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VISUAL DESIGN AND LOCALIZATION OF VIDEO GAMES

– From Japan to Europe

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BACHELOR'S THESIS | ABSTRACT

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VISUAL DESIGN AND LOCALIZATION OF VIDEO GAMES

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The purpose of this thesis is to explore the visual design and localization of video games in terms of basic UI design and character design in Japanese and Western, especially Finnish, styles. The two focal points are key differences between the two styles. The theoretical section of this thesis focuses on basic principles of design and factors that make a well-defined character, as well as the reasons behind the current styles in contemporary game art.

The practical section was carried out in Tohoku University with the professor Keizo Sato, the commissioner of the thesis. The goal was to localize a Japanese physiotherapy game to Finnish and European markets. To achieve this goal, a questionnaire was carried out to research of style preferences of Finnish and Japanese to see if there were certain aspects that should be added or avoided when changing the game. The survey featured images from Japanese and Western media and was distributed to Finnish and Japanese responders. The data was analyzed and based on the results the graphical design of the European version of the game started.

The new graphics were created with Adobe Illustrator to make them easily adjustable and to be similar with the original graphics made with Illustrator as well. Some graphics from the Japanese version were kept in the European version as they were deemed suitable by the commissioner of the thesis and based on the results of the questionnaire.

After the new graphics were created, the game was fully translated from Japanese to English and Finnish. Translations were proofread by the Japanese commissioner. The translations were kept around the same length as the original texts when possible.

The end result of the thesis was a translated game with new graphics ready for testing in Finland and Europe.

KEYWORDS:

Visual design, localization, user interfaces, character design, translation

OPINNÄYTETYÖ AMK | TIIVISTELMÄ

TURUN AMMATTIKORKEAKOULU

Valvoja: yliopettaja Mika Luimula, dos.

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VIDEOPELIEN VISUAALINEN SUUNNITTELU JA LOKALISAATIO

- Japanista Eurooppaan

Opinnäytetyön tarkoituksena oli tutkia videopelien visuaalista suunnittelua ja lokalisaatiota käyttöliittymän ja hahmojen suunnittelun kannalta. Työssä keskityttiin pääasiassa japanilaisen ja länsimaalaisen tyylin eroihin. Teoriaosuus käsittelee hyvän hahmon suunnittelua ja suunnittelun perusperiaatteita, mutta myös historiallisia vaikutteita nykyisen peligrafiikan taustalla.

Työosuus tehtiin Tohokun yliopistossa. Työn tavoitteena oli lokalisoida japanilainen fysioterapiapeli Suomen ja muun Euroopan markkinoille. Prosessi alkoi tutkimalla, millaisisesta tyylistä japanilaiset ja suomalaiset pitävät. Tutkimus tehtiin kyseltytutkimuksella, jossa oli kuvia japanilaisista ja suomalaisista viihdemediasta. Vastaajat olivat japanilaisia ja suomalaisia. Vastaukset analysoitiin, japanilaiset suosivat enemmän japanilaista, pyöreää grafiikkaa, kun taas suomalaiset pitivät niin japanilaisesta kuin länsimaalaisesta grafiikasta.

Uusi grafiikka luotiin Adobe Illustratorilla, jotta sitä on helppo muokata ja siirtää peliin. Pelin alkuperäinen grafiikka oli myös tehty Illustratorilla, joten ne osat, jotka jäivät peliin japanilaisesta versiosta, sopivat yhteen uusien elementtien kanssa.

Peli käännettiin japanista suomeksi ja englanniksi. Käännösten oikeellisuuden varmisti japanilainen professori. Käännökset pyrittiin pitämään mahdollisimman samanmittaisina mahdollisuuksien mukaan.

Työn lopputuloksena oli täysin käännetty ja lokalisoitu peli, joka on valmis testaukseen Suomessa ja Euroopassa.

ASIASANAT:

Visuaalinen suunnittelu, lokalisaatio, käyttöliittymä, hahmosuunnittelu, kääntäminen

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LIST OF ABBREVIATIONS

UI	User Interface
2D	Two-dimensional
3D	Three-dimensional
Anime	Japanese animation (アニメ)
Manga	Japanese comics (漫画)
AAA title	Triple-A title, high-budget game
Kanji	Chinese character used in Japanese language (漢字)
Katakana	Japanese writing system for foreign names and loan words (カタカナ)

1 INTRODUCTION

The Japanese game industry has been for a long time one of the largest game industries in the world. However, with the game market becoming more and more globalized, both games from other countries are being imported to Japan and Japanese games are being exported to compete with game companies around the world. In order to reach as many players as possible, and to create the best experience for the player, games are often localized to suit the needs of the players around the world. Usually this is achieved by translating.

This thesis consists of two parts: the first part explores the theory of graphical design and localization from the standpoint of Japan and Western world. Western world refers to Europe and North America as those regions are major areas for game creation, distribution and market. The second part is the work that was carried oiut during the author's exchange studies in Tohoku University, Sendai, Japan. The goal of the work was to localize of a video game, to acquire information about the preferences of both Japanese and Finnish video game players through a questionnaire, and then to change the graphics accordingly. The game was also to be translated to Finnish and English.

Graphical design consists of two parts: user interface and character design. The UI design focuses on the visual elements and their importance, the character design goes through general principles and then features of Japanese and Western character designs. The main focus is in 2D art but 3D art is also mentioned briefly. Although in the project itself, there was no character design, it is important to understand the basis of the character design in order to be able to understand features present in characters that make

The thesis work was commissioned by Tohoku University professor Keizo Sato, for a physiotherapy game played on Xbox Kinect. The main aspect of the work was to localize a game that was made for Japanese audience to European, especially Finnish audience. This thesis will first cover the research that was carried out to gain knowledge of the Finnish and Japanese graphics preferences. On the basis of the results, it is easier to modify the graphics according to the preferences of the target audience.

