

A Study on the Freedom of Open World Games : Focus on <The Legend of Zelda: Tears of the Kingdom>

Mingke Lyu¹, Xinyi Shan², Jeanhun Chung*

¹Master's Course, Dept. of Multimedia, Graduate School of Digital Image and Contents,
Dongguk University, Seoul, Korea

²Ph.D, Dept. of Multimedia, Graduate School of Digital Image and Contents,
Dongguk University, Seoul, Korea

Lecturer, School of Fine Arts and Design, University of Jinan, Shandong, China

*Professor, Dept. of Multimedia, Graduate School of Digital Image and Contents,
Dongguk University, Seoul, Korea

¹kkz533622@gmail.com@gmail.com, ²yarina.0122@gmail.com, *evengates@gmail.com

Abstract

This paper explores the factors influencing the degree of freedom in open-world games, taking <The Legend of Zelda: Tears of the Kingdom> as a case study, it is carefully analyzed in comparison to similar well-known games such as <Genshin>, <Elden Ring>, and <Far Cry>. It also analyzes how the player skill system and its synergy with the combination of interactive elements can effectively enhance the freedom of the game. The results show that the diversity of player skill systems not only significantly enhances the in-game strategy and depth of exploration, but also the rich combination of interactive elements further enhances players' tactical flexibility. This paper also points out that simply expanding the map size while neglecting the content richness and balance of quest design can have negative impacts on the game. This study aims to provide game developers with insights that emphasize the application of skill diversity and interactive elements to improve players' gameplay freedom and overall experience.

Keywords: Open world game, Game Freedom, <The Legend of Zelda: Tears of the Kingdom>, Player Experience

1. Introduction

With the booming development of the digital entertainment industry, open-world games, as a relatively new type of game, have become an important part of the global gaming market. Open world games have also reshaped the modern gaming experience with their unique freedom and exploration. The Legend of Zelda: Tears of the Kingdom achieves remarkable innovation and breakthroughs in terms of freedom. The purpose of this paper is to analyze The Legend of Zelda: Tears of the Kingdom in comparison with other open-world games in terms of freedom, and explore how to further enhance the game's openness advantage. The research

Manuscript Received: July. 31. 2024 / Revised: August. 8. 2024 / Accepted: August. 14. 2024

Corresponding Author: evengates@gmail.com, Jeanhun Chung

Tel: +82-2-2260-3767, Fax: +82-2-2260-3766

Professor, Dept. of Multimedia, Graduate School of Digital Image and Contents, Dongguk University, Seoul, Korea

will focus on key elements such as player autonomy and interactivity, hoping to propose feasible methods to provide guidance and inspiration for the development of open world games.

2. Theoretical Background

2.1 Open World Game

Open-world game is also often referred to as “free roam” “open world” and “roaming” represents the game in which Open-world and “roam” mean that there is no map in the game, and players are free to roam around the virtual world and choose when and how they want to complete their tasks. Due to their highly free and open-ended experiential goals, these types of games contain a large number of core gameplay elements that allow players to explore and create as much as they want.

2.2 The Legend of Zelda: Tears of the Kingdom

The Legend of Zelda: Tears of the Kingdom is an action-adventure game released by Nintendo on May 12, 2023 on Nintendo Switch as the 20th installment in the main Legend of Zelda series and the sequel to The Legend of Zelda: Breath of the *Wild*. Players will maneuver the character *Link* on an adventure to find the missing Zelda. *Link's* adventures are not limited to the vast land of *Hyrule*, but also extend to the skies and underground, providing players with a multi-layered exploration experience.

3. Research Contents

3.1 Manifestation of Freedom in Other Open-world Games

Player Skill System. In open-world games, a character's skill system is a key factor in enhancing the gameplay experience and player freedom. For example, in the game *Elden Ring*, each weapon type, from swords, axes, staves to more specialized weapons, can be equipped with specific skills. Players can transfer specific skills from one weapon to another by equipping “Ashes of War” on different weapons. This customization greatly increases the variety and individuality of combat strategies, allowing players to choose the right combination of skills based on their fighting style and the needs of their opponents (Fig.1). The variety of skills not only increases the playability of individual characters, but also increases the replay value of the game as a whole, as players can try out different combinations for the same scenario or challenge.



Figure 1 : Example of Mage Skill Combinations in “Elden Ring”

Quest and Narrative Sequence Design. In open-world games, the design of quests and plot sequences can have a decisive impact on the player experience. In *Elden Ring*, player decisions can lead to different story

lines and endings. Some entries in Assassin's Creed series also drive the story through the player's choices, and the player's decisions can affect not only the story ending, but even the characters and their relationships with each other. In contrast, while Elder Scrolls V: Skyrim offers a wide range of freedom of choice, such as the choice of quest lines and how they are executed, these choices do not affect the game's main ending. The player's decisions primarily affect the dynamics and interactions between characters in the game world, rather than the ending itself. This design highlights elements of role-playing and world exploration rather than an ending-oriented narrative.

