

Escuela Superior de Arte y Diseño de Andalucía



DISEÑO GRÁFICO Y NUEVAS TECNOLOGÍAS
VIDEOJUEGO DIDÁCTICO, HOURGLASS HISTORY

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Diseño Gráfico

Diseño gráfico y nuevas tecnologías. Videojuego didáctico, Hourglass History

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SECTION 1. INTRODUCTION

1. 1 Abstract

This work on the design and use of video games aims to increase young people's interest in Art History thanks to an educational video game. It presents an analysis of existing deficiencies in society, as well as the adaptation of new technologies to educational methods. These problems have been solved through a study of various video games that contain cultural references. In this way, we have designed an educational product that can entertain and facilitate the learning of our target audience.

Art has an important role in children's learning, helping their development. However, the presence of art in the subjects is limited and more importance is usually given to other educational branches.

This is not surprising, given that Spain has a 20% school failure rate, and even rejects any type of technology, cataloguing these instruments as distracting elements.

In this project we are going to show that the use of these technologies can be beneficial for us, for example, by adding the culture of art in a didactic video game and how this can exercise and improve the memory of young people by applying the History of Art in a video game that seeks to entertain and teach in equal parts.

Through research on educational video games and their users, certain issues will be addressed, such as innovation in current video games or in the dissemination of culture in a way that can attract the youngest.

Keywords: graphic design, innovation, digital media, videogame

Abstract

Este trabajo sobre el diseño y el uso de los videojuegos, tiene como objetivo el aumentar el interés de los jóvenes por la Historia del Arte gracias a un videojuego didáctico. Presenta un análisis de carencias existentes en la sociedad, así como la adaptación de las nuevas tecnologías ante los métodos educativos. Dichos problemas se han solucionado a través de un estudio de diversos videojuegos que contienen referencias culturales, de esta forma, hemos diseñado un producto didáctico que pueda entretener y facilitar el aprendizaje de nuestro público objetivo.

El arte tiene un papel importante en el aprendizaje de los niños, ayudando a su desarrollo. Sin embargo, la presencia del arte en las asignaturas es limitado y se suele dar más importancia a otras ramas educativas.

No es de extrañar, puesto que España contamos con un 20% en fracaso escolar, llegando a rechazar cualquier tipo de tecnología llegando a catalogar estos instrumentos como un elementos de distracción.

En este proyecto vamos a mostrar que el uso de estas tecnologías puede ser beneficioso para nosotros como por ejemplo, añadiendo la cultura del arte en un videojuego didáctico y cómo esto puede ejercitar y mejorar la memoria de los jóvenes aplicando la Historia del Arte en un videojuego que busca entretener y enseñar a partes iguales.

A través de una investigación sobre los videojuegos didácticos y sus usuarios, se atenderán ciertas cuestiones como la innovación en los videojuegos actuales o en la divulgación cultural de forma que pueda atraer a los más pequeños.

Palabras clave: diseño gráfico, innovación, medios digitales, videojuego

1. 2 Justification

This project consists of the adaptation and improvement of the educational sector that currently exists in Spain, due to the little importance of art in the development of children.

Art plays an important role in the education of each individual, in addition to stimulating the learning of other subjects, such as reading or mathematics, along with the development of perception, fine motor skills or social interaction.

Artistic teaching, unfortunately relegated; is in the background by many families and schools in our country. The same is true in the technology sector or, as in this case, in the video game sector, since the population tends to believe that both artistic subjects and games are simply an element that distracts young people's attention from other subjects, instead of being a support tool in their education.

For example, through art we can make a child feel comfortable and safe in expressing his or her opinion about a work, collecting reproductions and illustrations of works of art, and even observing art in nature.

The presence of art in education contributes to the integral and full development of children and young people. It is characterized by enriching and making a great cognitive contribution to the development of students' skills and abilities, such as entrepreneurship, cultural diversity, innovation, creativity or curiosity.

Therefore, we seek to reinforce this cultural diversity and curiosity by another means that can reinforce artistic interest, which in this case would be through technology or video games.

Previous work

In this field we can highlight the following studies: Firstly, we have a study where they point out the school failure in Spain, counting with 20%. Continuing with another study, we affirm that society tends to classify technological products as addictive.

This information has been very useful in defining the main concepts and principles on the subject to be dealt with.

However, in relation to this topic we have found another study that states the opposite; where it says that video games help in the development of reflective thinking and reasoning. Emphasizing the adventure and role video games, as they promote the development of knowledge of various topics, providing values and counter-values that help the user's own decision making, both in the video game and in society.

When talking about video games with similar themes, we have examples such as *Okami*, *Transistor* or *Blasphemous*.

The main objective of these video games is to show a stage of art and create a story in conjunction with these artistic bases. These video games would also be catalogued as didactic, since they do not try to hide any artistic element, but rather seek to enrich a fictional story with elements that we can find today.

In relation to the aesthetics of the interface and the logo, we have the *Psicología del color* book in which the author transmits the importance of typography and colours to please the user, as well as simply guiding him through the entire interface.

In order to make our interface smooth, we have created a typography and colour code adapted to the luminosity of the electronic devices. For example, according to a marketing study (Weyketing), only Sans-Serif fonts are the best for use on electronic devices.

In addition, we have studied other important aspects such as the use of colors and shapes to create characters with history and evolution, making the user able to quickly differentiate the role of each character and to be able to empathize with them.

1. 3 Objectives

At present, there are several educational video games that can be improved, as they can divert the user's attention or everything necessary to make the product useful to society has not yet been implemented, and therefore we have compiled certain objectives that we hope to meet.

- To design a video game that will attract the attention and increase the interest of young people in culture.
- Complement for textbooks.
- To exercise young people's memory with this product.
- To promote creativity.
- Art History accessible to a wider audience.
- To apply the History of Spain as a differentiating character.

1. 4 State of affairs: Theoretical framework and state of the art

Theoretical framework.

According to studies by various organizations, school failure in Spain is as high as 20%.. (Clementin, F. 2019).

Society tends to classify this product as highly addictive or inciting to antisocial behaviour. (Hidalgo, X. 2011)

Development of reflective thinking and reasoning, attention span, memory, motivation for learning and learning vocabulary and number concepts. (Marín, V. 2006).

Graphic Adventure is a sub-genre of the adventure where all player options are developed through text controls. (Montes, M. 2013).

When creating a Naming, we must evaluate our client and user. (Grau, X. 2010).

A Naming should be easy to remember. (Weyketing. (2016).

"El estilo artístico de un videojuego es una de las partes más importantes. Tiene que servir entre unión entre el guión, los personajes y el entorno de nuestro juego." Bueno, D. (2018).

State of the art.

Proyecto Kokori (2011), a video game that puts players at the controls of a small ship, capable of entering a cell to study it. (Arnau, D 2013).

Okami (2006) is one of the clearest examples of Japanese artistic inspiration and the Ukiyo-e genre. (Fantasía Gamer. 2017)

The Bridge (2013), a video game that bases its game mechanics on puzzles based on the works of Escher. (Fantasía Gamer. 2017)

Transistor (2014), whose colour range refers to Gustav Klimt and Alphonse Mucha. (Escribano, R. 2018)

Blasphemous (2019), a video game whose graphics are based on the art of Pixel Art and whose aesthetic is based on the Holy Week of Seville. (Zavaleta, F. 2020)

Maldita Castilla (2012), the saga *Assassin's Creed* (2009 a 2013) and *Broken Sword: La Leyenda de los Templarios* (1996), as a reference to Spanish art. (Zavaleta, F. 2020)

Costa del Sol (*Final Fantasy VII*, 1997), *Mesn de las flores* (*Street Fighter V*, 2016) and *Patio de los Leones* (*King of Fighters*, 1998) with Spanish settings. (Zavaleta, F. 2020).

Vega (*Street Fighters*, 1967). (Esteve, J. 2015)

Miguel Caballero Rojo (*Tekken 6*, 2007). (Esteve, J. 2015)

SECTION 2. METHODOLOGY

2. 1 Methodology and investigation

From the commercialization of video games to their current status, there is a constant debate between video games and the possible negative aspects they can have on young people along with their academic future. Perhaps it is because, according to studies by various organizations, school failure in Spain is as high as 20% (Clementin, F. 2019).

In the early days of video games, it was unfeasible for them to have a positive aspect, but thanks to different investigations such as a study of Hidalgo, X. (2011), we can see that society tends to classify these products as highly addictive or that they incite antisocial behaviour but that, nevertheless, it is increasingly clear that they are promoters of positive aspects.

We have another study that gathers the positive aspects of video games from different authors (Funk, 1993; McFarlone; Parrowhowk y Helad, 2002, citado en Gros, 2003; Calvo, 1995; Etxeberria, 1998b), Among these as-

pects, we can highlight the following positive points:

- Development of reflective thinking and reasoning.
- Development of the capacity of attention and memory.
- Development of motivation for and to learn different subjects.
- Development of the necessary skills to identify and learn vocabulary and numerical concepts.

(Marín, V. 2006).

In this same study we find a classification where those aspects that help to form the subject didactically are pointed out, highlighting the adventure and role video games, since they promote the development of the knowledge of different subjects, contributing values and counter-values. Knowing this, we chose to create a graphic adventure for our target audience.

According to the study by Montes, M. (2013) and the website Euston (2013), the graphic adventure is a sub-genre of the adventure, where all the player's options are developed through text controls, combining lines of text with the inclusion of images. The player must also communicate with the characters or perform actions in the environment to progress. According to Vandal (2019), on your list of best-selling games in history, we do not have any games with graphic adventure in this list. However, we can name fast thinking games such as *Tetris* (1984), which also has important educational value.

Currently, not so much importance is given to educational games and therefore we must get our product to stand out and find a way to make it attractive, ie, creating curiosity to the viewer.

Counting with another list of *Los 10 mejores videojuegos educativos* (Arnau, D 2013), we have different video games where the user can interact with the medium. As an example we have *Proyecto Kokori* (2011), a video

game that puts players at the controls of a small ship, a “nanobot” capable of entering a cell to study it, as well as identifying and solving the problems they may encounter.

Video games and artistic movements

Throughout the history of video games, we have many examples of how the art of diverse cultures influences these graphics. For example, *Oka-mi* (2006) is one of the clearest examples of Japanese artistic inspiration and the Ukiyo-e genre, within the history of video games. Its plot merges various elements of Japanese folklore and focuses its story on the work of the goddess Amaterasu, who, incarnated in a white wolf, must restore the natural beauty of the world and defeat the demons that are destroying it.

