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Master's Thesis
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Enhance Immersion
Interactive Storytelling of Uyghur Atlas and
Ibtila the Interstellar Journey of Awaken

Keio University
Graduate School of Media Design

Maierzuke Yalukun

A Master's Thesis
submitted to Keio University Graduate School of Media Design
in partial fulfillment of the requirements for the degree of
Master of Media Design

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Enhance Immersion
Interactive Storytelling of Uyghur Atlas and Ibtila the Interstellar Journey of Awaken

Category: Design

Summary

Storytelling has always been an effective tool to communicate and connect emotionally with the audience. It is one of the great tools to express and inspire a certain belief or important value in human's life.

In this project,the researcher aiming to enhance the immersion of a certain collaborative offline interactive quiz game group project.By implementing an unique ethnic minority's cultural element-Atlas with the power of storytelling, to deliver the message of each individual shines their own way.

With Atlas culture, contains not only beautiful patterns.But also the wisdom of ancient craftsmanship.Incorporated past people's wisdom and a new way of expression. The concept of adding Atlas was successfully proven with the aim of encouraging more creative designs in the future.

Keywords:

Keio University Graduate School of Media Design

Maierzuke Yalukun

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Chapter 1

Introduction
1.1. Project Overview

More and more immersive experience and digital art have been introduced to our lives, from 3D movies to VR theaters, from Van Gogh immersive museum to Immersive art.Immersive new media design has not only become a hot spot for attracting people and successfully gained a large number of young fans, and more people start to share their experience in social networking platforms.This phenomenon also reveals people's curiosity and strong demand for new interactions.

The project is a collaboration project with a Korean company called 101 global.The company is targeting millennial. The project was originally to build an offline physical immersive space experience. When thinking about the content of the immersive space.As a millennial, we are all in a life journey of self-exploring. We like to take personality quizzes.Because it satisfies our curiosity and sometimes it also reveals previously unknown information about ourselves. So the main proposal is to bring the idea of self-exploring combining with personality quizzes to create an interesting and interactive offline immersive experience for millennial.As a result, our team came up with an idea called The quiz room.

Figure 1.1 The Quiz room

The whole quiz room experience is divided into pre-experience, main experience, and post-experience.Main-experience is designed to entertain the audience during the waiting time before he/she enters the immersive space.Quiz Game is the main experience for the audience to answer the personality questions and interact with the projection mapping.Post-experience is designed to encourage the audience's revisit the whole journey.

However, A sudden Covid-19 pandemic outbreak in the year of 2020 makes it impossible for our team to accomplish our design in a physical form, In the procedure of bringing the offline experience to online platforms. We turn our experience into an online story-based game experience. Since it is the team project.My role in this project is the grand design, the narrative design as well as the immersion building of the whole experience.

In this thesis, both the original idea of the quiz room and the after-design of the online interactive game will be discussed.

1.2. Storytelling and Emotional Engagement

Storytelling has always been a creative and effective tool to communicate with people and deliver beliefs and values.It is one of the best ways to inform, instruct, involve, and inspire audiences in a short period of time.In the current world of social media and emerging technologies, storytelling can be truly powerful.Scenes, roles, atmosphere, plots, and rhythm are designed to immerse the audience in the experience itself. They imply information such as people's cognitive logic and emotional acceptance.When making a speech, a good story at the beginning will attract the attention of customers.When describing a complicated concept, people often use examples to express their views before building an emotional connection with audiences.Storytelling is not limited just to a sequence of events, facts, and figures.It also illustrates social norms, interpretations and possible scenarios which can affect people emotionally [1].

The immersion brought by storytelling realizes in different aspects such as virtual experience, gaming experience, journalism, film making, and music video.Many industries came up with an effective storytelling method to engage with the audience.

1.3. Storytelling in Culture Communication

Many industries use storytelling as the tool to spread its contents and culture to build engagement with people.Take the Kpop culture as an example.In recent years, Kpop culture has gone viral all over the world. Kpop music can be found in the most popular single on the Billboard.Apart from the music charm, the video of Kpop music usually excels at storytelling.

Many music videos on the market are developed around a specific concept.Although the music video itself contains narratives, such as a sad family story, or lamenting youth and beauty.But the story's beginning to the ending is limited within a single music video. The narrative of the singer's next music video is not connected with the previous one.

However, Kpop's music video starts with a storyline.One music video is first introduced to illustrate the beginning of the story, and then a series of music videos continue to follow the plot.In this way, a complete story is demonstrated by multiple music videos, and more Kpop cultural content has been spread.The audience will not only attracted by the song itself but also by the development of the storyline.Also, they are willing to use their imagination to be engaged in the story and even guide more people to get involved, which can significantly promote Kpop culture.Among them, KQ Entertainment is performing a good job.A boy group called Ateez from this company has exerted great influence since its debut in 2018. The director of the company created a storyline of pirate treasure hunt for Ateez's music video.Hence, every music video is an extension of this hunt, attracting many people to participate in this journey. Many international fans were created in the process.Through storytelling, Kpop culture is spread to the rest of the world.

1.4. Uyghur Atlas Culture

The word "Atlas" evolved from the Indo-European and the Turkic languages. They were once used to refer to valuables such as silk and shawls for a lady and were also used as currency. [2] More often Atlas is a product along the ancient silk road with a long history. In Central Asia, it refers specifically to tie-dyed silk

fabrics.

Atlas was born around the end of the 14th Century (the beginning of the Ming Dynasty).Its historical origin is still inconclusive. Uyghur silk is mainly produced in Jiya Township, Luopu County, Hetan ARegion, Xinjiang Province. During the field survey in Jiya Township, Luopu County, Hetan Region, China, the local craftsmen said that the making of Atlas was handed down from the ancestors and they are the fourth or fifth generation. [3]Its biggest feature is that it uses the ancient tie-dyeing method, it has rich and changeable colors, as well as strong and gorgeous appearance.It is an important part of Central Asian culture. Atlas is a silk craft that has been inherited for thousands of years. It was born on the Silk Road and is one of its important artworks.It is also the brainchild of the wisdom and aesthetics of ancient people.

In the design and dyeing process of the most traditional Atlas silk, the craftsmen do not use drawings or paper patterns to design and calculate, but directly weave it by the traditional skills and historical and cultural aesthetics.The color of Atlas is an important element of the visual and emotional language concerning Uyghur clothing.The pattern itself and the streamlined natural color halo make Atlas have the unique aesthetic value. When its pattern appears in many aspects of life, the unique regional aesthetics is actually inherited and the emotional identity is transmitted, which is precisely its cultural and artistic value. [4]

However, Atlas culture and the pattern is dying. China has listed Atlas silk as an intangible cultural heritage for protection.Yet this element with historical culture and ancient craftsmanship and aesthetic wisdom has a relatively narrow swathe of audience, and is circulated within a specific region.

The application of Atlas pattern is still limited in clothes, bags, cushions and other products.In recent years, due to the booming of the cultural and creative industry, many young Uyghur designers, mostly millennials, applied Atlas to mobile phone cases, headwear and other daily necessities, hoping to inherit this culture and pattern. However, due to the location of Xinjiang, the development of creative industries is relatively slow.Also, since this culture belongs to the category of ethnic minority, there are only a handful of art designers engaged. Many craftsmen who understand this culture have entered the old age, and the inheritance of Atlas is facing an existential issue.

But as discussed above, the culture, once integrated into the storytelling, will become powerful.Therefore, the researcher also intends to integrate Atlas into this quiz room project, with the hope of promoting and inheriting this valuable cultural element.

1.5. Design Motivations

Innovative use of Atlas culture
Atlas, the core of Central Asian and Uyghur culture, accompanies the researcher during her childhood. On important festivals, every Uyghur woman would wear her own Atlas silk skirt to show her aesthetic taste, and relatives and friends often go to the street to buy Atlas silk and ask for a skillful tailor to make a unique and beautiful dress for them.The author aims to apply Atlas's unique visual characteristics and its cultural meaning of love for life to the design of this immersive experience.This also helps Atlas culture be passed on in a new form and exemplify its beauty.

Seeing people suffering from low self-esteem and loosing self-confidence
People are struggling during the life journey.The past experiences can bring feelings of uncertainty, losing confidence or even worthlessness. Therefore, seeing people gradually losing their confidence is the trigger for this design.

Covid-19 and experience of long-term isolation
Due to the pandemic, hatreds occurred, many countries are blaming on each other, and some people lost life and jobs.They are suffering from depression and distress.Most people are in the long-term isolation, and staying connected has become people's emotional need.

The message of self-appreciation and stay connected
With all those sad things happening to us, the author hopes to create an emotional engagement with people to deliver the message that everyone is unique and beautiful in their own form and it is the diversity that renders the world beautiful.

1.6. Concept and Goal

In this thesis, the concept is to implement unique Atlas element and storytelling to enhance the immersion of the quiz game experience. The aim is to design an immersive storytelling journey to enhance the immersive experience and create an emotional engagement with the audience to deliver the author's final message.

1.7. Thesis Structure

For this thesis, Chapter 1 describes the background, motivation, and goal of the project. Chapter 2 discusses the related works and studies about the topic. Chapter 3 elaborates the author's main concept and the detailed information about the design. It explains the reason, the process and the actual details. It also includes the redesign work due to the restrictions of the pandemic. Therefore, both original design and current design will be presented.Chapter 4 explores the evaluation with the qualitative research conducted with the two design prototypes separately .Chapter 5 concludes everything of the project. It also discusses the current limitations and possible improvement in the future.

Chapter 2

Related Works

For the project ,In order to better enhance the immersion from author's perspective, author starts to look into the related design from different fields and perspectives to obtain a more broad understanding of building immersion. Author's main concept is conducting storytelling and implementing a specific minority culture element to enhance immersion. Hence, the study is mainly divided into three part: **Immersive experience, Storytelling, World building using cultural element.** As a result of the literature and related works analyze, author's design focus will be discussed.

In the past studies, many researcher has define the meaning of immersion. According to Witmer and Singer, the Immersion is a psychological state characterized by perceiving oneself to be enveloped by, included in, and interacting with an environment that provides a continuous stream of stimuli and experiences. [5] According to Brown,Emily and Cairns,immersion related to game atmosphere that is composed of graphics, sound, and plot as a determinant of total immersion. [6]

In this study, the researcher mainly focuses on two levels of immersion. The first is an offline immersive experience that uses physical space as the environment and involves interaction with the five senses of the participant. This experience cannot be achieved without the participant's state of consciousness that gives the impression of being physically present in the physical space. [7]The second is the emotional immersion brought by narratives and the world building. This immersion often uses games, novels, scripts, movies, etc. as the carrier to make users feel emotionally aroused and attracted by the narrative contents of the story. [8]

2.1. Immersive experience

TeaLab

TeamLab has been providing a popular offline immersive experience in recent years. This digital art museum brings the interactive visual experience to the

audiences. The teamLab exhibition excels at visual sculpting, coupled with immersive and ambient background music, and a variety of techniques to mobilize the senses of hearing and other senses to simulate physical reactions in the design, and brings people unique artistic experience in the world they create.

(https://www.teamlab.art/w/symbiotic/)
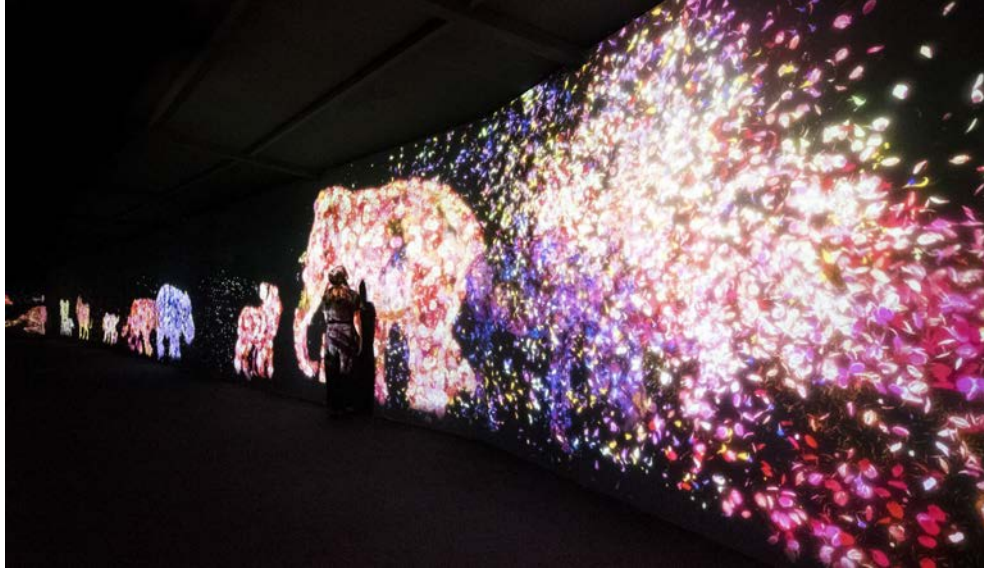
Figure 2.1 Animals of Flowers,Symbiotic Lives

Most of the TeamLab's experiences focus on spatial immersion by emphasizing the design of five senses to achieve the resonance with audience. For example, in the *TeamLab Bordeless-Animals of Flowers,Symbiotic Lives* by Teamlab Borderless, audiences can interact with the flowers in the projection by touching. Since the form of interaction with the audience tends to be limited in touchingbody gestures and other physical activities, it has lacked emotional engagement. Although the visual effects presented by TeamLab are dreamy and beautiful and can create a sense of visual immersion in a short time, it is still likely to be understood as a visual show. Although TeamLab's artworks are generated and changed in real-time, this change is still limited to the visual level. The audience may lose interest soon after one experience. .

