



Kati de Jona 2022, April 14th

Master Design for Interaction

Graduation thesis **Delft University of Technology** Faculty of Industrial Design Engineering

Chair: Arnold Vermeeren, Dr. Ir.

Department of Human Information Communication Design

Mentor: Mathieu Gielen, M.A.

Department of Design Conceptualisation & Communication

Kunstmuseum Den Haag Irma Benliyan **Kyra Berkhout**





KUNSTMUSEUM DEN HAAG

Contents

Executive summary	4
1. Assignment introduction	
Part 1: Preliminary research	
2. Kunstmuseum Den Haag	-
3. Current museum products	12
4. Families at the museum	 1:
Conclusion: Project brief	18
Part 2: Field Research	
5. Mutual engagement	2
Conclusion: Engagement through design	22
6. The personal art experience	23
7. Testing first theories	20
Conclusion: Enhancing the personal experience	3
Part 3: Design iteration	
8. Second round of tests	33
9. Design experiments	39
Part 4: Final design	
10. The final design	4
11. Product evaluation	48
12. Recommendations	50
Sources	52
Appendix	53

Executive summary

This report describes the process of designing a shared family experience for Kunstmuseum Den Haag that encourages visitors to explore and discuss the personal art experience together.

Kunstmuseum Den Haag is an art museum with a large variation of art pieces. They would like to see more families visiting the museum.

Their vision is 'Getting closer to art', meaning they wish to offer visitors a personal connection with art.

The personal art experience is anything someone thinks, feels or perceives about art that is unique to that person. It is interesting to help families explore and discuss this experience, because children might have trouble identifying them and have trouble putting them into words. In turn, adults might underestimate their children and never try, or they don't know how to talk about it. By discussing the experience, you can not only learn about art, but more about yourself and your family members as well.

To have a shared experience that successfully enhanced the personal experience, it is important that all family members are equally engaged. During this project, I identified four design principles of creating engagement in museums and four ways towards enhancing the personal art experience.

The four ways to engagement are:

- Role-play and autonomy
- Anticipation and reward
- ▶ Appropriate novelty and challenge
- ▶ Facilitation of varied energy levels

The four ways to enhancing the personal experience are:

- Pushing and challenging behaviour
- Novelty and weirdness
- ► Asking the right questions
- ▶ Relatability to one's own life

The final product consists of six role-booklets that each use different questions and exercises to explore and discuss the personal art experience. With the roles, one can move, be creative, search for details, experiment physically, fantasize, fabricate, change, feel and share opinions. Every player answers one question per artwork.

Additional to these booklets, there is the wayfinding board. The wayfinding boards helps with choosing an artwork to explore and discuss with your family. The family is still in charge of choosing their own artworks, but they are challenged to choose art they might otherwise not. It also makes for variation in activities during the interaction.

With this game, families are able to direct their own visit, but be supported in their journey toward a more personal experience.



1. Assignment introduction

This project is the coming together of my own belief and interest as a designer, the insights of the Museum Futures Lab at the TU Delft and the vision of my client Kunstmuseum Den Haag (KDH). I came to KDH with a hypothesis about families in museums and they kindly gave me the freedom to research this hypothesis within the context of their museum.

1.1 Initial hypothesis

When two adults visit the museum, they often share and discuss their personal thoughts on the art. Families visiting don't seem to do this as much. Why not?

There seems to be the assumption that children need quizzes and treasure hunts to be entertained in a museum. The museum offers these products and activities, but parents expect them, too.

My hypothesis is that children are more capable of understanding and enjoying art on a personal level than parents might think. However, they do so in a very different way than adults and will have more trouble expressing their own experience. By designing a more shared museum experience

for families, where they explore art together, better understanding between adult and child could be created. And hopefully with that, the art can be enjoyed on a deeper level as well.

1.2 The client

Modern art museum Kunstmuseum Den Haag resonated with my interest in sharing personal thoughts about art, especially in the relation to the family visit. Therefore, they offered to work with me.

The museum would like to see more families visit them, which is why we decided I would design a new product for their museum that targets families.

1.3 Initial assignment

Ultimately, the assignment below was written: This assignment would concern families with children between 7 and 10 years old. It was to be decided if specification within this range was necessary.

1.4 Steps to the design brief

To validate the relevance of this initial assignment and work it out into a more specific design brief, a few things would need to be researched and worked out.

Research on the context and vision of the museum would be necessary to figure out how to design a product fitting for the client. Since the museum already has some products they offer their visitors, these products will be looked at as well.

Furthermore, the target group families (with young children) will need to be researched and defined.

"Design a product that makes visiting the Kunstmuseum a **shared experience** for **parent and child** by letting them **explore art together**, ultimately creating **understanding** between them and enjoyment of art on a deeper level."

Part 1 Preliminary research

02 Kunstmuseum Den Haag

03 Current museum products

04 Families at the museum

Conclusion: Project brief

2. Kunstmuseum Den Haag

Kunstmuseum Den Haag is a modern art museum in The Hague. They own a wide range of both fine and applied art pieces, but are most renowned for their collection of works by The Hague born Piet Mondriaan and other artists from the Dutch movement 'de Stijl'. The museum offers various products and activities that target their different visitor groups and help them get closer to art.

In this chapter, we take a look at some aspects of the project client, Kunstmuseum Den Haag, that will be relevant to the project going further. These aspects are the architecture, the vision, the visitors and the art collection. The product line will be discussed in the next chapter.

2.1 Non-linear architecture

Kunstmuseum Den Haag, previously knows as Gemeentemuseum (Museum of the municipality), was designed by famous architect H.P. Berlage and was built in 1935. The building is a large part of the brand of KDH, since it has so much impact on the way KDH presents art.

Berlage wanted the museum building to be a piece of art in itself: art within art. He wanted visitors to experience the museum as if wandering through a forest, saying it would counter 'museum fatigue'. He designed the building to be labyrinth-like, with a lot of rooms that vary in size and brightness connecting in illogical ways. The non-linear way visitors are led through the various spaces of the museum makes KDH unique.

2.2 The vision: getting closer to art

For KDH, Berlage's vision is of great importance, but they also describe a personal vision: 'Getting closer to art'. They want to offer people a more

personal experience of art and let it have a deeper impact, to find connection with it. This vision is relatively new for the museum (first it was 'get lost in art', which relates more to Berlage's vision). They currently offer one product/activity that is a direct result of this reframing: the Mindfulness audio tour. More on that later.

2.3 Visitors and target groups

Fitting for their central position in the city's culture, KDH aims to be a museum suitable for all people of The Hague. They offer a variety of programs and products to cater to different ages and types of visitors. Even so, the largest visitor group of KDH is older couples who are mostly white and often have a higher education. They have more Dutch visitors than international ones.

Besides the approximately 500.000 'regular visitors', the museum also has a large number of school visits. Each year, around 40.000 children



Kunstmuseum Den Haag exterior (source: Kunstmuseum Den Haag)

visit through educational programs: up to 24.000 kids from primary education (BO), and 16.000 from secondary education (VO and MBO).



School children getting a museum lesson (source: Maurice Haak)

2.4 Art collection and exhibitions

Kunstmuseum Den Haag was founded as a modern art museum, but now also has a large contemporary art collection. While the collection includes a good mix of design objects, furniture pieces, fashion items and paintings, the latter is still predominant. The full collection counts about 160.000 pieces, which they show in about 35 exhibitions a year.

The museum has continuous and temporary

exhibitions. The next page shows a map of the museum with the continuous and temporary exhibit spaces.

Recurring themes and art styles

The Kunstmuseum is a museum with a varied program. It is not uncommon to see exhibits that feature many different artists or types of art.

Compared to other museums, KDH has a lot of Dutch art. This is apparent in their exhibition program, though they strive to mix it with plenty of international artists.

They also own a noteworthy collection of works from female artists. They find it important to keep expanding this collection and make it visible in the museum.

When the museum opened, the largest exhibit was of art from the Haagse School (a rather realistic painting style). Later on they collected many works by de Stijl, presently their most notable exhibit.

The commonality of abstract art at KDH is partially because of this connection to de Stijl, which features a lot of cubist and simplified characteristics. KDH not only has abstract paintings, but many applied art pieces as well, where form often goes beyond function.