This thesis will cover both thte design and the execution of the graphical design and of the European version of the game and the translation process from Japanese to Finnish

and English. It will also shortly introduce the theory of localization and factors that have to be considered when localizing video games. However, the focus of this thesis will be in the graphcs and translations.

Japanese words will have the transliterated version next to them in italics.

2 GRAPHIC DESIGN

Graphic design consists of all visual elements of the game, including menus, color choice and character design. Graphical design is the visual presentation of the game, so not only it includes art, but things like camerawork and font (Design Doc, youtube.com, 2017). This chapter goes through UI – user interface – design and character design as it was part of the thesis work.

2.1 UI design

The UI, even though often overlooked by new developers, is one of the most important aspects of the game. An unclear UI might turn new players away from otherwise good game for a simple reason of not understanding the UI (medium.com, 2018). The UI needs to fit the game's and gamer's needs, so depending the game, the UI requirements might be really different. If the game is cinematic, with beautiful world around it, the UI is often preferred to be sleek and minimalistic, or integrated into the game (gamasutra.com, 2017).

In a good UI a player can navigate with ease. Icons' design should be clear and understandable. The order of the buttons and other elements should be hierarchical, with the most important elements having the focus with being first to be seen, having bigger size, bright coloring, highlighting etc. The usage of fonts should be sparse, preferably using maxium of three different fonts to avoid making UI look inconsistent. Gradients and other effects are also to be kept minimum as it might create cluttered and unappealing visual effect. The color scheme should be kept similar to the game's colors, however, it is important to make the UI elements visible also to colorblind people. Colors should have different values so they can be told apart even in grayscale (Design Doc, youtube.com, 2017).

If the icons in the game might need an explanation, a tooltip is an excellent way to inform a player of a certain object or icon. A picture of a bun might not inform the player enough, but when mouseovering, they see the tooltip telling what the spell does. It also cleans up the UI for a veteran player who likely does not need the information all the time (gamedevelopment.tutsplus.com, 2013).

A dynamic UI might have some animated parts in it, but when using those it is crucial to keep in mind that the animations should not take too long, especially if the element is used a lot in game. Player might get frustrated if they have to wait for a long time for menus to pop up, book pages to turn etc. in order to progress in-game. UI needs to provide feedback to the player so the player does not have to guess if the command went through. Loading screens should have some kind of a moving object or a loading bar to communicate with the player that the game has not stopped. If the player gets frustrated with the lack of feedback or slow menus, it affects negatively to user experience (gamedevelopment.tutsplus.com, 2013).

Some games do not suffer in terms of popularity when it comes to bad UI design but it will hinder the gaming experience. One of the most notorious examples of this is Bethesda's Elder Scrolls IV: Oblivion (Figure 1) with hard-to-navigate UI with too big icons, unclear controls, no tooltips or other information about equipment or spells and no clear hierarchy based on importance. Oblivion's UI is also an example of why the platform of the game affects the UI design. Oblivion has a UI that is mainly done consoles in mind as the font and images are big, thus easier to see on a TV screen as it usually further away from the player than a computer monitor. As the UI stayed the same in PC version as well, it ended up being suboptimal for that platform (gamedevelopment.tutsplus.com, 2013). In comparison, the UI in Oblivion's successor, Elder Scrolls V: Skyrim (2011), showed changes when it came to UI (Figure 2). The UI has buttons visible with respective keybinds, it uses text instead of icons and has more information visible at the same time. Using text instead of icons are clearer in this case since images in Oblivion are fairly vague, but it means the localization team has to do more work when it comes to translations.

Figure 1. UI of the inventory in Elder Scrolls IV: Oblivion (Bethesda Softworks, 2006). The useful part is outlined, indicating the vast unused screen area.

