
EXPLORING VARIOUS STORYTELLING METHODS IN JAPANESE-STYLE ROLE-PLAYING GAMES (JRPG)

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ABSTRACT

Main Objective: This study reports an experiment to explore differences in player feedback caused by different storytelling methods of Japanese-style Role-playing Games (JRPG). **Background problem:** Narration is considered the soul of JRPG, and is a vital and irreplaceable role. Different ways of telling stories can bring different experience effects even though the essence of the story is the same. Stories are presented directly to players in dialogue form, much like a visual interactive novel. Non-linear storytelling can break down important parts and allow players to explore freely. Players can collect clues to get to the main plot. Also, most JRPGs use short films and sound effects to create a cinematic experience. **Novelty:** Based on all studies of game storytelling (linear and nonlinear), this study will compare player feedback on different storytelling methods to see which narrative can provide a better player experience. **Research Method:** Researchers categorize these three narratives as Visual Novels, Environmental Narratives, Visuals, Sounds, and Dialogues. This experiment combined all three of Caught in Trap's in-game narratives to investigate player preferences. Data was collected through questionnaires and interviews with 21 players who were invited to play the game. **Finding/Result:** The research results show that the three ways of storytelling enrich the expression of game narratives. Both linear and nonlinear narratives have their advantages and disadvantages, and the best way to engage players is to interweave both narratives in the game. **Conclusion:** The experimental results show that the interweaving of three ways of storytelling can enrich the narrative form of games and guide game designers in improving game plots to engage players in JRPGs.

Keywords: Storytelling-Method, JPRG, Game of Three Pillars

1. INTRODUCTION

Good storytelling will be able to build extraordinary works. Presentation of game plots is, arguably, an important part of video game design. In contrast to the linear narrative of traditional storytelling, play scripts can be presented in a variety of ways (Riedl & Young, 2006). The revolution in digital technology has brought the narrative to game design. Here, the term "revolution" refers to "the transformation of what was once an abstract playing field into a concrete fictional world inhabited by recognizable objects and individual characters" (Ryan, 2009). The gaming experience relies heavily on the player's strong imagination to increase the sense of immersion and engagement. Nonetheless, the application of science and technology has concretized abstract concepts and gradually lowered the threshold of "imagination". In the past, people used to use novels to convey imagination, where simple words created exciting fantasy worlds (Extra Credits, 2019). Now games can be a means for more and more people to experience the fun brought by the virtual world created by video games.

Narrative games use stories as bait to lure players into the world (Ryan, 2009). To grab players' attention and enhance immersion in this created virtual space, designers need to consider how game writing and game mechanics interact and maintain a compatible balance between the two. Three Pillar Game Writing (Extra Credits, 2018) states that "game writing" is the same as "narrative writing" plus "game design". In video games, the story unfolds not only in the form of narrative and traditionally written character dialogue but also in the form of gameplay and interaction with the environment to convey information to the player. This new creative direction departs from traditional games that purely help solve problems (Zarzycki, 2016). Unlike film and television, they place the player at the center of the interaction, using emotions to connect the player to the virtual world (Ommen, 2018). Hence, storytelling plays a central role in enhancing the player's experience.

The *Japanese role-playing game* (JRPG) can be considered a successful example of mixed narrative writing and game design. Narration is one of the most important metrics for a JRPG. Game designers have to perfect every detail to match the game plot to the mechanics and to create a unique immersive experience for players. As a result, JRPGs are compatible with different storytelling methods. Considering the characteristics of JRPG, this experiment chooses to make a JRPG game, *Caught in Trap*, to be analyzed. Game designers use RPGmaker software to build the entire project.

The core mechanics are asking the player to explore and gather information to solve a case and analyze the storyline. Three storytelling approaches are used in the game to present the plot. Mode A is similar to a visual novel, and the narrative is told in a linear process. The player follows the narrative by reading the dialogue presented in the game and clicking on the game screen to continue the story. Mode B is for the player control character to freely explore the game map, and the narrative is nonlinear (branching). Players can interact with any object in the scene, they can gather information by observing clues, such as character faces, narration, and object descriptions. C mode is similar to watching a short film. It uses visual (image and text effects) and auditory (music) shocks to convey messages.

A total of 21 participants were recruited for the experiment. Each of them will be asked to fill out survey statistics after playing the game. Two will be randomly selected for an interview to ask how they feel about the gaming experience. Survey questions are divided into background questions, game experience questions, and open-ended questions. At the same time, the researchers interviewed the game experiences of two selected participants combined with the answers in the open sections. Survey results are analyzed, and data is recorded to observe how best to tell stories in a JRPG. This study aims to investigate differences in players' feelings towards the three storytelling methods and whether the game experience will change with different forms of storytelling. This experiment provides game designers with a reference for using game writing to increase player engagement and enjoyment.

2. LITERATURE REVIEWS

Narrative Transformation: Interactive Storytelling

Driven by developments in science and technology, the video game industry is becoming increasingly prosperous and productive. Contemporary video games offer users a more positive form of media than
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traditional storytelling in many ways. As game environments have become complex, designers need to rethink in-game narratives. Interactive storytelling (Barros & Musse, 2005) has been widely discussed in the 20th century. Designers can create more complex game worlds, and they come to appreciate the potential of games to tell dynamic stories (Calleja, 2009). Interactive storytelling (IS) is a field of study that enables new forms of media to use interactive computer systems as storytellers.

One of the main goals of interactive storytelling is to align interactions and narrative consistency (Barros & Musse, 2005). Interactive storytelling systems can be used to create new types of computer games in which players are given a perceived degree of control over the story through their character choices. This setting allows players to feel that their choices impact the story, and thereby increase their engagement. Calleja (2009) argues that the core question for game designers is not whether games are stories, but how to better communicate stories through games. It should be noted that designers should try to use "pull" storytelling rather than the traditional "push" storytelling modes of communication. The story is pushed to the player in push mode via cutscene-like devices. Players interact with the environment while in drag mode, and interactive storytelling keeps players interested in "what's going on" in the game. Interactivity generates stories rather than excludes stories (Calleja, 2009). The results of the research above show that an interactive storytelling system can increase player participation in gameplay. This represents a departure from traditional storytelling, which consistently provides information to the player but rejects the player's thinking. Therefore, this experiment uses interactive storytelling to build an RPG game.