Due to the success of TeamLab, many exhibitions are taking a similar approach

to create immersion and define immersion only as a high-tech visual exhibition. Sometimes these immersive experiences tended to end up being a "technological showoff". Hardware equipment, exhibition scale, and capital investment seem to become the only things that determine the success of the immersive experience. The definition of immersion becomes narrow, and the similar and excessive experiences compromise the uniqueness and specialty. Lots of people have become tired of this visual show because they are familiar with their tricks and stunts.

Another type of offline immersive experience is virtual experience. The arrival of Virtual Reality, Augmented Reality, and Mixed Reality technologies are shaping a new environment in which physical and virtual objects are integrated at different levels. [9] However, many of these experiences rely on the stunts brought by VR and AR technologies, and young people tend to lose interest soon after experiencing it once. Therefore, the researcher believes that technology is not the core of immersion and that the true immersion should focus on the contents.

A good example of immersive experience is the theme park of Westworld ,the American drama produced by HBO, and the famous immersive theater Sleep No More. The biggest difference between the immersive experience and the art museum is that the former is supported by a very powerful narrative and storyline, enabling participants to obtain immersion from the physical space, as well as the emotional immersion from the charm and memory of the script and story. The similar examples include Disneyland, Universal Studio and other theme parks

2.2. Storytelling

Oat the Goat
Oat the Goat is an interactive online storybook designed by The Ministry of Education and FCB New Zealand. According to the Ministry of Education, the story is targeting children and teaches them about the importance of friendship and kindness with the aim of preventing bullying. The online interactive book tells about the adventure of the character Oat the Goat. The protagonist embarks on an adventure of his life. The story contains 11 chapters that build up the protagonist's journey. The visual and the voice narration of the whole design is quite appealing for building immersion.

Figure 2.2 Oat the Goat

The audience will be given three different options from the beginning to experience the storytelling: the choice to read, read for you, or watch it by yourself. Based on the audience's choice, the experience will be different. Also, when the audience is experiencing storytelling, they will encounter some plots that require them to choose for the development of the story. The author believes that this decision-making by the audience themselves is innovative and can satisfy the demand of the audience for an interactive experience. However, the whole storytelling is fairly long and the plots are simple, hence it is difficult to grab children's attention for a long period of time if they choose to watch it by themselves. If the overall time for experience is too long, and the plot design is too simple, and the audience can only sit and watch, they will lose some interest and the engagement will be compromised.

Dilili in Paris

Dilili in Paris, an animated film featuring adventure directed by Michel Ocelot was produced by France, Germany, and Belgium. The film mainly tells the story of a mixed-race girl Dilili and her deliverer friend Orel saving kidnapped girls. This film adds many French cultural elements in the plot and also presents the

audience with various places of interest in Paris. On the way to save the kidnapped girls, they also encounter a large number of celebrities, depicting a picture of the end of the nineteenth century. The romantic style of the film also becomes its major feature.

(https://www.wildbunch.biz/movie/dilili-in-paris/)

Figure 2.3 Dilili in Paris

The intention of the film is not just to tell a story for children, but to convey the deeper concept of gender equality in a novel and relaxing way. The background of the story is France at the end of the nineteenth century, known as the "Beautiful Era." With the spread of the European Enlightenment Thought and the establishment of La Troisième République, the status of women has been unprecedentedly improved. However, the development of new things often goes with doubts and opposition, and the idea is gradually conveyed through the progress of the story. The issue of gender equality is still a hot spot in society. The film is closely tied to the facts, with a peculiar perspective of a mixed-race girl to think about the issue, showing us a brave and confident female image. In the beginning, the director

(https://www.wildbunch.biz/movie/dilili-in-paris/)

Figure 2.4 Characters in the film

slowly presented a huge conspiracy to the audience through a relaxing narrative. As the plot develops, the shocking, furious and even heart-breaking truth surfaced, exposing the huge contradiction between the two sexes. Various problems in French society are also reflected: contradictions between races, classes, and lack of government responsibilities. The problems are never outdated. It can be said that the film is an animation suitable for all young and old. Outstanding talents in various fields at the end of the nineteenth century appeared in the "Surprise" of the film also added to the interestingness of the film.

(https://www.wildbunch.biz/movie/dilili-in-paris/)

Figure 2.5 Visuals of Paris in the film

Although the gorgeous visual storytelling and profound ideas can bring a certain degree of visual immersion and emotional engagement to the audience, they cannot overshadow the shortcomings of the film. For example, the plots lack ups and downs. The film is the carrier of the story rather than the container of reasons. And a film lacking contradictions and plots is soul-absent. In the early stage, a large number of scenes are piled up, making the film more like a tourist promotion video of Paris, and the contents of the dialogue are even less interesting, more like reasoning rather than storytelling, making many people lose interest. Secondly, the personality of the character is not depicted in full. The good and bad characters in the film are like symbols. But everything is contradictory, and everyone

has two sides. Why is Dilili brave and kind, and why is Orel willing to help a strange girl? The narrative of the story lacks motivation, and the development of the plot depends entirely on a sudden impulse. If the director had wanted to convey a profound idea, he should have relied on the plots. The idea conveyed by a story that lacks persuasiveness and appeal will become empty, which also goes against the original intention of the film.

2.3. World building and Cultural Element Implementation

World of Warcraft

World of Warcraft is a well-known online game produced by the company named Blizzard Entertainment. It is an online role-playing game with massive players.*World of Warcraft* has a complete historical background timeline.Players take adventures, complete missions, explore unknown worlds, conquer monsters, etc. Blizzard company set the world view of *World of Warcraft* quite extensive when designing it.

(https://www.gamerroof.com/world-of-warcraft-full-version-free-download/)

Figure 2.6 World of Warcraft

The creation of *World of Warcraft*'s worldview mainly introduces many mythological settings, in particular the Ancient Greek mythology, Christian mythology and Nordic mythology. However, people who don't know much about these myths understand may have difficulty in understanding the sense of immersion brought by the worldview. The design company of *World of Warcraft* even published books to better explain the world view.

Perhaps it may be a very immersive design for the fans of *World of Warcraft*, but for those who are not fans, it may take some time to feel the immersion brought by Worldbuilding. For those who are impatient, they might give up immediately and choose other games that are easier to understand and relate to. When thinking about the whole storytelling experience of the author's team project is relatively short. Overly strong and complicated worldview might not be as effective enough and may occur confusion.

Arena of Valor

Arena of Valor is a mobile game launched by Tencent Games. It has achieved very good commercial success and can be said to be Tencent's best mobile game in recent years. Like World of Warcraft, some cultural and mythological elements have been incorporated into the creation of the worldview and character design in Arena of Valor.

For example, the design of the heroes was derived from the Chinese myths and stories. The most representative ones include Pangu, Nvwa, Chang'e, and Houyi. Monkey King and Monk Pig are the characters from the Four Great Classical Novels of China. There are also some real characters from Chinese history such as Dugu Jialuo, Di Renjie, Cheng Yaojin, Wang Zhao, Li Bai, Han Xin, Zhao Yun, etc. The background information of those characters in the Game respects the history. For example, Han Xin and Zhao Yun were generals, so they also play the role of jungling in the game. This is also the case of Empress Wu Zetian and Detective Di Renjie. Their skills in the game are related to their historical origins. Therefore, the worldview in Arena of Valor contributes to enriching the players' historical and cultural knowledge, and to the promotion of traditional culture.

Arena of Valor has become a popular game due to its interesting character settings and the spirit of competition. However, the impact of improper borrowing of history and culture cannot be ignored. Players of this game are at different

(https://pvp.qq.com/web201605/wallpaper.shtml

Figure 2.7 Historical Character in Arena of Valor

(https://pvp.qq.com/web201605/wallpaper.shtml

Figure 2.8 Mythologic Character in Arena of Valor

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ages, including children and students with immature mentality. Inappropriate use of historical and cultural elements will adversely affect these children. Some characters in the game are not the same ones in the history. For example, Cai Wenji, is a little cute girl in the game, but was a talented lady in history with a very bleak fate. Li Bai was a great poet in ancient times, but is an assassin in the game in charge of jungling. If children think that Li Bai was a warrior and Cai Wenji kept a kid's face since she died at a very young age, the original history and culture will be misunderstood. On the other hand, Arena of Valor has gained more and more domestic and overseas users in the past few years. Many overseas players who have little knowledge about the Chinese culture and history may be misguided by this game. If more efforts had been put to truly reflect the history and culture, the script and the worldview of this game would have been shaped better.

2.4. Summary

Firstly, the visual feast or visual satisfaction is not enough. The visual elements should also ignite and contribute to the emotion of the audience. In the premise of a strong visual, if a certain storyline can be incorporated with the core message that could resonate with the audience, this experience might bring a sense of visual and emotional immersion.

Secondly, the plot design with an overly simple storyline directly affects the immersion of the audience. The engagement and the degree of participation in the experience can be used as the criterion for immersion. The plots of the story need to be constantly built up, and the protagonist needs to make the participant feel engaged and related.

Thirdly, the creation of a worldview can bring immersion. But an overly large worldview may hinder the communication between the creator and the audience. If the creator wants to immerse people of different backgrounds through the worldview in a short time, he/she should choose the one that is easy to understand in a short time and can resonate with as many people as possible..

Fourthly, when adding the cultural elements in the design, history, and culture should be properly used and introduced.

Chapter 3

Design

3.1. Concept

The concept is to implement the unique Atlas element and storytelling to enhance the immersion of a certain quiz room experience. The aim is to design an immersive storytelling journey to create an emotional engagement with the audience and enhance immersion.

In this chapter, both early design before the pandemic and later design after the pandemic will be discussed. In order to achieve the concept, there are 6 six things that is the key for the author's design:

- A strong story concept in which the audience can refer themselves as the protagonist.

- An engaging story plot to attract audience attention.

- A strong story message which everyone can resonate with.

- The sense of accomplishment and contribution after finishing the whole storytelling journey.

- Implementing unique cultural elements into the world building which participants can feel related to.

- Storytelling in both visual and emotion to enhance the immersion.

3.2. Overview(Early Design)

To create a better offline immersive experience in which everyone could be connected, our team came up with a project called"The Quiz Room".It is an offline interactive projection mapping experience that combines personality test with storytelling to help people find out themselves.

The whole quiz room experience design is divided into pre-experience, main experience and post-experience.Main-experience is designed to entertain audience during the waiting time before he/she enters the immersive space.Quiz game is the main experience for the audience to answer the personality questions and interact with the projection mapping.Post-experience is designed to encourage the audience's revisit into the whole journey.

Researcher's concept is to implement an unique cultural element Atlas and conduct storytelling to enhance the immersion and emotional engagement of a certain quiz game experience, and deliver the message of each individual is unique and beautiful in his own form.

To better build up an emotional connection and deliver the main message.Researcher's design is divided in two aspect: Atlas design and storytelling design.

3.2.1 Early Version of Atlas Design

In order to enhance the immersion.Researcher implemented Atlas element to the design.Atlas serves not only the visual component. But also the way that researchers create emotional connection with participant.Researchers hope to add some cultural elements that can resonate with the audience so that players can be immersed in both the screen and the soul.

Atlas and Five element

In this group project, one team member designed the personality quiz game questions based on the five elements; the projection mapping of the personality quiz questions, and the explanation of the test results and visual interpretation were designed by the researcher.

There is a certain religious element in the Taoist Five Elements theory, and for Atlas's design, any addition of other religious elements is taboo for the people believing in this culture. Therefore, in the researcher's narration for the test results of the five element,the researcher only focused on the color of gold, wood, water, fire, and earth. In addition, considering that the Atlas culture champions love for nature, the researcher extracted the gold, wood, water, fire, and earth elements that exist in nature from the Atlas silk pattern in the design for subsequent projection mapping.