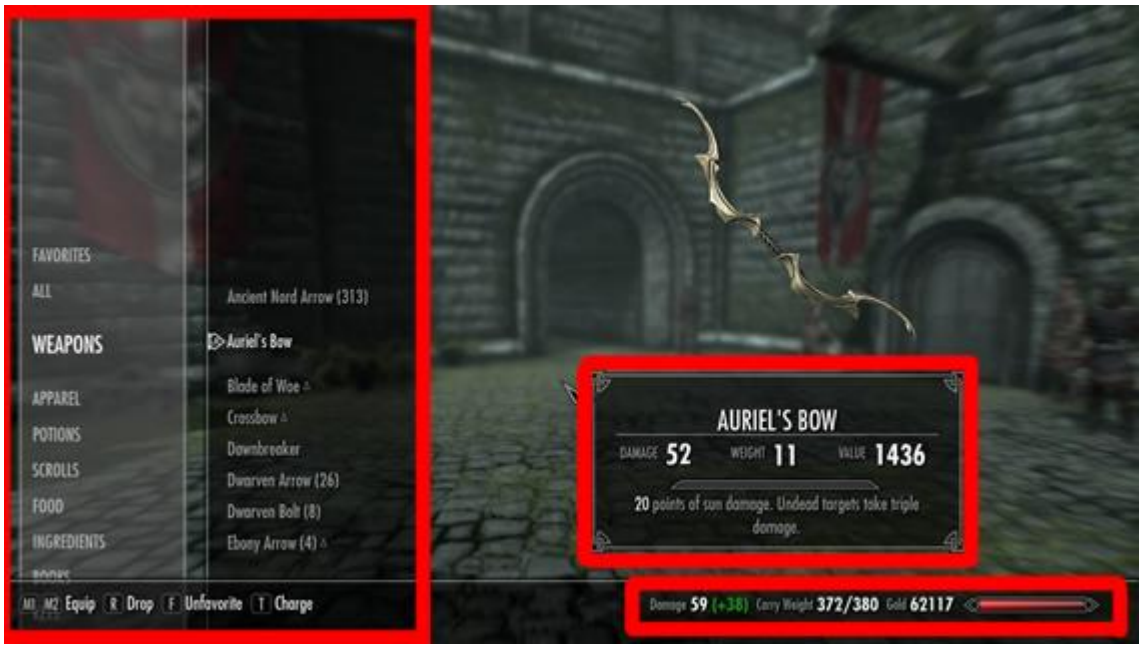


Figure 2. UI of the inventory in Elder Scrolls V: Skyrim (Bethesda Softworks, 2011). Useful parts outlined in red, there is lot less empty, unused space.

UI should be changed based on the platform. The platform of the game also affects the placement of UI – often in a mobile game the game mechanics or the placement of the UI force player's hand being in a certain place. The designer needs to take into account

the buttons of the phone itself so the player does not accidentally use phone's buttons instead of the game's buttons. (raresloth.com, 2018).

For Kinect games where the player's body is the controller – as in the project of this thesis – the UI has some special requirements. There should be a confirmation gesture to prevent accidental interaction with a button or a menu item. Usually it is holding a hand over a button for a certain time (usually indicated by an animation) to confirm that the action is indeed the one that the player wanted to perform. As the players generally do not have as much experience playing a Kinect game than playing a console or a mobile game, the gestures and interactions needed for the game should be clearly explained to make playing easier (Jakob Nielsen, nngroup.com, 2010).

2.2 Character design in general

If the character is playable, it should have features that make the audience feel connected to it. To make audience feel connected, the character should not invoke negative feelings towards it. The theory of uncanny valley is mostly associated with robots but it is applicable also in video games. In general, people feel comfortable when the character behaves the way they can understand it: clearly an animal behaving the human way is preferable to more anthromorphized non-human (Schneider, Wang et al. 2007).

Character with consistent behavior does not only make player feel more comfortable towards it, but it is also an important factor when creating a believable character. Character's appereance should give away the mechanics of the character. As an author Dane Thomsen writes on Giant Bomb: "We can assume that if it has wings it can fly, has a mouth it can speak or holds a gun it can shoot." If a character does something only due to the story, it creates ludonarrative dissonance. For example a character might be struggling to kill a single person in a cutscene, but will butcher their way through a small army without a second thought in-game (giantbomb.com, 2012). Even though ludonarrative dissonance is a thing to remember for authors of the game, it also applies somewhat to the design: if the character is a pacifist, they probably should not be wielding weapons and so on. The designer should not fall into using tropes instead of characters when making an easily distinguishable character. A generic man with a gun is easy to make but it is easy for a player to forget. They can be designed good-looking but shallow, lacking character and making it just an empty shell (chrisoatley.com, 2014).

To create more in-depth character the designer needs to bring the inside to the outside. Primary shapes are a useful tool to deliver the character's personality. Round shapes are associated with friendliness, sharp, triangual shapes make the viewer feel the character being threatening or evil, and the square represents the sturdy and stable (Rogers 2014). Using these shapes allows an easy way to make a bad guy feel evil and the pink blob feel safe. In Warcraft III, the player plays as Arthas who starts a hero but in the end turns the villain can be seen for example on the Figure 3. In the left-hand side of the Figure the character's shoulderpads are round, silhouette and mace being square and the detailed belt buckle being round as well. The look of the character is strong but safe (Rogers 2014). On the right-hand side the square mace has turned into a sword – triangular shape – round shoulderpads have spikes in them – more triangles – the round features have been replaced with triangual ones, leaving the base form being square and triangles.

The players sees the transformation in colors as well: the character that was first colored in vivid colors turns gray and worn-out, all visual cues to tell the player – who is still in-control of Arthas – that they are no longer the hero, but the villain.

Figure 3. Arthas starting a hero, ending up as a villain (Blizzard Ent., 2002)

2.2.1 Japanese style

Japanese art has always featurered cute characters or so called "chibi" characters from the early times, including manga-like paintings and old statues with cute and round

features. Art was and still is flat, with no lightning or shadow effects that would create an illusion of three-dimentional area. (Professor Mitsuru Haga, 2016, Japanese art history lecture at Tohoku University). It is suggested that due to the exporuse to the cute characters – especially after the creation of Japanese animation *anime* (アニメ) after Second World War – Japanese consumers have grown fond of the cute characters, making them a staple style of contemporary Japanese media (Galbraith 2014).

The chibi aesthetics might be used due to a few reasons. Chibi characters' big heads with large eyes enable them to portraly emotions easily. This works especially well in handheld consoles where the screens are fairly small. Since the characters are also fairly simple in design and requiring little to no details, it is likely to be more hardware-friendly, making chibi characters ideal for handheld consoles. For example in early Pokémon games, when launching the game, the protagonist is shown as fairly human-proportioned, anime-styled character (Figure 4), but when starting new game the character is "moved into the game" and made into stubby, chibi-like character (Figure 5). As original Gameboy had small screen and limited capacity, making characters small makes sense.