Linear and Nonlinear Narratives

In the traditional Three Act Structure (Barros & Musse, 2005), the plot can be separated into setup, confrontation, and resolution. At the beginning of the story, the designer introduced the main character's setting and moving goals. Typically, turning points are inserted at the end of the first half to introduce progression. Then enter the second stage, where the action of the protagonist will reach the goal. The final stage is the result of the story (adventure) and the climax. This will answer the reason for the story. There are still many games out there that use such linear narratives. A long history of linear narrative creation allows designers to directly leverage linear narrative structure expertise to develop optimal story sequence models, and better computational models of story generation, without having to worry about branching and interactivity (Riedl & Young, 2006).

Ip (2011) points to the continued popularity of linear game structures, but nonlinear narratives should not be overlooked. Linear narrative can be defined as a narrative structure with a single story direction, while nonlinear narrative increases the freedom of space and time in (virtual) text space, including randomness (Moser & Fang, 2015). In an RPG, a complex branching narrative structure can count as a story node reached. Two narrative structures provide experiences in multiple directions: nonlinearity allows users to experience a dynamic story unfolding in a realistic and personalized direction; linearity allows players to experience narrative causal agents, which mediate story experiences (Moser & Fang, 2015). When it comes to game design, researchers combine the best parts of both narratives. To ensure that players can have a personalized game experience, each branch is a linear plot from their point of view.

Epic Video Games & JRPGs

Narration plays an important role in JRPG. Compared to other game genres, RPG can increase player engagement by providing a more coherent narrative experience (Moser & Fang, 2015). Ommen (2018) mentions that Japanese-style RPGs focus more on characterization to enrich the narrative than Western RPGs. The main way to differentiate genres is not by looking at a particular mechanic or camera perspective, but by looking at what the player wants to experience from the game. In practice, most JRPG studios have early experience creating visual novels, so they are more adept at using games as a vehicle to tell a complete story through mechanics and characters. In this way, JRPGs are

unique in connecting players with the story through emotional resonance by creating a "real" virtual world and game characters. In contrast, Western RPGs are more focused on the players' adventures in virtual worlds. Therefore, some epic video games (such as Assassin's Creed) can also be classified as JRPGs, because players are not avatars created according to their preferences, but protagonists set by the game. Epic video games and JRPGs place the user at the center of the interaction, enabling content creation and the formation of strong emotional bonds (Zarzycki, 2016). Ommen (2018) provides a new perspective for the analysis of the JRPG genre, laying the groundwork for researchers to finalize the conception of the game's main story.

Agency

Digital media bring new narrative possibilities, in which agents play an important role (Zhu & Harrell, 2008). Information systems researchers use algorithms as a technical basis for story creation, trying to build story development through AI calculus. The emergent narratives are the product of interactions between agents in the system (i.e., characters in scenes or scripts) (Walsh, 2011). The standard approach to incorporating storytelling into computer systems is through storytelling by design, and system agents simplify understanding. However, an oversimplified understanding of agents will inevitably give birth to the idea that "the more agents, the better". A slow plot pace can undermine meaningful narrative development and lead to boredom (Zhu & Harrell, 2008). Both the player and the system need to be considered in the agency game discourse. Player agency is often the key difference between interactive and "traditional" storytelling. Agency play can be positioned as a promising expressive tool for interactive storytelling. However, the player agent is not a single phenomenon that is used to support story content and narrative. The goal of interactive storytelling is not to maintain a coherent story based on the changing wishes of the user. Any narrative that deals with themes of control, destiny, self-determination, etc., can be used as a metaphor for related themes in the agency game (Zhu & Harrell, 2008). This discussion of agency allows game designers to think about story and gameplay in terms of player agency and system agency.

Cutscenes and Background Music

Most games prefer to use cutscenes, the most popular method of narrative delivery. Ip (2011) states that the heavy reliance on cutscenes has increased over the years, with some games using cutscenes for more than 70% of their prescribed narrative. Overuse of cutscenes is a common problem. Different branches of storytelling include on-screen text, audio cues, and combinations of gameplay, cutscenes, and on-screen text (Ip, 2011). In addition, games can use music, art, or recorded sound effects to create the desired atmosphere. The use of music can immerse players in the game environment, thus creating a form of participatory performance (Borecky, 2021). These two aspects together inspired a third storytelling method in the experiment.

3. METHODOLOGY

Game design

Experiments were made with building Japanese-style RPGs to emphasize the advantages of storytelling. This specificity allows for the coexistence of multiple narratives within a single game (e.g., Corpse Party). Players can use different storytelling methods when they play the same game, so researchers can gauge their preferences based on their feedback. Since there are already many games for the same genre, players will be familiar with how to do it. RPG Maker provides a convenient platform for building game frames, allowing designers to think more through their scripts and presentations within a limited time frame.

Core gameplay loops

The room uses a variety of ways to express the game's narrative. In the brainstorming stage, game designers use flowcharts to map out the core gameplay and build a prototype framework (Figure 1). After the game starts, players will watch the opening scene play first to understand the initial story background, and then they start exploring all the rooms on the map after finding the specified item. During the quest phase, nonlinear (branching) narratives manifest the advantages of parallel narrative hierarchies in each room. That said, there is no clue Bs that need to be found to unlock clue A. Therefore, players can explore all of the rooms in whatever order they like. To avoid missing out on

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important plot episodes, players cannot leave the main map until all clues have been collected. Exit has a Boolean query that determines whether the player meets the criteria for leaving the room. After all, conditions are met, the game screen will switch to the Ending scene. The player will watch the final game, and then the game returns to the title screen.