We continue with *The Bridge* (2013), a video game developed by The Quantum Astrophysicist Guild, Ty Taylor and Mario Castañeda, which bases its game mechanics on the puzzles based on the works of Escher (1898-1972), an artist known for the optical illusions he captured in his drawings and prints. (Gamer Fantasy. 2017)

And finally we will comment *Transistor* (2014), whose protagonist is Red, a famous singer from the city of Cloudbank who is attacked by El Proceso, a robotic force commanded by the Camerata. In this game we can see that the range of colors refers to Gustav Klimt and how the rectilinear architecture of Cloudbank is inspired by art nouveau, without forgetting the art of Alphonse Mucha. (Escribano, R. 2018)

The influence of Spanish art on video games

If what we are really looking for is to design the graphics of a video game with reference to Spanish art, we must also analyze this artistic influence

and see how each element is represented in different games according to each region and see how its art is rethought in comparison with other existing works.

Our main reference at the moment is *Blasphemous* (2019), a video game that has undoubtedly revolutionized the market since its inception as a beta version. This game, developed by the Sevillian company The Game Kitchen, has managed to revolutionize the market with a video game whose graphics are based on the art of Pixel Art, managing to create a protagonist who has needed long hours of work because it stores about one hundred and fifty different movements. In *Blasphemous* our protagonist (The Penitent One), is based on the penitents who walk through the Easter processions. His characteristic pointed hat (capirote) has become an icon of religious celebration.

For video game lovers, they would catalogue it as the metroidvania genre (a sub-genre of action-adventure video game based on a non-linear platform concept), along with gothic art mixed with horror is the fruit of this indie game. We can bet without a doubt that we not only see the influence of religion or religious iconography such as the Holy Week, the crowns of thorns or the capirote, but we also see reflected part of the Spanish and Andalusian folklore. There are three Spanish artists who stand out among the many sources of inspiration for *Blasphemous*: Francisco de Goya, Bartolomé Esteban Murillo and José de Ribera.

The way to represent the contrasts of light and the muted colors that form a perfect harmony of color representing the dark baroque aesthetics of this game, inspired by medieval Spain or, as we have already mentioned, the Catholic religion. (Zavaleta, F. 2020)

We will continue to name several references such as *Maldita Castilla* (2012),

the saga *Assassin's Creed* (2009 a 2013) and *Broken Sword: La Leyenda de los Templarios* (1996).

We also have Spanish stages such as Costa del Sol (*Final Fantasy VII*, 1997), Mesón de las flores (*Street Fighter V*, 2016) or Patio de los Leones (*King of Fighters*, 1994).

And finally, if we talk about Spanish characters, they can't miss Vega (*Street Fighters*, 1967) and Miguel Caballero Rojo (*Tekken 6*, 2007). (Esteve, J. 2015).

After naming these references, we cannot help but notice the clear representation of Spanish art, not only at the national level, but also at the international level. Most of these precedents focus on highlighting Spanish folklore, making classical representations such as the use of the Spanish guitar, castanets, the box or even the heel and the repeated use of palms for soundtracks. If we talk about the graphic part, we also refer to the mime details: taverns that remind us of the Spanish south, female characters with clear reference to flamenco, both for their clothes with infinite turns and for their hair gathered with floral decorations; as well as the male characters that are not left behind either, as they make reference to bullfighters with white blouses opened in a subtle way, full of lace or decorations and tight sashes that make the folklore fashion stand out.

2. 2 DAFO and CAME

What are we going to face in this project?

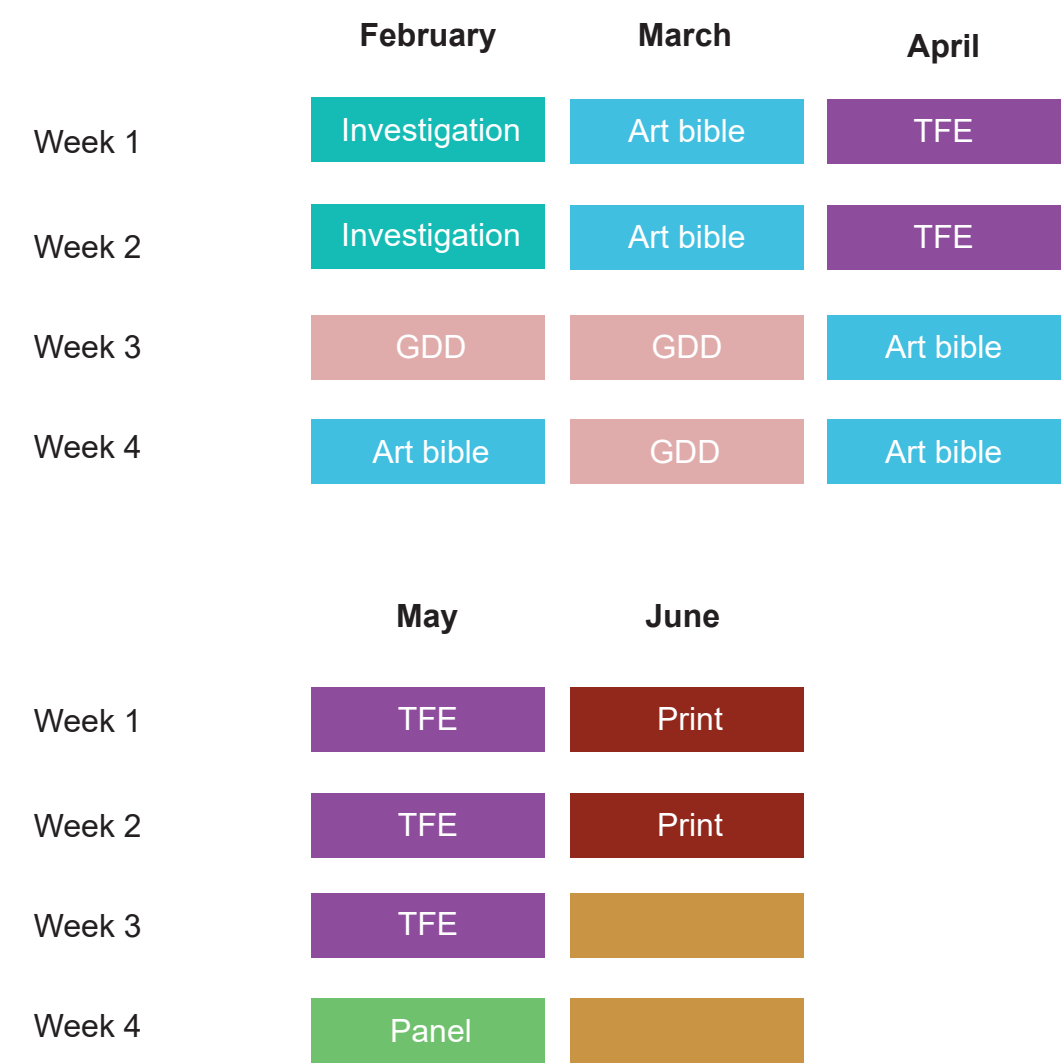
Before we plan each task, we need to recognize our advantages and disadvantages against this project.

DAFO	CAME
WEAKNESSES	CORRECT
Organization	Manage with planning
Time	Planning the tasks
THREATS	AFRONTAR
Time	Adapting the planning
Computer failure	Going to school or backing up
Competition	Interpreting the client
Free theme	Improve a real problem and investigate
STRENGTHS	KEEP
Knowing the customer	Adapting your tastes and needs
Viable product	Meeting the needs of the client
New technological idea	Exploiting all possible uses
OPPORTUNITIES	EXPLOIT
Portfolio	Social Networks
Experience	Curriculum
Acknowledgement	Curriculum

2. 3 Planning

In order to continue with our project we must follow a calendar with the tasks that are going to be carried out during the next months. The original date had to be changed due to various setbacks and the following date was set: June 26, 2020.

2. 4 Analysis and economic justification



The first phase of this project was developed independently, but the rest of the tasks were developed in parallel to achieve a cohesive project. In the first image we can see the project planning with the exact dates where each task is carried out, as well as a more precise breakdown of the secondary tasks. The most important tasks, and to which more time has been dedicated, are the Art Bible and the TFE document, since without both documents it would not be possible to present a complete project about a didactic video game.

This document gathers all the explanations of each section, such as the use of the interface or the graphic style adapted to our target audience. As for the Art Bible, it gathers every illustration and explanation of why each image, color or typography is used. Without a doubt, it has been one of the longest tasks to complete, since this project is based on creating artistic material such as characters, settings, objects... Because of this we have exceeded some dates established to add or retouch content from the art Bible and this has made the hours of work have been extended, especially on weekends. The month of June has been dedicated to improving the annexes of the document, retouching the main document and the information panel, as well as printing several copies of the document and including preparing the presentation of this project itself.

Nombre	Fecha de inicio	Fecha de fin
Biblio de arte	17/02/20	24/04/20
Documento TFE	17/02/20	15/05/20
Investigación	17/02/20	6/03/20
Interfaz	17/02/20	17/04/20
Guión	17/02/20	10/04/20
Escenarios	17/02/20	30/03/20
GDD	24/02/20	17/04/20
Portada	1/05/20	22/05/20
Logotipo	1/05/20	22/05/20
Panel A2	22/05/20	29/05/20
Impresión gusanillo	25/05/20	5/06/20
Impresión encuadernada	25/05/20	5/06/20
Impresión panel	25/05/20	12/06/20

Image 1. Proyect planning Hourglass History. Source: Own production.

2. 4 Analysis and economic justification

1. General idea of the project

According to our research, in Spain, school failure stands out at 20% in comparison with other countries and in this situation there is an ongoing debate where the population claims that this percentage is partly due to the influence of video games on the youngest. That is why we have decided to create a didactic video game that works as a support in education, as well as improving other aspects such as the use of memory.

2. Business plan for the video game

This project aims to create and market an educational video game for teenagers between 13 and 18 years old. With this product, the aim is to improve a social problem by addressing various problems that can occur in the education sector.

The sale and distribution of this game will be established through the Nintendo eShop or on the official Game website, so that the user can receive the product at the address provided in a short time.

In this way the company seeks to develop a marketing strategy, highlighting the importance of this product that facilitates daily life, in addition to being a national product. When the customer gets the product, he will be able to enjoy this artistic experience through a Nintendo Switch system.

Mission: Visual representation of the History of Art in Spain as a way of learning.

Vision: Entertainment of our users.

