



**QUALITATIVE DEVELOPMENT AND STANDARDIZATION IN SINGLE-
PLAYER GAMES**

Lappeenranta–Lahti University of Technology LUT

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Examiner(s): Associate Professor, Antti Knutas

ABSTRACT

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This thesis seeks to answer questions about the qualitative development and standardization that has happened in single-player games. These questions ask what is required of single-player games today in terms of quality, how the requirements have evolved, and what possible standards have emerged. The research was conducted as a case study, where chosen games were examined, along participants playing them and being interviewed about their experience. The results show that single-player games have grown to have a simple foundation in terms of mechanics, while innovation and uniqueness in the gameplay and aesthetic would make the game stand out.

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Tämä opinnäytetyö pyrkii vastaamaan kysymyksiin, jotka koskevat yksinpelattavien videopeleissä tapahtunutta laadullista kehitystä ja standardoitumista. Kysymykset koskevat sitä, mitä yksinpeleiltä vaaditaan nykyään laadun suhteen, miten nämä vaatimukset ovat kehittyneet ja mitä mahdollisia standardeja on syntynyt. Tutkimus toteutettiin tapaustutkimuksena, jossa valittuja pelejä tarkasteltiin, sekä tutkimukseen osallistujat pelasivat niitä ja kertoivat kokemuksistaan haastattelussa. Tulokset osoittavat, että yksinpelit ovat kehittyneet mekaniikan osalta yksinkertaisemmiksi, kun pelattavuus ja esteettisyys erottavat pelit toisistaan innovatiivisuudellaan ja ainutlaatuisuudellaan.

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SYMBOLS AND ABBREVIATIONS

Abbreviations

DLC	Downloadable Content
FFX	Final Fantasy X
GotY	Game of the Year
JRPG	Japanese Role-Playing Game
RPG	Role-Playing Game
3D	3-Dimensional
IAT	Immersion, Agency and Transformation
MDA	Mechanics, Dynamics and Aesthetics
NPC	Non-Playable Characters
XP	Experience Points
QoL	Quality of Life

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DECLARATIONS

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The originality of this thesis has been reviewed with the Turnitin similarity checking service.

AI usage

The author of the thesis, Oliver Peitsalo, used the following AI-tools during the preparation of the thesis:

1. Gemini 2.5 Pro
 - a. Purpose of use: Finding sources
 - b. Explanation of the use of the tool: The AI was asked to find sources that would be related to the thesis topic
2. DeepL
 - a. Purpose of use: Improving the text
 - b. Explanation of the use of the tool: The AI was used to check for possible grammar errors and see if better wording could be used

Responsibility

The author, Oliver Peitsalo, takes full responsibility for the content of this thesis and has reviewed and edited the content generated by the possible use of AI tools.

1 Introduction

As gaming platforms and technology have advanced, the evolution of video games from simple puzzle games to cinematic experiences has been a journey marked by many impressive works. While some may perceive merely sophisticated graphics and enhanced performance, others encounter a game that is the culmination of numerous iterations and refinements. As with movies, the development of the part of video games that are displayed on the screen is easy to see, but at the same time, the possibilities for user interaction in games are something that has opened a new dimension to the player experience. As the demand and interest in the gaming industry continues to grow, it is beneficial to understand its historical development and the ways in which it has evolved over time. The interest sparked by video games and their creation leads to the exploration of classics, just as a new painter admires the Mona Lisa and a future film director analyses *Gladiator*.

Given the continuous growth of game development, there is a constant need for new literature, and literature on the subject is frequently updated. Nevertheless, many older studies on the subject predicted where games would be headed. For instance, Adams & Dormans (2012, p. 32) wrote that creating a coherent narrative game requires a balance between the freedom given to players and its restriction, especially in open-world games. This article uses the critically acclaimed *The Elder Scrolls* series as an example case in which an open game world was successfully implemented. However, when the article was published, the authors could not have predicted that many open-world games would be among the best of their time. At the same time, ideas and opinions about concepts such as difficulty or challenge and their relationship to learning are divided among many. Fabricatore (2007) wrote about game design, arguing that the time needed to master core mechanics should be minimized, which would lower the barrier of entry. This has been proven wrong over time, as players have shown that they enjoy practicing difficult-to-learn mechanics and the learning process involved, for example in FromSoftware's *Dark Souls* series, which is known for its high level of difficulty. The assumption of casual and less serious gaming was something that was seen in game consumption at the beginning of the millennium.

This thesis will examine the development that single-player games have undergone in terms of quality and standards from the beginning of the millennium to the present day. The aim of the study will be to observe the qualitative development and standardization that has taken place in single-player games and to assess how the findings could be applied in the future. In order to obtain meaningful comparisons, the study will focus on the current millennium, which began in 2000 with the release of the PlayStation 2 and the games published for it. The main reason for this limitation is the limitations of previous generations of platforms in terms of the potential of the games published for them. For example, the original Super Mario games are very primitive by today's standards, and the difference in power between the platforms of that time and modern technology is too great for a meaningful comparison. Similar to the technical limitations of older platforms, mobile games have also been excluded from the study due to the limitations of the platforms themselves. At the same time, the study is limited to single-player games, as the qualitative aspects of multiplayer games differ significantly from those of single-player games, which would make the study too broad and prevent a deeper examination and analysis of different areas. The central problem of the study is defining the quality of single-player games and how our understanding of it has changed. The final research questions are:

1. What is required of single-player games today in terms of quality?
2. How have these requirements evolved?
3. What standards have emerged?