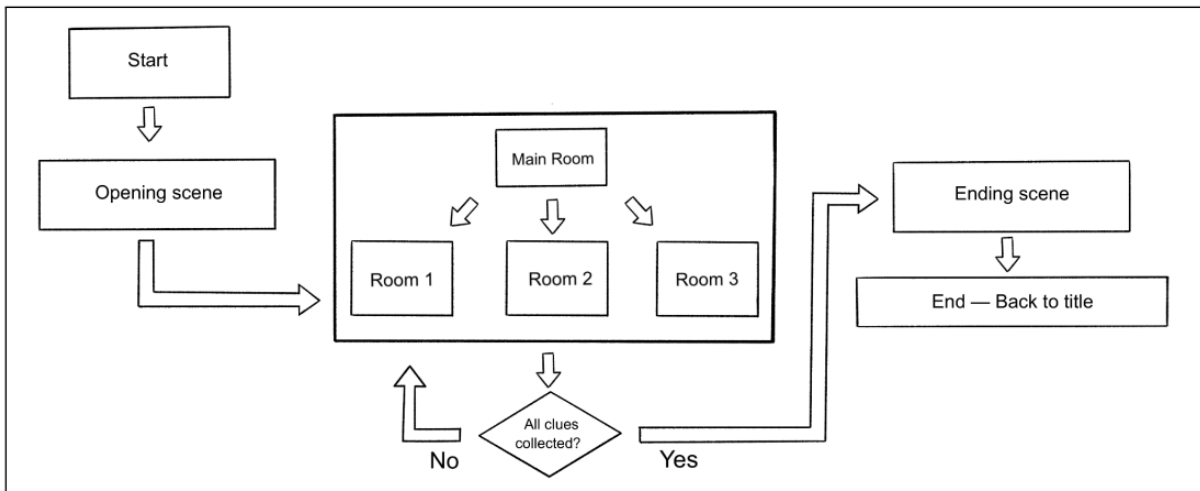


Figure 1: Toilet game

Important Items & Complete Conditions

To study the impact of different storytelling methods on player experience, three storytelling modes were integrated into the same game in this experiment. Players can explore in any order they like during the game. During the brainstorming stage, three narrative modes are created as three rooms to differentiate different narrative experiences. However, while creating the game, the researchers found that this juxtaposition was an abrupt representation of the experimenter's goal, which could reduce playability and enjoyment. Consequently, the distribution of the three narratives was adjusted during the construction phase. The main gameplay is exploring the map and gathering information to piece together hidden storylines. In the opening scene, the player finds a dead body in the Living Room area. To investigate a crime scene, players must first obtain gloves (Figure 2), as they cannot investigate a crime scene without obtaining gloves. After that, players will find many suspicious clues while investigating the house. Players will collect all the clues as item storage in the Menu bar (Figure 3). After collecting enough clues, the player can leave the room to watch the end of the game.



Figure 2: Collectable items. To complete the whole game, the player must collect all the clues.

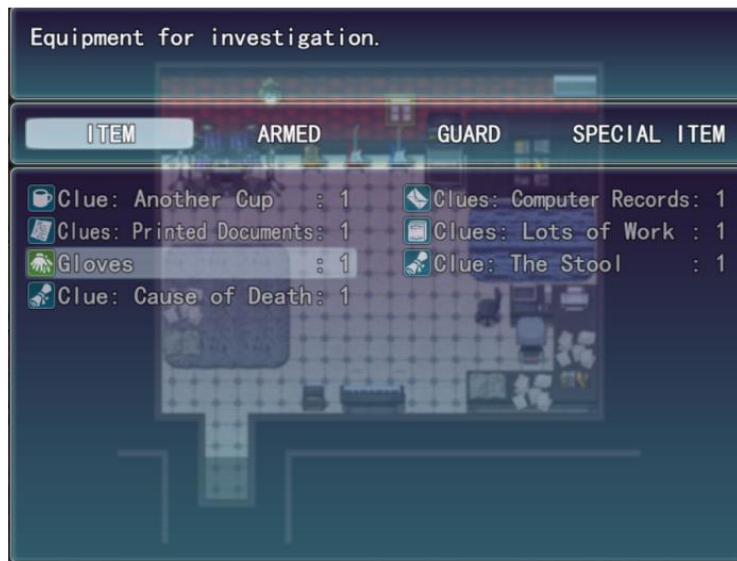


Figure 3: The menu bar. Players can check the collected items here. A description for each item is provided at the top of the page.

During the initial design, the player could not leave the main living room area without searching all the other rooms to collect all the clues. Therefore, the door must determine whether the player can leave or not. The researchers set the variable in two ways: before the player collects enough evidence, the character controlled by the player will display the line "I can't go now. Maybe I should look around again," as shown in Figure 4. Then, the player must take a step back. When the player has collected all the clues, the character enters the living room with the prompt (Figure 5), "Okay, I think I'm done. Maybe I should go now." This phrase guides the player to move to the next step. A question appears when the player tries to exit at this time (Figure 6). It must be confirmed whether the player chooses to leave immediately. If the player selects No at this point, the player can go back and explore the map until he is willing to move on to the next phase of the game.



Figure 4: Stop sign. This indicates that the player still needs to find more clues.



Figure 5: Directional signs. Indicate that the player has collected all the clues.



Figure 6: Permit to leave the house.

If the conditions for leaving are not met, the player must continue exploring the map.

Three approaches to Storytelling

As shown in Figure 7 below, the first storytelling method is to use visual novel-like expressions. Of the three narrative types in this experiment, this one is closest to a traditional linear narrative. Players will trigger an event on the map after entering the Bedroom area. Then the game map will be a view of the Bedroom. In this area, players must carefully read the narrative and dialogue in the boxes below to gather information. According to the text, the character's facial expression will change as key information emerges. After the text novel ends, hint items will be collected at the scene. The cue description contains questionable details that summarize a player's experience in this area. It should be noted that players can only explore the bedroom area once. This is to maintain the chronological order of the linear narrative. If the player misses something, there is no second chance to re-read the visual novel narrative. Of course, there's also the possibility of compensation: players can reload saved data to play back to previous scenes.



Figure 7: Bedroom area. The visual novel form is used to express the plot.



Figure 8: Kitchen, Studio, and Living Room Area. Environmental storytelling is used in all three areas, where the player can interact with all of the objects.