The Atlas pattern has different colors, and the researcher intends to connect

colors with the each participant's personality.
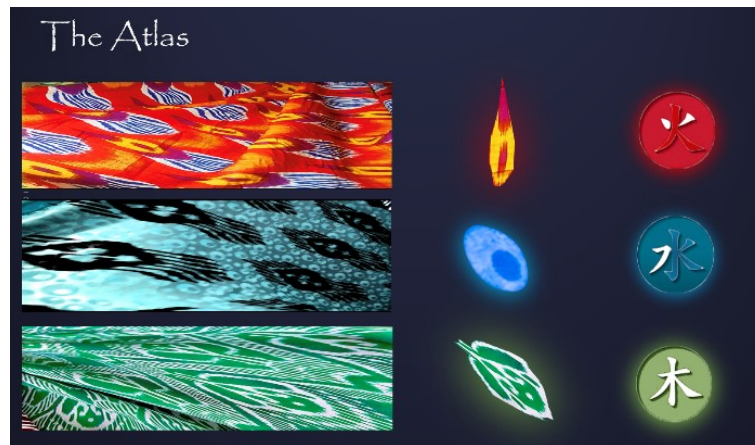
Figure 3.1 Atlas and Five element Design

Figure 3.2 Atlas and Five element Design

Atlas Projection Mapping Design

Originally for the offline quiz room experience before the pandemic, the researcher designed five projection mapping videos to represent five personalities using Atlas patterns.By gesture interaction with the pattern movement, the participant is allowed to interact with their inner characteristics and the interaction encourages

the participant to use their sensibility to embrace the charm of themselves, thus creating both visual and emotional immersion.

When designing Atlas, the researcher wanted to retain the original colors of the pattern, instead of breaking the original grid or the repetition within the pattern or selecting elements that are completely inconsistent with the cultural pattern. Every color and pattern contain the inheritance of history, as well as the wisdom of ancient silk weavers.

This kind of culture passed down from generation to generation requires a long period of cultural and historical study.In addition, for the protection of intangible cultural heritage, breaking the original structure and disrespecting design methods are fatal to the correct inheritance of culture.

So the researcher's projection mapping visual design is based on the original structure, with only some filters added.The actions in the video are designed in accordance with the flowing direction of the Atlas pattern.

Gold: In the traditional history of Uyghurs, yellow color symbolizing nobility, dignity, and magnificence.Therefore,the projection mapping of gold world uses yellow as the pattern of Atlas, and the story narration of the participant's psychological test results is mainly described around this theme.

Wood: The Uyghur people harbor deep love for nature, so there are a lot of Atlas patterns about plants, including flowers, branches, almonds, etc.The researcher mainly used the plant elements in Atlas silk when designing the projection mapping of wood.The narration Concept of the test results centered around "vigor and growth."

Earth: Atlas culture originated from the silk road in the desert.Earth is the foundation for nurturing all life in nature. Therefore, the projection mapping of earth mainly uses the most frequent colors and patterns in Atlas.The narration of the test results centered around "broad, mysterious, and exotic."

Water: The researcher's interpretation of water projection mapping used a blue pattern with flowing lines in Atlas to show the agility and flow of water in nature.The narration of the test results centered around "smart, gentle, pure, tough, puree, and tolerant."

Fire: In history,Uyghurs had a norm of fire worshiping.So the red and flame-like patterns can be found in the Atlas silk to express this historical practice.The

Figure 3.3 Gold world Narration

Atlas silk contains green color and the design of 木 result

木 personality projection mapping
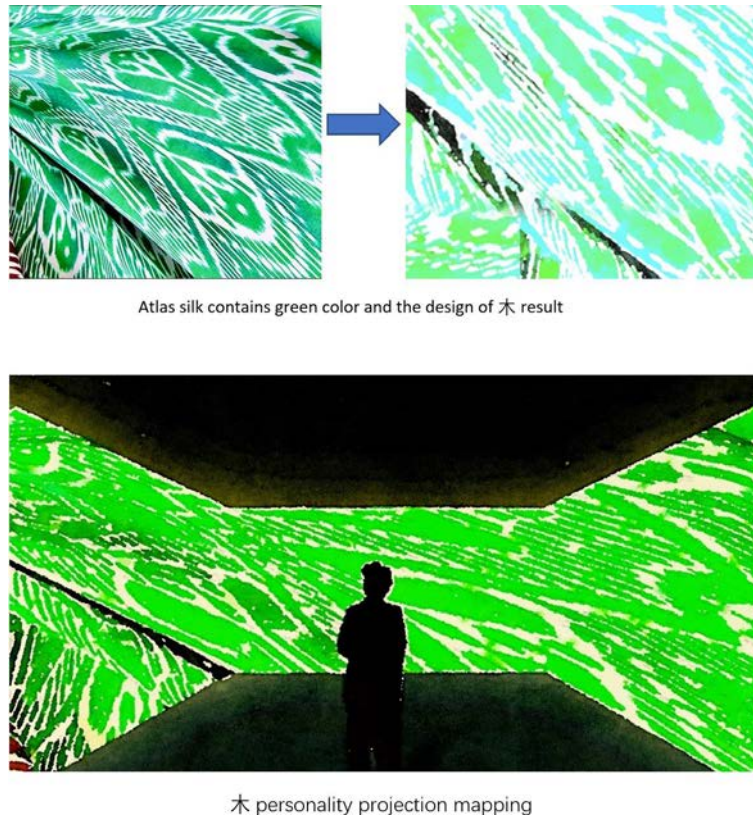
Figure 3.4 Wood world narration

Atlas silk contains with watery filter

水 personlaity of Atlas projection mapping
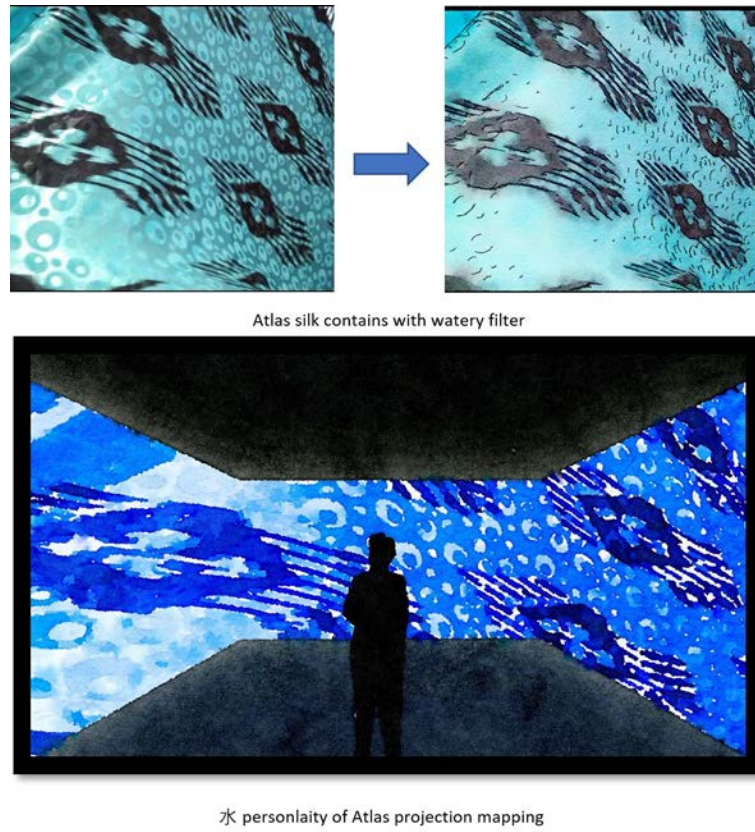
Figure 3.5 Water world narration
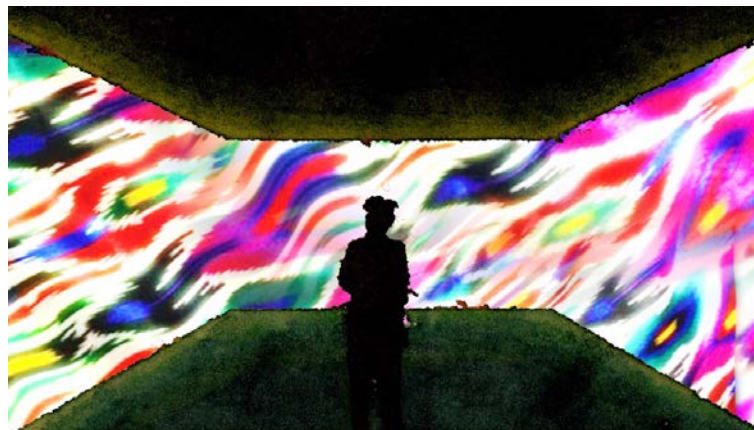
Figure 3.6 Earth world narration

researcher selected among the pattern which has the fire-like element into the design of fire projection mapping, and added other flame and sound effects to the video to express the attributes of the participant.The narration of the test results centered around "enthusiastic, unrestrained, brave, bold, energetic, strong, and determined"
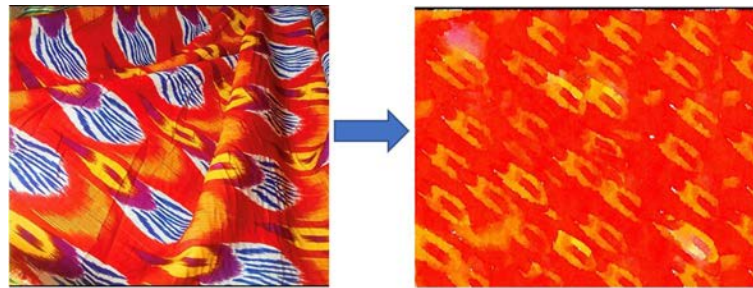
Red Atlas silk and the design of 火 result

火 personality projection mapping

Figure 3.7 Fire world narration

3.2.2 Early Version of Storytelling Design

To better build up an emotional connection at the very first beginning and deliver the main message.The author designs a background story for the offline quiz game audience to resonate with.

The background story 13.8 billion years ago, the Big Bang gave birth to every element in the human body. Everyone is a child of the stars. Like a star, everyone is born with a talent, and shines his own light. As a child, we have colorful dreams which, like the fountain of life, support the endless talents and inexhaustible creativity that flourish in the body.
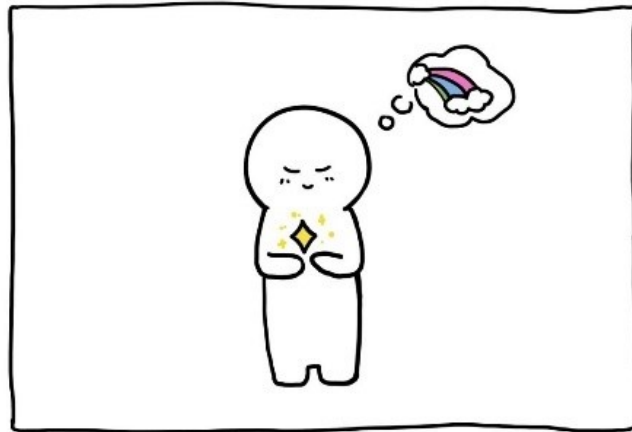
Figure 3.8 Orinigal story concept

However, the passage of time gradually wears down our innocence, and the vigorous song composed by life spurs us to run in the music scores of life, covering up the calm tone deep inside the heart. Sometimes we are so drowned in the effort to answer questions about beauty that we gradually fail to capture the voice from the inner-self.Life gradually wears down our original colors, rendering it gray and eventually transparent and fragile.

In fact, all of us have our own colors and unique characteristics. Let us redraw the colorful tones and wake up the slumbering glory in our hearts. The Atlas pattern is a kind of traditional culture in Central Asia and one of the representatives of the Silk Road. We aim to help you discover the inherent qualities and attributes hidden in your heart through the five elements full of oriental wisdom: gold, wood, water, fire, earth, and the Atlas pattern of Central Asian charm, and finally build a mapping of your inner world.“

The author's metaphor is the color of Atlas representing the true color of oneself.

Each individual is shining bright with their own light and with their own light they shine together in the universe. The author would like to deliver the message of everyone is unique. The atlas's color represents the uniqueness within the people. Even though we are different.We have our own color, our colorful dream we shine with our innate light that is born with us.

3.3. Customer Journey of Early Design

(Early project customer journey demo)
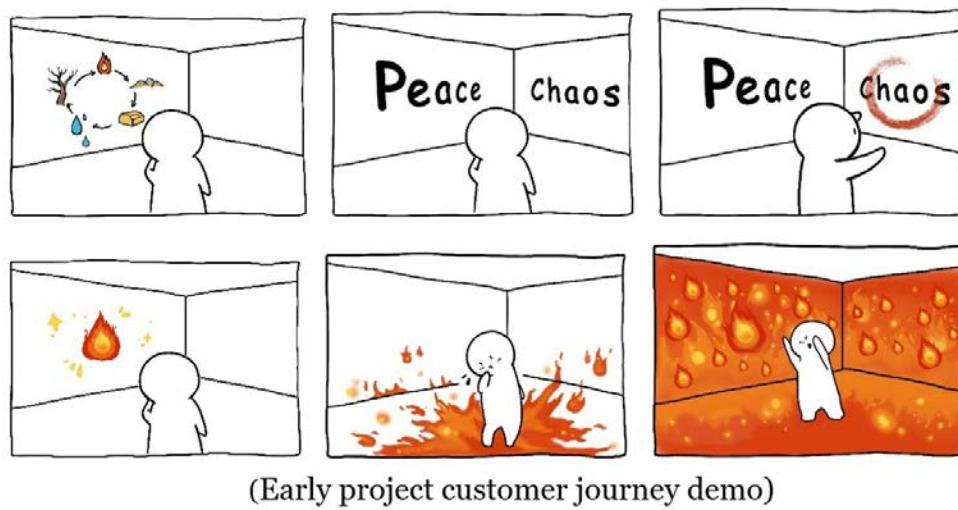
Figure 3.9 Customer Journey of Early Design

The overall storyline designed by the researcher is separated into three parts. The participants will understand the background of the story-the self-awakening journey in the pre-experience; be immersed in the theme of the story and travel through the universe to find the inner self in the quiz-game experience, and understand the meaning of the story and participate in creating the ending of the story in the after-experience.

