which suggests that players remain engaged when challenges are balanced with their skill level.

The survey responses further supported these observations. Most participants agreed that environmental elements such as lighting, sound design, and atmosphere enhanced their gameplay experience. Exploration was also seen as an enjoyable aspect of the game, especially in the hotel and warehouse levels where interconnected layouts encouraged curiosity and discovery. In comparison, the more linear apartment level helped players feel more oriented and less overwhelmed, showing that different level structures can create different forms of engagement.

5.3 Comparative Analysis

The findings also highlighted the differences between complex and simple level designs. More complex environments, such as the hotel level, maintained immersion by encouraging exploration, backtracking, and discovery. On the other hand, simpler levels like the apartment showed that strong environmental storytelling and atmosphere could still create an immersive

experience even without highly complex layouts. This supports the idea that level design does not rely solely on complexity, but also on how narrative and environmental elements are presented to the player.

At the same time, the survey responses revealed some challenges in balancing exploration and player guidance. A number of players mentioned feeling lost in larger environments, while others became frustrated when there were not enough cues to direct them. These responses highlight an important challenge in level design: creating enough freedom for exploration while still providing players with a clear sense of direction and progression.

6.0. Conclusion

This study highlights how important level design is in shaping player immersion and engagement. Features such as map layout, pacing, and environmental storytelling all affect how players experience and connect with a game. More complex level structures, such as those found in *Metroidvania* games, encourage exploration and create a stronger sense of depth, while simpler genres like endless runners depend more on repetition and visual or environmental cues to keep players immersed.

The development of *Dream Nightmare* also showed how combining gameplay mechanics with narrative and environmental elements can improve player orientation and strengthen emotional connection to the game world. Overall, level design goes beyond simply building spaces for players to move through—it plays a major role in guiding the player’s experience, emotions, and interaction with the game.

6.1 Limitations

There were several limitations in this study. The relatively small sample size of 15–20 participants limits how far the findings can be generalized. In addition, immersion is highly subjective, as different players may respond differently based on their gaming background, preferences, and personal experiences.

Time and resource limitations also affected the scope of the project. Testing could not be conducted across a wider variety of game genres, and the 21-week development period for the prototype limited the amount of refinement that could be made to certain mechanics, such as crafting systems and NPC interactions.

6.2 Future Directions and Reflections

Future studies could improve on this research by involving a larger and more diverse group of participants, as well as combining survey feedback with gameplay telemetry data for more detailed analysis. Exploring additional game genres would also help strengthen and validate the findings on how level design affects immersion.

Further improvements could include refining adaptive difficulty systems and expanding environmental storytelling techniques, especially in simpler game genres where immersion relies heavily on atmosphere and presentation. Reflecting on the project as a whole, the team successfully demonstrated how theoretical research on level design can be applied in practical game development. However, more iteration and testing would still be needed to better balance player freedom, guidance, and overall gameplay experience.

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8.0. Appendices

8.1. Appendices A - FYP1 Logbook

Project Paper Consultation Logbook	
Project Title	Dream Nightmare
Student Name	Khoo Zi Jian
Student ID	2205896
Year/Semester	Y3S1
Supervisor	Ts Dr Ang Kok Yew

WEEK 01	
Comments: • Begin brainstorming on our game idea and writing up a proposal for the game • Made a poll online to gain feedback and suggestion for what game we should make • Highest poll gotten was "Dream Nightmare"	Supervisor signature:  TS. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:
WEEK 02	
Comments: • Begin sketching character for the game, finding references, mood, style for the design • Made out 3 sketches for the character, design for the character will be in low poly with a detective style character.	Supervisor signature:  TS. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:

WEEK 03	
Comments: • started modeling for the character, making a rough model and applying colours to have a rough idea for how the character should look.	Supervisor signature:  Ts. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:
WEEK 04	
Comments: • Adjusted character model to fit better for animation. • Rigid character and added joints • Applied walking animation to character	Supervisor signature:  Ts. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:
WEEK 05	
Comments: • Started designing UI such as HUD in game • Added in animations for the UI to make it not look to static • Implemented UI into Unity to test out the result	Supervisor signature:  Ts. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:

WEEK 06	
Comments: • Reworked UI visibility • Modeled characters for random NPC generator • Added animation transition for moving, running, idle.	Supervisor signature:  Ts. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:
WEEK 07	
Comments: • Added shaders for outline, ghost texture, dream world shaders • Added in enemy model, texture, idle animation • Implemented layout for apartment level.	Supervisor signature:  Ts. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date:

8.2. Appendices A - FYP 2 Logbook

Project Paper Consultation Logbook	
Project Title	Dream Nightmare
Student Name	Khoo Zi Jian
Student ID	2205898
Year/Semester	Y3S2
Supervisor	Ts Dr Ang Kok Yew

WEEK 01	
Comments: •Revising back on what to fix for our game •Start brainstorming on ideas for the rest of the levels •Do research on real life cases to help with writing the story for the other levels	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 19/5/2026
WEEK 02	
Comments: •Drew new UI for level 2 such as keypad and redraw UI for dialogue and crafting table •Sketching out level 3 layout •Added new UI prompt for interactions	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 19/5/2026