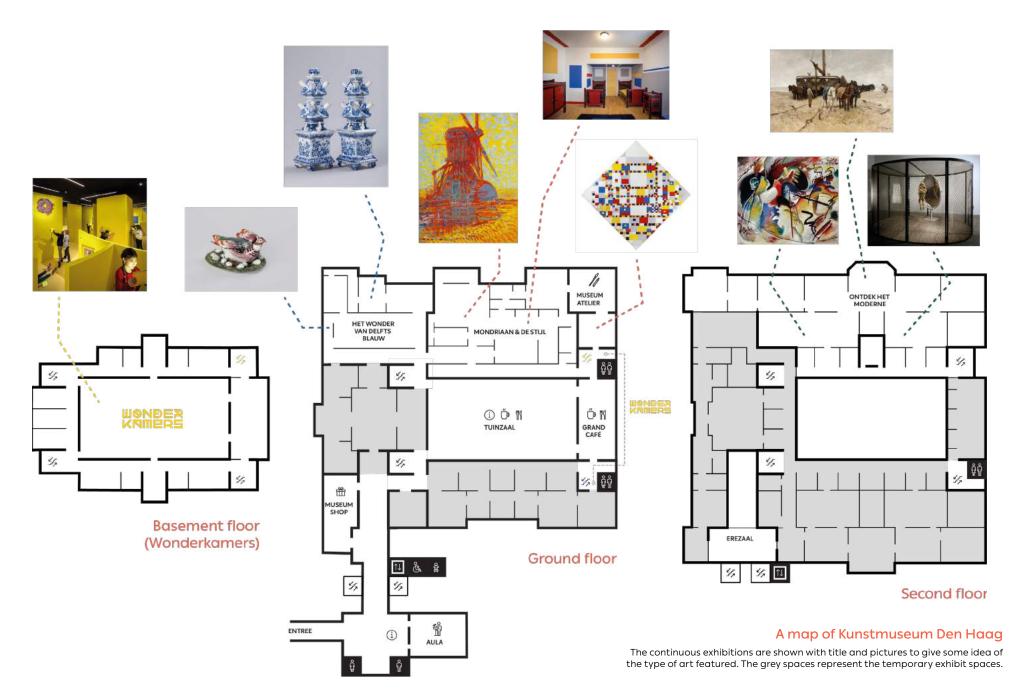
Currently, expressionism is one of the most featured art movements at KDH.



Form going beyond function: kids' chair design by Gerrit Rietveld (source: Erik Rijper)

Continuous and temporary exhibitions

Their three continuous exhibits include: the Dutch art movement 'de Stijl' and founding artist Piet Mondriaan (the museum's expertise and largest continuous exhibit); the 19th and 20th century modern art collection; and the collection of Delft blue vases and other applied art pieces.



Temporary exhibits greatly vary. The visual on the right shows some of the themes featured in the past.

Exhibition lay-out

The museum has a certain way of deciding which exhibition goes in which room.

Downstairs, immediately visible from where you walk in, the applied art exhibits are shown. This is the way Berlage envisioned it. He thought applied arts were a nice introduction to the museum, since it is more recognisable for a lot of people. They can get used to viewing art, before they go further into the museum to see the 'high arts' (often seen as more intellectual).

Further into the museum (still on the ground floor) is the Mondriaan exhibit, opposite of which, there is space for what KDH calls the "artists' artist". These are often lesser known artists that were admired by other artists. These exhibits are smaller and change quite often.

Upstairs in the museum, you find the large, more commonly popular and accessible temporary exhibits. These are also often the ones that are more widely marketed and get people in the museum.

The modern art exhibit is also upstairs, together with other, small temporary exhibits.

KDH hopes to get people inside the museum with the bigger exhibits, to then entice them to wander around and visit these lesser known



Walter Swennen



Het gedroomde museum



Alphonse Mucha



Global Wardrobe



Bob Bonies



Paula Rego



Bas van Beek



Nalini Malani

Examples of featured temporary exhibits at KDH (source: Kunstmuseum Den Haag)

artists afterwards.

This way, the bigger temporary exhibits have a larger role in promotion, increasing reach and

accessibility, while the smaller ones have the goal of enticing people to explore art and find the 'one for them'.

2.5 Current products and activities

KDH offers multiple activities for enhancement of the museum visit. For the sake of clarity, I will refer to these activities as products going forward.

The museum has a mobile app, on which one can find some basic information about KDH, get tickets and access the audio tours.

All in all, there are two main types of products at the museum: products relating to exhibitions and products that are separate from the exhibitions. To the right, the product line is visualised, showing these groups. In the next chapter, these products are looked into further.

2.6 Conclusion

In short the following things are to be kept in mind:

- ► The museum vision is 'Getting closer to art'. They want to create personal connection between art and the visitor.
- ► The museum has mainly non-linear wayfinding, the visitor decides their own path through the exhibits.
- ▶ Visiting families are not uncommon, but KDH would like to target them more.
- ► The museum has a large variation of types of art. They change their temporary exhibits quite often.
- ▶ The museum has a fairly rich product line.

Current KDH product line (sources from left to right, top to bottom: Thijs Wolzak; Marwan Magroun; Maurice Haak x2; Kunstmuseum Den Haag x3)

Seperate from the museum (designated space)



Chambers of Wonder



Free Family workshops



Free Children's workshops

Inside the museum



Museum lessons



Activity sheet



Audiotours (in app)



Mindfulness audiotour (in app)

3. Current museum products

To look further into these products, I did some research in the museum. I observed people using the products and I spoke with various KDH staff. I was looking for insight on the general effectiveness of the products, especially concerning engagement of families and if it creates a shared experience.

For this chapter, I will shortly describe the research done and insights gathered for each product, then conclude with a visual. I focus my attention mainly on the products closer to my target group and assignment.

3.1 Chambers of Wonder (Wonderkamers)

The largest and most significant design in the museum is Chambers of Wonder. Chambers of Wonder spans the entire basement floor of KDH and is a multimedia, interactive game for children and families. This game is completely separate from the rest of the museum and is a continuous installation.

It has thirteen differently themed rooms with games about art or artists, besides a large labyrinth in the middle. A tablet guides the visitors through multiple random rooms to play games, to finally end in the labyrinth to create the players' 'own Chamber of Wonder' with three art pieces they choose from the labyrinth.

Research activities

For about two hours, I observed a high school class of 11- to 12-year-olds that were visiting the Chambers of Wonder.

Additionally, I observed a family of four visiting the Chambers of Wonder for about one-and-half hours.

Results

- ▶ The game is very engaging to all ages.
- ▶ It features a lot of novel technology.
- ▶ Visitors are in the Chambers of Wonder for about one to one-and-a-half hours.
- ► The family collaborated and played together (a shared experience), mainly in the rooms with challenging quiz-games.
- ► The labyrinth in the middle is exciting to children.
- Players can earn points with the rooms and earn a medal at the end, depending on how many points they earned.

3.2 Activity sheet (Doe-blad)

The Activity sheet is a paper folder for children that families can receive at the information desk. The museum has a few Activity sheets about the continuous exhibits always available, and sometimes make an extra Activity sheet specially for a temporary exhibit.

The sheets feature a mix of questions and creative exercises inspired by specific works in the museum. The user has to search for the artworks

first

Research activities

To research the Activity sheet, I spoke with the creator and manager of the product, Iris Beljaars, the education department's head of 'child and family'. I also evaluated the product myself and shortly observed it in use in the museum by two families.

Results

- ► The whole family searches for the artworks together. The child largely directs the visit route like that.
- ► The activities vary in the type of skills they require, like searching for details, solving puzzles or drawing. Like this, it speaks to a wider scope of children.
- ▶ Open questions about one's own opinion or the like are not as common.
- ► The Activity sheet is done mostly by the children, parents only help once in a while. Children don't ask for a lot of help either.
- ► Children like being autonomous with the product.
- ▶ The sheet can be finished individually.
- ► Children get a sticker or the like for delivering a completed sheet at the info desk.

3.3 Audio tours (incl. Mindfulness tour)

The museum has a few audio tours that can be accessed via the app on the visitors own phone.

There are a few that accompany the continuous exhibitions at KDH, and there is the Mindfulness tour. The Mindfulness tour is in theme of the museum's vision 'getting closer to art' as it guides you through an individual, reflective journey through the museum.

Research activities

The audio tours were evaluated by looking through the museum's app. Specifically the Mindfulness tour was of interest, because of its relation to the personal art experience (looking and thinking about art from one's personal perspective). To see what this tour was about, I tried it out myself and took notes.

Results

Regular tours:

- ► The audio bites can be listened to in any order and at any tempo. This allows visitors to wander at their own pace.
- ▶ The tours are made to follow individually.
- ► The audio tours are not commonly used by families.

The Mindfulness tour:

- ► The Mindfulness tour tells the user to focus on themselves and how the art and surroundings can help them gain personal insight.
- ► The audio bites are not related to art works or locations, they encourage the user to

- choose those themselves.
- ► The bites should be listened to in a certain order, starting with defining personal themes and then expanding on those themes further on in the tour.
- ► The questions asked are reflective and sometimes abstract.
- ► The language level of the tour is rather high and obviously targeted at adults rather than children.
- ▶ In my own experience, the tour was difficult to follow at points. It requires good listening and understanding skills.

3.4 Free children's and family workshops

The free children's workshop (Kinderatelier and Familieatelier) is another activity that is in a separate part of the museum. Every Sunday afternoon this workspace opens its doors for children to do arts and crafts. Adults are not allowed. The children can stay for about 45 minutes before their parents come to pick them up. Until then, they are in the care of two museum teachers that explain assignments (if there is one), help and guide them. Ultimately, though, the children are in charge of what they make and do at the workshop, as long as the craft they work on stays feasible to finish within the 45 minutes. During Familieatelier, parents and family are allowed. This version of the atelier is usually once a month.

Research activities

I visited the children's workspace and spoke with two museum teacher. They also told me more about the family workshops. When I was there, I also observed the interaction between the children and teachers.

Results

- ▶ Adults are generally not allowed, it is very child-focussed.
- ▶ Parents are not allowed, because they tend to steer or rush children, often subconsciously.
- ▶ Child autonomy is encouraged and celebrated.
- ► Teachers ask children about their ideas and crafts. Letting them lead conversation.
- While the family workshop is obviously a more family-focussed activity, the child having a good experience is still the main goal.