The specific process is as follows:

Firstly, Participant A enters the site to complete the pre-experience which is the physical installation based on the researcher's storyline to help participants get a preliminary understanding of the background and gameplay.This is the time when

the narrative interaction starts to allow the participant to physically experience the beginning of the story.The planets generated by the Big Bang represents each participant.However, due to the continuous turbulence in the universe, the planets forget their initial light, fall apart and disappear.Participants will be given the task of finding themselves back.

Later, the participant will enter the projection space formally to embark on the adventure of finding its own light. He/she plays the role of the planet and answers the quiz questions in order to find back their original colors.The projection video will create an atmosphere in which the participant feels encountering difficulties in the universe and managing to escape.The quiz questions will appear on the projection screen, and the participant will be asked to choose the option that best suits his/her intuition through body gesture.As each question is answered, the participant will understand himself/herself better, the lighting environment of the projection space will be slowly built up, the interstellar theme will be more complete, and the ambient space sound is also adopted to create the sound immersion.

Then, having answered the six questions, the most suitable trait for the participant will be measured. For example, if the participant is tested to have the trait of fire, the fire element will be presented on the projection mapping to let him/her know his/her inner strength.

To be specific, the projection mapping of Atlas Fire starts from where the participant is standing, and gradually spreads to the entire space.The participant will be physical immerse in the world of fire.To achieve better interaction between the participant and his/her inner self and bring the emotional engagement, each participant will find that his/her actions will affect the projection mapping, and is able to control the flow of fire according to their actions. The purpose is to create visual and emotional immersion.

After completing the interaction, the participant will come to after-experience which includes the meaning of the story ending— "everyone has its unique color".

Through all the steps above, the researcher hopes to create immersion from three levels: visual, emotional, and storytelling.

Location and targets

Originally we are about the showcase and evaluate in Turkish cultural center

in yoyogi-Uehara.We found a place which could be set for the projection mapping.Also ,this place is known for art showcase and cultural communication.This place is also idea for showcase for Atlas culture.Since the Atlas is also the product which people of Central Asia familiar with.

Changes due to the Coronavirus pandemic
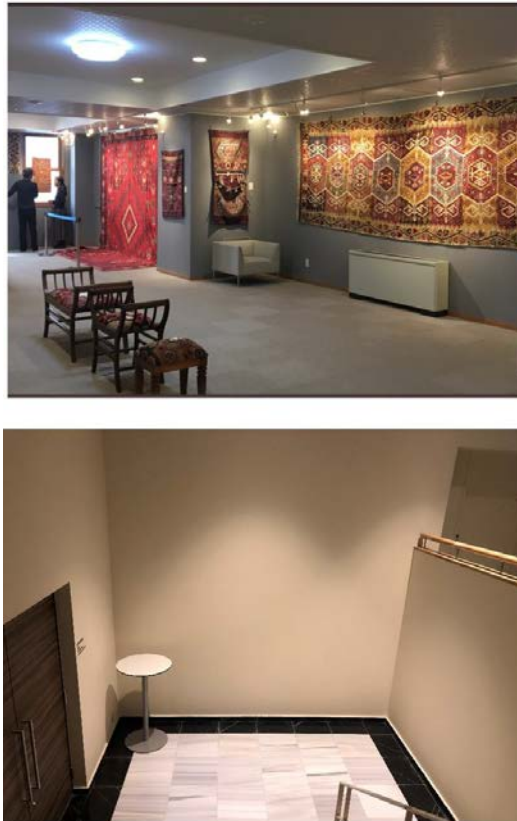
Figure 3.10 Turkish cultural enter in YOYOGI-UEHARA

Because of the outbreak of corona-virus pandemic, we are no longer to held the projection mapping and make the immersive room idea possible.So we redesign our whole experience from offline immersive experience to online.Under this circumstances.By changing Offline to online we lack of physical interaction, powerful visual immersion and easily access audience.For the project, the idea changed to the Story-Based Interactive Game experience.The definition of each part of the experience changed.
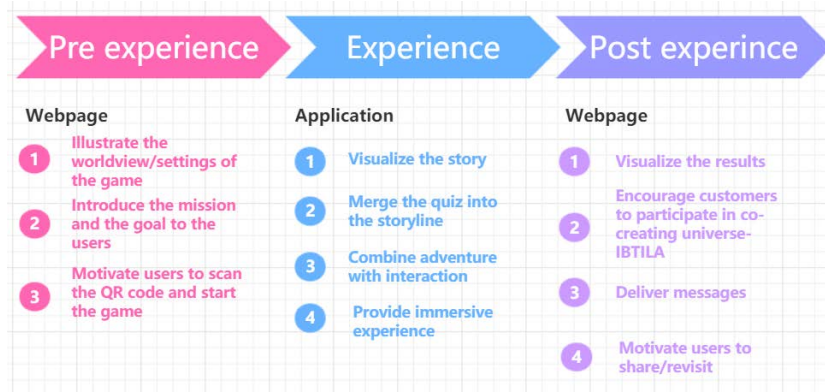
Figure 3.11 Online version flow

3.4. Overview (Second Version Design)

According to the studies of comparison of spatial immersion and emotion immersion.Emotional immersion is significantly more immersive than spatial immersion in terms of sense of "being there", time perception, realism, sense of engagement, emotional aspects, sensory cues, etc.Since the project lost the power of strong visual immersion and spatial interactions.The author decided to enhance the storytelling.Hence the second design is generated.

3.4.1 Story Design Documents

Story Concept Design
When thinking about the story concept, the author think of what kind of story can related to most of the people and enhance the sense of emotion engagement with the audience.So the author's starting point is the life journey which everyone will go through in their life. Since we will all face difficulties and hardship, through this kind of hardship we will grow up.We are all the growing hero of our life journey.By experience loss, fear, doubt and complexity.

Sometimes it's easier to put those experiences in perspective when we see them through the eyes of a character in a story to grasped audience's attention.The concept of the story is design to be a hero's life adventure type of story which people can easily related to.Also,hero's journey are tend to create the feeling of
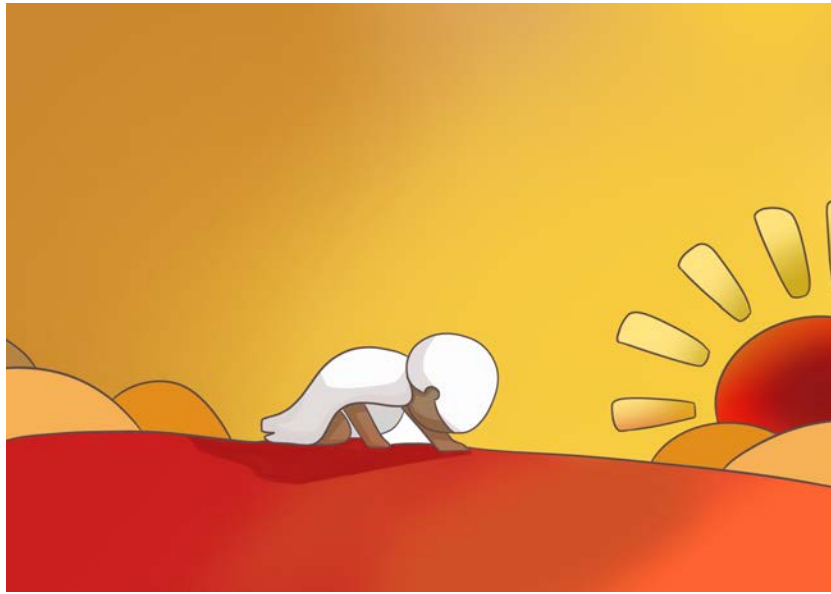
Figure 3.12   Hero's life struggle

accomplishment when audience finish the whole journey,and also the adventure theme can make audiences more likely to feel nervous and engaged.

Character Design

For the design of the main character, the author added some magic and elements of travelling through times, which might not happen in the real life.The author did not intend to use the protagonist's physical quality to resonate with the audience, but focused on shaping his inner fears and struggles, the outside challenges, the life philosophy and beliefs, motivations which are closely linked to the participant to create the common emotional understanding.

This allows audiences to discover certain shortcomings or advantages similar to themselves from the protagonist, thus enhancing the understanding and increasing the the sense of immersion.It is not the character setting but the emotional experience that resonates with audiences.Just like works produced by Pixar, even if the main character is a monster, a dinosaur,it can still leaves beautiful memories.It is not the character setting but the emotional experience that resonates
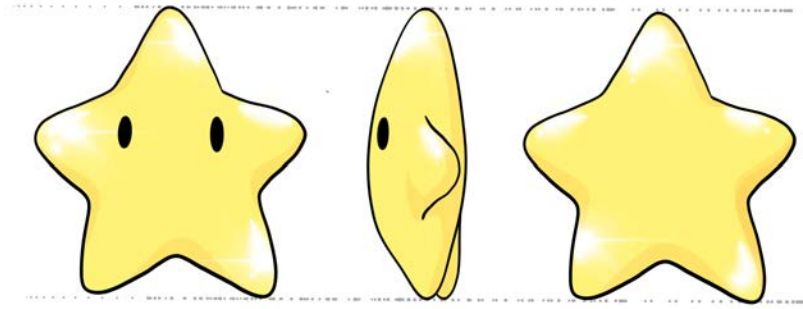
Figure 3.13   Main character-Aman
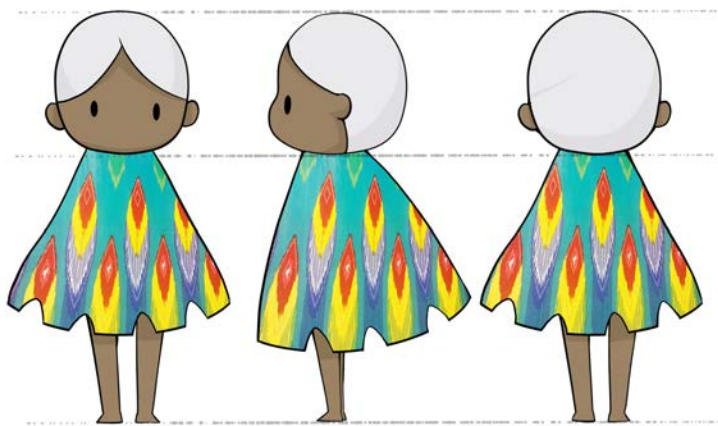
Figure 3.14   Main character-Aman

with audiences.

The main story: Ibtila the interstellar journey of Awaken

13.8 billion years ago, the Big Bang gave birth to every element in the hu-

Figure 3.15   Ibtila -the journey of Awaken

man body.However,being completely stricken by the trivial reality the original self-confidence and innate light being eroded. There is the lonely traveler in the desert and his name is Aman.He is also struggling with his life until one day he is given an mission and magically traveled to the universe.All kinds of space disaster and difficulties will be presented for him.He is not satisfied with the status quo and will struggle and in his interstellar journey to gain the chance of returning to the real world.At the end of the story, he will manage to conquer all the task given by him and regained his light.The true inner self will be awakened, he will return back to his normal life and living happily ever after.

Worldview Setting

- **Ibila vs Human Society, Aman vs Millennial**

When designing the worldview, author created two different world. Ibila and the Desert.The name of Ibila represents the trail and tribulation in Arabic language.

In narration, the main character Aman will face all kinds of trails and tribulation in the world of Ibitila.On Desert, Aman is just a lonely human struggle his daily life.Researcher would like to metaphor Aman as every single millennial.Where the main character Aman face trails and tribulation in Ibtila.

Millennial are also going through life journey which life is not always soothing on Earth.Through the Aman's interstellar journey, he will find back all his color and turning in to a Colorful Planet in the Ibtila.Millennial are also polishing their character through time and grown as the unique and beautiful individual.

Ibtila: The vast sky, and the stretching universe- Ibtila contains all the planets and everything on them. Countless stars drift lonely here, for days and nights.