Second, the narrative plays an important role in the game. In addition to the Bedroom area, the remaining rooms can be explored on the map using the environmental narrative. The goal is to improve the ability to play games and increase the interaction space. As mentioned in previous studies, this interactive narrative allows players to experience the freedom and fun of exploration (Calleja, 2009). This autonomy allows players to experience the interaction between characters and the story, thereby increasing engagement and immersion in the game. The advantage of this narration is that all the objects seen in the scene can interact with each other. The game system provides suitable descriptions for objects, such as a fridge or bookshelf in Figure 8. As a result, the player's behavior in investigating clues can be stimulated over time. Additionally, the interactive narrative uses a nonlinear narrative, with all cues given the same level of priority to increase the player's degrees of freedom. If the player wants to investigate the body in the living room at the end (Figure 8), the search process for other clues will not be interrupted. In this respect, each narrative parallels the others.

The third type of narrative is representational representation, which is similar to a cutscene. The screen creates a tense and depressed atmosphere in the CG and character soliloquy lines and background music, thereby immersing the player in the narrative (Figure 9). At the same time, the flickering effect of the full-screen illustration and the line special effect serve to attract the attention of the audience due to their excellent appearance. This passage reveals that the character controlled by the player is the killer. To accentuate the horror effect, large areas of red color and strange melodies are used to

accentuate the ending of the story (climax). The overall narrative of the game uses The Three-Act Structure (Barros & Musse, 2005) to enhance the game's plot and make it more interesting for players.



Figure 9: Closing scene. The third storytelling approach is watching short films. Pictures and background music complete the ambiance of the scheme.

DATA ANALYSIS

Survey Design

The questionnaire questions were designed using A grounded investigation of Game Immersion (Brown & Cairns, 2004), Measuring Narrative Engagement, Media Psychology (Busselle & Bilandzic, 2009), and Measuring Player Immersion in the Computer Game Narrative (Qin et al, 2009) as an instrument for investigating player interests and experiences with narrative expression. The first part of the questionnaire involved the demographics and experience of participants playing specific games, asking about their gender, age, and background experience with JRPGs or visual novels. Additionally, to explore the relationship between player preferences and different storytelling methods, researchers need to determine whether players are interested in the game's narrative from the start. Since game writing is an intrinsic part of the design, game designers need to balance traditional narratives with nonlinear narratives to maintain their interest (El-Nasr et al., 2013). Mixing story with gameplay mechanics is a good method of doing this. Thus, questions from Q6 to Q19 are based on Qin et al. (2009) and Busselle & Bilandzic's (2009) research to examine the level of immersion and player involvement.

In the second part of the survey, Caught in Trap game content and the players' experiences were asked by assessing the storytelling intensity and memory of three storytelling ways in different rooms. Scores range from 1 to 5 (1 = NOT at all enjoyable/Memorable, 5 = Very enjoyable/Memorable). The higher the score, the more fond/recall the storytelling method used in that area. In this way, the researchers were able to observe players' preferences for different narrative expressions. Q21 through Q24 examine whether players can adapt to different combinations of narrative forms, whether they understand what's being said in the game, and whether the experimentation will influence the types of games they choose to play in the future. The third section is an open-ended questions section, where players can provide suggestions about the game based on their own experiences. In light of these responses, the researchers randomly interviewed two participants to analyze their feedback and feelings about the different narratives.

Data Analysis Tools

Google Surveys and Wenjuanxing are used as survey tools in research to collect Quantitative and Qualitative data. For Quantitative data analysis (first and second part survey), R and SPSS were used. The results of qualitative data (final section and interviews) are integrated using Excel.

Procedure

As illustrated in Figure 10, participants need to download the Caught in Trap game package via Google Drive or other social platforms (eg, Weibo, Twitter). Before starting the game, they need to read the instructions to make sure they understand the basics of the game. Participants were allowed to play the game and complete a post-game survey when they were free. After completing the questionnaire, the researchers randomly interviewed one or two participants about their feelings about the game by asking open-ended questions. A link to the questionnaire was sent to the participants along with the game. The entire experimental process was carried out online, and the participants only needed a computer to play the game.

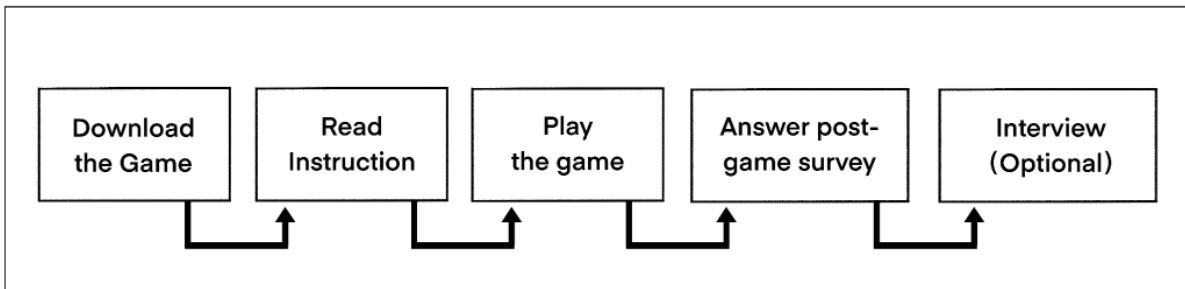


Figure 10: Procedure Map

RESULTS

In this chapter, the quantitative and qualitative results will be presented separately. Descriptive statistics and correlation analysis will be performed to analyze the quantitative results. In the open-ended section, the player's response will be analyzed using open coding.

Quantitative Results

In the first and second sections, a total of 34 questions were asked. Cronbach's α is 0.869 (obtained by R Studio), which proves the high reliability of the questions. In the background investigation, 21 participants completed the questionnaire (13 female, 6 male, 1 nonbinary, and 1 confidential). At the participant's age, the minimum score is 5, and the maximum score is 36. Therefore, the mean is 24.476, and the standard deviation is 6.0218. The age range of participants concentrated from 24 to 25. Q4 and Q5 surveyed their gaming experiences. As shown in Figure 11, for JRPG as a genre, 85.71% (n=18) of participants had played the same type of game, 9.52% (n=2) were unsure whether they had such an experience, 4.76% (n=1) do not relate to previous JRPGs. For visual novels, all participants said they had experienced visual fiction.