The study will first proceed with a more detailed examination of the topic and a presentation of the research. This will allow us to move on to the research itself, based on which we will form conclusions and other ideas that have emerged.

2 Research background

In this section of the thesis, an in-depth examination of single-player games will be conducted, with a focus on their evolution from the beginning of the millennium to the present. We will analyse selected games from this period to examine the evolution that has taken place. These games have been selected primarily based on their release date, as well as their general reception and acclaim. Furthermore, the limited availability of platforms was circumvented in certain situations, and the potential impact on the study, as well as the compromises made, are noted in the appropriate sections. In order to analyse these games, we must first understand what they are.

2.1 Single-player games

As the name suggests, single-player games are a category of video games in which there is only one player, as opposed to multiplayer games. In addition to the number of players, video games can be categorized in many other ways, including style and theme. For example, Hammad, et al. (2021) define "long-form" single-player games as single-player experiences that can last over 100 hours. Although this is not a commonly used term, it would be a good way to more accurately categorize many popular single-player games. Hammad, et al. (2021) define single-player games as a series of story-based missions, again using *The Elder Scrolls* as an example. While this definition would apply to open-world games, no open-world games could be likened to a theatrical play in which the player is tasked with playing through various scenes. The implementation of different genres varies, and an exploration of these variations will be key to understanding the changes these games have undergone. The following subsections will introduce you to the most popular genres and categories of single-player games to get you started.

2.1.1 Role-Playing Games

Role-playing games, often referred to as RPGs, have become the most popular single-player game in recent decades. The genre has been described by Waskul and Lust (2004) as a unique intersection of fantasy, reality, and imagination in which the user assumes the role of the "player character". They note that after creating a character at the beginning of the game, the user can role-play as his or her in-game self in the game world. The causality of the player's choices within the game is also noted as a large part of RPGs, for example, how they approach combat or use skills. (Waskul & Lust, 2004). The genre has proven to strike a near-perfect balance between reality and fantasy, with some of its brightest stars receiving the industry's most prestigious awards to highlight their success. Examples include Elden Ring (2022), Baldur's Gate 3 (2023), and God of War (2018), all of which won Game of the Year (GotY) awards and/or other equivalent trophies. (Serin, 2024). The RPG genre has also managed to form regional styles, with Japan bringing its own JRPG franchises like Final Fantasy. The games in this genre have also been the target of more specific categorizations, with Elden Rings action and RPG tags being combined into Action Role-Playing Game (ARPG), for example, but in this thesis these subgenres will be considered part of the main genre for the sake of clarity.

2.1.2 Action-Adventure

Action-Adventure games are another huge genre of the single-player game space, combining the beloved categories of action and adventure into their own genre. Liu (2024) highlights story- and worldbuilding as the main strength of action-adventure games, noting the element of exploration to be at the heart of the genre. Another point of emphasis is placed on progression, often in the form of increased difficulty. The feeling of accomplishment can be achieved by beating these harder challenges, letting the players grow as they play. (Liu, 2024). This kind of growth has made the genre unique, with Fernandez-Vara & Osterweil (2010) citing that unlike RPGs, the characters in adventure games don't have things like health points that can be improved as the game progresses. While the article refers to adventure games instead of action-adventure games, the statement would apply to the genre, as some games might include both action and adventure as tags instead of action-adventure.

Notable action-adventure games include Red Dead Redemption 2 (2018), The Last of Us (2013) and The Legend of Zelda: Breath of the Wild (2017), the last of which won an incredible 4 major GotY-awards, as noted by Serin (2024).

2.1.3 Souls-like

The increasing popularity of single-player games has given rise to new genres that are tailored to address the evolving demands and preferences of players. One of these genres is Souls-like games, which, as Pan et al. (2024) have noted, are distinguished from typical RPGs by their emphasis on difficult challenges and environmental storytelling. The authors observe that the genre emerged from FromSoftware's titles, such as Demon Souls (2009) and Dark Souls (2011). FromSoftware was instrumental in not only pioneering the genre, but also popularizing it with their signature series, Dark Souls. This series introduced many of the genre's core elements, thereby establishing its foundation and influencing subsequent developments in the field. (Pan;Xu;Guo;Park;& Ding, 2024). The genre to which the Souls series is often compared was inaugurated with the release of Dark Souls III (2016), which marked the conclusion of the series. The second set of downloadable content (DLC), The Ringed City, was released on March 28, 2017. After its release, the souls-like genre has persisted in providing its expanding cadre of adherents with notable titles, including Hollow Knight (2017), Sekiro: Shadows Die Twice (2019), and Lies of P (2023).

2.2 Related studies

As shown in chapters 2.1.1 and 2.1.2, the philosophy and concepts of game design have been studied in the context of specific games or genres. But the lack of general coverage and guidelines on the required quality and standards for single-player games could leave many aspiring developers wondering what would make their game exceptional. Previous research by Sobociński (2019) discovered valuable insight into what different quality factors games have. The data was gathered from students, who were asked about defining the quality of a video game along with the meaning of a game being either high or low quality. The result was a wide range of factors that could be divided into groups like technical, design and