WEEK 03	
Comments: •Modeled out level 3 room floors •Implementing and testing level in game •Fix collider issue with level and player •Fix issues such as door interaction and add animation for door	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 19/5/2026
WEEK 04	
Comments: •Testing out and making new painterly shader in game •Added elevator mechanic and secret floor mechanic into elevator •Testing out new camera triggers for level 1	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 19/5/2026
WEEK 05	
Comments: •Drew more UI for level 2 such as phone, and monitor •Model out ground floor for level 3 •Readjust animations for characters and NPCs.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 19/5/2026

WEEK 06	
Comments: •Readjust animations for enemy •Model out more models for NPCs and receptionist •Implement animations into game	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 19/5/2026
WEEK 07	
Comments: •Recorded audio for SFX for our game •Fixing and adjusting new npc interactions •Implemented cursed floors into level 3	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 19/5/2026
WEEK 08	
Comments: •Started design level layout for level 4 •Fixed more bugs on npc interactions •Adjust flow for level 3 gameplay	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 19/5/2026

WEEK 09	
Comments: •Implemented and placed NPCs on key locations for level 3 •Placed doors and props for level 4 •Implemented level 4 into game and test	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 19/5/2026
WEEK 10	
Comments: •Adjusted lightings for all levels mainly level 2 •Model out layout for main menu •Redesign UI for main menu and other UIs and added transitions for main menu	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 19/5/2026
WEEK 11	
Comments: •Fixed UI for main menu and also other elements such as pause menu and settings and HUD •Added and modeled out basement for level 4	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 (4) 5 Poor Satisfactory Good	Date: 19/5/2026

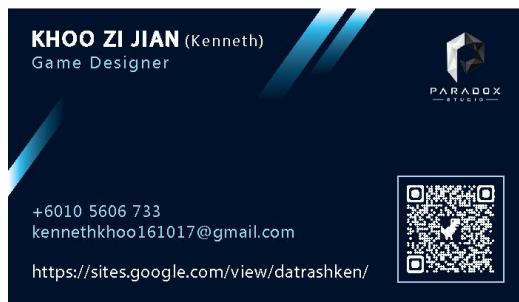
WEEK 12	
Comments: •Compose and implement new SFX into game •Model prisoner and police NPCs •Implemented new NPCs into game •Double checking level 3 and polish up other levels	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date: 19/5/2026
WEEK 13	
Comments: •Started designing promotional materials such as cards and posters •Remake transition effect for dimension shifting mechanic •Implemented and remake painterly shaders for game •Added UI for journal	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date: 19/5/2026
WEEK 14	
Comments: •Finishing up game and debugging the game •Prepare printing for promotional materials •Edit trailer for game •Prepare for beta presentation	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date: 19/5/2026

8.3. Appendices D - Promotional Material



Game Poster









Game card & personal cards

8.4. Appendices H - Final Project Title Form

Fill in the information below as detailed as you can after confirming project title.

Project Type:

Product Based Project

Research Based Project

(tick the appropriate box)

Student ID	Name	Email & Contact
2205898	Khoo Zi Jian	kennethkhoo161017@gmail.com +60 10-5606733
2303855	Lim Si Kai	limsikai21@gmail.com +60 10-325 5989
2304876	Chua Yi Zheng	alsonchua18@gmail.com +60 11-5857 6386

Supervisors:

Dr Simon Ang Kok Yew, Ms Christie Chow Mee Mooi, and Puan Nik Norazira Binti Abdul Aziz

Project Title:

Dream Nightmare

Project description:

“Dream Nightmare” is a narrative driven puzzle game where the player plays as a detective with supernatural abilities that allows him to enter through another dimension known as the “dream realm” and see through the world in another perspective to discover secrets, clues, and encounter strange entities in an attempt to discover the secrets behind his abilities and the people who went missing in his town.

The game's theme and design is made in a 3D low poly design similar to the game "Project Zomboid" and is played through in different perspectives such as top down isometric, fixed camera third-person perspective, and even a first person view based on the level that the player is in.

In the game, the player will have to go through 4 different levels to gather information and clues of the person who went missing at the place before reaching to the last level with all of the clues they have with them to discover the mysteries behind the cases and his own past and abilities, the player will have to interact with NPCs, find clues, and enter through another dimension to find and solve the cases for each levels.

Student Name	Individual Project Scope
Khoo Zi Jian	3D artist/ animator: Focus on creating 3d assets for the game such as character models, props etc and also rigging and animating animations for character and NPCs. UI Designer: Focus on creating UI elements and design for the game such as main menu, buttons, HUD and other UI animations. Technical Artist: Focus on creating shaders and effects for the game and adding on any extra textures and lighting effects for the game.
Lim Si Kai	2D artist/animator: Focus on creating 2D animations and other 2D elements for the game. Level Designer: Focus on creating the level design and the flow for the game and implementing props and objectives on to the level. 3D artist: Focus on creating extra 3D models for the game such as props, level, and etc.

Chua Yi Zheng	Main Programmer: Creates scripts and programs functions for the entire game. Sound Designer: Creates and edits the sound effects and music for the game and implements each of it on to the game. Game Mechanics Designer: Designs and creates the game mechanics for the game such as player controls, interactions and other mechanics.
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