Values: Maximum quality in our product and service, commitment to the client in terms of established goals and professionalism in showing a product that improves society.

Advantages: This project will add representative elements of Art History as a didactic function, counting on the cultural level adapted to our user. Thanks to this product, our user will not only learn essential aspects of the art world, but it will also work as audiovisual entertainment.

3. Description of products and services

A B2B business model is proposed that will offer its services to another company in order to promote and distribute the final product. The client will be able to book and buy the product on the website or online from the promotional company (Nintendo). The environment must transmit technological security as it is one of the main characteristics of any company.

3. 1. After-sales service

The company that has created the product will not have a direct attention to the customer, but will be the company that has decided to buy and distribute the product.

4. Competitive advantage

-Internal competitive advantage: Achieve a lower unit cost by having a reduced project team

-External competitive advantage: The distinctive qualities of the product, as an educational innovation option.

Taking into account the type of market, it can be seen that an important characteristic is the graphic style and modality of the game. To get a product that is simple and easy to handle for our target audience.

The project must focus on:

- Technological innovation.
- Showing the cultural value.

Care must be taken in the following points:

- Adequate cultural level for young people.
- Substantial thread to support the project.

5. Summary

The aim is to highlight the two pillars on which this analysis is to be based:

- Cultural value: Presenting part of the cultural values to an audience that is in the middle of its development.
- Educational value: Presenting a product as a viable complement in the educational sector.

Concept	Hours	Price
Market survey	30	320
Content selection	40	450
Character design	30	400
Character creation	50	850
Attack system	10	200
Map	10	200
Experience and level	10	100
Submenu	30	350
Skills/items	40	100
Interface	90	2.000
Logotype + Naming	10	600
TOTAL	350	5.570 €

Concept	Hours	Price
Programmer	90	2.000
Composer	90	2.000
Animator	90	2.000
TOTAL	270	6.000€

Concept	Hours	Price
Advertising web/banner	30 días	300 (50.000 people)
TOTAL		300€

2. 5 List of material and immaterial

Furniture and computer equipment

Office/Room
Laptop Lenovo Yoga 530
Digitizer tablet Wacom Intous
Printer
External memory

Tools

Information books
Stationery

Inmateriales

Graphic designer
Animator 2D
Programmer
Composer

Otros

Advertising

SECTION 3. PROJECT DEVELOPMENT

3. 1 Purpose and audience

Briefing

The main objective is to create a video game whose functionality consists of facilitating the learning of Spanish culture. This product will be aimed at teenagers between 13 and 18 years old who want to enjoy a new experience never before lived in school classrooms. For this reason, we are looking for an aesthetic and history that will seduce and facilitate the user's decision to desire this product.

Goals

Our main objective is to help young people take a greater interest in art culture. Our target audience varies depending on who is in charge of buying the product, but generally our main customer will be the parents of these teenagers, who will give their approval to this video game before buying it.

Customer

Men and women between the ages of 25 and 35, average standard of living. They think their children should be less distracted by technology and pay attention to the subjects they consider most important, such as mathematics.

Users

Men and women between the ages of 13 and 18. They are still experimenting and gathering knowledge. They do not know what their favourite subject is or what they want to do in the future. They know that not everything can be learned through study, but also through practice; and so sometimes they need to relax and have hobbies.

Audience

Francisco Quevedo: 40 years old, hairdresser

Francisco runs a family business, inherited from his father; with an average standard of living. He works with his wife and they live in Granada, a few kilometres from his work.

As a father, he wants the best for his son and believes he should focus on his studies. He also understands that he needs to relax on the weekends and therefore wants to find entertainment that will benefit him in the long run.

Daniel Quevedo: 14 years old, student

Daniel has several hobbies, such as playing different sports with his friends. He lives with his parents but because of his work he doesn't spend much time at home and therefore is often more easily distracted. He is good at studying but there are subjects that he is not so passionate about, such as History. Daniel wants to come to an agreement with his father so that he can have fun and get away from his studies and even look for a method that will make it easier for him to learn the subjects.

3. 2 History

Bold wakes up one day and sees everything disappear around him and all he can do is run to keep from disappearing. When it seems that everything adds up in the darkness, a light guides him until he meets the goddess Minerva, who will lead him through this adventure by communicating that he is the one chosen to restore the future and bring back the art that has been stolen. Nefarious, the main villain; intends to destroy all possible art by absorbing it all as if it were a black hole. Thanks to his henchmen and his own skills, he will lead Bold through all the stages of the story until the main character is able to stop him.

This video game aims to show and teach part of the History of Art in Spain, having as its mission not only to entertain, but also to educate the youngest thanks to a fictional story inspired by a world full of fantasy. Thanks to the mini-games and the environment with which you can interact, we can show historical data and reflect part of the culture through the graphic style of the video game.

In the trial or beta version of the product, we will show one of the chapters where the art of *Al-Andalus* in Granada will be shown.

Main character: Bold.

The hero chosen by Cronus by owning one of the time clocks, who will fix the future and recover the stolen art to restore all of history.

He is bold and brave, so he decides to join the mission of saving the world. At the beginning of the story he hardly shows any feelings, but he has an important evolution where his concern to save the world from the main villain is seen. Little by little his guide interacts more and he comes to show expressions of happiness, fury or sadness.

As well as his way of acting in front of enemies or difficulties, because at first he doubts if he is doing the right thing.

NARRATOR: Minerva.

The spirit of the goddess Minerva, goddess of the arts, guides and helps the protagonist in this adventure. She is serene and sensitive, transmitting the necessary tranquility in every occasion. She hides in the hourglass that Bold has, so they can talk without making an act of presence. Unlike Bold, Minerva does not show such a remarkable evolution due to her calm attitude. We notice an evolution between the relationship of both characters, as if it were a mother and son relationship.



Image 2. Bold of Hourglass History. Source: Own production.



Image 3. Minerva of Hourglass History. Source: Own production.

Villain: Nefarious

It seeks to absorb the art that has been and will be. Black silhouette, two meters high, hooded and devilish looking. It has no legs, as it alludes to the black holes that absorb everything they find. His evolution is similar to that of Minerva, since he does not show such a remarkable evolution, however, throughout history we will see another facet of this villain and we will be able to understand the reason for his anger. In this way the viewer feels empathy for the character because of his past. This villain also has an army of henchmen who will help him in his mission to make the world disappear.



Image 4, 5 and 6. Enemies of Hourglass History. Source: Own production.



Image 7. Nefarious of Hourglass History. Source: Own production.

3. 3 Playability and platform

Unifying the graphic adventure with a turn-based battle system, we will apply a linear story where the main character will have to fight against the villains who want to make art disappear in the world. In addition, we will apply complementary mini-games to the main story not only to make the story more enjoyable, but also to learn and win small rewards. These rewards are linked to the difficulty of each mission and useful items will be given to fulfill other missions or improve the character.

The game has 5 levels with one or two chapters within them; and an extra level.

- Prehistory: Cave Art (Paleolithic).
- Ancient Age: Roman art.
- Middle Ages: Al-Andalus art and romantic and gothic art.
- Modern Age: Baroque art and art of the Enlightenment.
- Contemporary Age: Modernist art and avant-garde art.
- Current events

The game mechanics are divided into two main systems. The first is the turn-based combat system, which will only be visible when the protagonist can interact with an enemy.

The second system is the puzzle solving system, since thanks to it we can achieve redeemable achievements to increase the number and improve the character's skills.

Once the user has created a new game, the game itself will show a tutorial that explains each section so that the user can remember which buttons to press to access each menu.

We decided to adapt this video game to the Nintendo Switch system, be-

cause it is a system that has been on the market for some time and they are adapting a lot of video games for any member of the family. Besides, being semi-portable our user will be able to play no matter where he is.

Map: We have a main map where it will indicate in which chapter or phase of the game we are, besides that you can go back and repeat levels until you manage to unlock all the chapter's puzzles. If we get all the missions and achievements, we will be able to unlock one last level in the game. The map represents an art gallery where each painting represents the stage of art where our protagonist will travel. It has five chapters (Prehistory, Ancient Age, Middle Age, Modern Age and Contemporary Age) and a secret chapter (Present Time). This story is linear, so we can only move forward to reach the next chapter.

Missions: Missions, both primary and secondary, are unlocked by talking to secondary characters and interacting with the environment. In this way we give the user freedom despite being a linear video game.

Points: They are used as currency to improve the character's skills. From the first chapter of the game we will be able to get these points but they are only obtained with certain missions, since this way the user will want to complete each phase completely so that the character can have the best skills in the game and thus gain more experience.

Spells: A panel of skills which can be equipped, unlocked and improved thanks to the point system mentioned above. At the beginning of the game we will have three basic spells to use against the enemies.

Profile: In the profile we can see the skill level of the character and the

game time, the chapters and how much of it has been completed. We can also see the items obtained, such as the game's hourglasses, which represent extra lives that can be obtained in the environment.

3. 4 Graphic style

"El estilo artístico de un videojuego es una de las partes más importantes. Tiene que servir entre unión entre el guión, los personajes y el entorno de nuestro juego." Bueno, D. (2018).

Therefore, if we create an original world, detailed and with good artistic design we will manage to give the necessary depth to our video game and impact the user through art. Before we start designing characters and scenarios, we must know what kind of setting and aesthetics we want to give to our game, taking into account what audience is targeted.

When we have a teenage audience, we opt for a friendly and animated artistic style, which simulates the cartoon style but also takes into account that it must represent both fantasy and reality in order to find a style that can please each audience; that is, not everything shown is fictional as it tries to represent a past history. The best way to explain the artistic style is to know the characteristics of the main characters and their costumes.

Bold not only tries to show closeness thanks to circular forms, denoting the kindness of the character, but also has a record of emotions and movements that makes the viewer become attached to the protagonist. Another feature that enriches this character is the wide range of clothing he has throughout the game, since he will have to dress coherently according

to the historical stage where he is.

Another feature that enriches this character is the wide range of outfits he wears throughout the game, since he will have to dress coherently according to the historical stage he is in.

When talking about Minerva, his guide, changes quite a bit as far as the main character is concerned, since even though he is represented in a friendly way with undulating forms, he does not have as many movement registers as the main character. In this way we manage to put Minerva in the background and make the protagonist stand out. Both characters have similar colors, differentiating who are the protagonists and who are the villains of this story.