3.5 Museum lessons

KDH offers museum lessons to groups of children. This is only done in the context of school visits and is taught by one of the museum teachers. There are separate lessons for each group (so for ages 4 to 12). Visiting groups go through the exhibits for part of the lesson and assemble at the children's workspace for the rest.

This is so far from my context, that I didn't look into this much further.

3.6 Conclusion

I was interested in how engaging and 'shared' the products were, in general but also in relation to one another. Therefore, I concluded the observation results with the visual on the right.

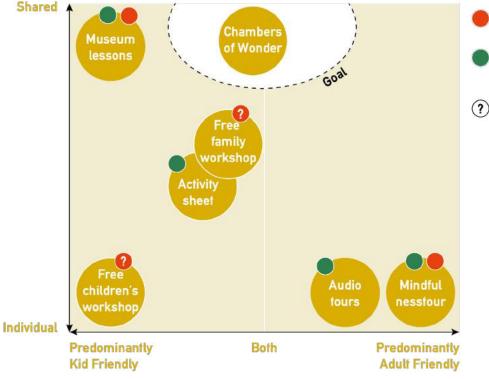
First I only drew in the two axes, one measuring how shared or individual a product interaction is, the other showing if the product is engaging to both adults and children, or is mainly targeting one of them. This lead to a 'goal area' where I would want my product to end up.

After filling in the products, however, I found that the Chambers of Wonder already fulfilled this goal quite well. It engages the whole family and encourages collaboration and discussion.

Particular about it is that it is separate from the museum. And since the only family activity that requires exploration the exhibitions, the Activity sheet, turned out to be mostly kid-friendly, this seemed like a gap in the product-line for KDH. Additionally, there is the KDH vision 'getting closer to art' that inspired the Mindfulness tour. The personal experience does not come up much in the Chambers of Wonder or the Activity sheet.

From this, it can be concluded that there is indeed a gap in the product-line that can be filled with a product for the exhibitions that concerns the personal art experience.

THINGS 'TO DO' AT THE KUNSTMUSEUM



of the personal experience

Requires exploration of

Prompts exploring/sharing

- Requires exploration o current exhibits
- ? Unproven assumption

4. Families at the museum

Since families have long been an important target group for museums in general, there seemed to be a lot of insight into the topic already. A little booklet called *A family friendly museum* (de Hartog & Remmelink) describes a lot of things to keep in mind when designing a museum experience for families.

The museum staff offers valuable empirical knowledge, as well, so an interview with the head of child and family at KDH was arranged.

Using these sources, this chapter sheds light on families in museums, families specifically at KDH and the differences in how adult and child experience art.

4.1 Families in museums

Families are a common visitor group for museums. Because of school and work, families often visit either during the weekend or during vacation time.

Families can be difficult to design for because of varying ages within the same group. Most families have multiple children which all visit the same content. To design for them, it is important to target each subgroup: adults, teens (12-16), children (8-11), and young children (5-7).

Special children's museums are (not surprisingly) most visited by the target group. More often than not, these children's museums are focussed on science or history, rather than art.

Length of the visit

Children have a limited amount of energy and attention. The younger the child, the smaller this amount usually is.

When the family visits together, it is often the

youngest child that influences the length of the visit the most. Because of this, family visits are generally not that long. The length is greatly influenced by the breaks the family takes, the child's interest in the museum, the museum's efforts to engage the child, and much more.

Without intervention, a family visit goes through the following phases (de Hartog & Remmelink):

- 1. Orientation (8-10 minutes)
- 2. Intensive visit (25-30 minutes) The family is attentively looking at the exhibit content. In this phase, the attention is high, information is absorbed well and the mood is focussed and calm.
- 3. 'Zapping' (30-40 minutes) The attention and energy start to dwindle. The family looks at the exhibit content at a much higher pace. They start skipping content that doesn't immediately catch their attention. Conversation is less about the content, and more about the family.
- 4. Leaving (5-10 minutes) The family leaves

the exhibit. Sometimes they rest and will be energized enough to go back in another exhibit. In this case, the last two phases are repeated, but within a shorter time.

With these phases, the average museum family visit takes about 1 or 2 hours. Take note, however, that the intensive visit, during which most engagement and learning is experienced, is only 25 minutes.

Wants and needs

There are two main groups of family visitors at museums:

- 1. The families that come for a social day out. Their main goal is to have fun together and create memories. They don't visit museums too regularly.
- 2. The families that want to learn something. Here, the parents are often art enthusiasts or otherwise fan of museums. They are more familiar with it. They look for something to tell their kids about and share their knowledge and interest.

Children mainly want to have fun at museums. They gravitate toward more active and physical activities, like feeling something or playing a game.

Adults want their children to be entertained. Most of their attention during a museum visit goes toward making sure the children are okay.

Benefits of engagement

Now we have spoken about family engagement as if the child is the only one that needs to be engaged. Unfortunately, this seems to be the tactic of many museums. They will offer games or activities for the child and the adult will help the child with those things, but they will not always play an actual part in the interaction.

Engaging adults can turn out to be a challenge, because of their tendency to focus all their attention on the children. They might not realise they are allowed to be engaged themselves, let alone it being beneficial to be.

The visual on the right shows why it is ideal to focus on the adult as well as the child. These insights are based on clustering of literature sources and observing families in the museum.

4.2 Families and art viewing

Children and adults look at art in different ways. This has to do with a combination of physical and cognitive differences. The visual on the next page lists some of the most influential characteristics.

The impact simple things as view angle can have is often overlooked. *A family friendly museum* tells the story of a family visiting a large war painting at the Rijksmuseum. The young girl burst out crying, because unlike her parents, she was standing at eye-height with the dead bodies on the ground below the victorious general.

When both are engaged, both experience more fun, alone and together

When both are engaged, both experience better understanding of the exhibit When parents are not engaged, they go into guiding mode. They may rush or take over activities. The shared experience is lost

When children are not engaged, they become restless and frustrated. The group experience can turn negative

Reasons why mutual engagement during family visits is important

Behaviour and cognition

Children tend to be drawn toward details. Partially because they are often literally closer by, but also because they are good at noticing them. They also ask a lot of surprising questions, motivated by their curiosity and the newness of most things. The younger the child, the stronger this shows.

There is a big difference between how 7-year-olds view art compared to 10-year-olds. A younger child tends to see their opinion as a collective one ('what I think, everyone thinks) and tends to fantasise what they see. They will create their own stories behind the art. Older children are more aware of the artists' possible motivations and get that their opinion is their own. This

affects how and what art is enjoyed by these age-groups (Van Heusden et al., 2016).

Like said before, adults tend to talk about what they know more. They explain things. They tend to read information signs to relay that information back to their children afterwards.

They also tend to be more aware of 'museum etiquette'. Being silent, calm and generally non-disruptive to other visitors. This is one reason to be so focussed on entertaining the children, in fear of them overstepping these boundaries when bored. It can also make them uncertain about 'fitting in' at a museum. A lot of parents are afraid of not knowing enough to visit with their children, according to Iris Beljaars.

4.3 Families at Kunstmuseum Den Haag

At KDH, most visiting families will do (at least) one of three things:

- 1. Visit the Chambers of Wonder. This is a very popular activity and what many families specifically come to KDH for. Most visit it directly from the info desk and often go home after, since the game is quite long. Sometimes they have lunch and visit the rest of the museum after.
- 2. Visit the exhibits with an Activity sheet. Activity sheets are advertised at the info desk so most families will take it with them.
- 3. Go to the Free Children/Family workshop. Most families doing this are regulars. Their children go every Sunday. When children are left at the workshop, adults go visit the museum by themselves.

Family targeting

Like many other museums, KDH targets families by mostly just targeting the child. This is reflected in the fact that, despite the name, the education department 'child and family' concerns children visiting with family, rather than the family as a whole. As opposed to children visiting with school. Nevertheless, it needs to be said that the Chambers of Wonder are an exception and do in fact target the family very well.

Children

Curious

Detail-sensitive

Literal or linear interpretation

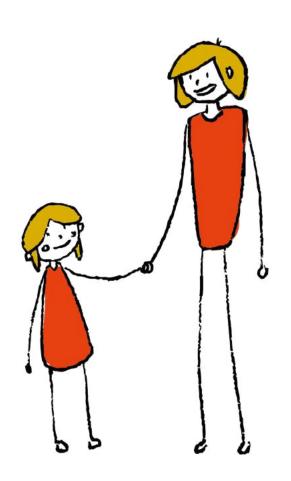
Intuitive decision-making

Open-minded

Lower view angle

Short attentionspan, lower attentiveness

Lower language understanding, reactive to images



Adults

Knowledgeable

Context-sensitive

Subjective interpretation

Reasoned decision-making

Rule-following

Higher view angle (often straight on)

Longer attentionspan, higher attentiveness

Higher language understanding

Characteristics in adults and children that influence how they look at and understand art. As you can see, they compliment each other in many ways.

Conclusion Project brief

In this chapter, the most important insights to come from the context research are presented. These are all things to keep in mind and aim for as the project continues. They also lead to a more specific project brief, which is written on the next page.