gameplay factors. (Sobociński, 2019). While the results would give a long list of factors that gamers saw as parts of a game's quality, the quality of the answers given would also vary. Notably some of the answers would be quite subjective, while others would cite out-of-game factors that would not either apply to single-player games or to the game itself. For example, Sobociński (2019) would note a fair number of factors relating to gameplay, while acknowledging factors related to the title or the developer, and them being irrelevant to the game as a product. This study shows that without proper guidance, the idea of quality in single-player games would shift away from looking at the game itself, and more towards people's own biases. Similarly, Ramadan and Hendradjaya (2014) would find that relevant quality for games would consist of things like user experience and functionality, citing important subfactors such as fun, usability, and performance. Due to using more professional sources for their data, they would not cite any unrelated factors, making their research a good framework. A core problem lies with the lack of connections, as Ragmadan and Hendradjaya (2014) would bring up more specific quality elements without forming the connections between those elements, and how some groups of elements could be more than the sum of their parts. This idea is especially true for older games, where despite having lower quality pieces compared to their modern counterparts, they can withstand the test of time by offering a comprehensive product. An example of this is Nintendo's *The Legend of Zelda: Ocarina of Time* (1998), of which Biller (n.d.) wrote that the game made its mark on gaming despite its weak storytelling. The text would cite many shortcomings within the game, noting weak character- and story building, while highlighting its game play and level design. The weakness in some respects would be balanced with strength in others, with the final product being a critically acclaimed gaming classic. (Biller, n.d.). While a prime example, *Ocarina of Time* would be noted as something special by Peer Schneider (*The Legend of Zelda: Ocarina of Time Review*, 1998), calling it "the new benchmark for interactive entertainment" along with predicting that the game would define the RPG genre for the coming years. In those coming years the release would turn out to be a black swan, as Guinness World Records (2025) would recognize the game as "Most critically acclaimed videogame ever", citing the games unmatched meta score of 99 at review collective website Metacritic.com. Even if the benchmark set by *Ocarina of Time* wouldn't be reached, the following millennium would begin a surge in both the popularity and quality of single-player games. This growth would be studied by Kuo, et al. (2017), with the initial idea that Immersion, Agency and Transformation (IAT) would grow as elements like player, narrative

and gameplay would become more interconnected, ultimately uniting as one. Figure 1 visualizes how this would happen.

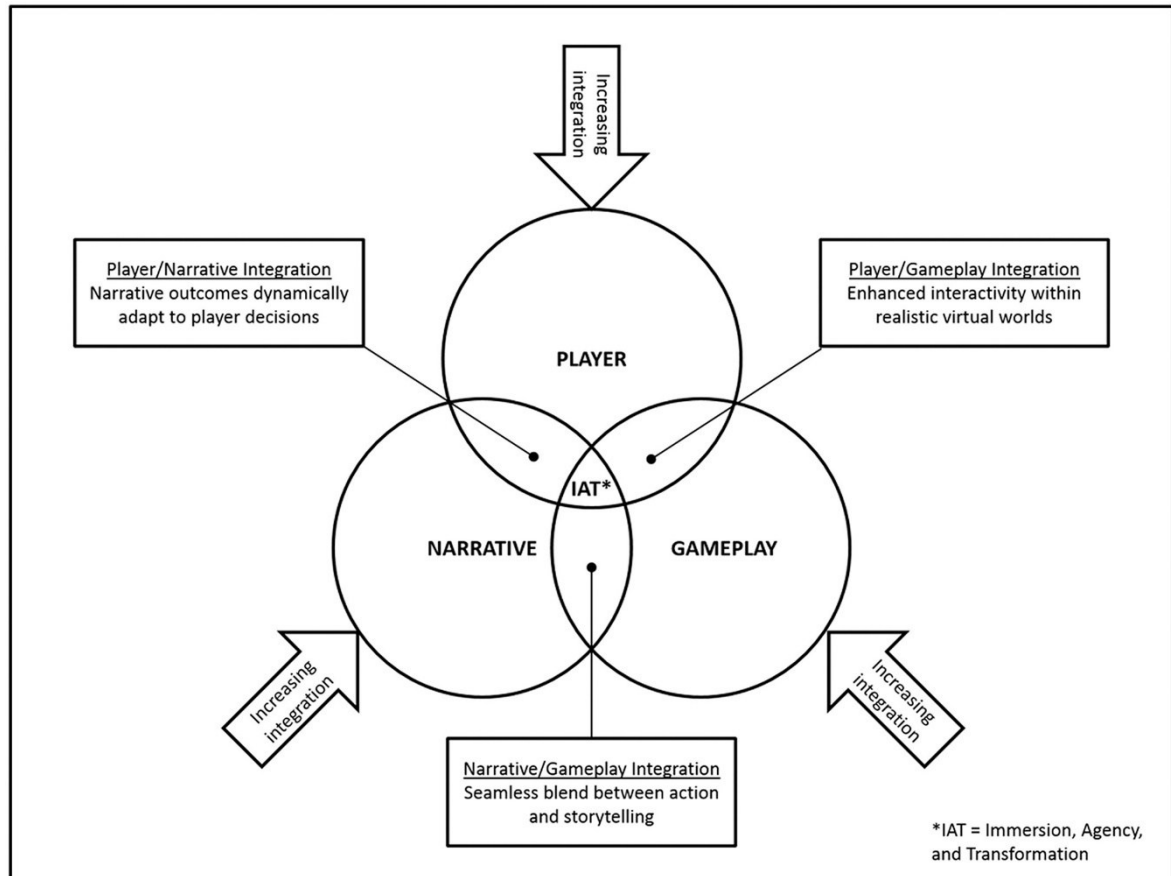


Figure 1: A Framework for the evolution of video game consumption. (Kuo, et al., 2017)

The figure shows their core theory of joining core elements of single-player games together to create a more engaging video game experience where IAT would be maximized. Video games' main difference from other media forms is its ability to integrate all three elements that form IAT. They would argue that overtime, these elements have and would continue to overlap more. (Kuo;Hiler;& Lutz, 2017). While true, the age of this research would in current context deem it lacking. Kuo, et al. (2017) would assume that in the future "games like Skyrim to be mere preludes to virtual reality-precursors to a truly integrated experience of gaming in a virtual world." While good, IAT would need to be backed by other frameworks and research to provide support with more subjective aspects of a games' quality.