Figure 4. Start screen of Pokémon Red (left), characters in-game (right) (Game Freak Inc., 1998)

Great part of Japanese game characters are not specifically Japanese looking. More than often characters are racially ambiguous so the player can identify the character with their own race perception. This is a common trait in anime and used also in games very often, as the big Japanese comics (*manga,*漫画*),* anime and game companies work usually under one roof, thus creating a media mix. The erasing of Japaneseness is called mukokuseki and was originally made to prevent the bad reputation of Japan after WWII to have a negative effect on the product itself (Watanabe, Watanabe et al. 2015).

In the 90s, when anime started to become mainstream in the Western world, the phenomeon “cool Japan” was born. After that some games started to have more distinguishable Japanese characteristics and it started to become a selling point. The developing technology allowed more expressive graphics and games started to have Japaneseness in them, mostly by style derived from anime – because of the media mix as games were turned into anime and vice versa (gamescriticism.org). Even in three-dimentional – 3D – games the characters may have animesqué features found in them like flat-colored hair, sharp features and neutral, racially ambiguous face. Some characters remain even more the same as the 2D games are often produced in the same style with few to no variants. Some 3D graphics are produced with cel-shading technique, making them appear more cartoon-like. Combining cel-shading with anime style creates a 3D game that is very similar to a 2D game. This was used in new Pokémon games as well as it maintained the style established a decade ago (Figure 6).

Figure 5. Articuno in Pokémon Ruby (left) and Pokémon Moon (right) (Game Freak Inc., 2002, 2016)

Besides the chibi style mentioned earlier in the game, the other 2D graphic style is the classical anime style, first seen in anime series and films. This style is more used in PC and console games, not so much in mobile gaming. Coloring of the characters is flat with usually only one lightsource. Main focus of the anime charactes is their face. When the style was first created for TV shows, the budgets were limited and the time to create an episode was short. This forced the animation team to focus on making the characters deliver feelings and their emotions through their eyes as movement was limited. The mouth movements were only opening and closing, making animation production cheap.

Realistic-looking 3D games are often PC and console games, and especially PC is not a popular platform in Japan. This might be the reason why big AAA titles – titles with the highest budget - like Resident Evil are made to look western (Figure 7) with characters being even animated speaking English. For Japanese audience generally subtitles and dubbing are often available even if the game is made in English.

Figure 6. Characters from Resident Evil: Revelations (Capcom, 2012)

2.2.2 Western style

Even from the earlier days of European art, classical Western art has not been flat when it comes to lightning or shadows. Whereas Japanese art has been flat from the early paintings to the modern anime style, Western paintings have had a touch of realism most of the time. It is not surprising then that the games made in contemporary Europe and North America, 2D games are not as common as in Japan.

Most Western games use 2D graphics either in mobile games or when a game has a designated art style made in 2D – pixel art being the most famous of them. Pixel art was created when computers had limited memory, thus creating limitations such as the number of colors and sizes of the sprites. Due to nostalgia and fondness of the style it has stayed relevant to this day, even though the technique itself became obsolete due the development of the computers. Pixel art is currently used especially in low-budget indie games as it offers affordable and simple way to create art (2dwillneverdie.com, 2018). Where some games keep the style and coloring near the original limitations: a handful of colors, ¾ perspective (Figure 8), pixel art can be used even games that operate in 3D (Figure 9). In Fez, published 2012, the game uses 3D layers and 2D planes (gamestm.co.uk, 2018). This creates an interesting look as sprites and background are 2D but there is more depth to the level, and it also allows the creation of interesting level designs.

Figure 7. A scene from Undertale (Toby Fox, 2015)

Figure 8. Fez, game made 2D in 3D environment (Polytron Corp. 2012)

Often 2D graphics create a game where the player is more of an observant or in control of the character rather than the character itself. The world might not be as immersive as in 3D first-person shooter as it nowhere near realistic and the player cannot see through the characters eyes but the character itself. However this does add up the status of video games as an artform. Picturesque games are sought after and it might become a selling point itself. The 2017 hit title Cuphead by Studio MDHR was done in 1930s rubberhose animation style and handmade graphics, and the uniqueness of the game's art was likely one of the factors that made it popular.

Western 3D games are mostly photorealistic, following the classic beauty standards – although this is also a case with Japanese 3D game characters as their style is very similar to western ones. The visual outlook of the characters has developed over time as 3D graphic creation tools and computers have evolved. Whereas Japanese games get inspiration or even material for their graphics from manga and anime, in the west games are usually a product of their own. With the motion capture techniques, and games having a better quality in graphics, most AAA titles have their protagonist looking extremely realistic. More than often the protagonist is a white male, most likely made for target audience to make them relate to the game, instead of Japanese version of making the player look at the character and feel something towards it – that might be the reason why the characters are nowhere near as cute and vulrunable as Japanese characters (O'Hagan, Mangiron 2013).

3 LOCALIZATION

A successful localization takes cultural differences into account so the players may understand what is going on in the game. While the term translation refers to translation of the language used in game, the term localization refers often to cultural adjustments, *culturalisation*; (Chandler, Deming 2011) the game is modified according to the target audience. For example the game Fatal Frame – originally named 零 (*Rei,* Zero) – was heavily modified in order to fade the exclusively Japanese features like the school uniform of the main character (O'Hagan, Mangiron 2013). Culturalisation lets the player feel more engaged to the game as the cultural context is familiar and content is easier to understand in deeper level. Culturalisation also takes in account things that might get players disengaged from the game. Certain things that might be taboo, illegal or offensive are better to leave out or change to avoid backlash and possible permanent damage to the company's reputation or getting the game banned in certain countries. Germany, when localizing to Europe, is the strictest when it comes to censorhip. For example, the games published there should not have gore or Nazi symbols in them. The localization team should take this into account and remove or redo possible forbidden imagery (Chandler, Deming 2011). For example, blood might be colored green or be removed altogether, scenes might be removed or symbols changed. If the localization is done outside of the company, developers and producers should be in contact with the localizers to ensure the mutual understanding of the possible changed content. The censorhip can be done in a transparent way if the developers want to make the original content clear. For example, if the game set in Second World War, Nazis can be represented with red armbands with only Swastika missing – or replaced with a black cross.