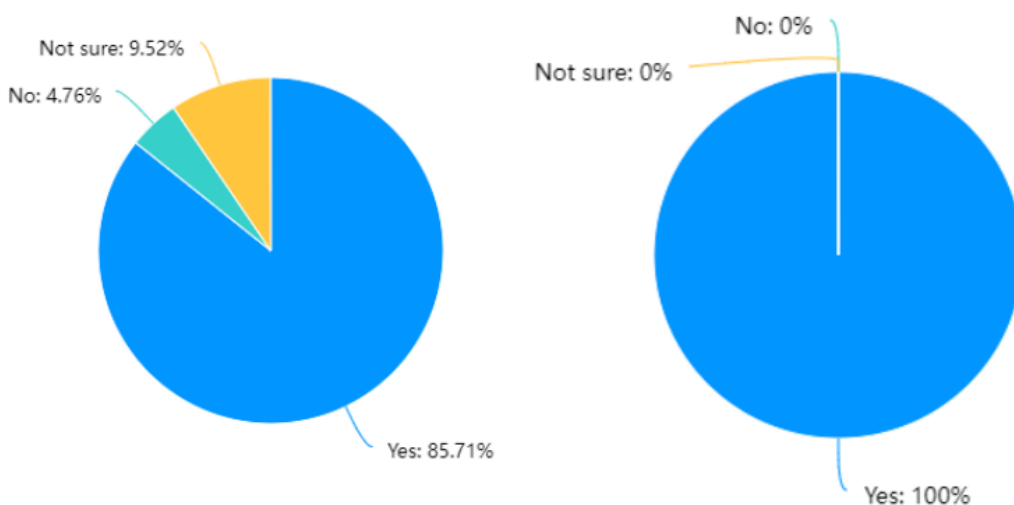


Figure 11: Left JRPG experience and Right Visual Novel experience

The results from Q6 to Q19 are reliable, considering Cronbach's $\alpha = 0.901$. This section measures the level of immersion and engagement associated with the game's narrative. These parameters can be divided into Curiosity, Concentration, Challenge, Skills, Control, Comprehension, and Empathy. Personality is analyzed from the seven dimensions (Qin et al., 2009). The results of this section are listed below (Figure 12).

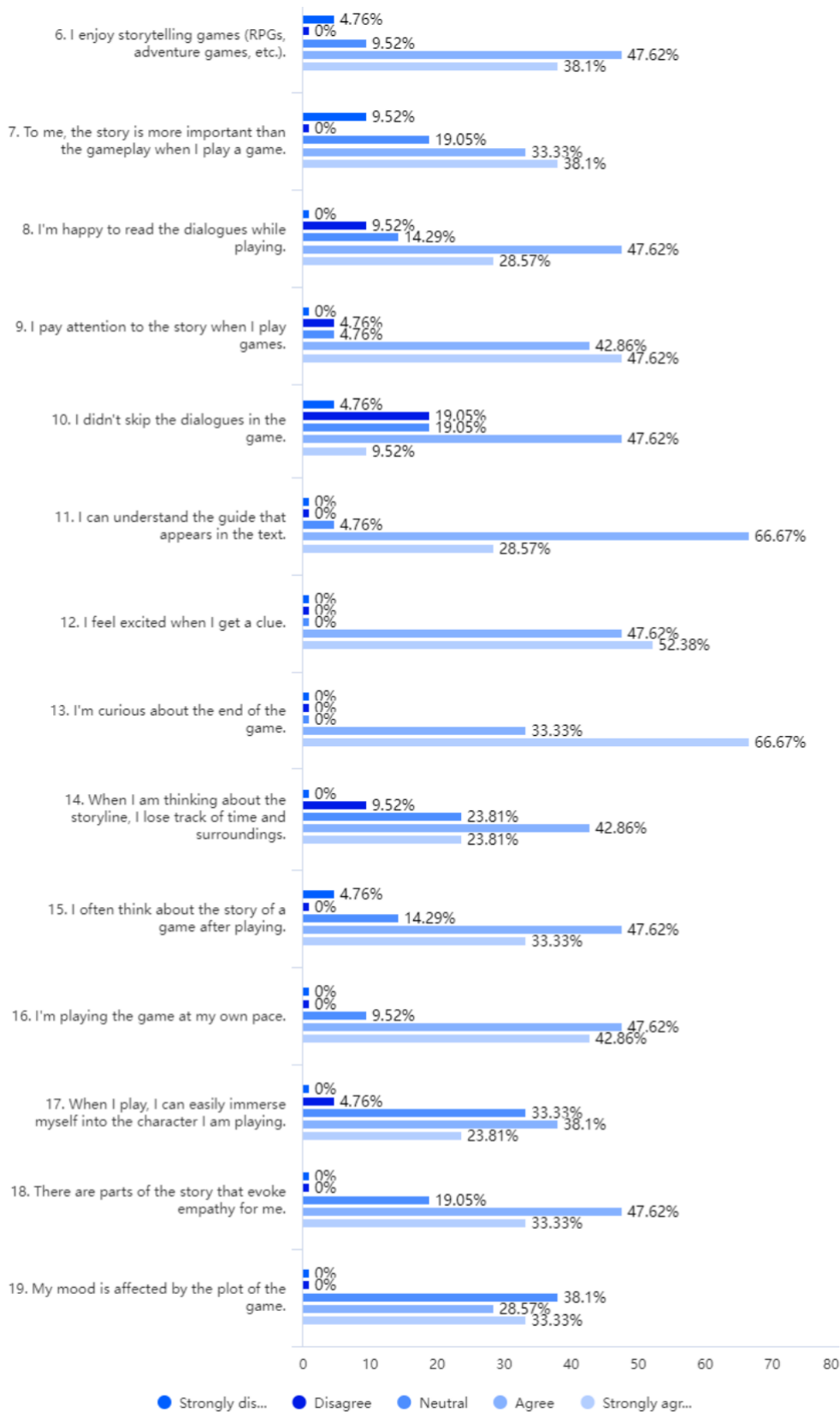


Figure 12: Player immersion & interaction results

Q8, Q10, and Q13 measure the relationship between player curiosity and involvement in the JRPG story. Q9, Q14, and Q15 were asked to observe the relationship between player immersion and Concentration based on Concentration. Q7 and Q12 examine the relationship between challenge and EXPLORING VARIOUS STORYTELLING METHODS IN JAPANESE-STYLE ROLE-PLAYING GAMES (JRPG)