The space and time of Ibtila is unpredictable, and a planet formed by the gold, wood, water, fire and earth is wandering in the universe.A meteorite struck the fragile and tiny planet, and the little planet was broken into fragments of the five elements of golden, wood, water, fire and earth.However, the fragments were shot down by the storm and lost their original colors. They passed through the atmosphere and fell onto the desert on the earth.
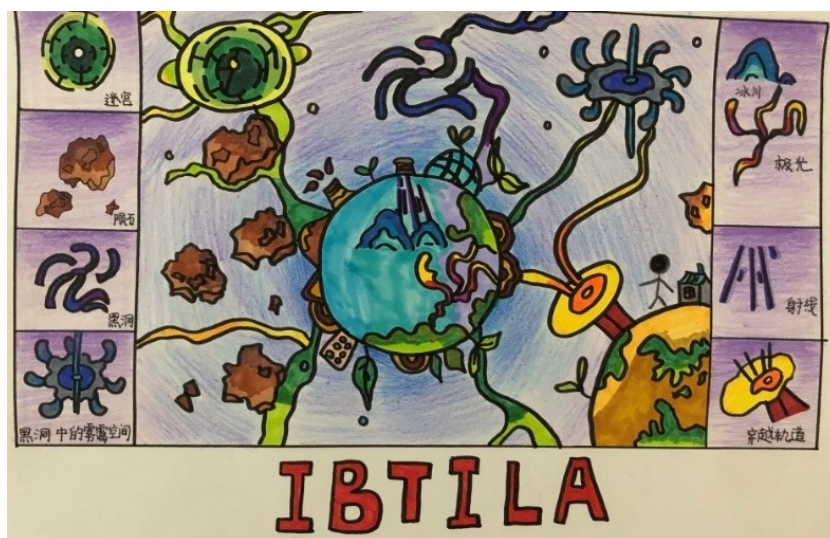
Figure 3.16   Illustration of Ibtila

- **Engergy Fragment vs WuXing personality test**

In the narration, Aman will be collecting energy fragments in his adventure by answering the designed quiz game by the participant. Through each answer, Aman will gradually find back his original color.In the game narration, Wuxing personality test is designed to represent Human's personality parts of gold, wood, water, fire, and earth which is discussed in the early design idea.

- **Mystery star character vs friends in people's life**

Another star in the Ibtila represent friends we will all meet in human society.We all have friends that will always stand besides us and help us in our daily life.This star can also illuminate the main character, but her light will not be dimmed.She is a beacon of the main character.It is a metaphor figure that even if there is suppression, one's confidence will never fade away or be questioned.

The Plot Design

In the whole experience, the game player will interact with the story in a third-party state to complete the entire narrative experience.When playing the game, the interaction between the gamer and the digital platform may influence the story.So when designing the plot, the author needs to consider what kind of content can allow the audiences to perform digital interaction, while making them believe that the participants themselves are the protagonists of the story to experience the whole story so that they can understand the core message.

As for the plots, the protagonist will be given several tasks to solve. He will experience all kinds of ups and downs in the world. There are two reasons for doing so. First of all, because researcher's story will be adapted to an interactive game in which the audience will play it for the perspective of the third person. More missions and tests in the main plot can give more choices to people who is going to design the game interaction later.For example, in the plot setting, the author designed plots of escaping meteorites, sinking into the black hole, and storm attacks based on researcher's world view setting.

Sometimes, when the script is designed into a game, the main line will be lost, So when designing the plot, the author added interactive kind of plots to the storytelling to provide people with a better interactive narrative experience and expand the sense of immersion.The second reason is that since human's life is the journey of collecting pearls and wisdom by fighting and struggling with whatever

we are faced, we are polishing the pearl that has been shining within us. The protagonist will face all kinds of difficulties which can shape his characters.The audience also review their life experience, grows together, or produce some emotional resonance with the story to enhance the immersion

Detail of Storyline Design

Figure 3.17   Figure: Ibtila the Interstellar journey's plot design

The researcher are aiming every participant naturally enters the story and gains a deeper understanding of the protagonist situation, and feels anxious about the crisis which the protagonist encountered, to create the feeling of immersion.When creating an emotional connection with the audience, the researcher decided to focus on the twists and turns of the plots, for example, why the protagonist would experience this setback or another, and what kind of psychological changes will be bring to the protagonist and the audience.

The plot is designed based on the classic model of Joseph Campbell's Hero's Journey in which he divided the journey of the hero into 12 steps.

1. The opening of the story and the call of adventure

This is the place to describe about protagonist's normal life before the journey.The purpose is to let the audience have some understandings about his real life and make a comparison with the subsequent changes in the adventure.

Protagonist is a lonely traveler in the desert.The wind and sand eroded his robe.The sunlight stung his eyes. He walked with difficulty in the desert, looking

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Figure 3.18   Figure: The opening and the call of adventure

for oasis and water. The unusual light caught his attention.He picked up the fragment and held it against the sunlight, observing it curiously.The fragment glowed strangely under the sun.At that time, he saw a flash of light, and magically traveled to Ibtila the cosmic world.

- The First Trail-The meteorites attack and avoiding.

Figure 3.19   The First Trail-The meteorites attack and avoiding

Protagonist stars to face the rules and trails. It is the time the author build the outer fear and obstacles for the character.The bumpy but hopeful journey begins. Protagonist travel through the universe, looking for the losing energy fragments which constitute the beautiful galaxy.However, everything in the universe dangerous and dark.The storm suddenly stopped and there was silence all around. Protagonist realized this abnormal silence and was cautious about it.At this time, a huge fireball appeared in the sky. A massive group of meteorite community

started to attack.Protagonist was knew that he was in trouble and decided to resist and held on to his beliefs.

- The second Trail-Lost in Maze

Figure 3.20   Lost in Maze

This is the Another trail designed for protagonist but with a little hope added to his emotion.The universe was vast and the road ahead was unpredictable.Protagonist walked through the universe and encountered the second wave of storm. The violent wind brought him into the maze of meteorites.He fumbled through the maze of overlapping mountains, finding the way ahead. Rocks collided with each other, and the road was unpredictable.Protagonist were in a muddle, and there was a light in front of him, piercing the chaotic time and space.He followed that ray of light as if he was grasping the hope. Then, protagonist walked out of the maze along the faint light, and the light gradually disappeared in the universe at the moment you were about to approach the exit.

- Third Trail(The ordeal)-The Black hole and the haze space

While protagonist Experiences more difficult trail and obstacles become a little hopeless is also the place protagonist fighting for inner Fears and struggles.The chaotic and staggered black hole made the protagonist unable to find the direction ahead. Protagonist felt that he was sinking in the haze. Confused, he crossed the overlapping barriers of the black hole at a loss.The icy air currents in the universe pierced his body, and the freezing cold made him tremble.He were caught in a hurricane, crossed an unfathomable black hole, and came to a zone with a slow

time and space velocity.The time and space around him seemed to stagnate, the airflow in the universe seemed to flow slowly like glue, and the rotating planet seemed to be slower and slower.Everything there was frozen, and time and space were seem solidified.

Figure 3.21 The blackhole

- The Rewards in Glacier

After being torture again, protagonist will meet the beacon in his journey, and guiding him to keep moving forward for preparing for the last task. The complete silent was scaring the protagonist.In the blend of clouds and shadows, the cold wind lifted him to land on this glacial land and to look for the light that guided him through the haze. The light was connected to another soul that was similar to the protagonist. Protagonist found share same bodies, and the same light.The only difference was that that soul has the particles that the protagonist lost. She will guided the protagonist in the cold place.The brilliance of the her particles dispelled the invading cold wind around the protagonist. Surprisingly, protagonist light became brighter and more complete.

- The Resurrection:Final Test

Final test before the climax added. This is the most difficult test designed for the protagonist. The road of the galaxy was silent and the night sky was endless.The fragments of meteorites were quietly suspended and sleeping. The protagonist were strolling there. Suddenly, the dazzling light tore through the sky, and the cosmic rays fell like a sword with cold wind, piercing the quiet and cloudy universe, breaking the tiny drifting planets, and smashing the meteorites in the dark

Figure 3.22 The reward in Glacier

night sky.Protagonist tried to escape the erosion of cosmic rays and the meteorite fragments that fell from the sky.Protagonist gradually lost his way ahead in an unknown direction.
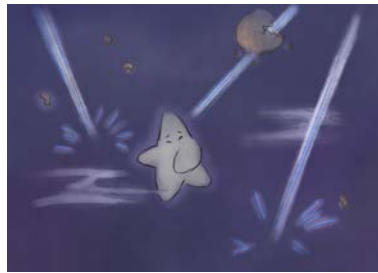
Figure 3.23 The final trail

- The Climax

Protagonist finish all obstacles and retrieved his true self as well as his colors represented with the Atlas color and regained his inner light represented by the Atlas Water .The most splendid of the atlas pattern shows. The true inner self was awakened. As the aurora rose slowly, the long-lost energy fragments came to your sight. Protagonist made a wish to the aurora, and the dazzling energy fragments surrounded him.They were transformed into a bright galaxy and scattered around.Protagonist were surrounded by the Milky Way, and covered with gorgeous stars.She was amazed by the beautiful color before him. The splendid color only belongs to him. **The Test results of the quiz game** This is where

Figure 3.24 The Climax of the story -found out the inner color

the quiz game experience come to and end. Through the aurora, the protagonist seemed to see the gorgeous self that have lost for a long time.The Atlas pattern became a complete planet. At this time, three orbits of different colors appear, and he rode one of the light and shadows to traverse.In the end, Protagonist slowly opened his eyes and walked from darkness to dawn, back to the desert that he were once familiar with.

Figure 3.25 Realization of test result

- The Return

The hero's return to back to his normal life.The end of the Quiz game.Protagonist woke up from a deep sleep and look around blankly, as if he had an long dream. When he looked into the distance, imagined the oasis and the prosperous world in the distance. Protagonist become determined.This is the time the researcher building transformation to the character to create a sense of accomplishment. beginfigure[htbp] Protagonist have washed away his past, and something have recovered the hidden original aspiration in the inner corner.Protagonist wandered

Figure 3.26 Hero's return

in the desert, but his footsteps were getting firmer. At the dusk, he looked up at
the sky and the gorgeous stars.But he walked steadily and firmly in the desert,
under the auspice of the feathery robe made by atlas pattern, he never walk
back.The hero's return to back to his normal life. The end of the Quiz game
experience.

3.4.2 Atlas Design(Second Version)

Due to the pandemic ,the actual physical engagement with the surrounding be-
come impossible.So, the author decided to use Atlas to deliver a strong message
with participants to enhance the emotional bond

When the design is based on cultural elements, the meaning behind the culture
needs to be emphasized to embody the value of the cultural beauty that really
makes it pass from generation to generation.One of Atlas's most important values
is its pattern, which is also determined by the added value of cultural and creative
content and the value of the product as carrier.

From the point of view of Atlas culture, many Atlas patterns bring together dif-
ferent elements in nature to present a colorful and vivid ambient.So ,the researcher
chose to design Atlas as the planet to represent every participant's personality and
uniqueness within the people.At the end of the story, the main character will found
back his color and turn into a planet with his own color constitute of the splendid

galaxy.
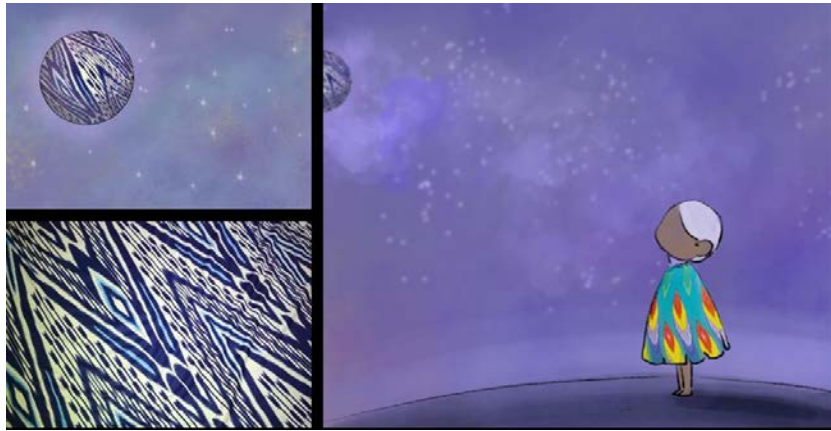
Figure 3.27 Atlas as the planet

"Never ending"story ending

In our game experience,every participant will have a unique atlas pattern representing himself after he finish the quiz experience representing participant's inner color. With more people playing the game, there will be more planet generated to constitute the beautiful atlas world of Ibtila.Audience will actually participate in the story end building ,and the story will never come to end by more people playing our game.The Atlas Ibtila world will continually grow and the galaxy will become more beautiful and complete.It is the time when the researcher invites the participant to be emotionally engaged in the building of a storytelling journey that never ends to create an emotion immersive experience.

Core message with Atlas

The author's metaphor is the color of Atlas representing the true color of one self. More and more people are in the journey on finding back their element.The galaxy will become more complete. Each individual is shining bright with their own light and with their own light they shine together in the universe. beginfigure[htbp] Behind the culture of Atlas lies a core— the expectation of good things and the longing for life. Observing the pattern of Atlas silk, one can find that Atlas patterns contain many combinations of colors, which are also the brainchild of generations of Atlas craftsmen. Therefore, the researcher decided to add "shine together" as the core message to the end of storytelling.