The personal experience

Providing visitors with a personal experience of art is an important goal for the museum. This is apparent through the new vision 'getting closer to art', and the recently designed Mindfulness audio tour. The museum's product line is lacking a product for families that concerns this topic.

Mutual engagement

Research shows a few reasons why it is important to engage the whole family during museum visits. Fun and togetherness are valued highly by families, both of which are increased by mutual engagement. Engagement seems to create better understanding of the exhibits for both adult and child. And non-engaged adults or children may stand in the way of the intended experience.

Currently, the museum's focus regarding the target group 'families' is mainly on the child. This is noticeable when looking at the products. For this project, it is important to target the family as a whole, rather than predominantly the child.

Differences in art experience

Adults and children experience art very differently. Both on a cognitive and a physical level. Because of this, they also take away different meanings and insights from art, which, when shared, could enrich the art experience for the whole family. Therefore, the product should encourage adults and children to use their differences when looking at art, as well as promote sharing insight.

Visiting exhibitions

The family products (or activities) the museum offers are often separate from the exhibitions. If not, they focus on predetermined artworks, rather than support an independent or spontaneous museum visit. There is an opportunity for a product that can be used in any exhibit.

Non-linear

The museum is designed to resemble a labyrinth and pushes the visitor to wander around instead of following a strict path through the building and exhibitions. Therefore, a design that affords a non-linear navigation fits best.

Effective with different art styles

The museum features a large variation of art pieces. To be suited for Kunstmuseum Den Haag, the design needs to be equally effective for these different types of art.

Short interaction

Children have a limited attention span. Because of this, family visits are often relatively short. While product intervention can change this, it is nonetheless convenient if the product allows for a short interaction.

Language limitations

When dealing with children, especially young ones, it is obvious there will be a language barrier. Appropriate language should be used as to not hinder children to use the product.

Defined Design brief

"Design a mutually engaging experience for families visiting the exhibitions of KDH, that helps them view and discuss art together in a more personal way, ultimately creating understanding between them and enjoyment of art on a deeper level."

Research for next part

Now, there are two main topics that I have not researched yet, which are:

- 1. Mutual engagement
- 2. The personal art experience

Both of these have to do with experience and behaviour, so I will be researching with the target group more for the next part.

For both topics I will try to distil a couple design principles to use further in my design project.

Part 2 Field Research

05 Mutual engagement

Conclusion: 4 Ways to engagement

06 The personal art experience

07 Testing first theories

Conclusion: 4 Ways to the personal experience

5. Mutual engagement

During the observations, conversations and readings I did for the first part of the research (mainly described in chapter 3), I found a lot of insights on how design affects engagement in the museum. In this chapter, I will shed light on a few important insights, leading to the conclusion of four design principles on the next page.

5.1 Children and rewards

As seen in the children's workshop, the Chambers of Wonder and with the Activity sheet, children always like getting a representation of accomplishment. The reward itself it important, but also the anticipation towards receiving it and showing it off. In the Chambers of Wonder, there is such a moment of 'showing off the room kids made. It caused multiple children to be disappointed, when it turned out this moment was very short and not many other people got to see their accomplishment 'reward'.

During the observation of the school children in the Chamber of Wonders, the points system caused high engagement, but also created competitiveness between groups, distracting from the game.

5.2 Releasing energy

With the school class as well as the family, children were very excited by the Chambers of Wonder labyrinth. They always ran around for a while first, before calming down and refocussing on the game. This seemed to power them up again somehow.

5.3 Kids like holding things

The tablets at the Chambers, the Activity sheets and even the tools at the workshop. They're all examples of things children very much liked to hold by themselves. The tablet often even caused jealousy between siblings about who's turn it was to hold it. The younger the child, the more important this seemed.

It seemed to represent autonomy, but also some kind of leadership position.

5.4 Novel tech

The cool, new technologies in the Chambers of Wonder spiked engagement every time. However, it also caused confusion in many parents, provoking them to take over from the children to 'figure it out' (unsurprisingly, this was often the dad).

It also caused general distraction from the game as children would play with the tech for a while, before continuing.

5.5 Challenge encourages collaboration

In the Chambers with the family, it was clear that challenging activities that offered multiple interaction points (the tablet ánd a screen, for example) brought about collaboration the easiest. This was when adult and child both felt challenged and had to discuss to solve the puzzle. Multiple interaction points also played into this by giving family members their own tasks.

Conclusion

Role-play and autonomy

If there is a leading role in a game or something like it, children seem to really want that role. It shows autonomy and makes them feel special. It also noticeably creates engagement through this created wish in the child.

If there is only one role that is perceived as above the others (like a leading role), children become envious of the leader and the experience turns negative. If there are more roles, the wish of the child wanting autonomy in their tasks is still granted, but this fighting over who is the leader is not as big of an issue.

Roles can also heighten engagement with adults, by not allowing them to be a by-stander, but instead include them in the game on an equal level as the child.

Anticipation and reward

This insight is not very surprising. It is proven time and again that adding a form of reward to a game will increase the engagement of it.

Anticipation to receive that award can be just as useful however.

Rewards do also have a negative side. It can cause a game to only be about winning the reward and avert focus from the experience of the game itself (or in this context, avert from the art viewing). There needs to be a balance between engagement and competition.

How to create engagement through design.

Appropriate novelty and challenge

Facilitation of varied energy levels

Anticiption and reward

Role-play and autonomy

Appropriate novelty and challenge

Novelty in a game can cause excitement about exploring it. Challenge excites people by creating the wish to beat it.

Puzzle elements and novel technology are good examples of this heightening engagement.

However, like the other principles, novelty and challenge should not take over the game.

If visitors get too engrossed in puzzles or cool technology, they get distracted from the experience itself.

Facilitation of varied energy levels

Lastly, it is important to offer visitors the opportunity to express various energy levels. This is especially relevant for children.

Children will lose their attention more quickly than adults. This often results in a change from a calm energy to a more boisterous one.

If the design allows children to release this higher energy once in a while as part of the experience, the children can keep their attention for longer over all.

6. The personal art experience

Having determined that the personal art experience is something valuable for a family to share, we now need to define exactly what this experience entails and how we can enhance it.

In this chapter, we find this out by discussing the topic with peers and an expert from the Kröller Müller museum.

Though 'the personal experience' might not be the universal term, it seems to be something familiar in the context of art (or to people who often visit art, at least). I spoke with multiple different people about this term to create a clear definition and to get an idea of what these experiences could be in practice.

I first set up a brainstorm with three fellow design students (see appendix C). Through mind maps and a few How To's (Tassoul, 2006), we discussed three things:

- 1. What do people qualify as a personal art experience?
- 2. How can it be different for children and adults?
- 3. How can we affect it?

Later, upon recommendation of my mentor at the museum, I visited the Kröller Müller museum and spoke with Sandra Boks.

Kröller Müller is a Dutch art museum which has had the personal experience as a main focus for the last years. Sandra is part of their education department, manages their *Philosophising with Children* programs, and oversees the design

of their educative products. As someone who has been working there for 9 years, she can be regarded as an expert on the personal art experience with families.

With her, I mainly discussed:

- 1. How do the different products at Kröller Müller relate to the personal experience?
- 2. How is the personal experience different for children and adults?

I also observed visitors in the museum and tried out one of their products, *The Museum Dice game*, which seemed most similar to this project's design goals.

In the next paragraphs, I will describe the results from these discussions.

6.1 What is a personal art experience?

One main definition for the personal art experience came up:

"Anything you think, feel or perceive regarding an artwork, that is different from other people and is therefore an individual experience."

Feelings of personal connection were also often associated with the term, but since these ultimately fall within the previous definition, this way felt most complete.

So what kinds of thoughts, feelings or perceptions are to be expected? And is there a difference within these? Can one be more personal than the other, for example?

Triggers for personal experiences

Every artwork triggers personal thoughts, feelings and perceptions. Sometimes positive, sometimes negative. The intensity can also differ. You might feel stronger about one artwork than another. And you might notice one more in the same way.

From the brainstorm session it became clear that what triggers strong personal experiences differs greatly per person and per artwork. Though, it was concluded that it mainly depends on these four factors:

- One's living context and values,
- ▶ One's memories and emotional experiences,
- One's interests and knowledge,
- ► The perceived opinion of others: person A's opinion on certain art combined with person B's opinion of A, will reflect B's opinion on the art.

Though it is likely not the only way, discussing the personal experience is often done by asking questions. This is true for the Kröller Müller products and it came up as a logical method during the brainstorm.

By testing and reflecting on the products, the visual below came to be. It visualises the possible types of answers to game questions and how they relate to the personal experience.

Exploring and sharing the personal experience

An artwork by itself is not always enough to be triggered through one of these factors. Sometimes extra information on the art or background can do that instead. This is of course why museums offer signs storytelling throughout exhibitions, but this is not the only way to get there. Visiting together can offer the same.

This is where **exploring and sharing the personal experience** become important.

Exploring an artwork via different methods will help with discovering the (strong) triggers and define the thoughts, feelings and perceptions. Sharing is in turn important to have a shared

Sharing is in turn important to have a shared experience, firstly, but also to possibly trigger other people again.

Through exploration and sharing, the collective personal experience can be deepened.