Translatos have a task, not only to provide accurate translations but also to keep in mind the culture they are translating the game to. In order to do that the translator needs to have an excellent knowledge of the culture and the language of the target area, but also of the source material. The cultural translation, culturalization, not only includes the graphical changes as mentioned earlier, but also wordplays, puns and possibly names (O'Hagan, Mangiron 2013). In the thesis work there was no narrative text or dialogue, therefore the only culturalization that had to be done was the forms of politeness.

Depending on the resources and time available, there are different levels of localization that can be done. The lowest level is no localization at all, when there is no translation or changes in graphics or gameplay-wise. Second level is so-called “box and docs” localization where only manual and packaging are localized. In current times where most games are mostly distributed online via applications like Steam or Origin, it is not likely many companies choose to do this. Probably the most common one is partial localization where in-game texts - and possible packaging – are translated. Voice-overs are not translated. Full localization includes translated voice-overs and it is naturally the most expensive one. When localizing to Europe, it is beneficial to localize to English – if the game is not made in English – and to “FIGS” (French, Italian, German, Spanish) as they are the major languages in Europe (Chandler, Deming 2011).

To make translation easy and preventing any errors added to the code, coders should not have in-game text strings put into the code itself, but to a different file or data base where the strings can be retrieved – at least if the translation is made by an outside translator with no knowledge of coding. One way would be to provide a text file for each instance, with added context information. The translator should get as much information about the game/scene they are translating in order to make best translations possible. To avoid clashes with different characters and symbols Unicode should be always used (Chandler, Deming 2011).

4 QUESTIONNAIRE

To gain/have an understanding of preferences when it comes to graphics, a questionnaire was conducted amongst Japanese and Finnish. The questionnaire was done using Google Forms as it is easily accessible via the internet and it is easy to modify and share. The original language was English and then it was translated to Finnish and Japanese. The questionnaire included pictures of characters from Japanese, Finnish and American TV series and video games. The characters were chosen to represent different characteristics such as eye size, skin color or art style. The characters were both male and female equally.

After presenting an image of a character, the participant was to give their opinion on different attributes of a character: overall look, hair, eyes, face and color. They had the answer to the statement “I like the character’s:” with the options ranging from “strongly disagree” to “strongly agree” (table 1).

Table 1. Attributes that participants had to give an opinion

	Strongly disagree	Slightly disagree	Neither agree or disagree	Slightly agree	Strongly agree
Overall look	○	○	○	○	○
Hair	○	○	○	○	○
Eyes	○	○	○	○	○
Facial features	○	○	○	○	○
Colors	○	○	○	○	○

After the first chart the participant was given adjectives to choose from. They could pick all the applicable and also add their own (table 2).

Table 2. Adjectives to describe the character

I think the character is (multiple choices possible):

- [ ] Beautiful
- [ ] Cute
- [ ] Ugly
- [ ] Weird
- [ ] Happy
- [ ] Sad
- [ ] Interesting
- [ ] Empathetic
- [ ] Evil
- [ ] Handsome
- [ ] Other:

In the Japanese version the word “empathetic” was replaced with the word “優しい” (*yasashī)* meaning kind as in Japanese the concept of empathy is strongly related to the word kind and there is no word exclusively for empathetic.

Participants were also able to leave additional comments after the questions.

4.1 Participants

The participants were selected with Prof. Sato, who distributed the questionnaire to Japanese participants, getting 31 participants. The Finnish version was sent to over 50 students of Turku University of Applied Sciences but only 13 responses were acquired. Most participants were male, 61.5 % of the Finnish respondents and o 71 % of the Japanese. The rest of the participants were female, except one Japanese responder identified as “other”. The majority of participants were aged 20 and up (Figure 1 and 2). However, some Japanese left their age unanswered.

Table 3. Ages of Finnish participants.

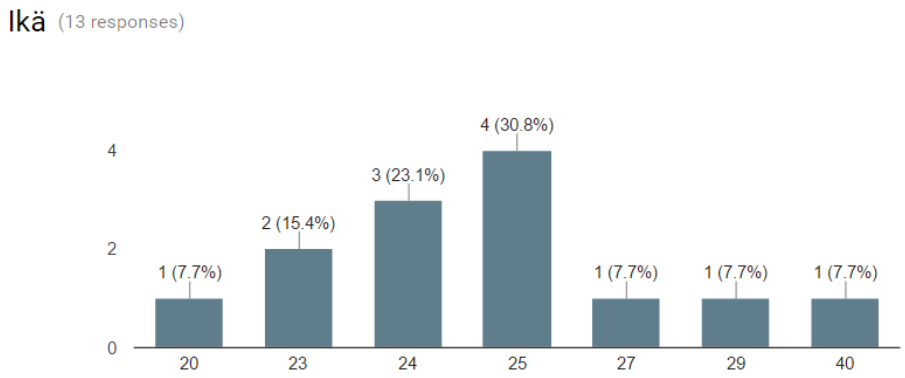
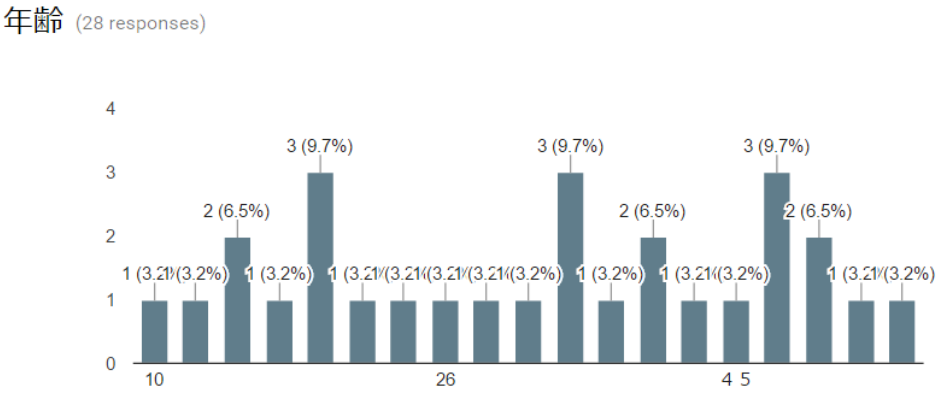