Figure 3.28 Children of the Planet
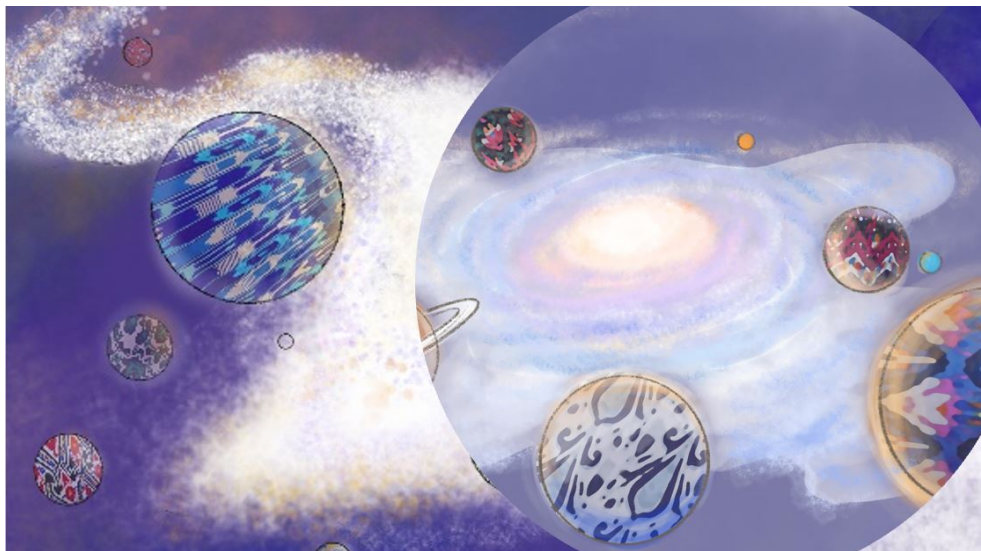
Figure 3.29 Shine Together

The author would like to deliver the message :

1. Even though we are different. we are all unique and beautiful of his own form. It is our beauty that constitute the beautiful planet that we are living in.

2. We all have something within us that is so unique and beautiful. Observing around, one will found beauty within others.

3. The pandemic has not yet ceased, but the difficulties offer us an opportunity to unite and sparkle. Our light can ignite your surroundings and converge in the galaxy. It will illuminate and compose the glorious movement of the whole world.

Chapter 4
Evaluation

The concept of the researcher is to enhance the immersion by introducing Atlas element and the storytelling of the certain experience of a quiz game. To have a clear understanding of whether the design concept can fulfill the goal or not and get the feedback of the early version of the offline design before the pandemic and the later online version design after the pandemic. The evaluation is separated on two prototypes.

The prototype sets the test subjects as eight young people at the age of 20-35. Among them, there are six people familiar with Atlas and two with no knowledge of Atlas pattern.The detail of each prototype's evaluation will be discussed respectively.

4.1. First Prototype Testing

Due to the restrictions and social distancing in Japan to contain Covid-19, the original idea of physical projection and mapping to test the Atlas and storytelling is no longer applicable. Considering the force majeure, the researcher still hopes to present the original prototype test as much as possible. So, the intention of the first prototype is to test the immersion created by the five Atlas worlds: Fire, Water, Wood, Gold and Earth according to the result of personality quiz of each participant.

The inspiration for the first prototype came from the background filter of Zoom. Due to the pandemic, more and more offline meetings and offline teaching have been adapted to online remote meetings and teaching. Many video conferencing companies have made the life during quarantine interesting through their creativity.For example, Zoom, the video conferencing software launched by Google, allows users to set their own background.Under Video settings, users will find an option to personalize the virtual background, for example, add their own artwork or creative videos to the video conference and share them with their friends

without leaving home.

Therefore, the researcher also adopted this method— edited the video for original offline projection mapping, restored the sound effect of the projection mapping scene, combined it with the ambient sound of the mapping video, and finally made six one-minute video filters which were used to test the subjects. In this prototype, the researcher chose Instagram as the platform for video filters. Compared with zoom, Instagram has a higher resolution and the video can be shared in real time.In order to better test the visual immersion created by Atlas and maximize the original image quality of the projection mapping, the researcher chose Instagram as the test platform for projection mapping video.

4.1.1 Evaluation of The First Prototype

Evaluation process

Participants will first be asked to download the green screen on Instagram for the evaluation preparation, and take the personality quiz game designed by another member of the project based on the five-element theory.In this experiment, the personality quiz question was asked by the researcher.Participants will select the words that best suit their first instinct by telling his answer to the researcher, and each word corresponds to an attribute (Gold, Wood, Water, Fire, and Earth).

metal	wood	water	fire	earth
/	SINGULAR	/	/	VARIETY
/	/	/	CHALLENGE	SECURE
/	STRONG	SOFTEN	/	/
/	PROVOKE	MEDITATE	/	/
/	/	INDULGE	RULE	/
HOBBY	/	/	INTELLECTUAL	/
/	ROUGH	SMOOTH	/	/
TOGETHER	ALONE	/	/	/
SPIRIT	/	/	HEART	MIND
LEAD	/	ESCAPE	/	SAVE
UNDER	/	/	OVER	AROUND
/	/	WINTER	SUMMER	/
WEST	EAST	/	/	/
/	ANGRY	/	HAPPY	/
/	/	SALTY	/	SWEET
WHITE	/	/	/	YELLOW

Figure 4.1 Personlaity quiz question designed by Boshen Zeng

After 6 rounds of options, the most frequently selected attribute will become the test result of the participant.After the result is obtained, the corresponding video filter of projection mapping will be sent to participant's mobile phone.Then the participant will add his/her personal Atlas filter to Instagram green screen and

interact with the video filter just like the normal Instagram filter.After the whole test is completed, an in-depth interview will be conducted with the participant.

Figure 4.2 Atlas video filter in Instagram

Evaluation method and interview question

The researcher decided to adopt the qualitative method for evaluation and conduct in-depth interview with the participants to have a deeper understanding about their feedback.The experiment was evaluated according to three aspects: immersion, emotional engagement, overall feedback of Atlas projection video filter.

- Immersion: Did the participant feel the sense of immersion created by Atlas projection video filter?

- Emotional engagement: Did the design of Atlas projection video filter create an emotional engagement with the participant's test result?

- Overall feedback of projection video filter: Other comments and feedback of the Atlas projection video filter

Test Subject 1

User A is a 25-year-old student from Turkey with the knowledge of Atlas.After the personality test, he obtained the result of Wood.

Q1:Do you think that the Atlas design brings you sense of immersion ?

A1:Yes. I have only seen Atlas used in real objects, but I have never seen the visual effects like this. I felt that the visual effects brought by Atlas were vivid and the various states of gold, wood, water, fire and earth were fantastic.Atlas gave

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Figure 4.3 Test subject 1 with Wood personality

me a magical feeling.When I received the video, I was very surprised.The visual effect was really beautiful, and the feeling of being able to make a still picture into a flowing tree was still very immersive.I can imagine the experience of projection mapping.

Q2:Do you think the Atlas design brings you a certain emotional engagement with your test results?

A2: Yes,I think i can related to

Q3:Based on this experience, please tell us your feedback on the overall experience, good or the bad.

A3: The visual effect was really beautiful, and the colors were very beautiful. I wanted to keep watching how the pattern of Atlas changed. The pattern was really beautiful, and I didn't expect it to be used in this way.

Test Subject 2

Test subject 2 is a 26-year-old student in Chiba University who is familiar with Atlas culture and pattern. After the personality test, she obtained the result of Fire.

Q1:Do you think that the Atlas design brings you sense of immersion ?

A1: I am very immersed in the visual experience brought to me by Atlas. I

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Figure 4.4 Test subject 2 with Fire personality

never knew Atlas could be expressed in this form, and I didn't expect it at all. I like it very much. I think it is really a great idea to adopt Atlas for visual effects.

Q2: Do you think the Atlas design brings you a certain emotional engagement with your test results?

A2: I like my test result very much. It just reflected who I am. I feel that I am in the world of fire. My personality can be related to fire very well. And seeing the pattern of Atlas made me feel at home. I haven't seen it for a long time.

Q3: Based on this experience, please tell us your feedback on the overall experience, good or the bad.

A3: I can imagine what the designer wants to express, but I feel that it may be more shocking if it can be expressed offline.But , I still really like the visual effect, which is so pleasantly surprising.

Test Subject 3

Test subject 3 is a 32-year-old working class gentleman with the background of Atlas. After the personality test, he obtained the result of Gold.

Q1:Do you think that the Atlas design brings you sense of immersion ?

A1: Yes, I can feel that. If I had been in a dark room, the feeling would have been stronger.

Figure 4.5 Test subject 3 with Gold personality

Q2: Do you think the Atlas design brings you a certain emotional engagement with your test results?

A2: I myself have a thing for Atlas, so Atlas will encourage my emotional engagement. But for those who have little knowledge about it may need to briefed at the beginning.

Q3:Based on this experience, please tell us your feedback on the overall experience, good or the bad.

A3: The overall feeling is that I really want to experience the projection mapping. I can imagine its power. On the whole, it is quite good under the existing conditions. After all, the mobile phone alone cannot achieve the full interaction, and the sense of immersion will be compromised. So I have the confidence that the live experience will be fantastic. I looked at the colors of the Atlas of gold, wood, water, fire, and earth, and found that all of them were all positive colors. So when I imagined the scene, I was not sure if the scene was so bright that it would affect my emotional engagement. There are dark colors and negative energy in the real world. Everyone is a combination of various abilities, so I agree with the design! If you finish the whole project, you will definitely be able to get the people emotionally involved. I can feel the energy the designer wants to bring to

us. So maybe that is why the designer chose those bright colors exactly, didn't she?

Test Subject 4

Test Subject 4 is a 26-year-old medical student with the knowledge of Atlas. After the personality test, she obtained the result of Earth.

Figure 4.6 Test subject 4 with Earth personality

Q1:Do you think that the Atlas design brings you sense of immersion

A1: Even if I experienced it online, I felt the visual immersion that Atlas brought to me. Seeing the flow of patterns allowed me to better imagine myself in another space and be able to better complete the test.

Q2: Do you think the Atlas design brings you a certain emotional engagement with your test results?

A2: The addition of Atlas gave me a more specific experience of the test results. The test results and the corresponding Atlas were also very matched. The process of waiting for the test results was very exciting, and I was always looking forward to what would come next throughout the whole process, hah-hah.

Q3: Based on this experience, please tell us your feedback on the overall experience, good or the bad.

A3: I feel very sorry for not being able to experience offline, otherwise the

experience would be better. I really like the visual effect. It's really like an offline experience.

Test Subject 5

Test Subject 5 is a 26-year-old student studying psychology with the knowledge of Atlas. After the personality test, she obtained the result of Water.

Figure 4.7 Test subject 5 with Water personality

Q1: Do you think that the Atlas design brings you sense of immersion

A1: I think it brings me a sense of visual immersion. First of all, after hearing the initial idea of the designer, I think it could be a really cool and new experience for me. I can definitely imagine the visual effect will be so cool. What I knew was that Atlas had been used to make clothes, scarves, etc. So the visual experience is quite surprising to me. I really enjoy the pattern changing in the background.

Q2: Do you think the Atlas design brings you a certain emotional engagement with your test results?

A2: I think the test result reflects a certain degree of emotional engagement, and it also reflects my personality and mentality. I could also relate myself to Atlas. The description of the test results made me very happy.

Q3: Based on this experience, please tell us your feedback on the overall experience, good or the bad.

A3: I think this research is very interesting and attracts my attention, and the design is also very good, bringing me a fantastic feeling. But it is a pity that, if there had been no pandemic, I would have wanted to experience it personally, which I believe would be more amazing.

Test Subject 6

Test Subject is a 25-year-old Korean student without any knowledge of Atlas. After the personality test, she obtained the result of Water.

Figure 4.8 Test subject 6 with Water personality

Q1: Can you feel the immersion that Atlas brings to you?

A1: *The blue color is reminiscent of summer and the slowly flowing river. Although it is not very strong, you can still feel the visual immersion. I think it would have been better if it had been offline.*

Q2: Do you think the Atlas design brings you a certain emotional engagement with your test results?

A2: *Yes. The addition of Atlas has a great connection with the test results. I really like the feeling of water and flowing. I think I am the water person,the test results really match with me.*

Q3: Based on this experience, please tell us your feedback on the overall experience, good or the bad.

A3: *I think the description of the test results makes me very happy. My confidence surges and a sense of satisfaction is achieved. I think the designer's offline idea is really interesting. And I believe that an offline test in the future will definitely be better and more interesting, with a stronger sense of experience. But now, I can still somehow be related to the test results and imagine about them. I already saved the filter in my phone. I like it!*

Test Subject 7

Test subject 7 is a 31-year-old working class gentleman with the knowledge of Atlas. After the personality test, he obtained the result of Fire.

Figure 4.9 Test subject 7 with Fire personality

Q1: Do you think that the Atlas design brings you sense of immersion

A1: *Yes, yes. I really appreciate the beauty of Atlas, whose balanced color and unique shape make people feel a sense of joy.*

Q2: Do you think the Atlas design brings you a certain emotional engagement with your test results?