player experience. Q16 tested for the existence of a correlation between player Control and their interest in the story. Q11 measures the relationship between players' understanding of the story and their experience of playing. Q17, Q18, and Q19 test whether empathy can affect the player's experience of the story. Finally, Q6 explores the impact player familiarity has on the gaming experience. Q20 investigates how players view themselves in Trapped (Figure 13). The results show that 33.33% (n=7) of them think they are the audience who watched the story. In contrast, the remaining 66.67% (n=14), considered themselves as protagonists who actively participate in the game's plot.

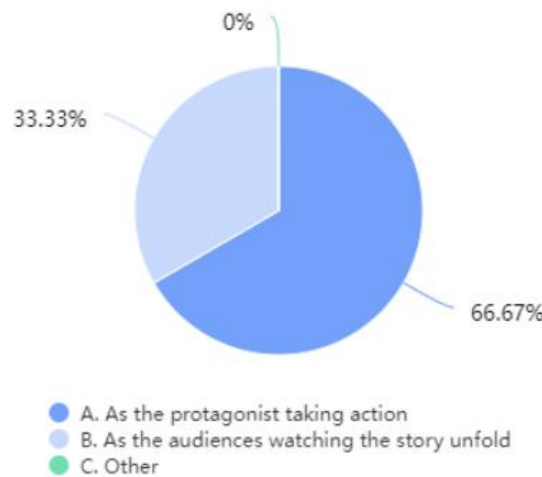


Figure 13: How players see themselves in Trapped.

Figure 14 shows the player's understanding of the narrative in Caught in Trap and their preferences after experimenting with different ways of telling. Q21 showed that 95.23% (n=20) of participants could understand the contents of the story, while only 4.76% (n=1) did not agree (did not understand the contents of the game's narrative). Tips & Warnings Computer footage in Q22 is presented in visual novel form. The results show that 47.62% (n=10) of participants agreed that they could immerse themselves in this part of the narrative, 42.86% (n=9) were neutral, and 9.52% (n=2) opposed this notion. No players will mind trying JRPGs or Visual Novels after this try.

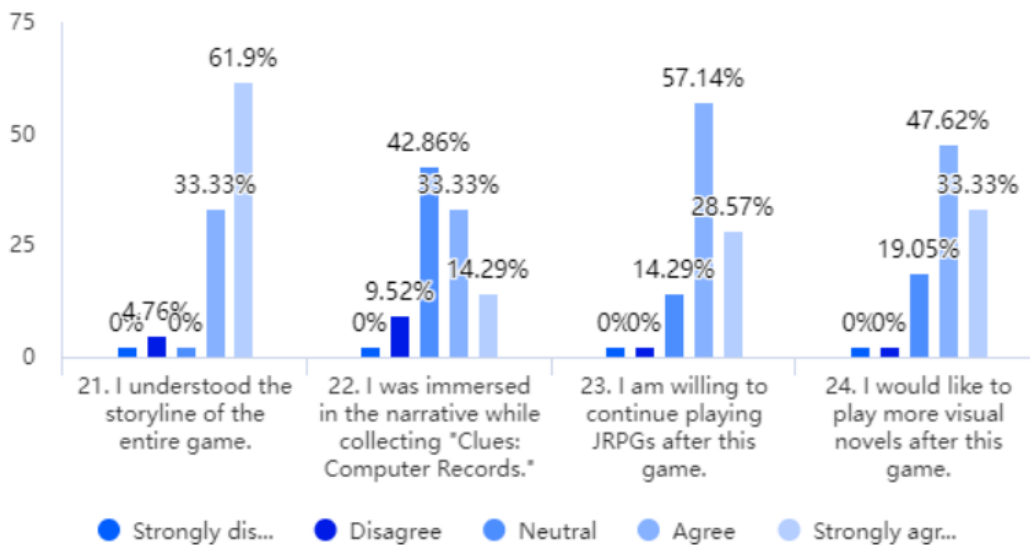


Figure 14: Narrative experiences & preferences

In Q25 and 26, the player rankings are shown in Table 1 below. The ending scene is the most enjoyable and the first scene the least memorable. Moreover, there are no observable outliers in the data set. Because the median cannot show the difference in scores for each region, the average value can be directly described and analyzed.

Table 1: Enjoyment and Impression Score results for each scene

		Mean	Medians	SD
Enjoyable	Opening scene	3.714	4.000	0.845
	Living Room area	4.000	4.000	0.707
	Bedroom area	3.714	4.000	1.056
	Studio area	3.905	4.000	0.831
	Kitchen area	3.810	4.000	1.030
	Ending scene	4.476	5.000	0.680
Memorable	Opening scene	3.238	3.000	1.030
	Living Room area	3.714	4.000	0.680
	Bedroom area	3.762	4.000	1.044
	Studio area	3.667	4.000	1.017
	Kitchen area	3.619	4.000	0.921
	Ending scene	4.667	5.000	0.577