2.3 Research material

When researching the evolution of single-player games, the most effective research can be done in the virtual world itself. Thus, the material used to conduct this investigation into the qualitative development and standardization of single-player games will be carefully chosen representatives of this area video game archetype from different parts of the century.

2.3.1 Final Fantasy X

The first, and the oldest point of research will be Squaresoft's Final Fantasy X (2001). Notably the version used for this research was from Square Enix's Final Fantasy X/X-2 HD Remaster (2016) due to the limited availability of the original version compared to the remaster, where the only notable differences would be an auto-saving feature along with audiovisual options, support and settings to integrate the game to desktop. Final Fantasy X, often referred to as FFX, is a turn-based JRPG game, originally released on PlayStation 2 in July 2001 for Japan, with a global release coming in January 2002 (Wikipedia contributors, 2025). The tenth part of the Final Fantasy franchise would introduce fully 3D areas, a new combat system, moving from Active Time Battle (ATB) to Conditional Turn-Based Battle (CTB) alongside a new levelling system called the "Sphere Grid" (Anonymous, 2019). The game is widely regarded as one of the best of its time, with good story and world building, alongside a good amount of player agency. The game was chosen due to it representing a popular, yet somewhat niche genre of single-player games, along with having had a lot of high-quality elements for its time.

2.3.2 The Elder Scrolls V: Skyrim

The second point of inspection will be Bethesda's The Elder Scrolls V: Skyrim (2011). At its core, Skyrim is a simple RPG that has integrated elements of action-adventure games into it, creating a simple, yet satisfying playing experience. The game also uses world building from the series' previous entries, which lets the series have one of the best settings in the single-player space. Hopkins (2023) would cite the series' fantasy world named Tamriel,

with Skyrim's events being set in the province of Skyrim. The game's atmosphere is set on a Viking theme, with the Nordic landscape of Skyrim being a change from the series' previous entries. The game offers players a variety of options to their playing experience with 18 upgradeable skills, ability to change between first- and third-person view and choices to join various factions and cults, getting to role play as a member of them within the game's world. After the initial release, Skyrim would receive additional content in its three expansions: Dawnguard (2013), Hearthfire (2013), and Dragonborn (2013), bringing new content and features to the player. The game was chosen for its impact on the genre, with its open world layout, well-built narrative and unique questlines influencing many future RPGs.

2.3.3 The Witcher 3: Wild Hunt

The third case of research will be *The Witcher 3: Wild Hunt* (2015), which received two *GotY* -awards in 2015, establishing the game as one of the most exceptional of its time. At core, *Witcher 3* is an open-world RPG, following the story of a professional monster slayer named Geralt. Jański (2019) would cite the story's originating from Andrzej Sapkowski's fantasy novel series called "The Witcher", the games being a spinoff of the original story. The base of Sapkowski's stories gives the game a story-rich world, which is enhanced by good storytelling through Non-Playable Characters (NPCs) and their dialogue in different questlines and events. The game also makes the traversal of its world easy with fast-travel points, while allowing easier exploration on horseback. The game would also allow players to earn experience points through gameplay, allowing them to strengthen aspects of their arsenal. Another notable part of the game is the player's ability to control the narrative of the game with choices in responses to NPCs, letting the player choose their approach to the story, while bringing the causality of said choices as possible in-game events. *Witcher 3* would also be expanded with subsequent expansions as *Hearts of Stone* (2015) and *Blood and Wine* (2016), which would expand the game, adding new stories and quests for the players to complete. The game was chosen for its legacy, as it would go down as one of the greatest, with its simple gameplay alongside a deep story and wide world would raise the bar for years to come.

2.3.4 Elden Ring

The fourth and final case of research will be FromSoftware's Elden Ring (2022), which received nearly record-breaking 4 GotY-awards, as cited by Serin (2024), being a testament to its quality and success. Elden Ring draws from a variety of genres, with FromSoftware's iconic Souls-like genre bringing a challenging RPG experience with a hefty dose of action. Nguyen (2024, p. 18) would cite Elden Ring's departure from FromSoftware's liner level design into an open world that would give players the freedom to explore. Furthermore, she would cite the collaboration between FromSoftware's director, Hidetaka Miyazaki, and renowned author George R. R. Martin as a significant contributing factor to the game's lore and narrative success. Miyazaki's profound storytelling and Martin's exceptional lore development contribute to a world that is characterized by its distinctive depth and intricacy. (Nguyen, 2024). This made the world feel more alive, while providing the players with a profound sense of meaning for their adventure. Even within an open world, the game would create unique environments ranging from snowy mountains to luminous cities, filling them with their own loot and enemies, creating a pie with unique flavours on each slice. FromSoftware would exceed its previous works with Elden Ring, as the moderate difficulty in the main adventure would be raised in optional areas, offering some of the most challenging tasks and enemies in all of gaming. Even with a conclusive ending, the game would be expanded with a new story branch in the games DLC, Shadow of the Erdtree (2024), bringing the player into a new, independent region where new stories would be added to the existing lore. Elden Ring was chosen for its incredible world and narrative, along with its one of a kind playing experience, ushering a new era of single-player games.