A2: *The test result is really amazing and I was shocked, ha-ha! I was deeply moved by Atlas. Those rhythmic and passionate combinations of colors are really the expression of emotional engagement.*

Q3: Based on this experience, please tell us your feedback on the overall experience, good or bad.

A3: I like this design style very much. If you observe it carefully, you can experience the resonance between vision and nature. I feel that the form of artistic creation and structure are essentially emotional perception and performance at the spiritual level. For the bad part, the performance of fire is a bit rough.

Test Subject 8

Test subject 8 is a 25 years old student in Japan with no background with Atlas. After the personality test ,she received wood result.
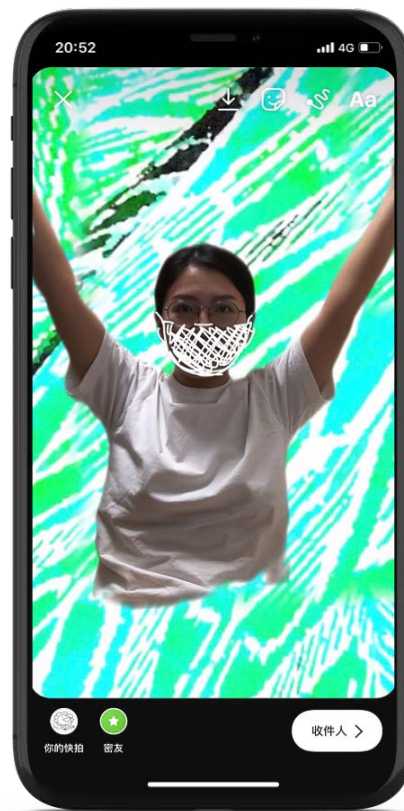

Figure 4.10 Test subject 8 with Wood personality

Q1: Can you feel the immersion that Atlas brings to you?

A1: Yes,the patterns and colors looked very interesting and good. Atlas has brought me a sense of immersion and visual impact. They looks like a moving

board painting.I wonder what does other test result look like. Can I do it again?

Q2:Do you think the Atlas design brings you a certain emotional engagement with your test results?

A2: The test results are so amazing and I have emotional engagement. I want to have my boyfriend tested. I am curious about his results.

Q3: Based on this experience, please tell us your feedback on the overall experience, good or bad.

A3: Atlas has brought me a strong sense of immersion, and it reflects my personality. Although the online experience is not as immersive as the real experience, but I can still imagine ,the overall feeling is still very good. Also, the test time is not long so the overall experience is very good. I still want to participate in the offline design. If I can experience it in a larger space, the effect will be more amazing. It's a pity. I really want to have the opportunity to see the complete design.

4.1.2 Summary

Regarding this prototype, the researcher tried to present the previous idea of projection mapping idea before the pandemic, and explained the original offline experience to the test subjects. All the 8 participants said that adopting Atlas was a new and interesting experience to them, and all of them had a high evaluation of the visual immersion created by the prototype. 2 subjects with no knowledge of Atlas also showed their interest in Atlas upon receiving their exclusive filters. Regarding the emotional engagement, 6 out of 8 participant felt that the Atlas video filters brought them an emotional engagement. 2 out of 8 linked the emotional engagement with the accuracy of quiz game result. When considering test subjects said in the interview that they could imagine the effect of the original projection mapping, and they also expressed strong interest in the future experience of projection mapping to the researcher. The assumption that adopting Atlas can create immersion and emotional engagement was proven.

Limitations:

1.The researcher thinks the physical limitation might affect the evaluation. First of all, although all the test subjects expressed the sense of immersion brought by Atlas, and Instagram filter can directly show the pattern design, the online

experience can still not compare to the offline projection mapping . In addition, due to the small screen of the mobile phone, the running platform of the video failed to meet the scale of the researcher's original projection mapping.

2.Because of the pandemic, the evaluation did not fully display the researcher's design. The initial idea was to showcase Atlas in a relatively large physical space by projection mapping. By combining with gesture engagement, participants were supposed to interact with the inner-self reflected by the projection mapping, which could contribute to the emotional engagement.

3.The ambient background music could not play due to the limitation of Instagram. Therefore, the current evaluation was quite different from the original design in terms of the size, scale, and effect, and will have a certain degree of influence on the fairness of the test concept.

4.The first prototype was mainly focusing on the first half of the concept without including the complete storytelling journey of the entire quiz room idea. Since the actual storyline was supposed to be included in offline pre-experience design and after experience. So the evaluation of the emotional engagement for the storytelling part might be compromised.

Future Improvements

1.Researcher think the actual improvement should be consider in the evaluation method. Even for the Instagram filter version of testing. The background story should still be introduce in some kind of formation to let the test subject know more about the story theme and the deep meaning behind the test.

2.Find the alternative platform to realize the ambient sound design of the video filters.

3. Some test subjects said their immersive experience may be further enhance in the offline design. So in order to create a better experience for the test subject the original projection mapping idea is still expected to be tested.

4.2. Second Prototype Testing

The second prototype testing is designed for the evaluation of storytelling and the immersion building by Atlas in the online interactive game experience after the outbreak of pandemic.

The research's concept for enhancing immersion are originally designed for the whole storytelling which includes Pre-experience: Introducing the researcher's worldview and setting, Quiz game experience: the actual realization of game narration, and After-experience: delivering the core message of the story to enhance emotional engagement. Ideally, the researcher's second prototype should be tested through the complete online game experience designed by each member of the team. However, the pre-experience and the actual game is still in the process of production due to the pandemic restriction.

In order to get feedback and also test the hypothesis of bringing Atlas element and conducting the storytelling journey to enhance the immersion, the researcher decides to create a story-book style of presentation in both English and Chinese to explain the game narration and place the Atlas projection mapping video in the storybook-style presentation. The prototype for after-experience is designed by Hong Hong, which includes author's key idea of incorporating Atlas elements and delivering the story message to test the immersion created by the researcher's concept.

Figure 4.11 Story-book style presentation

4.2.1 Evaluation Process for The Second Prototype

1. The researcher will have a remote meeting via Zoom with the test subjects. The researcher's screen will be shared to prepare for the subsequent presentation.

2. Start the storybook style presentation, which contains the background information to let the test subjects know about the main purpose of the experience.

3. Start the main storytelling journey with researcher controlling the flipping pages of the presentation along with the voice narration of the story. The voice narration is recorded before the test and played in the presentation.

4. Conduct in-depth interviews

Interview

All the testing subject for the second prototype is same with the former porotype's in order to create a deeper communication and understanding of the concept .The backgrounds of the test subject will not be discussed this time.

Test subject A

Q1:Do you feel you can resonate with the character or the story setting?

A1: Yes, definitely for the background part. It is like telling a life story, from the initial silence to the different self, and finally to the coexistence with other. It's like a person who grows up, forms his own personality, and finally learns to tolerate others for coexistence.

Q2: Do you think the storytelling give you any immersion or emotional engagementIf so, which part of the experience?

A2: Yes, I do. I like the presentation style feel like someone is reading a bed time story for me.What touched me the most is the little girl's journey alone. From the photos, I can feel that although she is always alone, the colorful totems surrounding her empower her to move on. I think the little girl is like me. Although I am lonely, my charm and uniqueness make me the only existence in this world.

Q3: Do you think the pattern of Atlas and the design of the planet can bring you a sense of immersion?

A3: Yes,I do. The planets and the cloak of the character also attracted me visually.

Q4: Do you think that the pattern of Atlas and the design of the planet make you emotionally engaged in the whole experience?

A4: Yes. Although I also like the researcher's first design, I feel that the immersion is only presented from the screen. Yet this time I feel that Atlas has a deeper meaning, which gives me a deeper connection. I never thought it would

be so attractive when used in such pictures. I think the idea of planet is very innovative because the application is successful. I really admire that.

Q5: Did you get any message from the whole experience?

A5: The message I got from the story is not to forget the progress of oneself. The little girl became unique after the Big Bang. But she was not alone. She coexisted with other unique people. This message encourages people who are still searching for the direction in life, just like me.

Q6: Do you have any other comments?

A6: I think different people tell different stories. But I really enjoy this kind of healing stories, especially the sound and the style of presentation brings me to my childhood. I really enjoyed it. I think this experience has many advantages. Firstly, the topic is very innovative and the story offers a true experience. I really imagined that I was looking for my planet and myself. Secondly, the visual effect brought by Atlas is fabulous. In the past similar atlas design, we would often see patterns with a single or black background, which are very depressing and boring. So we would forget the contents of these tests soon. But Atlas is different. It is colorful and the bright colors impressed me a lot. And I really admire the author's attempt and effort to apply traditional clothing materials to the new technology. Thirdly, the experience reminded of the first prototype the test results part. Just like the beginning of the story said, we are really looking for ourselves. The whole story is about gaining a better understanding of myself.

Test subject B

Q1: Do you feel you can resonate with the character or the story setting?

A1. Yes, I do,and I hope I can always maintain a truly unique self in the process of pursuing my goals like the character, and I am able to constantly search for the true self in the journey.

Q2: Do you think the storytelling give you any immersive felling or emotional engagementIf so, which part of the experience?

A2. I think when the protagonist completed the adventure and finally returned to the desert. I don't think this is the end, but a new beginning. It really like each time we achieve a goal, it is actually a pursuit and upgrading of ourselves. Even if we end the dream of adventure and return to the real world, in fact, every

adventure will make us more complete and help us know what we want.

Q3: Do you think the pattern of Atlas and the design of the planet can bring you a sense of immersion?

A3: The fusion between pattern and story is very good. However, I wish there will be more content for me to understand what is Atlas. I wondered is there any specific things that is behind the pattern?

Q4: Do you think that the pattern of Atlas and the design of the planet make you emotionally engaged in the whole experience?

A4: Yes, especially after I understood the meaning of Atlas in the universe of the planet, The idea that the entire universe would be brighter as the number of planets gradually increased is great. I do have a suggestion. If you want to enhance the sense of emotional engagement, maybe you can use a cooler color like grey and dark blue, which boys will like.

Q5:Did you get any message from the whole experience?

A5: I think what this story describes is that, every adventure and pursuit of goals is actually a process of constantly pursuing the true self and the inner self. Although the journey of adventure has an end, the process of self-seeking is endless. I really appreciate the idea that as the number of planets gradually increased, more elements would be added to the entire universe.

Q6: Do you have any other comments?

A6: The presentation is well-made. I like the effect so much. Brings me back to me childhood. The whole experience is very beautiful and soothing. It reminds me a kind of thinking and experience of seeking the inner self and enhancing confidence in the current world aswarm with high efficiency and desire for material goods. I think this idea can be further expanded into a collection of design and can be passed on to others in the form not limited in picture books. If there are products related to Aman and the planets, I will definitely buy and collect them. I want something like postcards or small stamps, which are meaningful. In addition, if the Atlas planet generated by each person after the game is matched with the player's information. Then different players can interact through their planets. I think the shock power and the immersion are well really well expressed. I really like the theme of this story. I think the game narration has a potential to be a great game.

Test subject C

Q1:Do you feel you can resonate with the character or the story setting?

A1: Yes,I do.The effort to collect all the particles in the pocket of the one little protagonist is a heart-warming to see and the message of uniqueness of each planet and not to forget to listen to inner voice synchronize with ourselves. That resonated to my heart.

Q2:Do you think the storytelling give you any immersion or emotional engagementIf so, which part of the experience?

A2:The message of page 10 was immersive for me, as our busy life in this worldly life makes us neglect to take a look at ourselves again to hear our inner voice. The message page 13, "everyone is born with a talent, and shines his own light. " touched my heart as well to rethink that each one of us is beautiful as we are.

Q3:Do you think the Atlas design can bring you a sense of immersion?

A3:Yes, I do. Especially I think Arabic letters written on some planets make the image of the story mystical.

Q4: Do you think that the pattern of Atlas and the design of the planet make you emotionally engaged in the whole experience?

A4: Yes, I do. The pale color of the background and the pureness and nostalgic of the protagonist give me thought-provoking and author's speculation. Having less characters also helps me concentrate to invest my emotion.

Q5:Did you get any message from the whole experience?

A5:I think the author wanted to express the unity and harmony of all planets represent the ones of humans and existence of the power behind to control the universe which was created from nothing and we are all different and unique on this earth as the planets of the universe are so.

Q6:Do you have any other comments?

A6: The whole experience is quite soothing and healing. I feel like it will be a perfect bed-time story or an ASMR for me.

Test Subject D

Q1: How did you feel when first reading this story? Do you feel you can resonate with the character or the story setting?

A1: Yes, I can. It reminds me of the Atlas dress that I wore for the first time as a child.

Q2:Do you think the storytelling give you any immersion or emotional engagementIf so, which part of the experience?

A2: Yes, sometimes you have to face some difficulties at some point in your life, and you cannot decide it.

Q3:Do you think the pattern of Atlas and the design of the planet can bring you a sense of immersion?