6.2 Deepening versus Broadening

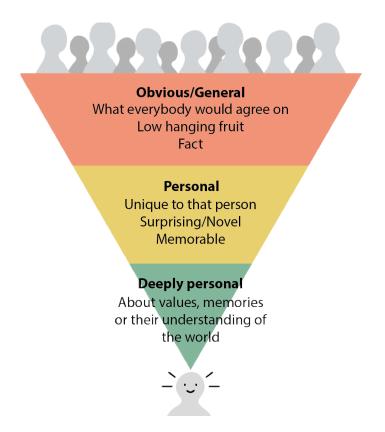
The various products Kröller Müller owns show an interesting distinction in how they relate to the personal experience. I will use two examples to explain this: *Philosophising with Children* and *The Museum Dice game*.

Both ways can work towards a personal experience but make use of different methods.

Philosophising with Children (Deepening)

This product is actually a collection of lesson packets for school classes. The children and teacher get workbooks that discusses a few specific artworks at Kröller Müller. Each artwork has it's own topic to philosophise about. The workbook offers information, explanation, starting and deepening questions.

The goal of this product is to go really deep into abstract topics and relate the discussions back to the art. The conversations are long and very specific to the work.



A visualisation of what answers to game questions would be defined as a 'personal experience'.

The Museum Dice game (Broadening)

This product is designed for families and is much more broad in the way it relates to the personal experience.

The game has a large list of questions divided into different sections ('imagine', 'search with me', 'what do you think?', etc). Players roll a die to decide what section to choose from and then answer one of those questions together. The questions always concern the entirety of a museum room (E.g., 'How many ears can you find in this room').

Because each question is unrelated and starts a new 'round' of the game, the game doesn't encourage deepening of topics that much. It focusses more on looking at a lot of art and comparing them. In other words, broadening.

6.3 Differences between adult and child

There are a few important differences in how adults and children deal with the personal experience.

An obvious one is that children are likely less aware of the experience. Like mentioned before (§4.2), the sense of self is not fully developed yet (especially with younger children). They tend to assume other people think the same things as them. Therefore, children might not regard the personal experience as personal.

If they do, they might have trouble putting it into words and sharing it. The language barriere is another thing to keep in mind.

Adults have their own difficulties. As Sandra Boks says:

"Children always feel like the expert and will look at art without worry or judgement. Adults think they need to be an expert, this is their barriere."

The product needs to distract or comfort the adult in a way, as to make sure they don't get in the way of their own experience. They also will need to accept that a personal experience is always valid, instead of worrying about interpreting art in the 'right' way.

Finally, Sandra mentions how their products always have a mix of quiz-like, fact-based questions and open questions that lead to more personal answers. This is because families have different needs. Some are intimidated or confused by open questions and might need some more lead-in. Quiz-like questions can help make people feel at ease and more confident.



Above: The Museum Dice game, below: Philosophising with Children

7. Testing first theories

During the brainstorm with peers, design solutions for the mutual engagement insights and the first personal experience theories were thought up. With the help of Sandra Boks from Kröller Müller, a first design to test was chosen. This first design was used to research the personal experience further, now with the actual target group involved.

This chapter describes some of the relevant decisions made during this phase, the tested design and important results of the test.

Like I said did we also do some ideation during the brainstorm with peers mentioned in the previous chapter. I prepared How To's (Tassoul, 2006) on two of the mutual engagement insights and two personal experience theories:

- ▶ How to explore the personal experience?
- ▶ How to share the personal experience?
- ▶ How to play with roles and autonomy?
- How to facilitate varying energy levels?

The other mutual engagement insights ('Anticipation and reward' and 'Sufficient novelty and challenge') seemed to speak for itself so were left out of the brainstorm. For the full results, see appendix C.

I then formed three early ideas from combining interesting brainstorm results, and discussed these with Sandra Boks at Kröller Müller (again, see chapter 6). There, I was also introduced to the similar game *The Museum Dice game* produced by Kröller Müller. In this chapter, I will go a little more into relevant aspects of this game and how it influenced my own design.

7.1 Learning from *The Museum Dice game*

In the previous chapter, I briefly discussed this game and how it works. It serves a very similar purpose as to the one I aim for in this project, so to make sure not to make the exact same product, I tried out the product and observed it in use by others.

Positive aspects to use as inspiration

The game shows how my project goals are valid and can create a positive family experience that feels more personal to people. In an online review, a user says:

"Never before was a museum visit so happy and really together. Much more fun than the slightly arrogant 'search that one object because I as curator find that the most important for you to see' approach." - Astrid Poot (lekkersamenklooien.nl)

The game can be described as 'fun and easy' and definitely causes more in depth conversations about art, often about topic you would not

discuss otherwise. The experience is memorable and creates a feeling of togetherness with other players. It is nice to be able to decide where you go yourself, like the online user also says.

Negative aspects to avoid

Because the game questions always concern an entire room, the game is not suited for rooms where there is only one artwork. It also becomes much more boring when the entire room is by one artist.

Sometimes the questions do not suit the artworks in the room. The answer to the question might feel too easy and not inspire conversation. Then the game can quickly fall flat.

Answering only one question per artwork makes this more common and feel tedious (since you have to roll again and choose a new work for a new 'chance' at an interesting question)

The single die and shared question cause envy in (especially young) children over who can 'lead'.

7.2 Design 1: Family exhibit curator team

The design chosen from the ideas discussed with Sandra is presented on the next page. I chose to go with a role-play card game (see appendix D). The roles aspect gives every family member their own task. It can also call upon different skill sets in adults and children.

Rules were kept as simple as possible.

- 1. This game has four roles that are divided up over the family members. With less than four players, some will have two roles.
- 2. The family chooses an artwork to discuss and answer a question from each role-card.
- 3. Afterwards, based on the given answers, they decide if the artwork fits in their 'Family exhibit'.
- 4. Then, the role-cards are rotated so everyone has a different role again.

To add a physical component to the game that shows ownership, each role-card has an complimentary button.

Each role has a different theme and therefore uses different ways of discussing the personal art experience. The Historian and Philosopher roles are more heavily inspired by what adults like and are good at. The Detective and Artist roles are that for children. By rotating the roles each round, the family members try out each other's 'strengths' and are made aware of the different interpretations each person has.

The Historian

jou laat voelen en denken

Welke emoties voel je bij het

Vind je het werk mooi of niet?

Waar denk jij dat het werk over

Filosoof

Wie geef je dit werk kado?

Vaar liikt het werk op?

werk? Maakt het je blij?

Waar herinnert het werk je aan? Aan iets of iemand?

(lekker persoonlijk!).

The Historian gives adults the opportunity to tell the children what they know about the art.

At the same time, the children can use their imagination to make up answers they don't know.



te maken van het werk.

Laat het jou en de anderen

/ Hoe ziet dit werk er uit als dansbeweging?

inspireren!

- Kan ie wat tekenen dat bii het werk past?
- / Hoe klinkt dit werk? Kan je het laten horen?
- Kan je het werk uitbeelden?
- / Kan je een gedicht verzinne dat bij het werk past?

Kunstenaai

The Philosopher

The Philosopher uses the most classic way of discussing one's personal art experience, by directly asking for an opinion or emotion. It also has questions that ask the users to associate the work with people and things they know.

The Detective

Children like searching for details, so that's what this role is all about. Adults are encouraged to copy the children's way of looking at art when playing this role.

Besides searching for details, the questions also (indirectly) ask for favourite and least favourite parts.

The Artist

The Artist brings an active component to the game, by encouraging users to translate the art into a new medium.

This engages children by offering variation in activity and pushes adults to act playful like kids do.

7.3 Testing the first game design

I printed out the game and approached visiting families in the museum. I spoke with five families, four of which tried out the game.

My research questions were:

- 1. How clear is the game in use?
- 2. How effective is the game at enhancing the personal experience?
- 3. How mutually engaging is the game?
- 4. How enjoyable is the game?

Continuing in this report, this test will be referred to as T1. See appendix E for the full reference table.

Though it was not my intention, all families answered every question on the role-card they had, instead of just one. The design seemed to motivate this. This made them discuss every painting at length and rather thoroughly.

"I see a bird, but I don't know if that's what Mondriaan intended." -Mother A



Blossoming apple tree by Piet Mondriaan

Family A

The first family consisted of a mother, father and a boy of around 10. They played three rounds (so three paintings).

Both parents quickly assumed they got the rules and started playing without reading the questions well. They mostly went off the role names and made some incorrect assumptions on the purpose of each role. This steered the game away from personal answers.

"You are the 'Artist', so you are supposed to be Mondrigan." - Father A

The son did read the questions and played the game as intended.

The parents were too focussed on saying the factual thing, which was detrimental to the personal experience. Afterwards, the mother said she wanted to tell her son everything she knew. Their was visible excitement when something new was spotted or there was a difference in what people saw. The parents seemed positively surprised by the son's interpretations of the art. In the end, he had the most fun and novel insights. The family enjoyed the game, though it was a bit long at times according to the son.

Family B

The second family was five people: a mother, grandmother, a son (14) and two daughters (8 and 5). This family had less trouble making

up facts than family A. This often initiated funny storytelling. The family discussed about 5 artworks.

Since she could not read by herself, the youngest did not participate the whole time. With help from her mom, she was able to play the Detective card for one artwork.

She also walked around the exhibition holding the Detective button like a looking glass. The physicality of the button seemed to resonate with her, causing her to role-play.