Table 4. Ages of Japanese participants



4.2 Results

Professor Sato performed a statistical calculations to the results in order to compare the Finnish and Japanese responses. The values were given to each answer for the statements of the first part of the questionnaire. (Table 3) When the *p*-value of mean of answers in each segment (“hair”, “face” etc) is under 0.05, the differences between responses from Finland and from Japan are greatly different.

Table 5. Values of answers (Sato, 2017)

Answer	Value
Strongly disagree	1
Slightly disagree	2
Neither agree or disagree	3
Slightly agree	4
Strongly agree	5

From the questionnaire three characters received most mixed opinions from Japanese and Finnish (Figures 10, 11 and 12). In general, Japanese disliked the characters whereas Finns liked them.

Figure 9. Sun goddess Amaterasu (Hi-Rez Studios, 2016)

Figure 10. The Tief (Frozenbyte, 2009)

Figure 11. Jaina Proudmoore (Blizzard Entertainment, 2014)

All the characters receiving mixed reviews are from Western game studios, two from American and one Finnish. In all cases Japanese were to like less about characters look, especially the Finnish Tief (Figure 13.) received very negative reviews (Table 4.).

Table 6. Medians of Japanese and Finnish responses about The Tief (Sato, 2017)

	OVERALL LOOK	HAIR	EYES	FACIAL FEATURES	COLORS
JAPANESE	*1*	*1*	*1*	*1*	*1*
FINNISH	*3*	*3*	*3*	*3*	*4*
P-VALUE	***0.01***	***0.01***	***0.01***	***0.01***	***0.01***

In comparison Japanese character (Figure 15.) did receive positive reviews both from Finnish and Japanese (Table 5.).

Figure 12. Misaki from anime “N・H・Kにようこそ” (Gonzo, 2006), edited

Other Japanese characters also received more unified and positive responses than Western characters from both Japanese and Finnish responders (Table 5.).

Table 7. Medians of responses and the *p*-value of Misaki (Sato, 2017)

	OVERALL LOOK	HAIR	EYES	FACIAL FEATURES	COLORS
JAPANESE	*4*	*3*	*3*	*3*	*3*
FINNISH	*4*	*3.5*	*4*	*3.5*	*4*
P-VALUE	***0.61***	***0.82***	***0.57***	***0.84***	***0.24***

From the Table 4. it can be seen that *p*-value is greater than the *p*-value in Table 3. It would be possible to argue that Japanese prefer a Japanese character over Western character only based on the nationality, but the characters were not identified in the questionnaire. Other than that, some Finnish responders identified the anime in the comments but Japanese responders did not do that. In general the commentary was different based on the nationality of the responder: Japanese commented on the character's looks, eyes and other things that were related to the questionnaire. Finnish responders commented either the series the character was form or the character itself – it seemed that Finnish were identifying characters more than Japanese. Example of a Finnish comment for the character that was most postiviely reviewed by both Finnish and Japanese (Figure 15.): "Welcome to NHK - excellent slice-of-life series." One Japanese comment was on the other hand: "I like the black hair" ("黒髪が好き" "*Kurokami ga suki*"). Some Finnish comments were unusable due to the lack of content as they were only jokes.

4.3 Analysis

Japanese characters in general are known to be cute so it is not surprising that Japanese would prefer the round-eyed, soft characterstics to somewhat harsh, aggressive style lot of Western characters represent. Especially the ones that got the worst reviews by Japanese are female character that are represented angry, aggressive and active. That is probably due to the Japanese tradition of portraying even Japanese female superheroes cute (Reinhard, 2004).

The dislike for aggressive-looking characters is mostly limited to female characters. Male characters did not receive such diversity in responses, they all received fairly positive

reviews both Japanese and Finnish responders. However there were similar preferences as with the female characters, the softer style of another character from “N・H・Kにようこそ(*N.H.K ni Yōkoso!,* Welcome to the N.H.K) (Figure 16.) received liking from both Finnish and Japanese unlike really realistically drawn character from World of Warcraft (Figure 17.) was not liked that much by Japanese.

Figure 13. Kaoru Yamazaki from anime “N・H・Kにようこそ!” (Gonzo, 2006)

Figure 14. Arthas Menethil (Blizzard Entertainment, 2002)

Of all the characters, the character in Figure 10 was the most Western-looking due to the realistic proportions, blonde hair and gray eyes. It is also the most aggressive-looking with hints of armor showing. The most common adjectives associated with the character were “bad” and “ugly”, Finnish also described the character “interesting” while Japanese used the word “strong” often.