On the contrary, if we look at the villains' designs they all have the same colour range. The basic enemies have different shapes that try to simulate non-corporeal aspects since they are not presented as human figures or some known figure and transmit to the viewer curiosity and bewilderment by not knowing what they really are, as with Minerva's appearance. Nefarious is the opposite of Bold, as it presents a stylised and shadowy figure together with unfriendly features that make the user realise from the first moment who the main villain is. His movements are direct and defiant, they even show a part of his character as he is the most determined character in the game, together with the main character.

3. 5 Typography

When talking about identity typography, it is recommended to use "Sans-Serif" typographies for reading digital media. Mier, G. (2017)

"1. Typography in digital format.

To facilitate reading on digital media, unlike physical and printed media, it is recommended to use "Sans-Serif" fonts (without serif) and opt for others such as Open Sans, Roboto or San Francisco.

Finally we make use of Open Sans for the video game interface, as they are suitable for viewing on monitors and even low resolution. We will also make use of the Roboto typography for the dialogues in the video game, thus differentiating the story from the game interface.

3. 6 Chromatic palette

If we continue on this page, we will also find information about the colors we can use. Thanks to this information we have decided to focus on three main colors, adding also the contrasts of them to improve the visibility of the application.

"3. Colour palette

Normally, we recommend a maximum of 3 primary colours and always maintain the colour balance. This balance can be achieved through contrasts, analogical colours or different shades of the same colour".

We have decided to use two different color palettes composed of four colors, one for the interface and the main character; and another one exclusively for the *Al-Andalus* art chapter. In this way, each chapter would have a different colour palette to represent each stage.

We decided to use white, dark blue, light blue and black to apply them to the game interface and thanks to the book of *Psicología del color* (Heller, 2004) we can reaffirm the meaning we want to give to these colours.

“AZUL - El color de la simpatía, la armonía y la fantasía.

El color más nombrado en relación con la simpatía, la armonía, la amistad y la confianza; debido a que al asociar colores con sentimientos nombramos el azul como el color de todo lo que deseamos que permanezca, de todo lo que debe durar eternamente.” (p. 23)

“Como color de lejanía y de anhelo, el azul es el color de lo irreal, e incluso de la ilusión y el espejismo.” (p. 26)

“AMARILLO - El color del optimismo.

Nuestra experiencia elemental del amarillo es el Sol. Esta experiencia encuentra siempre una generalización simbólica: como color del Sol, el amarillo serena y anima. El amarillo irradia, sonríe, es el color principal de la amabilidad.” (p.85)

“NEGRO - El color de la elegancia

La elegancia supone la renuncia a de llamar la atención. Quien viste de negro, renuncia incluso al color. Es la elegancia sin riesgo.” (p.140)

Bold is represented with a blue hood next to the color black, due to the fantasy that this color transmits to evoke the infinite feelings that this story can transmit to the user. On this occasion, black represents the need to draw attention together with blue. As mentioned above, blue also represents kindness and thanks to the sha-

pe and colour of the main character, it manages to represent a kind and charismatic character.

The hourglass, on this occasion; is a valuable symbol of the gods that represents value in small proportions, just as one would describe art. It is the serenity and the courage to continue with the adventure.

The same goes for Minerva's colour range, only this time it represents the unreal and the distant, so its form is represented as a spirit and thanks to this it gives an even more serene aspect.

“ROJO - El color del dinamismo.

El rojo es activo, es dinámico. El rojo es el color simbólico de todas aquellas actividades que exigen más pasión que razonamiento.” (p. 71)

“MARRÓN. El color de lo acogedor.

Lo natural, lo esencialmente carente de artificialidad, hace el marrón el color de la comodidad.” (p. 257)

We use the color red to give the character's costume dynamism in comparison with other elements, such as the settings of the game itself or other elements.









On the other hand, we use the color brown for other elements that we don't want to highlight. For example, in the scenarios we make use of brown tones to leave the character's prominence so that the user can easily recognize him on the screen.

“NEGRO - Negro con violeta: misterioso e introvertido.

Negro y violeta son los colores de lo misterioso, de la magia. Pero el color decisivo en el efecto mágico no es el negro, si no el violeta.” (p. 132)

In creating the game’s villain with his minions, we have relied on the union of black and violet (purple) to highlight not only who he is, but his evil and arrogant personality through his gestures. We seek to create mystery and uncertainty, using colors as a principle in this video game.

.

			
C: 14 R: 215 M: 44 G: 150 Y: 82 B: 63 K: 4 # d7963f	C: 87 R: 53 M: 67 G: 82 Y: 26 B: 128 K: 10 # 355280	C: 73 R: 48 M: 16 G: 162 Y: 22 B: 189 K: 1 # 30a2bd	C: 91 R: 0 M: 79 G: 0 Y: 62 B: 0 K: 97 # 000000
			
C: 15 R: 217 M: 34 G: 173 Y: 48 B: 135 K: 3 # d9ad87	C: 21 R: 191 M: 57 G: 119 Y: 63 B: 90 K: 10 # bf775a	C: 9 R: 216 M: 89 G: 55 Y: 67 B: 69 K: 1 # d83745	C: 91 R: 0 M: 79 G: 0 Y: 62 B: 0 K: 97 # 000000

3. 7 Interface

The graphical interface of video games usually varies quite a bit, however, there are certain options that they maintain and will continue to maintain over the years. It is for this reason that not only the art of a video game is important, but also making an interface simple and effective enough for our target audience to understand the game’s menu features.

In order to do this, we have based ourselves on examples of different games to observe their shortcomings and improvements.

We have taken as an example a previously mentioned videogame, whose graphic interface is well resolved, besides being able to live a real user experience. We are talking about the video game interface *Transistor*.

As proposals to imitate on the interface of this video game, we must emphasize the wide and complete menu that has, since not only includes a complete specification of each action but also has other extras such as an exclusive section for the credits of the development team.

We can also highlight the tutorial, since it guides the user at all times and trains him to memorize each action.

In highlighting various improvements to our own interface, we should name the save slots, the tutorial and the combat system.

Since our game does not follow the same system as the example interface, we have detected some improvements that we should include. For example, the save slots are too simple and do not contain the essential information such as the time spent on each game or where in the game each level is located.

In this game we must highlight the use of tutorials, however, for our target

audience we will not need to use a very complex tutorial since its interface is even simpler.

We can say the same about the combat system of this game, since it is a completely new system and it does not look like other existing systems, it is usually more difficult to memorize for the user.

Competitive advantage

Simple and tutored interface: clear and easy-to-use interface, plus a tutorial once the user enters each section for the first time, to resolve any doubts. This tutorial can be viewed whenever necessary. Of course, all the interface will have a common aesthetic.

New system for the save slots: because this videogame will have many hours of gameplay, we will add in the save slots a percentage that will indicate how much the user has left each chapter. This way, it will be easier to know how much is left to complete the game one hundred percent. In addition, a unique section will be added for each chapter, adding the percentage mentioned above and with the possibility of resuming each chapter that has been completed.

Original menu: to differentiate this videogame from the rest of the competition, we will apply a new format for the chapter selection menu. As it has an artistic theme, we associate art to the paintings and art galleries and thanks to this we manage to create a personalized art gallery, with paintings that represent each episode of the game.

When planning a new interface, we must know our user and how he will interact with each section offered to him. To do this, we will analyze the user flow and the Customer Journey, that is, the customer experience in

the first moment he interacts with our product and the experience after knowing the use of the interface.

User/Customer Flow

We are a new user who has acquired the product for his own income or with external help. We usually buy similarly themed games and like to enjoy good gameplay.

Your main objective as a user is entertainment, leaving the didactic part as an additional bonus.

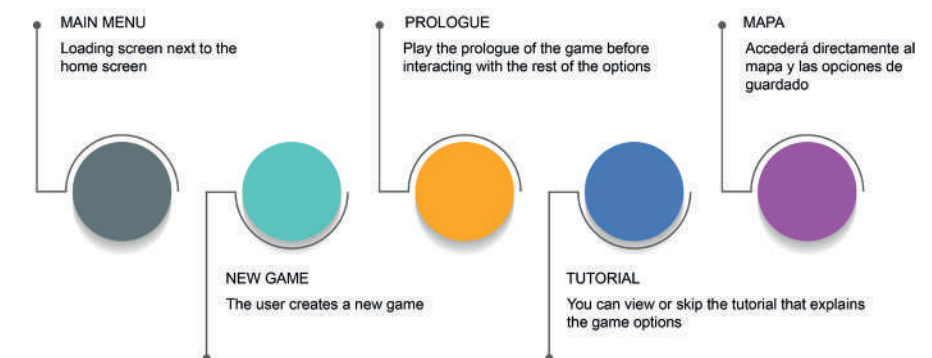


Image 8. User flow. Source: Own production.

Customer Journey

We are a user who has been playing this new product for several weeks, is satisfied with his purchase and will recommend it to his acquaintances, as it has a simple gameplay. In addition, thanks to the basic instructions you have learned to use each menu and to use all the options.

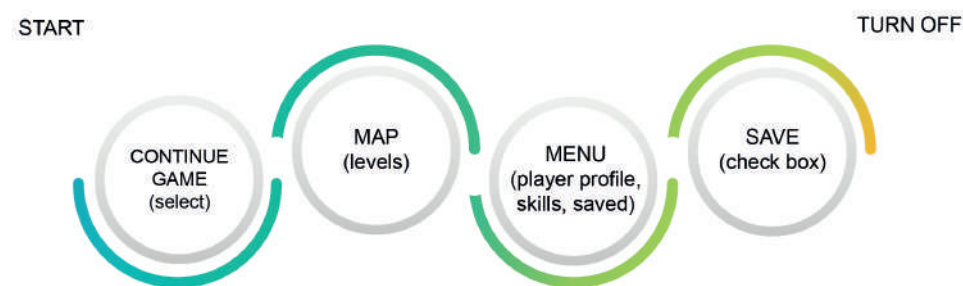


Image 9. Customer Journey. Source: Own production.

Once we have presented the previous points, we can continue with the realization of the interface. This way, we will know which are the most important sections and the ones that our user will use the most.

We must take into account that the user has to adapt to our product, because despite having controls and menus similar to other games, no video game is the same as the previous one and therefore we must adapt it in the easiest and most intuitive way possible. On the contrary, if the user shows any possible doubt he can always consult the tutorial where each section and control of the game is explained.

Next, we will add screenshots of the interface.

Screen 1: Startup screen or presentation of the video game.

The game's logo with the starred background stands out, the main graphic resource that defines the aesthetics of this product.

We have the option to create a new game, resume the game that the user has left halfway through, or see the technical options of the video game, such as the function of each command.