3 Research method

To find out how quality has developed in single-player games, a case study was conducted on the games mentioned above. The study utilized two different research methods, with formal game analysis alongside observations of others interacting with said games. These would provide us answers to our research questions, with each method focusing on one or two of them.

3.1 Formal game analysis

The first methods of research will be formal analysis of the games chosen. We will investigate the various factors that the player experiences during the game. This will range from available controls to the visual feedback that the player receives during the gaming experience. The results will be gathered by playing the games with the goal of seeking answers to our questions. These results will be formed into tables and other forms of gathered data, which we will investigate to find the qualitative development and standardization of single-player games. This method was chosen to compare the objective differences between video games, while also considering some subjective aspects of these games. We will look at these elements in the context of the Mechanics, Dynamics and Aesthetics (MDA) framework, which formalizes games by breaking them down to different components, as cited by (Hunicke, et al. (2004)). This framework was chosen due to its focus on both objective and subjective elements of games and thus being applicable to this research.

3.2 Observation and interviewing

The second method of research will be observing and interviewing gamers during and after playing the chosen games. The subjects would play the games for 20-30 minutes and after each game, they would answer a short form of questions: 1. what you thought about the sound and visuals, 2. how it felt, 3. were the controls easy, 4. was the game hard, 5. how it differed from reality. For FFX, Skyrim and Witcher 3, the players used a save that was prepared beforehand, while in Elden Ring, the players started a new save, due to Elden

Ring being the only game where the start was relatively fast and the players could easily get into the main fun of the game. To have a big enough sample size, I had 5 people play the chosen case games and give their opinions and answers to the questions presented. The questions were presented as a semi-structured qualitative interview, with Braun & Clarke (2013, s. 80) noting their rich and detailed data as a strength for qualitative research.

4 Results and conclusions

After hours of playing and researching the case games, along with multiple interviews, an idea of what is demanded of single-player games in 2025 was becoming clear. The interview participants also provided valuable insight into what others thought about the evolution of single-player games, after going through each of our games. Those questioned were all familiar with video games in general and played them with varying regularity. Some of them had some experience with a few of the games chosen, but most had no prior experience of playing any of them. We will begin by looking at the formal analysis conducted on the games and see how the observations are reflected in the interview results.

4.1 Formal game analysis

In this part of the results, we will look at the games in the context of the MDA framework, and how the single-player game environment has changed in recent years. First, we will look at the games individually and then compare them to each other to see how the games have changed from their predecessors. After playing each of the games for at least a few hours, I was able to collect my thoughts into an affinity diagram, as shown in Figure 2.



Figure 2. Affinity Diagram of researched games

4.1.1 Final Fantasy X

As the first, and thus the oldest of our chosen games, FFX turned out to be the least complex. When looking at it through the MDA framework, the game can be broken down into few core components, that form a solid foundation for a game of this time. In terms of mechanics, FFX doesn't offer the player a lot of freedom in what to do, keeping the game quite simple. Notably the FFX/X-2 HD Remaster was when the game was brought to the pc environment, so the controls might be less optimized for the platform, and more an copy of the original PlayStation 2 controls, as shown in Table 1.

Table 1. Controls in Final Fantasy X

	Up	Down	Left	Right	Interact/ Confirm	Cancel	Menu	Change character	Pause
FFX	up	down	left	right	c/enter	x/ backspace	v	a	esc

turn-based combat lets the player think through each of their turns, letting them craft the perfect strategy for handling the encounters. With the simple, yet fun gameplay, FFX can focus on its main strength, story and aesthetic. The games liner world helps the player follow the story, with the narrative building starting from the start of the game. FFX also makes sure to let the player see and feel the progression as they go through the different levels, with unique environments and interactions making the fantasy aspect of the game stand out. In terms of the MDA framework, the few core mechanics of FFX alongside simple dynamics let the aesthetic of the game shine. Hunicke, et al. (2004) wrote that a games aesthetic should be described with a taxonomy they listed in their work, from which words like fantasy, narrative, sensation and discovery would be described FFX's core experience. Along with the story of the game, FFX succeeded in creating a memorable audiovisual experience, as the great music lets the player feel immersed in the world of game.

4.1.2 The Elder Scrolls V: Skyrim

Coming in as a critically acclaimed game for its time, The Elder Scrolls V: Skyrim came in with a lot to offer. Similarly, when looking at Skyrim through the lens of the MDA framework, it comes out with a lot of good elements. The game offers a lot of mechanics for the player, with them needing to be separated into different tables, with Table 2 showing the different ways the player can move in Skyrim.

Table 2. Movement options in Skyrim

	Up	Down	Left	Right	Jump	Crouch	Sprint	Run/ Walk	Toggle Run/Walk
Skyrim	w	a	s	d	space	ctrl	alt	shift	caps lock

As shown above, Skyrim has many more options when it comes to movement, when compared to FFX, which only provides the normal up/down and left/right options. Alongside the movement, Skyrim offers a lot of ways to interact with the world, with its different combat and cooperative options. This can be seen in Table 3.

Table 3. Interaction options in Skyrim

	Left hand	Right hand	Magic	Interact	Inventory	Map	Journal	Menu	Pause	Wait
Skyrim	m2	m1	z	e	i	m	j	tab	esc	t

When looking at the interaction options shown above, the game offers a lot of ways to interact with the world. While the number of choices might be a bit overwhelming, most of the options to operate have their own moments when they're needed, not making the player must think about each one in every moment. Skyrim also offers the player ways to customize their gameplay by allowing them to use different weapons and apparel alongside character customization to make their experience unique. Another point of freedom is the games large skill system, similar to FFX's Sphere Grid. As shown in Figure 4, the game offers a total of 18 different skill trees, where the player can specialize in different aspects of the game, letting the player pick a style that suits them best.