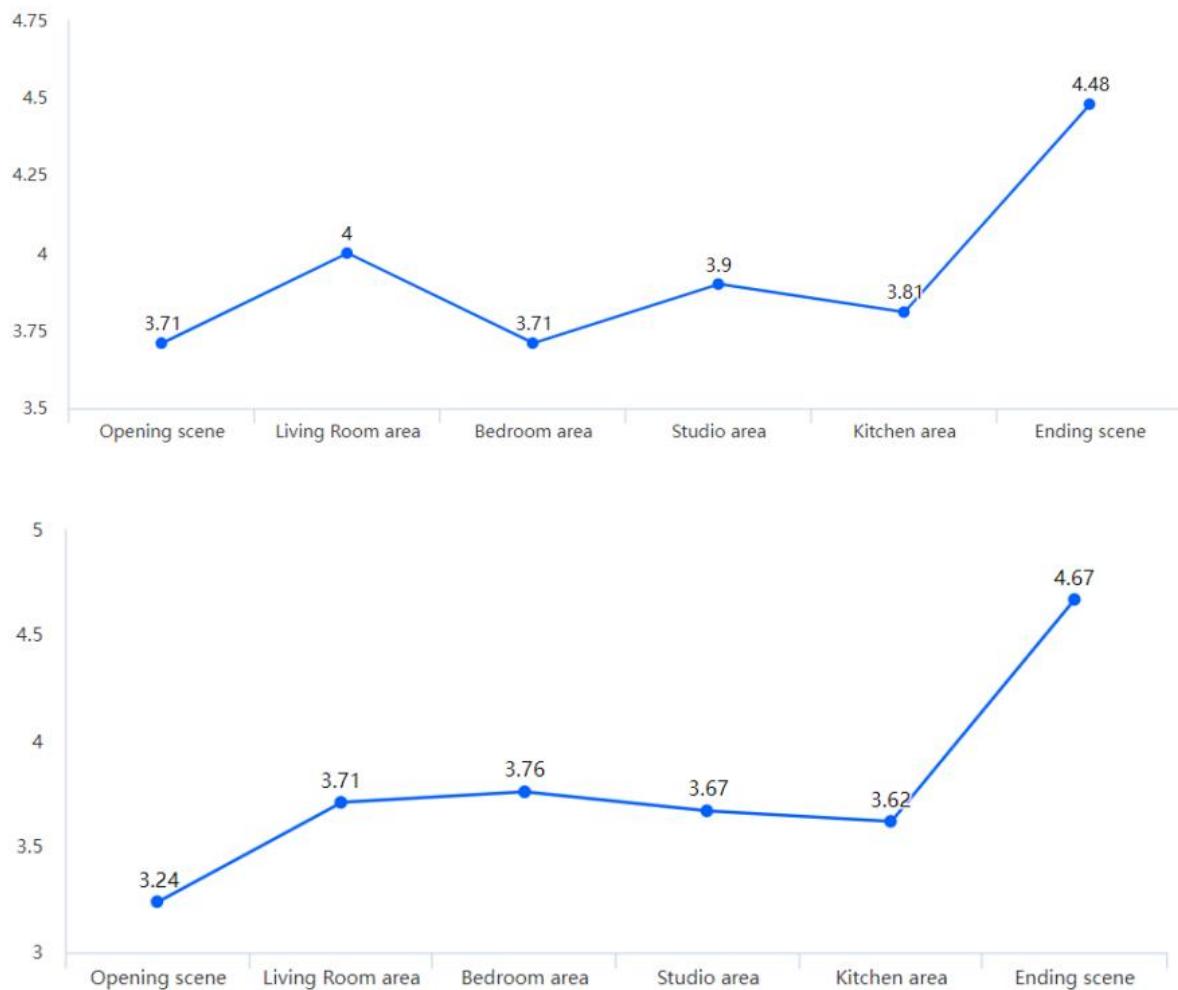


Figure 15: Enjoyment and Meaningful Comparisons that are Memorable

The linear graph shown in Figure 15 can intuitively see the level of fluctuation in the average score. The results show that the opening score is the lowest, while the ending is highly praised. Also, while the Bedroom area's fun score is lower than Living Room, Studio, and Kitchen, it scores higher than all three areas. Correlation analysis was performed on Q25 and 26 results for in-depth analysis. The complete table is attached in Appendix A. The table shows that players' enjoyment of the Bedroom area is highly positively correlated with their level of memory in the Living Room ($r = 0.559$, $p < 0.01$), Bedroom ($r = 0.616$, $P < 0.01$), Studio ($r = 0.746$, $p < 0.01$), and Kitchen area ($r = 0.448$, $P < 0.05$). Since the Bedroom area uses visual novel expressions (traditional narrative) and the rest uses environmental storytelling (nonlinear narrative), this indicates that players' enjoyment of traditional narrative is highly positively correlated with the level of memorable environmental storytelling. The correlation coefficients for Living Room, Bedroom, Studio, and Kitchen are 0.559, 0.616, 0.746, and 0.448, respectively (see Appendix A for a detailed table).

Qualitative Results

There are two open questions in the survey, namely:

Q27: What do you remember most about the whole game?

Q28: What did you find most interesting (or not)? Why?

When answering the first question, 10 participants mentioned their deep impression of the closing scene, accounting for 47.6% of the total respondents. They stated that "the ending animation has a strong sense of insertion", and "The CG matches the music in the ending, creating an atmosphere". They also define the mode of expression in the closing scene. Additionally, 7 player mentioned that the game's scene interactions were fun and "can interact with all the objects in great detail". Three mentioned that The Bedroom Area's visual novel storytelling method impressed them greatly, "this section can help me conclude the development of the story." As for the last question, players' feedback on the overall script layout, gameplay setup, and hint lineup was collected. The keywords "hint" and "inversion" were mentioned 11 times. 85.7% (n=18) of players answered yes to the story. 8 players mentioned a lack of exploration in the bedroom, "felt like I was getting clues without actively searching", and "although it's easy to explain what's going on not interactive." However, except for the bedroom area, 76.19% (n=16) participants said they enjoyed exploring the game map, and 1 participant clearly stated that he had played the game several times.

Discussion

This section analyzes the relationship between the three different storytelling methods and the player experience, to inspire the design of unfolding narratives in story-based games, such as JRPGs. This chapter will also discuss the shortcomings of the trials and directions for improvement in future research.