Image 10. Home screen. Source: Own production.

Screen 2: Saved game.

The "Load Game" option has a series of empty boxes that collect game information each time the user decides to save the game. Once a game is saved, a series of informative data appears; such as the name we have assigned to the box, the chapter where the user is currently, as well as the percentage that indicates when it will be completed and finally, the time played in each saved game.

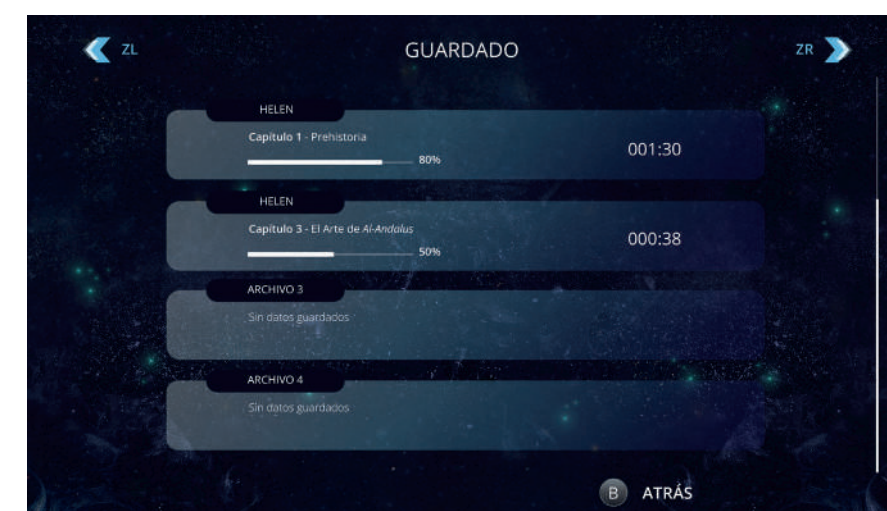


Image 11. Save slots. Source: Own production.

Screen 3: Chapters.

This menu can be accessed in the “Load game” option. Here you can see which chapters have been completed and if they are one hundred percent complete.



Image 12. Played chapters. Source: Own production,

Screen 4: New game.

When creating a new game, you must create a name to differentiate future games. This way there is no confusion if a different user starts a new game on the same console.



Image 13. New game. Source: Own production.

Screen 5 and 6: Settings.

In the settings option, you can choose the desired language; as well as modify the volume of the music and sound effects, and you can also activate and deactivate the vibration of the Joy-con. The user can restore the default settings. We'll know which buttons are used for each action and can even change them for the user's convenience. The default settings can always be restored.



Image 14. Game settings. Source: Own production.



Image 15. Game settings. Source: Own production.

Screen 7 and 8: Map-gallery.

Once the game has started or a chapter has ended, this menu is displayed, with pictures that refer to the art of each period, representing each picture as a new chapter of the video game. The selected painting is represented by a light coming from the ceiling, as this way it can be better differentiated from the rest of the paintings.

Once we select one of the paintings, thanks to the zoom we can see in detail the painting, as well as an information plate about the period we are going to visit and the historical piece that is shown.

A menu gives us the option to continue the episode or restart it.

If we want to restart it, the game itself asks us if we are sure about it. By telling a linear story, the chapters are unlocked if the previous chapter has been completed and can always be restarted to achieve the completion of each mission in the chapter. To advance to the next chapter, we have to complete the previous one.



Image 16. Map. Source: Own production.

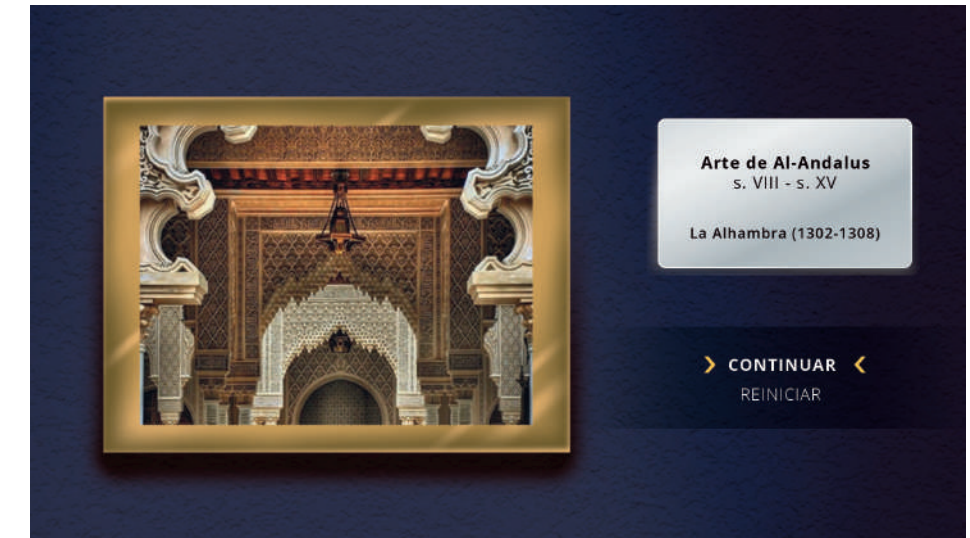


Image 17. Map. Source: Own production.

Screen 9: Menu-profile.

In this section the power level of the character is shown together with the lives he has, represented as hourglasses, the spells equipped at the moment and the chapter currently being played together with other details, like the time played or how much of this level has been completed.

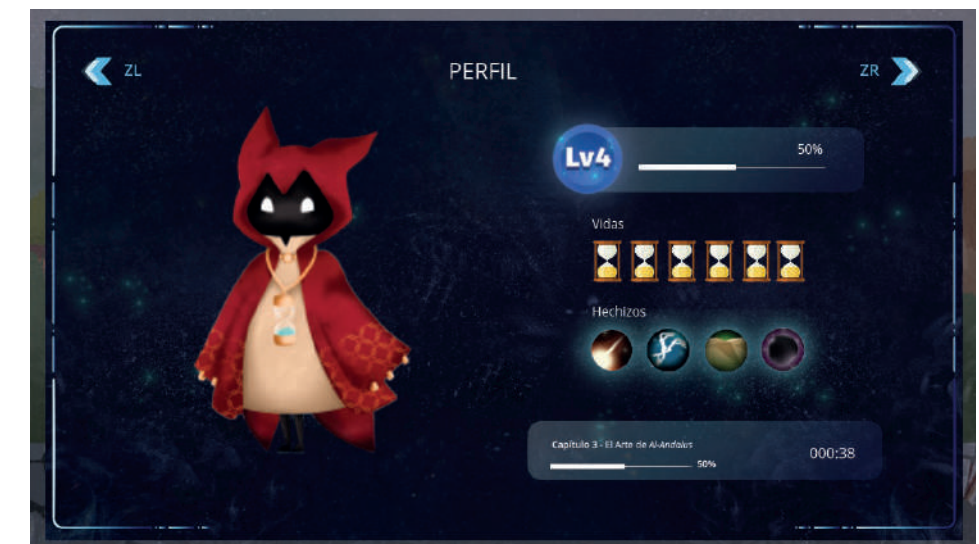


Image 18. Player profile. Source: Own production.

Screen 10: Skills menu.

In the same profile menu you will find the available spells and equipment, and you can improve each one up to five times.



Image 19. Menu skills. Source: Own production.

Screen 11: Location.

In the upper left corner we are shown where we are every time we change scenery. Thanks to this the user will not get lost at any time.

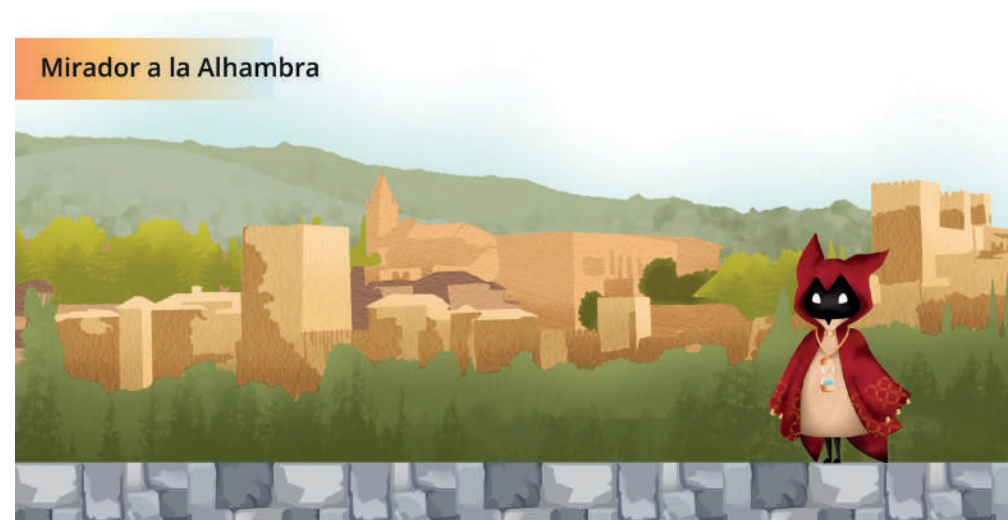


Image 20. Location. Source: Own production.

Screen 12: Dialogues.

The dialogues of the characters are highlighted inside a blank sandwich, along with a different typography to highlight them from the rest of the interface using the Roboto typography.



Image 21. Dialogues. Source: Own production.

Screen 13: Combat system.

The combat system is represented as a turn-based combat, that is, the player can attack one or two turns in a row, depending on the system; and has to wait until the enemy attacks and then continue. In this way we help the user to meditate each action using the strategy and his own mind. The screen shows the main character and the enemy we must face. In the upper left we can appreciate the life we have and if we have extra lives, represented as hourglasses.

Underneath we will have our own menu that consists of attack, defense and objects that we can use in the battle.

Also, we can end our turn if we don't want to or can't make any movement in our turn. Next to this menu, the name of the enemy will appear next to

the available life. Every time the enemy receives an attack the life marker goes down and to win we must reach zero.



Image 22. Fighting system. Source: Own production.

Screen 14: Level up.

After each battle we can see if our character has leveled up, and the points where he improves are shown.



Image 23. Level Up. Source: Own production.

Screen 15: Mission completed.

Every time we complete a mission, the interface itself informs us about it at the top of the screen.



Image 24. Mision completed. Source: Own production.

Screen 16: Menu options.

With the “-” button you can access to this menu, where you can save the game and return to the main menu or watch the tutorial again.