Figure 4. Skill trees in The Elden Scrolls V: Skyrim

At the same time, the dynamics of Skyrim are quite complex, creating a deep, immersive experience. One of the main dynamics of the game is the interactions that the player can have with the NPCs. Most interactions with NPCs have multiple options for what to say, letting the player choose how their story goes. At the same time the causality of those choices makes the world feel more alive, creating an immersive experience that's reflected in the games acclaim. Skyrim's combat is quite simple, with equipment in both hands alongside magic, letting the player focus on exploring the world.

When looking at the aesthetic of Skyrim in the context of the taxonomy by Hunicke, et al. (2004), terms like discovery, fantasy and submission would reflect the experience that Skyrim offers. The idea of discovery is a big part of Skyrim's experience, as the game offers a huge open world for the player to explore. Similarly, fantasy is a huge aspect of Skyrim, with its multiple races ranging from elves to lizards along with the magical environment distancing the player from reality. Lastly, Skyrim's submission as pastime comes with its countless quests, letting the player sink hours into the game without running out of things to do. When bringing the elements of MDA framework together, Skyrim provides the player with a simple story and gameplay, bringing focus on the freedom of choice and exploration, which made the game one of the best for its time.

4.1.3 The Witcher 3: Wild Hunt

When looking at our third game, Witcher 3, the game seems similar to Skyrim, with its open world environment and easy gameplay. And while that might be true to some extent, the development between the two will be much clearer due to that reason. When looking at Witcher 3 through the MDA framework, the games mechanics can be a little overwhelming at first glance. The different movement options are shown in Table 4.

Table 4. Movement options in Witcher 3.

	Up	Down	Left	Right	Jump/ Roll	Dodge	Sprint
Witcher 3	w	a	s	d	space	alt	shift

When looking at the table above, the amount of movement options was reduced, with the notable lack of crouching alongside no running and walking options, making the games core movement less complex. Like Skyrim, Witcher 3 also offers a wide range of options when it comes to interacting with the world, as shown in Table 5.

Table 5. Interaction options in Witcher 3.

Witcher 3	Fast attack	Strong attack	Call horse	Witcher' s sense	Cast sign	Quick-access menu	Lock-on Target	Interact	Pause	Menu	Map
	m1	m1 + shift	x	m2	q	tab	z	e	esc	backspace	m

By looking at the table above, we can see that Witcher 3 has quite similar options for interacting with the world as Skyrim, with the mouse buttons (m1/m2), m, esc, backspace, tab and e standardizing in their functions. At the same time, the dynamics of Witcher 3 have been improved with things like ability to lock-on target and call horse, making the combat and explorations respectively better. Another point of improvement is the game's smaller amount of simpler skill trees, with Figure 5 showing one of the game's 5 skill trees.



Figure 5. Skill tree in The Witcher 3: Wild Hunt

When looking at the MDA frameworks taxonomy for aesthetics, a lot of terms could be applied to Witcher 3. Vocabulary like narrative, fantasy, discovery, submission and sensation describe the experience of Witcher 3. The narrative comes from the game's interesting story, where the base of Andrzej Sapkowski's novels shines brightly, bringing the fantasy from his books to the player. At the same time, discovery and submission can be felt in the game's incredibly large open world, where countless quests offer the players hours upon hours of things to do. The game's gameplay is enhanced by the sensation of its beautiful visuals and music, making the game even more immersive. When combining the different elements of the MDA framework in Witcher 3, the end result is a very good all-around product.

4.1.4 Elden Ring

The fourth and final game of our research is Elden Ring, which takes a slightly different approach compared to the previous two, while keeping some similar elements in it. In terms of core mechanics, the game resembles the previous two, showing the growing standardization of basic mechanics. The core movement options are shown in Table 6.

Table 6. Movement options in Elden Ring.

	Up	Down	Left	Right	Jump	Sprint	Roll	Crouch
Elden Ring	w	a	s	d	space	hold shift	shift	c

From looking at the table above, the standardization of the wasd-movement alongside spacebar jump can easily be noticed. Also, the option of sprinting carries on from the previous games, with rolling and crouching not making their first appearances either. Like movement, interaction has also seen some standardization, as shown in Table 7.

Table 7. Interaction options in Elden Ring.

	Left hand	Right hand	Skill	Map	Interact	Lock-on target	Map	Use item	Menu
Elden Ring	m1	m2	f	m	e	m3	m	r	esc

By looking at the table above, we can see the standards that have formed for interaction in single-player games. Notably, the mouse buttons (m1/m2) being your equipment, with the map, interact and menu also remaining the same. The dynamics of Elden Ring remain quite similar to Witcher 3, simple combat and movement mechanics are the foundation of the game, with Elden Ring including rolling as a core form of manoeuvring the different areas. When looking at character progression, Elden Ring has opted into levelling core attributes instead of abilities and/or skills, as shown in Figure 6.

