**Advanced Gameplay Survival Mechanics First-third/person for multiplayer video games**

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**Abstract**

Video games are high-involvement products that tend to retain their players thought out the duration/narrative or objective goal. Either keeping at the edge of non-linear narrative perspective of Hero’s outer and inner Journey aka from “real” world obstacles to overcome or fail; all the way through identity to the essence or by introducing non-story multiplayer skill competence and attributes or else combination of everything above. At its core of implementation from business goals to product delivery, there is where the gameplay systems sit.

My thesis project study addresses this succession line of which games are being made in the literature by analyzing the core concept and actual implementation of an immersive virtual world of innovation, freedom and a form of digital identity of an offline or online player instance.

Because of a plethora of game genres categorization even though the line can be blurred easily between each genre this is dependent on the project’s vision; this study will be focused on survival experience multiplayer horror approach with FPS (first-person shooter) and some RPG (role-playing) mechanics mixed.

First, I analyze the observable factors, a dataset and impact of 3 well known multiplayer co-operative and non-co-operative video games via Steam Charts associated with a similar genre approach. The historical behavioral data and the time of the game's actual release throughout its competitors and deconstructing the mechanics/systems in short of each game and why it retains the majority of the players more than the others.

What makes a game appealing? Is it the story? Is it just for fun? Do we like spending more on thinking while playing or just playing for nothing?

I also show that player retention diminishes due to the absence of a particular game mechanic or lack of a plethora level design strategy that contributes to the factors as well.

*Keywords*: Game Design; Multiplayer Games; Player Behavior; Player retention; Gameplay Mechanics; Gameplay Systems;

1. **Introduction**

The “video game” industry represents one of the most significant pillars/components of the global market expanded in many fields, e.g., entertainment, training and simulation, architectural and automotive visualization, higher education, linear film and television content creation, broadcast and live event production, animation, metaverse and other real-time applications. According to Europe’s video game industry (ISFE), consumers reach a 50% mark of the European population aged between 6-64. The average age between them is 32 years old and half of that population, the 47%, are women’s across these markets. Usually, there is a higher chance of someone pursuing a STEM job when playing video games, which concludes in higher science development rates.

Also, another excellent impact point is that 10h/week the average is being spent playing video games. In contrast, 14/h week on social media and 24/h week on watching tv from these statistics can someone easily tell that this is all part of the “video game” industry in a way, the virtual world is everywhere and its growing onset rapidly [1].

Now you may wonder where gameplay mechanics fit here? In a broader term, well actually everywhere because they define the field and ruleset of the deterministic non-linear virtual or augmented reality world. Everything has its logic and with the logic comes the actual design and implementation of gameplay systems of interactions because it is nothing more than what a user will input as his next instruction set in the iconic or more pronounced virtual world. The world is digital, and life events also contribute to these areas. As pandemic hits us or world pollution and climate change become a more controversial issue for our day’s digitalization is a must and that means at its core, “gameplay” mechanics usage, proper structure, architectural software solutions are becoming our reality, modern problems require modern solutions.

From an entertainment perspective, modern video games are high-involvement products with multiplatform and multiplayer skill and attribute characteristics or story-wise, aiming to deliver long-term happiness to consumers [2]. This directly leads to more significant retention of consumers in the market, which is often seen as more preferable and profitable than acquiring new ones. Jolley et al. argue that retention can be measured by the duration of time a consumer continues to buy from a company [3]. Rust and Zahorik add that retention can be viewed as the propensity for a consumer to stay with a brand over time [4]. To improve player retention beyond the short term, producers attempt to efficiently organize and effectively create immersive blueprints for match participants in the multiplayer video games into teams and thus customize the video game experience around aspects of the player such as preferences, playing style and skill level [5].

Consequently, this study addresses three key research questions related to enjoyment, matching and retention of players in multiplayer video games [6]:

1. Which genre affects the most a player by design?
2. Which observable, game logic behaviors tend to affect player retention?
3. What is the proper way of building an architectural gameplay system?

I address these research questions through a multi-stage analysis approach.

First, I go through comparing an ongoing analysis of Steam’s concurrent players using its dataset. Following the extensive empirical analysis, we dig into which game core ideas of systems can influence a game the most such as teamwork vs game difficulty ratio balance. Then based on findings, we conclude what is the best way to develop similar systems and structure architecture in order to create an immersive genre video game experience by reverse-engineering the existing ones.

1. **Literature and Hypothesis**

***References***

[1] Europe’s video game industry, 2021 key facts about the European video games sector, available at https://www.isfe.eu/data-key-facts/key-facts-about-europe-s-video-games-sector/ Accessed: 11th November 2021.

[2] E. W. Anderson, C. Fornell, D. R Lehmann, Customer satisfaction, market share, and profitability: Findings from Sweden, Journal of Marketing 58 (3) (1994) pp. 53-66.

[3] B. Jolley, R. Mizerski, D. Olaru, How habit and satisfaction affect player retention for online gambling, Journal of Business Research 59 (6) (2006) 770 – 777.

[4] R. T. Rust, A. J. Zahorik, Customer satisfaction, customer retention, and market share, Journal of Retailing 69 (2) (1993) 193 – 215.

[5] S. Karpinskyj, F. Zambetta, L. Cavedon, Video game personalization techniques: A comprehensive survey, Entertainment Computing 5 (4) (2014) 211–218.

[6] N. Stroh-Maraun, D. Kaimann, J. Cox, more than skills: A novel matching proposal for multiplayer video games page 2.