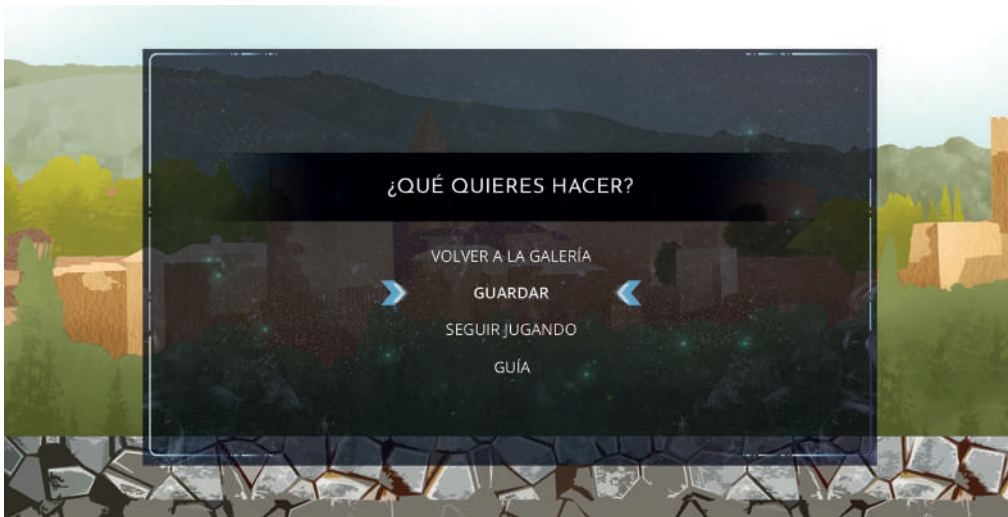


Image 25. Extra menu. Source: Own production.

Screen 17: Loading screen.

In the loading screen we have a section that constantly reminds the player about the game mechanics that have already appeared in the tutorial itself. This way we make sure not only to entertain the spectator, but also to help him with the game itself.

In addition, there is also a loading animation where a dotted line appears horizontally until it reaches an hourglass that is constantly moving.

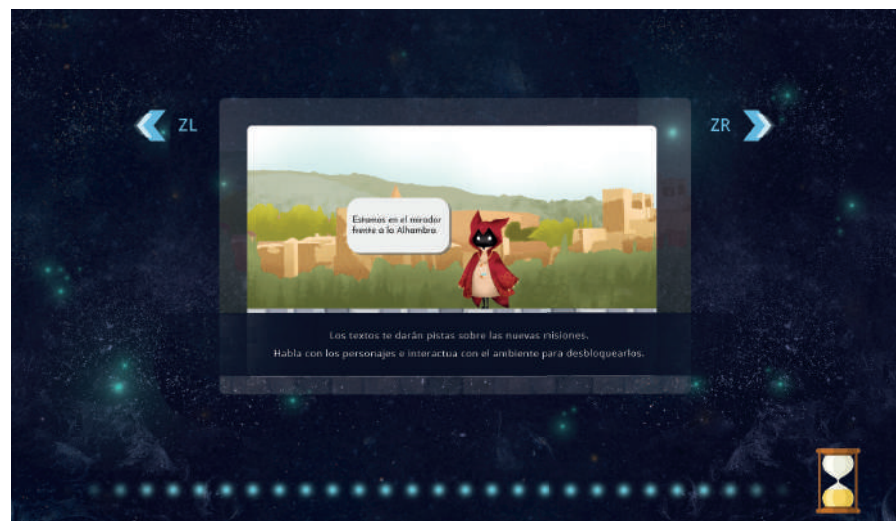


Image 26. Loading screen. Source: Own production.

Screen 18: Defeat.

If we lose all the lives of the character in a battle, the game ends and the player will see the next screen with two options, having the option to resume a game, in this case from the last point saved automatically by the game itself or even from a game saved by the player himself; or the option to return to the home screen to leave the battle for another time or change any of the options of any command.



Image 27. Defeat. Source: Own production.

Screen 19: Nintendo Switch interface.

The downloaded or previously played games will appear on the system's own interface. On this occasion, the title and a preview of the game's cover will be included.

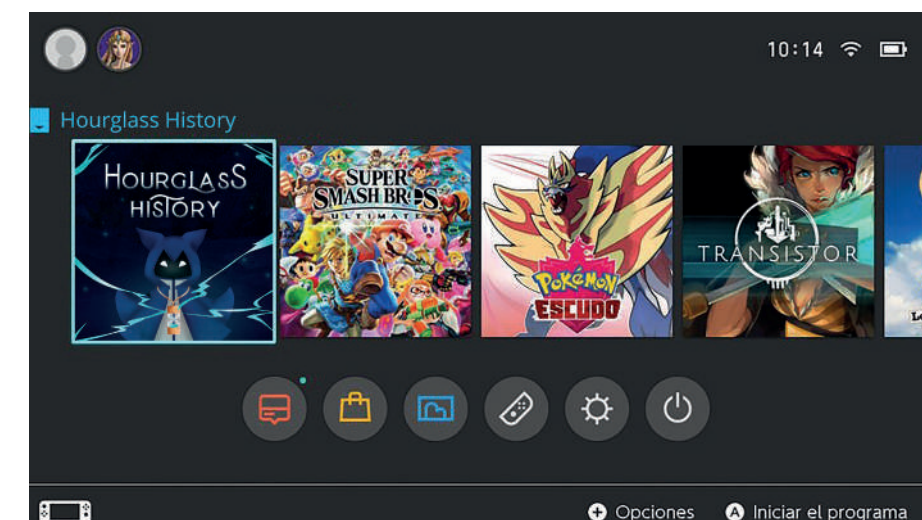


Image 28. Interface of Nintendo Switch. Source: Own production.

3. 8 Sound

Both the soundtrack and the sound effects used have been extracted from free libraries for the trial version of the video game and will be played continuously. There is a different song for each scenario, with two songs for each combat with the basic enemies and the final boss of the time, and two environmental songs to represent the culture and the city of Granada.

The main idea is that if the videogame is finally developed, to have its own soundtrack with different artists, based not only on typical instruments of the Spanish culture but also that each chapter would have a different soundtrack to represent each cultural period, since each chapter will have its own atmosphere. We also have the need to create themes for the characters and pieces for specific film sequences.

3. 9 Naming

When creating a Naming or title for our video game, at Google Academic we have taken as a reference of *Naming. ¿Cómo crear un buen nombre?* (Grau, X.2010). In this work we find the steps to follow to find a good Naming.

CLIENT / ORDER / BRIEFING / STRATEGY / LONG LIST / SHORT LIST / REGISTRATION AND DOMAINS. (p, 15.)

CLIENT: Evaluate the attitude of the client and the user.

ORDER: Objectives required in the project.

BRIEFING: Briefing of the client and our interpretation of it.

STRATEGY: Concept map with ideas,

LONG LIST: Process of generation-release of names.

SHORT LIST: Subjectivity, instinct and experiences.

REGISTRATION AND DOMAINS: Every name must be able to be used

and therefore must pass the registration test.

As we have seen before, we have already evaluated our client, the assignment, the briefing and the strategy, so we will name the possible names for our brand. Our starting point is a naming in English that is also understood in Spanish and that does not resemble other brands. We will achieve this by providing our brand with characteristics such as: Professionalism and culture.

Namings in English tend to have more impact on social networks or television, tend to be more commercial and therefore, we seek that our video game is recognized nationally.

In creating our brand, we have followed the steps of the above-mentioned author, creating a large list of possible names that refer to our identity, which has finally been reduced to the following: Clock, Watch, Hourglass, History, Story, Art, Artist...

To complement our research, we again looked to Google Scholar for help in finding an official marketing blog.

In *Naming: el eje principal de toda marca es su nombre*, (Weyketing, 2016) we will find six tips to choose the right naming.

- **To be attractive.**
- **Easy to remember.**
- **Must fit our audience.**
- **Representative.**
- **Legible and pronounceable.**
- **With personality.**

Finally we have chosen “Hourglass History”, as it refers to the connection to the main story, where the protagonist alludes to time travel. With this naming, we also reinforce the idea that there is a story behind this project.

Finally, we have checked the status of our domain on the Internet and the address www.hourglasshistory.com is free, so we can use this naming and domain for our brand.

3. 10 Logotype

One of the most representative parts of a video game stands out for its logo and to create something completely original, we decided to create an original typography taking as a reference the Retrocycles typography, both for its rounded style with capital letters and for its decorations that simulate freehand gestures.



Imagen 29. Referencia tipográfica. Fuente: FFonts.net

According to the Spanish language dictionary, retro means “backwards”, referring to an object or work from the past. Since the main story of the video game is about time travel, a retro typeface would be the most accurate. Thanks to the mix of different typographic references that simulate ancient styles, we have focused on the Art Nouveau style due to its sinuous and natural forms that simulate written typography. This original typography stands out for its rounded corners and manual shapes that simulate the nature of freehand drawing.

In terms of colour, white and blue will be the main colours of the logo, which will always be next to a black or dark blue background, in line with the video game’s chromatic range.



Image 30. Logotype Hourglass History. Source: Own production.

3. 11 Cover

If we look for references about covers for Nintendo Switch games, we see that each one of them has the same pattern that must be respected, not only because it was the company who established this design, but also because it informs the user what product he is going to buy.

We must take into account that these covers have a cover, back cover and the spine where the name of the video game will go.

On the back cover you will find additional information such as compatibility with various electronic devices, warnings and important information about the product, where it has been created and the PEGI symbol. The acronym PEGI (Pan European Game Information) refers to the age rating system for software and video games applied in Europe. Currently there are 6 labels in the PEGI system and on our cover we must add the PEGI 7 sticker, as it indicates that the game is still suitable for all audiences, but may contain images or sounds that scare away some of the viewers.

This symbol should be implemented on both the front and back covers to warn the customer about the recommended age for this video game.

There are also the PEGI descriptors, which are those that outline the type of content offered by the video game, and are used as a basis for establishing age labels. As our videogame is adapted for all audiences, it is not necessary to add this label.

We have also added explanatory texts on the back cover describing the game and we will highlight phrases that are essential and draw the viewer's attention, along with images that are found within the game itself, to attract our client. On the cover we added the logo of the game together with an illustration where the protagonist of this story and the hourglass he owns stand out. In addition, the protagonist appears looking in the direction of the logo, creating a union in the composition of the illustration.



Image 31. Cover of Hourglass History. Source: Own production.