Level	135
Runes Held	9835
Runes Needed	120373
Attribute Points	
Vigor	40
Mind	35
Endurance	15
Strength	16
Dexterity	13
Intelligence	79
Faith	7
Arcane	9

Figure 6. Level and Attributes in Elden Ring

In terms of aesthetics, many terms from Hunicke, et al.'s (2004) taxonomy would fit Elden Rings experience, with words like sensation, fantasy, narrative, challenge, discovery, expression and submission all fitting the game. Fantasy and narrative can both be experienced in the game's unique world and story, distancing the game from reality. Submission and discovery come with the game's massive open world, which players are free to explore from the very start. Sensation is created with memorable audio and visuals, strengthening the game's immersion. At the same time, challenges are presented with difficult bosses and areas, challenging the player to master the game's mechanics. Lastly, expression is allowed with character creation and builds, letting the player choose how they approach the game. When combining the mechanics, dynamics and aesthetics of Elden Ring, the result is a product with little to no flaw in the context of the MDA framework.

4.1.5 Overall analysis

To complete the formal game analysis with the MDA framework, this section will compose an overall rubric of the results of the analysis by looking at the MDA framework's aspects along with usability and player experience. The goal is to give a concrete overview of how the different aspects of quality have evolved in single player games.

The evaluation will give the different aspects a rating from a scale of 1 to 5, where 1 signal an older and more lacklustre implementation, 3 indicates a serviceable approach, and 5 indicates a strong, modern implementation that should be considered in future works. From the conducted research, the following seven main categories were identified as quality defining aspects in single player games: Controls and input standardization, Player freedom and world design, Intuitiveness of progression, Combat's feel and difficulty curve, Coherent audiovisuals and aesthetics, Quality of Life (QoL) and Gameplay, and Narrative and lore. These categories are presented in Table 8.

Table 8. Evaluation rubric

	Scale	FFX	Skyrim	Witcher 3	Elden Ring
Controls and input standardization	Unclear ->Simple	2	3	3	4
Player freedom and world design	Liner ->Open	1	5	4	5
Intuitiveness of progression	Complex ->Clear	2	3	4	5
Combat's feel and difficulty curve	Plain ->Satisfying	2	3	3	5
Coherent audiovisuals and aesthetics	Disconnected ->Coherent	4	3	5	4
Quality of Life and Gameplay	Deficient ->Strong	3	4	5	5
Narrative and Lore	Lacking ->Rich	4	3	5	4

Looking at the scores above, we can see some patterns that have emerged from the research. From these, we can see a move towards simpler gameplay with familiar inputs and more in-depth narrative and gameplay. In terms of combat, we can see a shift from FFX's slow turn-based combat to Elden Rings engaging, skill-intensive action. When it comes to progression, the single-player games have moved away from complex skill trees like the ones in FFX and Skyrim, going towards the simpler implementation of progression that we see in Witcher 3 and Elden Ring. On the other hand, Final Fantasy X's strong narrative and storytelling hold up well in the modern era, with newer titles like Witcher 3 and Elden Ring improving on FFX's legacy with new ways storytelling and lore integration. And when thinking about the world design, we can look at the difference between FFX and Skyrim, and how the move from linear levels to an open world allowed the player to make their experience unique.

4.2 Interviews and Observations

The second part of the case study was interviews and observations. In this part, we will discuss the observations and results of the playtests conducted and interviews to see what the player experiences in our chosen games would look like.

4.2.1 Final Fantasy X

When playing FFX, the subjects were loaded into a pre-saved level of the game, where they would proceed as they wished. Going through the level, all subjects would consider the controls to be simple, but not really practical. All subjects enjoyed the game's audio and visuals, citing good overall theme and feeling. In terms of combat, the subjects felt little to no challenge, with some citing the slow turn-based combat as boring. Immersion varied from little to some amount, with enjoyment of the combat and audiovisual aspects seeming to be the main factors. Overall, the subjects found the game to be fine, with it not being bad, but not being anything crazy by today's standards.

4.2.2 The Elder Scrolls V: Skyrim

For Skyrim, the overall reception by the subjects was better. All would note the game's controls as more practical, with better use of the mouse and keyboard combo, with also simpler options for what they could do. Same applies to the game itself, as most found the game to be simple, and/or easy, with one noting the similar health between the player and the enemies creating some challenge in the game's combat. Looking at the world itself, all subjects enjoyed the game's aesthetic and atmosphere, with many citing the music and art style fitting Skyrim. Some also pointed out that the game focused more on world, with things like narrative being simpler. Another part of the world is the NPCs, which was an element that some brought up as a plus, noting that they made the game feel more alive and thus more immersive. Overall, the subjects enjoyed Skyrim, with its older feel and immersive world alongside the simple, effortless gameplay.

4.2.3 The Witcher 3: Wild Hunt

When playing Witcher 3, the response by our subjects was quite similar to Skyrim. All subjects said that they enjoyed playing the game, citing that the game itself felt good to play. At the same time, all subjects felt the controls to be rather simple, with one citing that the game felt like Skyrim, but with better combat. The combat also seemed to be easier, with all subjects saying that the game did not feel hard, with simple sword swinging and weak enemies being cited by some of them. The gameplay seemed to be a huge strength of Witcher, with subjects citing things like horse riding making the travel faster and exploration of a city being nice. Some subjects also pointed out that the game felt alive and more realistic. Even with short playtime, some subjects noted the story to be interesting, with the loading screen talking about the current story progression. Overall, the subjects cited Witcher 3 as an immersive experience, mainly doing things better than Skyrim, while keeping it simple.