3.2 Manifestations of Freedom in The Legend of Zelda: Tears of the Kingdom

Skills and Innovation. In The Legend of Zelda: Tears of the Kingdom, the game's freedom is enhanced by the introduction and innovation of the Link skill system. These skills open up a wealth of play styles and strategies. And players' creativity is not limited to combat, but extends to lifestyle customization. Some players built their own houses on the continent of Hyrule, others invented various kinds of transportation, and some even created large weapons that automatically attacked their enemies (Fig.2). These innovations enrich the game's playability and make each player's experience unique and personalized, not only providing countless solutions and ways to play, but also stimulating players' creativity and desire to explore, a key factor in the game's increased freedom.



Figure 2 : Player-Constructed Houses, Vehicles, and Attack Devices

Table 1. Bow Modification Recipes and Effects in The Legend of Zelda: Tears of the Kingdom

Material	Additional Effects
Keese Eyeball	Automatically track enemies
Keese Wing	Increase arrow speed
Red Chuchu Jelly	Adds fire attribute to enemies, burning them
White Chuchu Jelly	Adds ice flexibility to enemies, freezing them
Yellow Chuchu Jelly	Adds thunder attribute to the enemy, causing the enemy to be electrocuted
Blue Chuchu Jelly	Adds water element to the enemy, making the enemy soaked
Ruby	Causes a fire-flexing attack in a wide area, causing the enemy to burn
Sapphire	Causes a large-scale ice bending attack, freezing the enemy
Topaz	Causes a wide-area lightning attack, electrocuting the enemy
Bomb Flower	Explodes at the point of impact
Puffshroom	Creates smoke at the point of impact
Muddle Bud	Creates smoke at the point of impact, causing enemies hit to become confused.

Raw Meat

Place animal flesh at the impact point to attract nearby enemies.

Combination of Interactive Elements. The Legend of Zelda: Tears of the Kingdom inherits the elemental response system from its predecessor, The Legend of Zelda: Breath of the Wild, which includes interactions with the elements of ice, fire, and lightning. Through these elemental interactions, players can execute complex tactical maneuvers, such as utilizing the element of water to put enemies in a dampened state, followed by an electric attack to trigger a ranged conductive effect, thus effectively controlling the battlefield and eliminating multiple enemies. Additionally, in The Legend of Zelda: Tears of the Kingdom, the developers have introduced a new skill called “Fuse”, which allows players to create or upgrade weapons, shields, bows and arrows by synthesizing different materials. For example, combining a Keese Eyeball with a Bow gives it the ability to automatically track its target, while combining a Keese Wing with an Bow increases the arrow's speed as show as in Table 1. This synthesis process not only improves the basic attributes of the equipment, such as damage value and durability, but also adds variety to the gameplay, allowing players to customize their equipment to suit their style of play and the challenges they face.

Game Map Design. Henry Jenkins, in his 2004 article “Game Design as Narrative Architecture”, suggests that game designers can create a “narrative space”to allow players to experience stories as they explore. Game designers can create environments that guide the player through a particular storyline, environments that are not just passive backdrops but actively participate in the storytelling, exposing the story through player exploration and interaction. In The Legend of Zelda: Tears of the Kingdom, the game's map is expansive, encompassing not only land, but also expanding into the air and underground. The even distribution of temples across the islands adds visual and exploration variety, and also contributes to the richness of the overall narrative. By providing puzzles and challenges related to the main story, not only do they challenge the player's puzzle-solving and combat skills, but more importantly they serve as key narrative elements that effectively drive the story deeper.

3.3 Comparison of the Freedom in The Legend of Zelda: Tears of the Kingdom with Other Games



Figure 3 : The Skill Tree System in Far Cry 5

Impact of the Player Skill System. The design of the skill system is one of the key factors influencing the player experience. The diversity of Link's skills in The Legend of Zelda: Tears of the Kingdom provides multiple ways to perform the same task, and this flexibility significantly increases the freedom of decision-making and breadth of spatial exploration within the game. In role-playing games such as Genshin and Elden Ring, players are free to choose their characters and mix and match skills, combining the different abilities of their companions to create a colorful combat experience. Comparing Far Cry 5 and Far Cry 6, Far Cry 5 adopts a traditional skill tree system (Fig.3), where skills are unlocked through the accumulation of experience values, and this progressive character growth mechanism empowers players with a clear growth path and long-term goals. However, this system may limit the player's need for immediate tactical adjustments. On the contrary,

by removing the traditional skill tree and introducing an instant equipment replacement system to acquire skills, Far Cry 6 allows players to quickly adjust their skill configurations and quickly change skills based on immediate needs and tactical considerations, increasing the flexibility to deal with various challenges in the game.