SECTION 4. CONCLUSIONS

4. 1 Critical evaluation and conclusions

Finally, we present the final phase of this project, since thanks to the experience obtained in the course of this research and work, the expectations that were initially held have been far exceeded, coming to create a product in relation to the new didactic technologies on the market; where this can be considered as a new technological route that can even be adapted in educational centres.

Both the development of graphic material and the design of the interface have been the basis of this project, researching on other video games with similar themes and proposing new improvements adapted to our future client. With the results obtained from our research, we generated a series of competitive advantages and adapted them to our proposal.

In order to attract the attention of young people to a cultural theme, we have implemented a fantasy story that is mixed with real events, including monuments and representative works of art in the History of Art in Spain. Moreover, to reinforce this interest, we have not only created an attractive story for our audience, but we have also created characters capable of empathizing with the user. To adapt everything in the same interface, we have generated a code of typographies and colors that serve to guide the user, besides that we have taken into account every possible action and we have adapted it to the interface format as it is the one of a console. It is thanks to this that it has been possible to create a project where the main axis is the didactic use, getting to transmit this idea to an audience that did not know about this cultural part or that did not call enough attention to it, changing this perspective into something more than a simple experience of the player.

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APPENDIX A: GAME DESIGN DOCUMENT

GAME PIECE

TITLE	Hourglass History
GENERAL	Graphic adventure
USER	Young people, between 13 and 18 years
PLATFORMS	Nintendo Switch
GAME MODE	History mode
THEME	Historial/Fantasy
AESTHETICS	2D Illustration

GAME DESCRIPTION

The protagonist wakes up one day and sees that everything is disappearing, buildings, animals...; the only thing he can do is run so as not to disappear.

Bold, the protagonist; is the one chosen to restore the future and bring back the art that has been stolen. Minerva, his guide; will tell you that he is the one chosen for this mission by owning one of Cronus' watches, since throughout history we will understand that Bold is a creation of Cronus.

Nefarious, the main villain; he intends to destroy all the possible art by absorbing it as if it were a black hole. With his henchmen and his own skills, he will lead Bold through all the stages of the story until the main character is able to stop him.

This video game aims to show and teach part of the History of Art in Spain, having as its mission not only to entertain, but also to educate the youngest with a fictional story inspired by a world full of fantasy. On this occasion, we will focus on showing one of the chapters where the art of Al-Andalus in Granada will be shown.

Unifying the graphic adventure with a turn-based battle system, we will apply a linear story where the main character will have to fight against the villains who want to make art disappear in the world.

In addition, we will apply complementary mini-games to the main story, which thanks to these and the environment with which it will be possible to interact, we can show historical data and reflect part of the culture through the graphic style of the video game.

CHARACTERISTICS

PROTAGONIST

Character name: His name is Bold, which means adventurous or daring. It also alludes to the bold typography as it has no face and a black silhouette as its body.

Description: At the beginning of the game he wears a hooded tunic that simulates two pointed ears. In each chapter he will have a different outfit to go unnoticed. Bold is a fantastic being, he has a similarity to the human body and in the game they don't assure his race. As we advance in the game we will know that Bold is one of Cronos' creations.

Concept: He is bold and brave, so he decides to join the mission of saving the world.

Encounter: He appears from the beginning of the game without skills and will have to solve puzzles and defeat enemies to gain experience. The more levels, the harder it is to defeat the bosses of each level.

Weapons: The character uses magic by default, as well as the power to go back in time once every three turns to change an attack.

Items: His main item is an hourglass, which he can use to go back in time if he wants to change an attack. In addition, he has a brush with which he can change the time when creating portals.



Image 1. Bold of Hourglass History. Source: Own production.

NARRATOR/GUIDE

Name of the character: Minerva, the goddess of arts.

Description: She manifests as a spirit, since she does not possess legs. She has human form and dresses a tunic similar to the one of the main character. Her blue hair hides one of her eyes.

Concept: She is serene and sensitive, transmitting the tranquility that the player needs to face his enemies. She will hide inside Bold's hourglass.

Encounter: It appears from the beginning of the game and is the player's guide. She informs the main character that he is the one chosen to fix the future by owning one of the Cronus watches.

Weapons: She doesn't have weapons, she can only help the main character to evolve and guide him through the game with hints and tips.

Non-playable character: His purpose in the game is to help the main character and the player.



Image 2. Minerva of Hourglass History. Source: Own production.

ENEMIES

There are three types of enemies, which will be repeated throughout the game. With each chapter, their difficulty level is higher and each one is stronger than the previous one.

In each chapter there is a different boss related to the time in which we are, next to the final boss who is the villain of this saga.

LEVEL 1

Name of the character: Spotty (Spot).

Description: Black spot of ink.

Encounter: First chapter.

Skills: He spits ink, he can leave blind the opponent and make him lose a turn. He attacks with blows but he can't defend himself. Help the main character to level up quickly.

LEVEL 2

Character name: Kotty.

Description: It is shaped like a sack or rag, which is why it can erase memories.

Encounter: First chapter.

Skills: More resistance and attack than the previous enemy. Every three turns, it blocks the last skill used and you lose a turn.

LEVEL 3

Character name: Black Kotty.

Description: Black spot that has several faces accumulated in it.

Encounter: First chapter.

Skills: Absorbs energy and accumulates charge. He has a lot of stamina and uses magic attacks, he can paralyze two turns.



Image 3, 4 and 5. Enemies of Hourglass History. Source: Own production.

FINAL ENEMY

Character name: Blackus.

Description: A black watercolor stain, similar to the enemy Spotty but twice the size. It is found inside a vessel, referring to a genie of the lamp.

Encounter: This enemy is in the final stage.

Skills: Spits ink, can blind an opponent and make him lose two or more turns. It absorbs the energy of the opponent's attacks and therefore must be defeated as soon as possible.



Image 6. Final boss of Hourglass History. Source: Own production.

ANTAGONIST

Name of the character: Nefarious.

Description: Black silhouette, two meters high, hooded with a devilish look. It has no hands or legs, since it alludes to the black holes that absorb everything that is found.

Encounter: Appears in combat at the end of the first level and will reappear until the end of the game.

Skills: He feeds on art, which gives him more stamina. He possesses the skills of all the enemies as they are his creations.

Weapons: He attacks with black magic and creates enemies to defend himself.



Image 7. Principal villain in Hourglass History. Source: Own elaboration.

GAME MECHANICS

The game mechanics are divided into two main systems. The first one is the combat system, which will be used with the enemies, simulating a turn-based combat system. The second system is the resolution of puzzles, since thanks to them we can achieve redeemable achievements to increase the character's skills or clothes.

Map: We have a main map where we can see which chapter we are in, and we can go back and repeat levels. If we get all the missions and achievements, we will be able to unlock one last level in the game. The map represents an art gallery where each painting represents the chapter or the stage of the art where our protagonist is going to travel. The map has five chapters (Prehistory, Ancient Age, Middle Age, Modern Age and Contemporary Age) and a secret chapter (Present Time). This story is linear, so we can only move forward to reach the next chapter.

Missions: The missions, both main and secondary, are unlocked by talking to secondary characters and interacting with the environment.

Points: They are used as currency to improve the character's skills. From the first chapter of the game we can get these points but they are only obtained with certain missions.

Spells: Here we will see the skills we have equipped and we can improve them or unlock new skills with the stones. Spells are unlocked with these points. At the beginning of the game we will have three basic spells to be able to use them against the enemies.

Profile: In the profile we can see the skill level of the character, level up, time of game, chapters and how much of it has been completed (percentage).

Camera: 2D.

Peripherals: Joy-con (Switch) or compatible controller.

CONTROLS

Save/Load: Within the options, you can save your game at any time during the game, except in fights or puzzles.

There will be different boxes to save the games, this way we will provide the user with the option to go back if he has not completed any mission.

To open the menu you will have to use the “+” button and to close it you will use the “B” button.

Map: To go back to the main map, we will have to open the options menu and select the option “Back to map”. Before that, it will ask you if you are sure you want to exit and if you want to save before going to the map.

Spells and player profile: We will access the inventory with the “+” button.

Missions: We’ll accept missions thanks to the “A” button.

Points: We’ll get them either by interacting with the environment or by completing missions. These points will be redeemed in the spell section to unlock leveling.

Saved: We will access the options menu by pressing the “-” button.

KEY POINTS

This video game does not only take into account entertainment as its main feature, since one of its main values is the didactic value. We seek to draw attention through the visual content and artistic style, but one of the main factors to achieve the completion of this game is to remember pillars of the story.

Thanks to its history and a level of difficulty accessible to our target audience, we will manage to attract our client’s attention until the game is finished. As we have already said, it stands out thanks to the didactic work it carries out, since through games and the story itself we are looking for a new way of popularizing science.

FLOW AND NARRATIVE

As the game begins, we will see a kinematics of our protagonist where he opens his eyes and realizes that everything is disappearing around him. The character already has the main dress of the game (blue tunic), along with the hourglass , since he always goes with it. After this kinematics we will be able to handle the character. The word “RUN” will appear on the screen together with instructions on which button to press. In the end, everything will disappear and our protagonist will end up in another dimension. In this astral plane where at the beginning our protagonist is alone, Bold will meet his guide, Minerva. She will explain to him that he is the one chosen to restore the History of Art because he has one of Crono’s watches as his inheritance.

The game will consist of 5 levels with one or two chapters within them; and an extra level.

- Prehistory: Cave Art (Paleolithic).
- Ancient Age: Roman art.
- Middle Ages: Al-Andalus art and romantic and gothic art.
- Modern Age: Baroque art and art of the Enlightenment.
- Contemporary Age: Modernist art and avant-garde art.
- Actuality.

DIAGRAM

Puerta de la Justicia: Enemy in the passage.

Plaza de los Aljibes: Enemies and a minigame of the Alhambra.

Puerta del Vino: Hidden stones.

Puerta de las Armas: Minigame to unlock the door.

Patio de los Leones: Enemy level 3, by defeating him you get the medallion of Zaira. Once he is defeated, if we go back to the marketplace we'll see that people say they can't find their king and the Catholic Kings are looking for him.

Patio de los Arrayanes: You meet the villain, Nefarious; and you have to fight him to rescue Muhammed XII.

This script will only be used in the trial version of the game, as the script should be more extensive and not limited to the length of a demo.

At the beginning of the fifth part of the third chapter of this game, a text will appear on a scroll of the time, along with a dark background where it will explain the historical context.