The lengthy discussions caused the children to get distracted when they were not presenting their role. This lowered engagement, but also had a positive effect. It created side bars where life stories seemed to naturally come up, which were then connected to the art again.

The longer interaction also caused the teenage son to notice more, to his own excitement:

"The longer you look, the more you see." - Son B (14)

Overall the family, especially the mother, was enthusiastic about the game. They would have liked to play it more often.

Family C

A father and son (8) tried out the game, but had been at the museum for a long time already, so they were quite tired. We stayed seated in the museum 'Tuinzaal' (cafeteria space) and discussed the hanging sculpture there.

Because of the low energy, the boy was not enthused by most of the game. Surprisingly, the Artist role was the one that got him actively playing the game and thinking more deeply about the artwork. The challenging aspect of the role seemed the most likely reason.

Family D

The final family consisted of a mother, father, daughter (9 or 10) and son (6 or 7). They played for as long as they said they would ever want to, which was 8 paintings, each role two times.

They played the game in a Walter Swennen

exhibition, so the Historian question 'Who painted this art piece?' became very repetitive. I encouraged them to make up their own 'facts' for the Historian answers. This turned out to be much more conducive to the personal experience. It caused the family to create stories for each artwork that would continue across roles (see quotes and photos below).

The adults could also more easily let go of their need to be the expert, now that they were challenged to 'lie'. They were playful with the children. Additionally, they would reference their own life, likes and such more, since they used it as inspiration for answers.

When the children made up 'facts', they often were

quite weird (like the son deciding a painting was made by a chicken). This weirdness introduced hilarity and was very memorable. It also made the family look at the art anew, because the weird answer was still inspired by something that player saw in the art. The family made an effort to understand it, which in turn added to the collective personal experience.

Afterwards, the mother mentioned how their conversations were much profound with the game. Normally, they would not say more than: "look at this!", before continuing. However, they also were not able to discuss many works, because it took so long.



Family D plays the Family exhibit curator game. Everyone has a button and a role-card. They are discussing a painting by Walter Swennen.



"No kiwi's anymore! Buy apples and pears!" - Family D together

The Artist asks to act out the painting. The players continue their story about the protesting fruits that they created with the Historian questions.



A painting by Walter Swennen that family D discussed. When asked by the Historian card, the younger son declared it was painted by a chicken.

7.4 Conclusions

From the tests came a few interesting conclusions on the design and the theories. The main conclusions on the latter are presented on the next page. I will focus on the design and other insights in this paragraph.

One question card per role

All families understood from the design that they had to answer every question on the role card for each painting. This was not my intention and it created an interaction that was too long and detrimental to the engagement. To avoid this, a design iteration needs to be made.

More or less questions?

Asking more questions per artwork can significantly deepen the personal insights. Unfortunately, it also makes for less art pieces discussed over time. It is important to find a balance in this and see what fits the Kunstmuseum.

Working with younger children

From the test it became clear that, when working with families, it is inevitable that there are multiple children with different ages involved. It was nice to see that the 14-year-old from family B enjoyed the game and seemed to benefit from it, too. The 5-year-old had trouble joining the game, however.

It's a good idea to work towards making the

game suitable for children younger than 7, going forward.

The Detective role already seems to be understandable for them. More roles like that can be added.

Physical components also resonated strongly.

Fact versus fiction

The Historian role prompted way more factual

answering than I anticipated. This will need to change, as it was proven to be much more fun when 'facts' are fabricated rather than true.

Creative energy

The Artist role added a lot of activity and engagement to the game. Not only though physical activity, but also by creative challenges. It's something to keep in the design.



The tested prototype of the first game design: Family Exhibit Curator Team

Conclusion

Pushing and challenging behaviour

When family members are challenged to behave differently from how they usually do during a museum visit, they try out new ways to look at art and sometimes surprise themselves or the others with what they find.

It also helps with getting adults past the phase of wanting to do or say the 'right' thing. They often feel like they need to be experts in the museum. Challenging them with questions that they don't know the answer to anyway, can push them into a more carefree, playful mood.

Active and creative tasks (like dancing, poetry and theatre) are often regarded as more difficult, but also help with getting in a playful mood.

Novelty and weirdness

From testing, it is clear that novel and weird answers lead to the most fun. It makes people laugh and it causes surprising, memorable moments. Therefore, it is important to encourage these answers and the playful mood that inspires them.

Here, the benefit of surprise becomes very clear. Surprise is both a sign of people sharing the personal experience, as a motivator to keep doing so. During moments of surprise, family members learn about each other's varying experience and get to see how that can be a lot of fun.

How to stimulate the personal art experience.

Novelty and weirdness

Pushing and challenging behaviour

Asking the right questions

Relatability to one's own life

Asking the right questions

A question that leads to interesting thoughts for one work of art, can lead to very obvious 'right' answers for another piece.

To get to the more challenging and novel answers, the questions need to be specific enough to the art.

Relatability to one's own life

A way to quickly make any topic more personal, is to relate it to your own life. Relating to memories, cultural background, lifestyle, even norms and value. Questions should encourage this if possible.

This is shown to happen on its own already. People (though admittedly, some more than others) have the natural tendency to relate with what they see and compare it with things from their own life.

Conversations about these topics often start in the moments in-between questions, as sidetracks. They always lead the conversation to a deeper level.

Part 3 Design iteration

With the design principles now gathered, we can really start going into the design part of the project. In this part we will review some critical steps that lead to the

final design. Some are small and made by either just me or with the help of experts, others are more extensive product tests with families.

08 Second round of tests

09 Design experiments

8. Second round of tests

With the design insights gathered about mutual engagement and the personal experience, we will now iterate upon the first quick design that was tested in chapter 7. In this chapter, I will shortly go into some decisions made while going from theory to design, as well as the process of detailing and testing the second design.

8.1 Asking the right questions

From the first tests, I gathered the importance of asking the right questions to get to the personal experience. This concerns not only suitable language, but also if it fits the artwork it is asking about.

I wanted a clearer idea of what *would* be the right questions for the art, so I toured the museum and asked myself:

- ▶ What sort of questions lead to interesting answers regarding certain artworks?
- ► And what sort of questions lead to obvious or boring answers?

I also looked into the Kröller Müller products again for inspiration. Mainly the *Philosophising with Children* workbooks.

The visual below shows some artworks with their 'good' questions. Two main things were concluded from this. Adult family members can choose

When offered a choice, it is often rather obvious which question is the 'better' one. As stated in chapter 4, adults are context-sensitive and knowledgeable. I can use this to my advantage.

Abstract versus realistic, object versus flat

The biggest differences in the type of questions came up between abstract and realistic art, and object art (furniture, clothing, etc) and flat art (paintings, drawings, etc).

With abstract art, what one sees can be novel,

but with realistic art more fantasy is needed. Objects are obviously usable, while flat art is generally for viewing only. Questions needs to be able to relate to objects in that multi-sensory context.

8.2 Main design revisions

The first game design turned out to check most of my boxes already in terms of project goals. Therefore, the main goal and method of that game (using role-play to represent various ways of enhancing the personal experience) were kept the same going forward.

The main revisions had to do with the design detailing and interaction duration. Sketches and concept drawings leading to these choices can be found in appendix F.



How does this artwork make you feel?

Flat < Abstract > Object

What can you use this object for?

Flat < Realistic > Object

Step into this painting and look around. What do you see?



Would you wear this? Where to?

What do you think it is?

What detail says the most about this artwork?

Artworks from KDH with 'good' questions. Asking a question from one work about another can lead to results that fall flat and/or are too obvious. There are notable differences in the type of questions between flat vs. object and abstract vs. realistic art.

Role-booklets

The role-cards were changed to role-booklets: separate question cards bound into a little book. This was for two reasons:

- ► Through talking with Irma Benliyan from the museum, it was determined that a broadening interaction (§6.2) suited KDH better than a deepening one. KDH aims to make visitors wander and discover new art.
- ► The role-card was misinterpreted and caused the interaction to be too long. Separate question cards resolve this issue.

A bound deck was chosen, because a loose deck falling on the ground in a museum would be very annoying.

Repeating interaction

It was an option to go the route of storytelling over multiple artworks. This way an interaction can be broadening and quick, but deepening as well. This option was not chosen, because of the target group.

The short attention span of children makes it preferable to go with a repeating interaction, so the family can stop whenever they want and feel the same satisfaction of completing a game.

Wayfinding

The aspect of wayfinding was added to make the game more interesting between works as well. As well as to make better use of KDH's non-linear building and 'wandering' ideology.

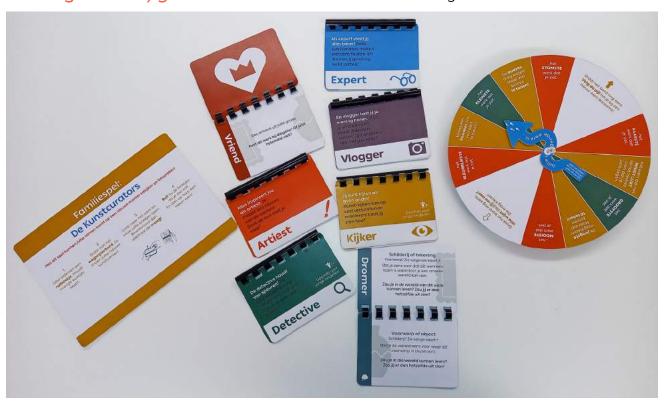
Additional roles

Lastly, it was decided to expand the role selection from four to seven roles. Families larger than four people are not uncommon, according to Irma, and it is ideal if every family member can play. Appendix G shows the role-name brainstorm.