Some Japanese responders left some parts unanswered, so that might be a factor affecting the results. It does not seem that women or men would prefer greatly different things, and there were no major differences in different agegroups either. The gender of the chararcter was not also a major factor, both female and male characters were as liked.

One possible explanation of different preferences is that Japanese are not exposed to Western cartoons as often as Finnish are to Japanese manga and anime (Yuta Aoki, interview, YouTube, 2016). This lack of exposure to different styles might make a new style look weird or uncomfortable.

5 GRAPHIC DESIGN AND TRANSLATION

5.1 Graphic design

The graphic design consisted of two parts: deciding what graphics were to be kept same and which ones were to be replaced. Although the questionnaire (presented in chapter 5) was not directly done for this game but rather to understand the general preferences, it gave hints of which kind of styles and colors would either European or Japanese audience like.

5.1.1 Planning

The game has three minigames in it. All the games use Xbox Kinect, so the player sees themselves on the screen. Depending on the screen size, up to six people may play at the same time. The game is targeted towards old people who have difficulties moving and need physical excersise. The game can also measure movement of joints, so the caregivers and patients can get information of the physical condition. The Japanese version has three minigames that are bouncing a Japanese paper ball, rock-paper-scissors, and bouncing a football. In the Finnish versions the Japanese paper ball is changed to a beach ball as it is more familiar and also creates the feeling of a warm beach that can be thought as a pleasant during the cold season.

The target audience for this specific game was elderly people, which created some restrictions to the design. The colors needed to be clear, rather vivid and have enough contrast. At the same time however the images should not be to distractive since the game needs focusing and the images are there only to provide a scene and outlining the gameplay area. The silhouettes that are sharp and clear make charactes such as palm trees (Figure 18) easily distinguishable just with a quick glance.

As it is a game for rehabilitation, the graphics should make the player feel good, or at least create an atmosphere that is comfortable. In Japanese version this was achieved for example with cheering crowd, in the Finnish beach ball version the imagery of a warm beach with palm trees. The Finnish design was left without any hints specificly to Finland or Finnish culture so the game would be also marketable to Europe.

To the Rock-Paper-Scissor game (じゃんけんゲーム, *jankengeēmu*) new graphics were not needed besides correct and incorrect marks. In Japan correct is marked with O and incorrect is marked with X. This might confuse the European players so instead of O and X the signs for correct and incorrect were decided to be a checkmark (✓) and X.

5.1.2 Execution

The view of the game area needs to be clear enough, therefore the assets that overlap with the area – represented by white in the Figure 17 – the opacity of the assets was set to 45% in order to not block the view and make the area feel more open. The assets are bigger horizontally than they are viewed in the game make adjusting the area possible, hence some are cut out in the final product.

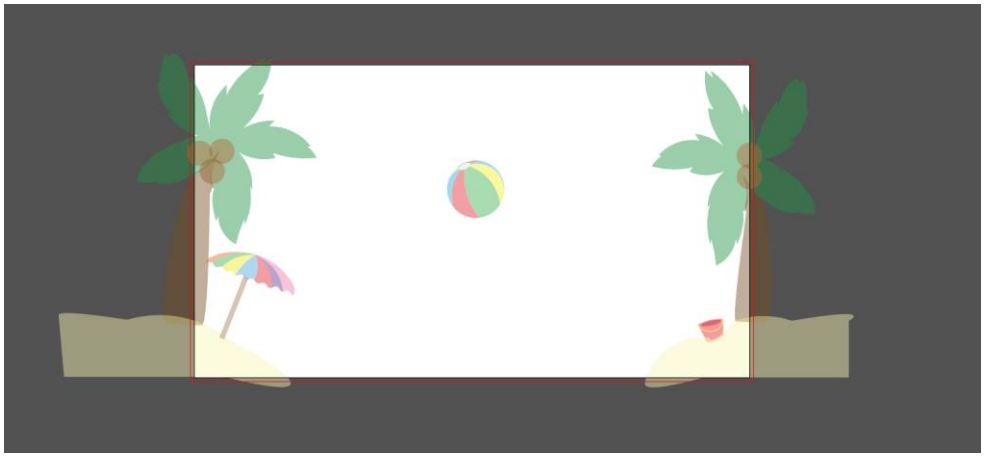


Figure 15. Beach assets in location where they would be in-game (snippet in Illustrator)

The design work was done with Adobe Illustrator as the vector images are easy to adjust, and the original designs were also done in Illustrator form. All the graphics are transparent so they will not disturb the player when playing. The playing area is between the borders so the player is able to focus only to the object in the game: in the beach ball case it is the ball being bounced. The player sees the outline of the “skeleton” of themselves, so the movement of the body is trackable at all times.

To make the overall look feel lightweighted and not to draw attention to the graphics too much, the graphics were left withouth borders. It was also to imitate the original style, as some parts were left untouched and the style needs to be continuos in order to create a

solid, common style. Also the side graphics just mark the end of the gameplay area so there is no need for them to be too complex.