Role of Interactive Elements. The richness and complexity of the interactive elements play a crucial role in enhancing the game's freedom and the player's immersive experience. The game Genshin, borrows the elemental reaction mechanism from the Zelda series of games, creating seven basic elements: Anemo, Geo, Electro, Dendro, Hydro, Pyro and Cryo. In Genshin, the reactions between elements play a central role in the battle system. The combination of different elements can trigger specific effects, such as combining the Hydro element with the Pyro element to create an “Vaporize” reaction, or combining the Hydro element with the Electro element to create an “Electro-Charged” effect (Fig.4). These effects enrich the decision-making process during the battle, and the complex interactions between the elements also increase the strategic depth of the game, significantly enhancing the game's explorability and playability.



Figure 4 : Elemental Reaction Chart for *Genshin Impact*

Among other games, Might & Magic Heroes VII is not a continuous open world in the traditional sense, but the game offers a wide range of areas to explore, and the game's elemental system allows the player to utilize elements such as fire, water, electricity, and poison to solve puzzles or gain an advantage in combat. While elemental reactions in Dragon Age: Inquisition are not as significant as in Genshin, players can utilize ice, fire, and other magic to have some effect on the environment, such as destroying walls or freezing water to create paths. The widely adopted elemental reaction system not only proves the universality and effectiveness of this mechanic, but also demonstrates that through the complexity of interacting elements, the game can provide players with more strategic choices and opportunities to interact with the environment. Thus, elemental interaction is a key factor in increasing the freedom of the game.

Map Scale. Having an expansive map does not directly equate to a superior gameplay experience. It's the effective use of the map that is the key factor, including building density, variety of interactions, and design of accessible areas. For example, GTA 5 has a sprawling downtown area, but its building density is relatively low, far below that of a real-life county. Recognizing this, game developers have made significant improvements in space utilization. Cyberpunk 2077, released in December 2020, placed particular emphasis on its vertical and longitudinal sense of three-dimensional space and high-density environment design, which enhances the interactivity and diversity of the scene.

The Legend of Zelda: Tears of the Kingdom provides an excellent demonstration of map space utilization in terms of quest distribution, NPC interactivity, storyline progression, and exploration rewards. The main quest points in the game are evenly distributed, and resources such as treasure chests and fruits, in addition to

temple locations, are made easy for players to discover through their even distribution (Fig.5).



Figure 5 : Player-Created Interactive Map for *The Legend of Zelda: Tears of the Kingdom*

4. Conclusion

This paper systematically explores the multiple factors affecting the degree of freedom in open-world games by analyzing well-known open-world games such as *The Legend of Zelda: Tears of the Kingdom* and *Genshin*, *Elden Ring*, and *Far Cry*. The results of the study show that the degree of freedom in open-world games depends not only on the vastness of the map, but also on the diversity of the skill system, the flexibility of the quest design, and the richness of the interactive elements. Together, these factors contribute to the game experience, enabling players to enjoy a richer and more satisfying gameplay.

To summarize, the research in this paper has important guiding significance for the design and development of open-world games. Through a deeper understanding of the key factors affecting the degree of freedom of the game, developers can more accurately grasp the needs and expectations of the players, so as to create more fascinating game works that meet the expectations of the players. At the same time, this paper also provides new perspectives and ideas for the design of open world games, which helps to promote the continuous innovation and development of this type of game.

References

- [1] Wang Zhaoyang, Le Yun, "Immersive gaming experience provides new ideas for open-world video game level design." *Culture Industry*. 29(2023):97-99. DOI: CNKI: SUN: WHCC. 0. 2023- 29- 036.
- [2] Mao Xinyue, "Research on Open world game design" [D]. *China Academy of Art*, 2023. DOI: 10. 27626/ d. cnki. gzmsc. 2023. 000284.
- [3] Hwanhan Kim, "A Study on user characterization of open world games." *Domestic Master's Thesis Hanyang University Graduate School*, 2023. Seoul.
- [4] Henry Jenkins, "Game Design as Narrative Architecture" *Computer*, 44, 118-130.
- [5] Miaoyihai Liu, Jeanhun Chung, "Research of popular success factors of game content <Genshin Impact>" , *IJASC Vol. 11 No. 2*, DOI:http://dx.doi.org/10.7236/IJASC.2022.11.2.83
- [6] Qi Yi, Jeanhun Chung, "Research of Character Design in Side-scrolling Horror Puzzle Games" , *IJASC*, Vol. 11 No. 2, DOI: http://dx.doi.org/10.7236/IJASC.2022.11.2.77
- [7] Qi Yi, Jeanhun Chung, "A Study on the Adaptability of Shadow Puppet Elements to Side-Scrolling Games" , *IJASC Vol. 12 No. 2*, http://dx.doi.org/10.7236/IJASC.2023.12.2.102
- [8] Q. Q. Jiang. &J. H. Chung, "A case study on the promotional animation of the mobile game 'Honour of Kings'". *Journal of Digital Convergence*, Vol.19 No.8 293-299 (2021), DOI:https://doi.org/10.14400/JDC.2021.19.8.293