8.3 Design 2: Family game: the Curators

How to play:

- 1. Every player chooses a role-booklet.
- 2. The wayfinding board is spun to decide on an artwork to discuss.
- 3. Everyone opens their booklets and answers their presented question.
- 4. When everyone has had their turn, booklets are exchanged and a new work is chosen.



All components of the second design Family game: the Curators. The rules, seven role-booklets and the wayfinding board.

The Artist and Detective roles are pretty much the same as from the first version (§7.2). The Friend and Vlogger are derivatives from the Philosopher. The Expert comes from the Historian but now only focusses on fabrication rather than facts.

Two completely new roles were added, the Dreamer and the Looker.

The Looker was created as role suitable for younger children (under 7), additionally to the Detective role. It focusses on physically experimenting with ways of looking. In that way it also builds upon the success of the active Artist role.

The Dreamer focusses mainly on fantasizing. This role is slightly more complex than many others, because it features choice cards, where the player must determine if the artwork in question is a flat or 3D piece. This was necessary only for this role, because the abstractness of the fantasy questions needed more introduction and the introduction had to fit the type of art (see the upper picture).

The new wayfinding board stimulates users to choose artwork based on prompts like 'the largest artwork' or 'the weirdest artwork', etcetera. The family can still choose the artwork themselves in the end, but the prompts challenge them to choose ones they might not discuss or regard otherwise.

During prototyping, it became clear that it was actually more fun to spin the board rather than





On top: One of the choice cards from the Dreamer role. The player chooses which question is most suitable.

Below: The blurriness makes it less predictable what it will land on.

the arrow. This way the text blurred (see the lower picture) and the anticipation of seeing what it would land on built up much more.

8.4 Testing

When planning the second round of tests, the museums were closed because of COVID. Therefore, I decided to plan a test I could do at home with the participants. The full test plan can be found in appendix H.

I printed ten works of art on A3 paper, five paintings and five design objects all taken from the KDH online collection archive. I chose pieces that vary in style, to represent the variety the museum shows and to test how well the game adapts to these different artworks. These A3 prints were placed around the house to form a 'fake museum' at home.

Besides comparing results on engagement and enhancement of the personal experience with test 1, I had the following research questions:

- 1. What do the participants expect from the roles? Do the role-names match the expectations?
- 2. How clear is the language? Also for younger children?
- 3. How fluent is the game? How is the transition between game steps?
- 4. How fun is the game? What questions and roles are most fun?

Shortly, the test plan was as follows:

- ▶ First we would sit down to ask some questions about expectations.
- ▶ Then play for 30-45 minutes.
- ▶ Afterwards, we would talk again, now looking back at the expectation and other things that happened in the test.

In the end, I tested with three families. This test will be referred to as T2 (see appendix E).

Family E

The first family I tested with consisted of a mother, a daughter (9) and a son (6). They played the game for 40 minutes, in which they discussed 5 works of art. The first 3 were discussed for longer than the last 2. The family visits museums quite often. They seemed to enjoy looking at and talking about art.

Family F

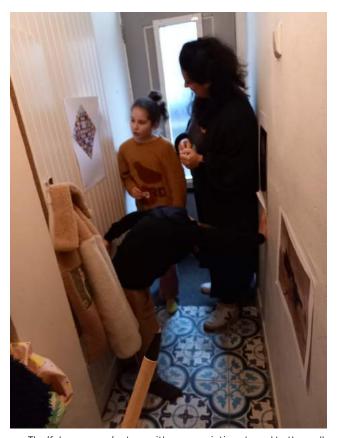
The second consisted of a mother, father, and two sons of 9 and 11. They played the game for 20 minutes, in which they discussed 3 works of art and 2 household objects. The family doesn't visit art museums that often. The sons mentioned not liking art much in general, which the test reflected by lack of enthusiasm.

Family G

The last family consisted of two mothers, a son (9) and a daughter (9). They played the game for

30 minutes, in which they discussed 8 works of art. The family visits museums quite often. They seemed to enjoy looking at and talking about art.

Though it luckily did not matter too much, testing from home had a few limitations. Firstly,



The 'fake museum' set-up with some paintings taped to the wall.

the wayfinding board was hardly as exciting with two rooms to choose from. Secondly, the children were quickly distracted by the couch and familiarity caused some early dwindling of attention (see below). Still, they managed to play for quite long, though.



Testing at home effected the concentration sometimes.

8.5 Results

In this test, I gained a lot of insights on the specific roles and other components of the game. Therefore I will present those shortly per component rather than per family.

General insights

- ► Compared to the first version of the game, there are some key differences:
- Players tend to keep one role for the entire game. Since they don't finish the booklet with one artwork, there is no need to exchange so often. People even forget to do so.
- It is very uncommon, now, that the same role is done by multiple people. This takes away some of the comparison moments between different ways of answering the same question.
- ► The interaction is much quicker and more artworks are discussed.
- ► There is more replayability and surprise, since most questions will stay a surprise, even after playing it before.

Detective

The Detective was among the children's first choice for every family. Children often choose it because they think detectives are cool. Those expectations weren't always met by the role, though. Children expected more searching for clues.

"I didn't get the question about how much money it was worth.. Why would a detective ask that? Unless a thief had actually visited!" - Son G (9)

Expert

The expert was the other child favourite. It was also first chose for every family. People associated the name with being smart.

Mother E found this one to be one of her favourites for playing with her younger son. She found the questions simple but creating fun conversations.

Looker (or Watcher)

While the Looker wasn't chosen as first choice by anyone, it was a favourite afterwards. The role-name did not convey the type of questions to expect. Mainly parents were very enthusiastic about this one, because of its simplicity and silliness. It seemed very suited for younger ages. Since this role is more active, it helped with variation of energy (Ch.5). Family members always joined the Looker in their challenges.

"I am sure that after [that], Son E (6) will want to see every painting upside down." - Mother E

Dreamer

This was the favourite role of the parents. They resonated with the idea of fantasising about art

and be lost in thought. The name also suggests a focus on thinking-based questions, so adults liked this.

The choice cards in the booklet were not clear enough. Choices were skipped or caused confusion.

Vlogger

The Vlogger was a booklet that was never first choice, but often second. Both adults and children liked this one.

This role has questions that are quite different from each other. Some are quite direct, others more associative. It differed which questions resonated with the family.

"Vlogger was one of my favourites. It has a bit of everything." - Daughter G (9)

Artist

To my surprise, the Artist was not populair during choosing the roles. Family F mentioned not really being able to guess what the role would be. Afterwards, it was declared very fun because of it's activeness, much like the Looker.

Friend

The Friend was a role chosen by kids and adults, much like the Vlogger. Slightly more by adults, though.

A few questions were very good, but generally this role was a bit boring.

Wayfinding board

The addition of this component did a lot for the game. Children found spinning it very fun and wanted to do it all the time. It seemed to heighten engagement in the times in between artworks, but like said before, this was hard to test fully in the home situation.

The board does need a redesign at least, since the arrow shape makes that the obvious choice for spinning, while we want to spin the board instead.

8.6 Family goes testing without me

After test 2, I got the opportunity to loan the prototype to Family E. They would take it to a museum, without me there, test it for a second time, and then do an interview with me.

It was very interesting to learn how differently they experienced it in this different situation. Some very valuable insights came from this. This is referenced as test 3.

Wayfinding board makes proud

The first thing mother E mentioned was how different it was to use the wayfinding board in the museum. First of all, it was indeed much more engaging, as I had hoped. Second, it created some moments of pride. The prompts were often interpreted as challenges, where the children would compete on who found the 'best' painting for the prompt.

Other people make proud

Though it was sometimes awkward if there were a lot of people around, in the end it also created pride. Strangers would ask the children what they were doing and even play along, which made the kids feel cool.

Museum story reflected in the game

Mother E told an anecdote that goes with the picture below. The wayfinding board prompted to find the most colourful work. The kids had just seen a video on how many shades of yellow this Van Gogh contained so they decided this painting was the most colourful, even though other paintings arguably had more different colours. The museum's storytelling was reflected in the game, which is very nice to see.



Family E being proud and happy about having found 'the most colourful painting'

Memorable questions

A final interesting thing she mentioned was how loosely they played the game for the second time. They were kind of familiar with the roles and questions now. The son (6) even remembered his favourite questions from the first time they played and kept repeating them for every artwork. This shows how simple and memorable the questions are. It also introduces an interesting version of playing where one compares artworks by asking the same question for each one. It turned out to be very educational, according to Mother E.

9. Design experiments

On top: Family H looks at the design variations.
Below: The key word version of the booklet front design.
Also note the new names for Looker (Explorer now) and
Artist (Inventor now)

Test 2 and 3 left me with some minor uncertainties about the final design for the role-booklet fronts. To remedy this, I organised a final testing with a family at KDH where I showed three slightly different versions of the front design. I also brought an option for product storage while walking around the museum.

I did these design experiments (referenced as test 4) with Family H: a mother and her 9-year-old daughter.