Comparing Results of Three Ways of Storytelling

The experiment explored different player responses to three different in-game narratives. Before analyzing player feedback on the three ways of storytelling, it is important to determine whether players are interested in in-game storytelling. The seven dimensions proposed by Qin et al. (2009) were applied in an experimental investigation of actor immersion in narrative. The results show that more than 80% of players are interested in the game's narrative and can immerse themselves in the game. Participant feedback from Caught in Trap serves as a helpful and inspiring reference in this context. The qualitative results reveal that although pure text narratives are easy to understand, linear narratives can undermine players' curiosity and patience. As can be seen from Bedroom's feedback, some players said that "the story is clear and easy to understand", while others thought that "there is no interactive exploration, so the playability is not enough". While the narrative of nonlinear environmental interactions can provide players with a fair degree of freedom, some participants said that "there are no clear guidelines, and they don't know what to do next." After the experiment, we observed that players' desire to play games with different narrative styles was significantly stimulated. The results of the correlation analysis show that the combination of text and interactive storytelling can enhance the game experience. Players can adapt to incorporate different narratives: they enjoy the traditional (text-based) narrative, and their impression of the interactive narrative is proportionally altered. That is, when linear storytelling is combined with non-linear narrative (Environmental storytelling), players can understand the story clearly and immediately explore the scene at will. This intertwined narrative helps players stay immersed in the script. Therefore, the researchers suggest that crossing linear and non-linear narratives can reduce the disadvantages of each storytelling method.

Also, while the opening and closing scenes use a third mode of narrative expression as a cutscene change, player feedback is noticeably different. The opening scene is close to the game's agency, as it doesn't have a major impact on performance, only guiding the player to interact with dialogue and scenes. While the ending features visual effects (more CG) and auditory effects (different BGM), it captures the player's senses and helps them interact and immerse themselves in the plot. The way the ending scene is presented is more direct, as it impresses the player, and proves to be the most memorable part of the narrative. Players reported no statistically significant change in enjoyment and memory retention in rooms with environmental storytelling. Based on the above understanding, for story-based games like Epic Games or JRPGs that want to increase player interaction, the game's plot must be presented in various ways to keep players interested and increase their motivation to explore on their own. When conveying large storylines or setting background information to players, designers should avoid using large blocks of text, because too much information will prevent players from enjoying the game. After all, no one wants to read long texts for relaxation, and too many long lines

can reduce immersion. Textual narrative interspersed with exploration can delay the point at which players become immune to game information by leveraging the game's environment to immerse players in the virtual world.

LIMITATIONS AND FUTURE RESEARCH

It should be noted that all participants in the study had experience with visual novels, and most had played JRPG-style games. The subject is interested in the narrative. Therefore, people who have not been exposed to JRPGs or visual novels may get different results. In addition, designers need to consider whether the game's target audience can accept different combinations of expressions in the presentation of game plots. Participants may be more diverse in future experiments. Respondents of different sexes, ages, and nationalities must be taken into account. Also, to make the game more playable, the story can be enriched by adding points and branching stories. This idea was proposed by players after an experiment to increase the amount of player agency and make the experience more random. The application of all three narrative methods in the same JRPG makes it difficult to discuss the variables separately in subsequent data analysis. Another drawback is that experiments must be designed according to different groups of players, bearing in mind that comparing experimental results from several groups can reduce the occurrence of errors. To analyze the effect of different modes of storytelling on the player's experience at a later stage, group experiments on players following different game designs had to be conducted.

Conclusion

This study explores the effects of three storytelling methods: visual novel storytelling (traditional text), environmental storytelling (interactive), and cutscene-favored storytelling (visual + sound) on player immersion and experience. The results of the study show that the three ways of storytelling enrich the narrative expression of games. Both linear and nonlinear narratives have their advantages and disadvantages, and the best way to engage players is to interweave both narratives in the game. For those studying narrative-based game development (such as JRPGs), this research provides guidelines and examples of players' experiences playing with different storytelling ways. However, this study was not without limitations: 1) The types of participants were not very diverse, and experiences could change if participants were of different age groups, nationalities, or liked different types of games. 2) In future studies, more control groups should be included, and games should be designed separately with different manifestations to improve variable control and reduce experimental error.

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APPENDIX A

Table of Correlation Analysis Results

	Immersion & Engagement	Understanding	Narrative preference	Enjoyable Opening	Enjoyable Living room	Enjoyable Bedroom	Enjoyable Studio	Enjoyable Kitchen	Enjoyable Ending	Memorable Opening	Memorable Living room	Memorable Bedroom	Memorable Studio	Memorable Kitchen	Memorable Ending
Immersion & Engagement	1														
Understanding	0.359	1													
Narrative preference	0.699**	0.484*	1												
Enjoyable Opening	0.274	0.09	0.388	1											
Enjoyable Living room	0.117	0.283	0.392	0.418	1										
Enjoyable Bedroom	0.087	0.325	0.468*	0.296	0.469*	1									
Enjoyable Studio	-0.08	0.164	0.221	-0.112	0.595**	0.480*	1								
Enjoyable Kitchen	0.03	0.524*	0.275	0.279	0.549**	0.407	0.562**	1							
Enjoyable Ending	-0.162	0.075	0.241	0.162	0.416	0.269	0.438*	0.279	1						
Memorable Opening	0.017	0.088	0.131	0.421	0.542*	0.246	0.316	0.416	0.185	1					
Memorable Living room	-0.07	0.219	0.372	0.451*	0.740**	0.559**	0.467*	0.399	0.681**	0.472*	1				
Memorable Bedroom	0.123	0.359	0.505*	0.089	0.339	0.616**	0.605**	0.42	0.238	0.376	0.429	1			
Memorable Studio	0.017	0.241	0.345	0.058	0.487*	0.746**	0.612**	0.414	0.386	0.502*	0.617**	0.722**	1		
Memorable Kitchen	-0.228	0.231	0.225	0.303	0.768**	0.448*	0.538*	0.495**	0.624**	0.411	0.836**	0.317	0.605**	1	
Memorable Ending	-0.289	-0.039	0.176	0.102	0.367	0.246	0.452*	0.056	0.680**	-0.028	0.543*	0.442*	0.227	0.502*	1