A3:Yes,it is quite interesting and appealing, because using Atlas in a very pleasant visual form is quite a new experience for me. It's beautiful, graceful, and it's visually stimulating.

Q4:Do you think that the pattern of Atlas and the design of the planet make you emotionally engaged in the whole experience?

A4: Yes, I like the design of the planet very much, the AR game is so cool.

Q5:Did you get any message from the whole experience?

A5: Everyone has the meaning and value of existence.

Q6:Do you have any other comments?

A6: It's been a long time since I saw Atlas last time. I really like the researcher's design. It's very novel

Test Subject E

Q1: Do you feel you can resonate with the character or the story setting?

A1: Yes! I do. I thought of my childhood and my little kaleidoscope. Since I was a child, I have had a lot of fantasy about the formation of the universe and the origin of life. I feel that I am the protagonist who is eager to explore the vast universe and the truth of life.

Q2: Do you think the storytelling give you any immersion or emotional engagementIf so, which part of the experience?

A2:Yes, I think the presentation is creative and well made. I am impressed.

Q3: Do you think the pattern of Atlas and the design of the planet can bring you a sense of immersion?

A3:Yes, when I saw on the planet comprised of different patterns and colors at the end, it is quite immersive.

Q4: Do you think that the pattern of Atlas and the design of the planet make you emotionally engaged in the whole experience?

A4: Yes, I think the core of the story is the planet right? I think so.

Q5:Did you get any message from the whole experience?

A5: I feel like the universe is too big to imagine. Human are just a dust in the universe. It is too small, let alone humans. However, humans are always the independent illuminators distinct with others.

Q6:Do you have any other comments?

A6:I like the storybook presentation. When I finished whole experience. It reminded me of the documentary The Universe and People I just watched not long ago. The documentary showed the development of the universe from a scientific perspective, for example, the emergence of matters and the biological evolution. I am a space-acholic.

Test subject F

Q1: Do you feel you can resonate with the character or the story setting?

A1Yes,I do,Like protagonist. I feel like everyone has the shining points that they do not see. They should hang in there when they feel lost and frustrated, and one day they will see the light of hope.

Q2: Do you think the storytelling give you any immersive felling or emotional engagementIf so, which part of the experience?

A2:Yes,when the Atlas became a complete planet, three colored tracks appeared, and the gray robe turned into a gorgeous one made of feathers.

Q3: Do you think the pattern of Atlas and the design of the planet can bring you a sense of immersion?

A3:Yes, the pattern of Atlas and the design of the planet make me feel the passion and pursuit of the reality and future.

Q4: Do you think that the pattern of Atlas and the design of the planet make you emotionally engaged in the whole experience?

A4:Yes, the gorgeous colors of Atlas and the design of the planet have strengthened the hope and joy of seeing a galaxy after the storm in the universe, and predicted new hope and bright prospects.

Q5:Did you get any message from the whole experience?

A5:I think everyone will encounter various difficulties in life. We should find out our shining points, work hard to overcome difficulties, and go forward bravely and relentlessly. There will be a happy ending awaiting us.

Q6: Do you have any other comments?

A6:To live a life full of hope.

Test Subject G

Q1: Do you feel you can resonate with the character or the story setting?

A1:Yes,especially for the beginning of the story part.I feel like we do have certain talents within every people.

Q2: Do you think the storytelling give you any immersive felling or emotional engagement.If so, which part of the experience?

A2:Yes, I really enjoy the storytelling ,the presentation is nice.

Q3: Do you think the pattern of Atlas and the design of the planet can bring you a sense of immersion?

A3: yes ,I do. The most immersive part for me is the planet part.I like the setting.

Q4: Do you think that the pattern of Atlas and the design of the planet make you emotionally engaged in the whole experience?

A4:Yes, the last experience of my color will be in the Universe makes me happy and firmly believe everyone has its mission and value being alive in this universe, we should all embrace the difference and care each other in this journey.

Q5:Did you get any message from the whole experience?

A5:I think I should be grateful and happy about my differences from others, those differences make me who I am today. And at the same time, I should respect and learn from other people, who are also unique and valuable.

Q6: Do you have any other comments?

A6:I like the person who wrote the story. It is healing and comforting.

Test Subject H

Q1:Do you feel you can resonate with the character or the story setting?

A1: Yes. "Staring at the stars" is my first impression of this story. What attracts me most is that it resonates with me. I was somewhat attracted by the

planets in the universe, and together with the protagonist, I started the journey of finding myself in the adventure of universe.

Q2:Do you think the storytelling give you any immersion or emotional engagementIf so, which part of the experience?

A2: Yes,I do, I think when the protagonist is surrounded by aurora in front of the glacier at the end of his adventure. There is a certain resonance between me and the protagonist. It seems that the adventure reached the climax as well as the end. There is a kind of melancholy after the journey is over and the dream is realized, and I am also immersed in the dreamlike starry sky of aurora.

Q3: Do you think the Atlas design can bring you a sense of immersion?

A3: Well,I think the fusion between Atlas pattern and planet design enables me to bring more emotion in the experience. For the AR atlas, when the colorful planets appeared in front of me. I think that the details can be more refined and more attention should be paid to the emergence and coordination of colors, then I will be more immersed in it.

Q4: Do you think that the pattern of Atlas and the design of the planet make you emotionally engaged in the whole experience?

A4:Yes,I think because I went through designer's first prototype, so I think the whole pattern and the planet design are very coordinated, which made me feel myself as a planet. When the planet was finally formed, I felt as if a gap in my heart was filled, and I found a kind of emotional resonance between my inner self and the true self.

Q5 Did you get any message from the whole experience?

A5: I think that each of us may become the protagonist of this story, who walks against the harsh wind and sand, but still has the opportunity to find his/her true self. When the true self is complete, he/she always keeps firm beliefs and goals, and is supported by unique true self. I hope that this feeling can serve as a driving force for me to move forward.

Q6: Do you have any other comments?

A6: The narration is a little long, I might prefer it to be a poem style. But I really concise with a dreamy and idealistic style. It is undeniable that this feeling is exactly what each of us may miss and need to look for. Perhaps we can use this

story as the skeleton and continue to develop it into a series of work, which also responds to the idea of "an adventure that never ends" in the end of the story.

4.2.2 Summary

Regarding the second prototype, the researcher designed 6 questions on immersion and emotional engagement. The feeling of immersion, emotional engagement, and story resonance level of participants were measured based on Atlas design and storytelling. The researcher believes that the description of each participant is very detailed, and provides some suggestions for the researcher's future design.

From the aspect of storytelling, all the 8 participants said they could resonate with the story concept and the setting, and said they were emotionally engaged in the different stages of the storytelling, and had the feeling of immersion brought by the narrative.

From the aspect of Atlas, all the 8 participants agreed that Atlas could bring them visual immersion and emotional engagement. Both the storytelling and the Atlas design contributed to their immersive experience and the emotional engagement.

According to the test results, the concept of incorporating Atlas elements and the storytelling to enhance the immersion and emotional engagement was proven.

In addition, on the basis of the interviews, the researcher asked the participants to measure the key factors mentioned in Chapter 3 to achieve the concept. More detailed results were obtained, for example, the overall immersion, visual immersion, emotional engagement, sense of accomplishment, duration of attention and the level of resonance. The scoring determines 10 as the highest number, and 0 as the lowest number. Among all of them. The duration of attention received the highest point, followed by the visual immersion and emotional engagement. The score of the sense of accomplishment was the lowest.

Although, the test result is proven by the concept, and the author gain some positive comment towards the storytelling and the Atlas design. There are still some limitations.

Limitations

1.For the researcher's concept, the prototype used by the author for the second evaluation is not the final design prototype. The concept was supposed to be
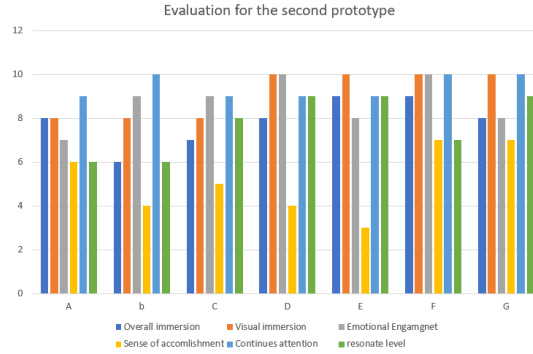
Figure 4.12 Furthur evaluation for second prototype

tested in an online gaming experience. Due to the pandemic, the production of
the complete game is still in progress, so the researcher can only try to present
the game narration originally used for online gaming experience in the form of a
story, test it and get feedback. However, this practice has limitations. Although
the story shows the entire script, if the participants cannot actively participate in
the game, the presentation of the story will be more like a background information
rather than a game narrative.

Moreover, when designing the whole process, the researcher actually considered
from the perspective of a game platform instead of a storybook, so some conflicts
and reward mechanisms were specially added, with the hope to be used in the
plot design of the game. So, the actual prototype is different from the motivation
of the original design.

In addition, the story+ voice narration will restrict the participant to a state of
passive acceptance, but the game is a process of active participation. Therefore,
the sense of accomplishment might be diminished. Interestingly, two of the test
subjects said that the experience was more like a sweet bedtime story, and one also
mentioned ASMR before bedtime, which made the researcher feel dumbfounded.

2. The actual drawing style is not in line with the interstellar journey that the
story intends to create. The researcher originally planned to create a thrilling
game script suitable for millennial, but her drawing style tend to be of the healing
effect, so the tension may be reduced, which is another interesting and unexpected

result.

3. The actual pre-experience for explaining the worldview and governing rules is not included, which might affect a complete worldview that the researcher wants to present. Since the overall storytelling time cannot be too long considering the feeling of the participants, unlike a novel, a storybook cannot give participants more time to understand the worldview and background. Hence, the worldview in the testing prototype only illustrates the purpose of the test, and the immersion is created by words, pictures and feelings. The actual immersion brought by the worldview setting is diminished. The presentation of worldview is not perfect and tends to be one-way instillation.

4.The pre-experience design needs to be put in the evaluation in order to let people with no knowledge of Atlas know more about Atlas and the culture behind the design. In this way, the presentation can be more creative and interactive, rather than just explaining with words or pictures.

5.The actual cultural background knowledge between the test subjects is not balance.

Future Work

The future work is related to the project as a whole. The researcher, as well as the whole team, are expected to design the complete game experience and realize the game narration in the online game experience. After which, the author will conduct another testing and invite more people with different cultural backgrounds to participate in the final story building journey.

Chapter 5

Conclusion

In this project, the author's goal is to enhance immersive experience for a group project and deliver the author's message. The collaboration project with the Korean company 101 global offer researcher a valuable opportunity to target millennial and implement researcher's concept into a group project to deliver author's belief and value.

The concept of this study is implementing unique Atlas element and storytelling to enhance the immersion for a certain quiz game experience. The concept is tested trough two prototype respectively and the result and limitation has been discussed.

In addition, from the cultural aspect of Atlas, the researcher expresses the yearning for nature and life advocated by Atlas through the visual design of its projection mapping, and through describing a unique story about the journey of self-awakening. The positive energy and love for life that Atlas culture intends to convey are demonstrated.

Due to the pandemic, even though the original idea and design is changed. But the pandemic added more value for the topic.

To sum up, implementing Atlas element and storytelling can enhance the immersion and build emotional engagement.

5.1. Limitations and Future Works

Because of the pandemic, the researcher's initial idea of physical projection mapping of Atlas world could not be realized. If conditions are mature, the researcher hopes to implement this design in offline scenarios.

Due to the pandemic, even though the original idea and design is changed. But author do feel like the pandemic make the author's design more valuable and more attached to people. To sum up, implementing Atlas element and storytelling can enhance the immersion and build emotional engagement.

A good story can touch people's hearts. Even after thousands of years, when

people think about it, the original feeling never fade away. A large amount of storytelling, while creating stories, has completely built a new world. However, it is the researcher's hope to explore the original culture element and create new possibilities. The sparks brought by the collision of two important Asian cultural elements WuXing and and Atlas lightening the splendid universe dotted by the planets composed of different patterns of Atlas and with the hope of introducing new cultural element will be the step to connecting the world map.

One of the motivations of the researcher is to better convey the positive energy from Atlas elements and culture, for example, the love for nature and the yearning for life. It may require more people from different countries and different backgrounds to participate in order to better create cultural communication. The culture contained in Atlas is not only about beautiful patterns, but also the expression of art and responsibility of generations of craftsmen behind the culture.

Atlas culture contains not only beautiful patterns. Among the basic patterns of Atlas silk, the most commonly used is almond. The almond looks like a baby. The ancient craftsmen incorporated their own imagination of nature to the design to express the care and desire for life. This concept can also be reflected in the way most Uyghur families express love for their children. So Atlas silk is not just about beautiful patterns; it contains the loyalty to culture and the wisdom of life by many generations of craftsmen.

The researcher believe there are still many unique cultural element that can create important value in future design. Some time instead to create everything new. Looking through what the past people's wisdom and implanting new method but remaining the essence without touching into the taboo and respect the important of the cultural and history itself might be a valuable thing to do.

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