4.2.4 Elden Ring

Elden Ring seemed to be the most successful game, when looking at the answers given by the subjects. Most of them said that the basic controls were easy, with few saying that only some special controls were a bit complicated. One of the subjects said that the games movement felt weird, which might be due to the game's slightly slower pace. In terms of combat, most subjects said that the enemies in the starting area felt rather easy, with those already familiar with Elden Ring noting that the game's bosses and later areas being hard. The moment-to-moment experience was well received by the subjects, with the audiovisual aspects of the game getting praised. One of the subjects cited that music changed with different events and environments, fitting each one well. Similarly, the graphics and art style were highlighted by the subjects, accentuating the games aesthetic. Another point of praise was the games open world, with few subjects citing the freedom to be a plus. One of the subjects also cited openness, making the goal less clear, mentioning it to be a good thing. One of the subjects that had prior experience with the game mentioned the world feeling alive, with good story and methods of telling it. In terms of immersion, most subjects felt Elden Ring to be most immersive, with only one not feeling super immersed by the game. The main factor in the feeling of immersion seems to be enjoyment on the audiovisual side, as those that with less praise for the graphics and music seemed to feel less immersed. Overall, Elden Ring seemed to be an immersive experience that offered a lot of freedom and challenge, with the aesthetic making it unique and memorable.

5 Discussion

Looking at the results of our research, the qualitative development and standardization in single-player games seems clearer. Questions of what used to define the quality of a video game and how those definitions have changed now have answers, and the current standards seem obvious. When putting our test-games into a timeline, qualitative development to certain design choices and away from others forms an answer to the question of what is required of single-player games today. When looking at these requirements, biggest standouts from our research were player freedom, number of core mechanics and audiovisual experience.

Looking at the related studies, the survey done by Sobociński (2019) showed that biggest number of quality factors fell under the umbrella of artistic factors, where plot, art style and soundtrack were among the most popular answers. This would reflect the interviews conducted, where good audiovisual experiences seemed to affect the immersion felt during the playtest. In our research, FFX would show this, as many subjects cited the overall theme and aesthetic of the game as its biggest strength. Similarly, the plot and storytelling seemed to be a big part of a single-player game's quality, as the subjects seemed to enjoy the better quality and ways of storytelling in games like *Witcher 3* and *Elden Ring*. When looking at quality factors under the gameplay factors-umbrella in Sobociński's survey, the most popular one is difficulty, followed by playability and gameplay. While difficulty is a thing that only some people like, the rising popularity of souls-like games shows that players seem to like being challenged, with games like *Elden Ring* presenting challenges ranging from moderate to extreme. When it comes to playability and gameplay, the games seem to have evolved to have more engaging gameplay, going from FFX's simple traversal through levels to the exploration of open worlds in games like *Witcher 3*. If we look at how the requirements in terms of quality in single-player games have evolved, we can see a clear development in certain elements. One of the main things that seems to have evolved is the amount of freedom given to the player, with FFX giving the player little freedom while *Elden Ring* and *Witcher 3* let the player progress the story at their own pace. Notably the linear level design of FFX is still present in 2025, with some games opting for it to have the game and its story progressed in the intended way despite the popularity and success of the open world layout. Similar to level design, the ways in which the stories of single-player games are told have evolved,

going from simple cutscenes to NPC encounters, environmental storytelling and deeper focus on the lore and backstory of the games' narrative. At the same time, player progression has also evolved, going from the huge Sphere Grid of FFX to the simple skill trees of Skyrim and Witcher 3, with Elden Rings levelling of attributes being a simple take on player progression.

With the development of the hardware, the audiovisual side has also explored new approaches. The visual side has shifted from simple environments to more dynamic and detailed ones, which the games' themes. Similarly, the requirements for music and audio have gone from simple music and sound effects to a larger number of different ones that change depending on the situation. Music has also become a big part of the overall theme of games, with the best soundtracks making their games more memorable. When looking at the standards that have been formed in single-player games, we can mainly focus on the mechanics of the games. On the PC environment, wasd has become the standard input for movement, with other controls like space, m, e and mouse buttons nearly always present with the same purpose. Beyond mechanics, standardization was found in the ease of access to fast travelling and horse riding, which improved overall gameplay with hastening the traversal of many open worlds.

When looking at these results, we need to recognize the limitations that could have affected them. The main limitation of the research was the smaller sample size, which made the results unable to provide enough comparisons to find significant results. A sample size of about 10 games with a wider range of genres could have presented more detailed results, but such research was limited by time and availability of those games. Besides that, the research was successful with the results being good considering the sample size.

6 Conclusions

When looking at the qualitative development and standardization in single-player games, the main takeaways would be that the games have gotten simpler in terms of mechanics while growing more complex and diverse in terms of audiovisual presentations and narrative. At the same time the maximization of player freedom has improved the immersion of newer games, creating more memorable experiences. These ideas would also answer the research questions, as single-player games have simplified in some respects, while diversifying in others, going from Final Fantasy X's complex gameplay and simple aesthetic to Elden Rings smooth gameplay and variegated audiovisual experiences. While limited, standardization was found in mechanics, with controls becoming similar in newer titles, with movement and basic actions finding their mainstay binds.

Comparing these results to prior research, the similarities can be seen with certain aspects of quality. This should build a foundation for future research on the topic, where a larger sample size could be used to gain more in-depth results. The use of a case-study proved quite effective, with methods like semi-structured interviews being a great way to gather data. If I could redo the research with more resources, I would focus on raising the amount and quality of data, with the methods of research providing good data while being enough scalable to be used in a more sizable study on the topic.

To summarize, single-player games have grown to a state where simple mechanics allow players to easily get into the game, with the uniqueness of different titles coming with the gameplay and its dynamics alongside the overall aesthetic of the game. The recent success of new titles like Clair Obscure: Expedition 33 should show aspiring developers that simple gameplay with unique aesthetics can create great games, where an innovative approach to a genre can result in something truly incredible.

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