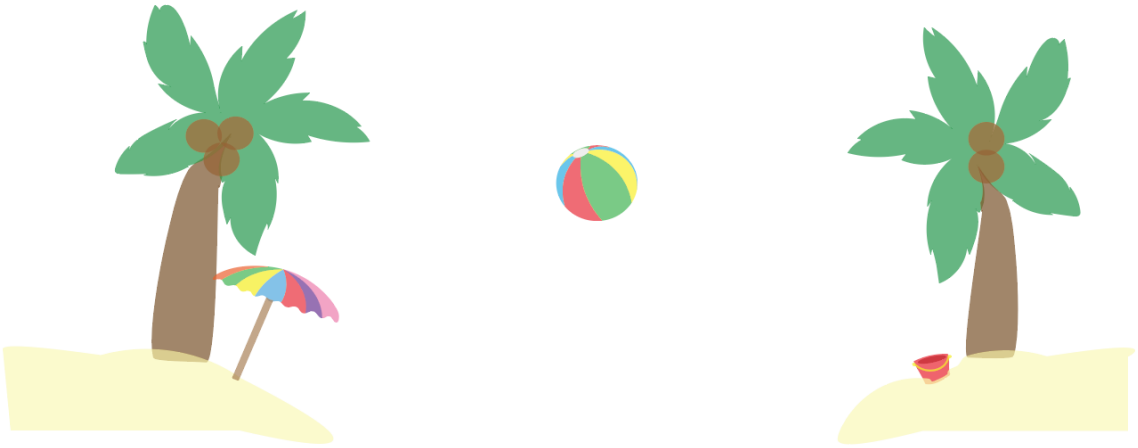


Figure 16. Assets in the final form

The correct and incorrect marks were also made in Illustrator, the colors matching the normal traffic light scheme: green for good and red for bad (Figure 20). The marks were made with slightly curved lines to make them more relaxed-looking. The colors scheme was similar to the other graphics, simple and clear with minimal shading to emphasize the shape of a symbol.

Figure 17. Symbols for correct and incorrect

5.2 Translation

The translation had only one objective: to translate all the text in-game to Finnish and English. The grammar needed to be correct and the translation as accurate as possible.

5.2.1 Planning

The game was to be translated from Japanese to Finnish and English. Finnish version was for the new, localized version to be brought to Finnish market, and English version provided an excellent platform to continue localizing and marketing to diffenret countries in Europe. When translating, the aim was to create text that would be easy to read and understand as the text is mostly instructions on how to play the game (Table 3).

Table 3. A sample of the translated texts

ゲームを終了するには「９」を押してください	Paina [9] sulkeaksesi pelin	Press [9] to close the game
もう一度ゲームをするには「１」を押してください	Paina [1] pelataksesi uudestaan	Press [1] to play again
ゲームを開始するには「１」を押してください	Aloittaaksesi uuden pelin paina [1]	Press [1] to start the game
残り「○△□」秒	Aikaa jäljellä 「 ○△□ 」 sekuntia	Time left: 「 ○△□ 」 seconds

The text was mostly instructional, so there were no major cultural differences that would have needed special attention. The only major difference is the formality of language, Japanese is very polite language whereas English or Finnish used in instructions is usually imperative: for example the sentence “Press [9] to close the game” is natural to encounter as an instruction, but in Japanese an extra layer of politeness is added with “ゲームを終了するには「９」を押してください” that would directly translate as “Please press [9] in order to close the game”. It is not unnatural as a sentence, but in the context of directions the use of “please” is unnecessary.

The text in each language was supposed to be roughly the same length to maintain the space the texts require the same in each version. Japanese sentences were longer due

to the polite suffixes, words written in katakana and different sentence structure, but it balances out the fact that kanji take less space than Finnish or English words.

5.2.2 Excecution

The sentences and words were presented in an Excel sheet. Each word or sentence were in their own separate cell, with each language having two columns: one for titles such as “Beach Ball Game” and the other one for instructions and in-game texts like “By lifting your knees, keep the balls from hitting the ground” or “Level 1”. There were 31 original cells in total, final amount of cells being 93.

Most often the translations were direct from one another but some occasions it required different words in one language than other. For example there was the word “画面表示” (*gamenhyōji)* translating to “screen demonstration”, meaning the demo video in the game. This word was translated to just “demonstration” in English as the extra word “screen” seemed pointless – the player would see immediately that the demonstration is on the screen as they are watching it. The Finnish word on the other hand was translated as “esimerkkivideo”, translating to “an example video”. This word was decided to use because the loan word for demonstration (“demostraatio”) could possibly be a bit difficult to understand by elderly users of the game.

Something that was not done this time was a Swedish translation. It could be useful to have also a Swedish translation in order to widen the market to Finnish Swedish-speaking audiences and at the same time to Sweden as well.

6 CONCLUSION

It is clear that even when principles of visual design in UI and characters are global, preferences and visual representations vary from one market area to another. Japanese media is popular in the West, and this was shown in the results of the questionnaire as well. Whereas the Japanese respondents preferred characters from Japanese media, the Finnish respondents had more variety in preferences. It might be due to lack of exposure of Western media in Japan and in contrast to the availability of Japanese media in the West.

However, the characters most disliked by both parties were Finnish, so it begs to question whether or not Finnish game companies should pay more attention to their character design. It is to be noted, however, that the representation of the Finnish character design by the questionnaire was very minor, and to better understand the topic it would require a study of its own. If a company wants to play it safe, when aiming for the Japanese market, it would be advisable to approach the Japanese style or at least its core elements.

One might argue that the more beautiful the character, more it is liked. Based on the research of the Western and Japanese style, it did seem that the Japanese – as visually appealing as it is to most people – do have a sense of anonymity with the racial ambiguity and lack of realism. It might be the reason why respondents did prefer them in the questionnaire and why Japanese style has spread to the west but not vice-versa.

To appeal to a certain market the knowledge of the target area is crucial. Sources of information are widely available in the internet and in literature so there is no reason not to search for information there. Certain aspects might still be easier to find when visiting the target country itself, therefore being able to work on this topic in Japan gave an excellent layer of information that might not been available elsewhere.

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