“Nazarene Kingdom of Granada (1232-1492). The Conquests of Cordoba (1236), Seville (1248), Valencia (1238) and the Balearic Islands (1229) will lead to a new era of Taifas from which only the Nasrid kingdom of Grana-

da will survive until 1492, as a result of its political ability, the payment of taxes and the struggles between the different Christian kingdoms that due to its military capacity.

The Nasrid kingdom of Granada would be the last Muslim state in the Iberian Peninsula, the old Al-Andalus. Its last king was Muhammed XII (known as Boabdil the Younger), defeated by the Catholic Kings, who were forced to surrender Granada on January 2, 1492.”

After this introduction, the character will appear on a stage that simulates an alley of the ancient streets of Granada. This is where he will talk to Minerva, his guide; through the hourglass.

STAGE. ALLEYS OF GRANADA

Bold: Where are we?

Minerva: In Andalusia, specifically in Granada during the year. That means that Nefarious is looking to take over the Alhambra.

Bold: I can't rest for a moment...

Minerva: Don't worry, I'm here to guide you. Let's go to the Alhambra.

The protagonist will go in the direction of the monument (to the right, since on the left side of the stage there will only be a wall blocking his way), going through the streets of the city. He will pass through an alley where he will find some stones and a level 1 enemy.

If you continue, you'll head towards the city market and if you try to talk to any merchants, some of them will give you valuable information or will be enemies disguised as level 1 or level 2.

STAGE. MARKET

The merchants will give us random objects that will help us in the fights.

If the protagonist enters the market for the first time.

Bold: A market?

Minerva: Yes, it's quite common. I'm sure we can make progress with our research here.

If he talks to any merchants

Man 1: Have you seen Princess Zaira? They say she's always in the Alhambra courtyard.

Minerva: I didn't remember this story anymore. There is a legend about Zaira, the African princess. Her father doesn't let her leave the Alhambra and she is always accompanied by a talisman. She reminds me of someone... (Referring to Bold).

Woman 1: We are very happy to have the help of our king.

If the protagonist meets an enemy.

Bold: You again...

Bold: Let's do it!

Bold: Let's get this over with quickly.

STAGE. VIEWPOINT TO THE ALHAMBRA

Once the protagonist travels around the market, he arrives at the viewpoint with the Alhambra in the background.

Minerva: There it is... He looks so much prettier in person.

Continuing with the tour, we now find the entrance to the Alhambra or better known as the Gate of Justice.

STAGE. PUERTA DE LA JUSTICIA

Bold: It's very quiet in here. Aren't there supposed to be guards here?

Minerva: Something's not right. Be careful, Bold. We can only keep moving.

STAGE. PASSAGE

When the protagonist enters the passageway, he has to face a level 3 enemy.

Bold: I knew it, this is just like you.

When you defeat the enemy, you continue to the next stage.

STAGE. PLAZA DE LOS ALJIBES

They come across a market again, a little smaller than the last one, where everything seems normal.

The merchants will give us random objects that will help us in the fights.

Bold: I don't understand, everything seems to be fine here or at least for the moment.

Minerva: Let's not get too confident, remember who you just faced.

Bold faces two level 1 and level 3 enemies if he talks to certain merchants. When he talks to one in particular, he proposes a mini-game (with chronometer) of differences of a concrete zone of the Alhambra.

Man 2: An outsider? Do you dare to try your luck? I have good rewards for you, but be careful with time.

When we complete the mini-game, we have the option to go through two areas, the wine door (this scenario is optional, but here we will find stones) and the weapons door.

STAGE. DOOR

Once you have gone through the whole market, you will reach one of the doors to access the interior of the Alhambra. To unlock the door, a mini-game related to the Nasrid mosaics is needed.

A note will be added on the screen, as a curious fact about these mosaics.

“The Nasrid mosaic is based on mathematics.

In its composition, lines are used that cross and form rhombuses, stars, polygons and zigzag patterns.”

STAGE. PATIO DE LOS LEONES

Enemy level 3, by defeating him you get Zaira’s medallion, which happens to be a new skill.

By defeating him, if we go back to the market the atmosphere will have changed, there will be no background music to generate even more tension and if we talk to the merchants, they will tell us that they can’t find their king and the Catholic Kings are looking for him.

Merchant 1: Where is our king?

Merchant 2: Royalty has come on horseback. Could it be the Catholic Kings?

Trader 3: Someone has to talk to the Catholic Kings.

Minerva: Where has Muhammed XII gone?

Bold: I don’t know, but we should look for him before things get ugly.

STAGE. PATIO DE LOS ARRAYANES

We find the final villain, being one of Nefarious’s creations, which will only appear at the end of this chapter. We will have to fight this final boss and the main villain to rescue Muhammed XII. Once the villain is defeated, Bold will have to jump to another era. For them he will make use of a magic brush whose functionality is similar to that of a portal.

SOUNDS

Describes the style of the game audio:

- Musical style: In the Al-Aldalus phase we will have Arabic musical styles as a representation of this period, highlighting representative instruments such as the Spanish guitar. We have taken as our main reference the soundtrack of Blasphemous (2019).
- Sound effects: We will make use of a free sound bank and references from other video games to implement them in this trial version.

Steps (Bold): Fire Emblem Heroes - Sound

Effect 1 (protagonist vessel breaker): EFX EXT Metal Impact Drop 01 A.

Ambient sound (market): EFX EXT GROUP Unrest Murmur 01 A.

Selection (menu): StartSelect,UI,set3,pure,warm,simple,quick,tonal.

- Dialogues: There are no voices for the protagonists, but there will be a sound to indicate that the character is speaking. When the lyrics of the dialogues appear, you will hear that sound. Example: Phoenix Wright (Ace Attorney) - Text Sounds.

APPENDIX B: SPECIAL EDITION OF THE VIDEOGAME

La compañía de Nintendo es especialista en promocionar sus videojuegos y consolas y por ello suele sacar ediciones especiales con el lanzamiento de ciertos videojuegos. De esta manera, consigue implementar la estética del videojuego a la venta junto con otros accesorios, como por ejemplo libros de arte, ilustraciones e incluso la propia consola. En esta ocasión, aplicaremos esta estrategia con el videojuego de Hourglass History.

Las ediciones especiales de los videojuegos no tienen una norma establecida en cuanto a qué deben y no contener, si no que va en relación al dinero que se quiera invertir, teniendo en cuenta también al precio que se va a poner de cara al público.

Debido a que aún no tenemos claro nuestro presupuesto ni la aprobación de la compañía, diseñaremos una versión para la edición especial del juego con el siguiente contenido: Consola, dock y control con un diseño nuevo; y un amiibo con una función complementaria en la historia.

Si tomamos como ejemplo otras ediciones especiales y consolas, debemos de tener en cuenta algunos detalles, como por ejemplo el diseño que se implementan y cómo se resuelven en formato físico.

Logran destacar los colores principales del videojuego, además de contar con otros detalles importantes como pueden ser los personajes a la hora de implementarlos en la gráfica de la consola. Por ello, nombraremos algunos detalles que podemos destacar de este proyecto.

La gama cromática con los colores azules y dorados. junto a los personajes principales como pueden ser Bold, Minerva o Nefarious; son las características más destacables del juego y por ello, implementaremos esto en una edición especial.

CONSOLA NINTENDO SWITCH



Image 8. Nintendo Switch of Hourglass History. Source: Own elaboration.

A la hora de hacer una consola con un diseño especial basado en un videojuego, la compañía Nintendo tiene en cuenta la gama cromática principal para diseñar la carcasa y los Joy-cons de esta consola.

La paleta cromática de la interfaz de este videojuego contiene colores como el azul, el negro o incluso el dorado o amarillo para destacar objetos de suma importancia. Por ello, hemos elegido estos colores para los Joy-cons de la consola, junto con la carcasa de color negro para que sean el azul y el amarillo los colores que destacan de esta versión especial.

Como complemento para esta consola debemos de tener en cuenta el dock, que es el soporte que funciona de conexión entre la propia consola y la televisión, ya que la principal característica de la Nintendo Switch es que es una consola semi portátil.

Al hablar sobre el diseño del dock y mirando varias referencias, hemos decidido implementar al protagonista en este diseño, de esta manera daremos más importancia al protagonista principal.

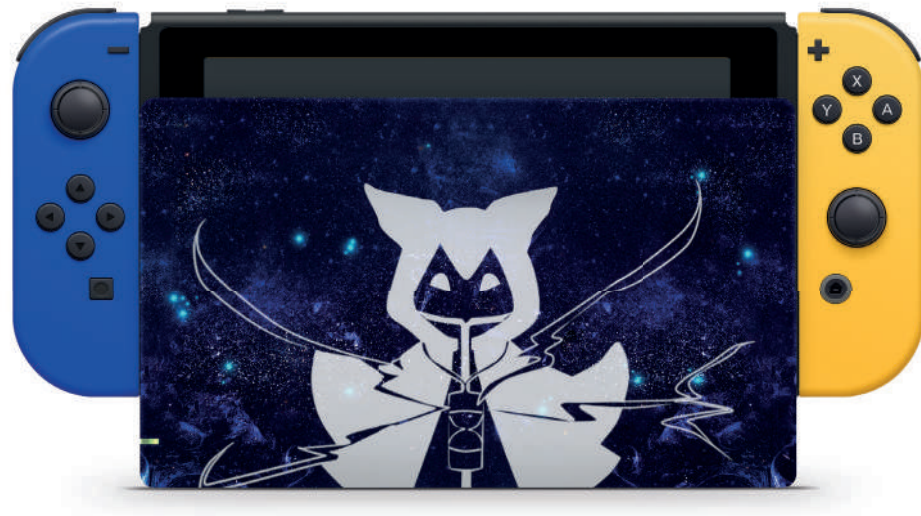


Image 9. Nintendo Switch of Hourglass History. Source: Own elaboration.



Image 10. Nintendo Switch of Hourglass History. Source: Own elaboration.

AMIIBO

El Amiibo es una figura cuya base tiene un código el cual puede leerlo el Joy-con de la consola y aplicar una serie de beneficios en el propio videojuego, como por ejemplo, añadir ropa extra, experiencia, niveles...



Image 11. Control Nintendo Switch of Hourglass History. Source: Own elaboration.

CONTROL

El diseño del control como algo complementario, el cual se puede hacer uso de él si la consola se conecta a la televisión. Su diseño será diferente al de la consola, ya que destacará por un mosaico de relojes de arena, haciendo referencia al objeto más importante del juego.



Image 12. Control Nintendo Switch of Hourglass History. Source: Own elaboration.