There were two main things I changed for these design experiments:

- 1. The Artist and Looker were misinterpreted or underestimated and therefore had a disadvantage during the first choice. Since people don't seem to switch roles so often, this is important to fix. The roles need to be more equally desirable. I tried to think of new names to see if this would fix the issue.
- The text on the front of the booklets was not read often. In test 2, Mother G mentioned their being too much text and it being demotivating to read. Family F felt the same. I made a different version that only used key words and compared them with the participants.

The images on the left show the design variations I presented them, as well as them discussing the design.

9.1 Conclusion

In short, they preferred the Key words over the long pieces of text, however, they like the short sentence that gave some personality to the role.

Even though I gave them a bag to put all the booklets and the rules in, the mother ended up holding everything in her hands awkwardly. Afterwards, when asked why, she said:

"I want to see all the options I can choose from when changing roles."

Remarkably they both pointed out the Inventor and Explorer as their first choice. The name change might have helped with that, though it is hard to say with only two participants.





Part 4 Final design

- The final design
- Product evaluation
- Recommendations

10. The final design

In this chapter I will show the final design of the game. First, I will describe the general 'how to play' and explain the components included. Then I will go further into each component separately. I have included references to previous chapters and paragraphs after each insight to show where it came from. See appendix K for the full card sets.



The final design prototype and all its components

10.1 How to play

The game uses role-booklets with themed questions to discuss the personal experience of art pieces as a family. The family discusses one artwork at a time and can stop playing at any time they want (§8.2).

How to play:

- 1. Each family member chooses a role-booklet from a selection of six different ones.
- 2. They spin the Wayfinding board to decide on an artwork to discuss.
- 3. Arrived at an artwork, the family members all open up their role-booklets and answer the question on the revealed card.
- 4. When everyone has had their turn, the family spins the Wayfinding board again for the next work. Roles can be (ex)changed if the players so wish.

The game can be comfortably taken into the museum with the accompanying bag.

10.2 Game components

The game consists of the following components:

- ▶ 6 different role-booklets
- 1 Wayfinding board
- 1'How to play' card
- 1 custom bag
- 1 game packaging

Each role has a different focus on how to explore and discuss the art. Some are more inspired by adults, while others are inspired by children (§7.2). All roles can be played by all ages.

All the roles have a front page that describes the role with a short sentence and two key words (T4).

Amount of roles

There are six roles to choose from. This was estimated to be a good amount (not too little, not too many), because larger family visitor groups are not too uncommon and it is ideal if all family members participate (§8.2).

The amount of roles should also help with replayability, since there is more content to explore (§8.5). Lastly, it heightens the possibility of users finding a role they relate to. Relatability can help with enthusiasm early on in the game (T2).

Booklets

It was decided to go for role booklets rather than one large role card or a role deck of cards (§8.2). With every question on a separate card, there is more room for a clear question and design, more curiosity towards the next questions and less tendency to answer multiple questions in a row (T1). The binding keeps all the questions together nicely, minimizing the risk of a whole deck of cards falling on the ground in the museum. It also keeps the role cards organised in the right deck during storage.

Role-names

The names were chosen to connect with children as well as adults. They mostly had to be words children understood and could visualise. Research also showed the impact of association with desirable attributes (T2, §8.5) (Detectives are cool and Experts are smart for example), so role-names were chosen to be equally desirable in that way.



The six roles. Each role has a short phrase and two key words describing how one explores and discusses the art using that role.

In order: the Inventor, the Detective, the Dreamer, the Vloager, the Expert and the Explorer



The Inventor

This role's name was changed from 'Artist' to be of more equal desirability to the other names. During test 4, this role was favoured over the previous consistent favourites (Detective, Expert and Dreamer) by the two participants, so that is a possible hint to the effectiveness of the change (§9.1)

The key words are 'Moving' and 'Being creative'. Though not all questions require physical activity, they do encourage something other than just

talking about the art.

Testing showed these questions to often automatically involve the whole family rather than only the asker. The questions pose a creativity challenge which causes family members to compete or build upon each other's answers (T1, T2).

This role can be very memorable and funny, but possibly a little awkward if the museum is very busy. This depends on the carefreeness of the players. Extroverted players seemed to like this challenging aspect more than introverts (T2).

Finally, this role relates to the personal experience by asking after personal interpretation and translation.

The Explorer

Like the Inventor, this role's name was changed to be more descriptive and associative. 'Looker' (or 'Watcher') was too general and not often chosen because of it (T2).

The questions are all physical experiments to look at art differently: change the angle, duration of looking or try to memorize the art. That is why the key words are 'Moving' and 'Thoroughly looking'.

On the front, the role states it is well-suited for children younger than seven. Together with the Detective, these roles make good use of simple ways of viewing art that young children can understand and connect with. Testing showed evidence of Explorer questions being enjoyed and well-remembered by 5and 6-year-olds (T3). As well as picked as 'most likely to play again' by parents of younger children (T2, T3).

The personal experience is explored by introducing new ways to look at art and sharing and comparing what one sees with others. It also specifically plays with exchanging 'adult and child viewing', like asking an adult to hunch down to child-eye-level, or challenging a child to look silently for 20 seconds,



The Vlogger

The Vlogger booklet contains a mix of questions concerning 'Feeling' and 'Finding (opinions)'. Some are more directly asking for emotions in or about art, or opinions on the work. Others are more associative about how art relates to the player themselves.

Testing showed that families resonate with different types of questions. Some families could answer the direct questions more easily ("What emotions does it make you feel?"), while others had more fun with the associative questions ("What would make this more sad?") (T2, T3)

The 'art and my family' questions originate from an integrated role: the 'Family friend'. These

help with relating the art to the user's own life (Ch.7) in a way that is doable for all ages. It not only discusses the art, but also the family members themselves, often leading to funny conversations. (T2)

The personal experience is often quite literally discussed with Vlogger questions. If not, it encourages reflective thought about the (possible) effects of art, and how people can see this differently from one another.





The Detective

This role has been a constant favourite for children throughout the many tests (T1, T2, T3). It plays into the natural way most children look at art, which is look for details and study the work closely. The role is well-suited for children under seven (T1).

Earlier on, Detective questions were more about pointing out different details the player thinks are somehow specific. This turned out not to satisfy the wish for finding a 'correct' solution of some kind (T2), and didn't match the expectations

children had when choosing the role.

Therefore, questions were added that felt more like search challenges, while still keeping them open for interpretation. For example, "find pairs in the work" makes it possible for one person to label a dog and cat as a 'pair of animals', another to match the cat with a boat because 'they are the same colour', and for both to feel like they solved the challenge. With the addition of these questions, the key words became 'Thoroughly looking' and 'Comparing'.

This role explores the personal experience by discussing what players notice and find relevant. It also connects the art to family life, encouraging personal stories.



The Expert

The Expert focusses on 'Fabricating' and 'Changing'. All questions take a part of the art work and ask the player to change or add to it. This role highlights the idea that 'all answers are right answers', by infusing the questions with the playful attitude of knowing better than the other players, the museum and even the artist.

The name was popular during testing, because of the association with being smart (T2).

In the first iteration, this role had a more factual focus, to give adults the opportunity to flaunt their knowledge (§4.1). It was decided to alter this to fabrication rather than fact, because the former produced more fun and humour during the game (T2). However, the current questions still offer this opportunity with questions like "What would you write on the information sign to go with this art?".

The personal experience is explored by encouraging out-loud association and the generation of novel ideas on the art's topics. Incidentally, it also brings preference and attraction to the conversation, because players

The Dreamer

This role also uses 'Fabrication' to get to a more personal experience, but instead of altering the work that is there, it focusses on 'Fantasising' about what is not there.

The qualities associated with the role's name were popular with the adults, so this role was often chosen by them. However, it also interested some children (T2).

During play, both enjoyed the role a lot. The thought experiments provoke other family members to give their insight or idea additional to what the asker answers.

Dreamer questions are often quite abstract and have longer introductions than the other roles. To keep them clear enough for players, it

was important to specify if the art to be discussed is flat (i.e. painting) or 3D (i.e. applied art). The design for these questions is slightly different, as shown on the right. This design came to be through multiple iterations (T2), and now seems to be confusion-free (T4).

Like mentioned above, the way this role enhances the personal experience is very similar to the Expert, though there's even more focus on the generation of novel ideas and association.





The Wayfinding board

This spinning board shows the players the way in between discussing the art works. It contains 12 different prompts: 7 specific characteristics, 3 options where a specific person chooses an artwork, and 2 options where the players spin the board again to have it point out a person who can choose or a direction to walk in.

The board offers a change of activity between discussions (Ch.5, T2, T3, T4). It's inspired by the non-linear building (§2.1).

Testing showed the board's ability to introduce challenge and pride into the game (T3).

Daring to ask a guard for help made players proud and was a memorable experience (T3, T4). The "most colourful painting" caused a fun colour-counting competition (T3).

Because of this positive effect, it was chosen to add more prompts that were quantitative to replace subjective ones (i.e. 'most beautiful').

The board spins, rather than an arrow on top. The spinning is more exciting this way. The text is unreadable while spinning, making it impossible to see what it will land on (§8.3). The design was iterated upon to make clear how to spin it.

Children (especially the very young ones) liked spinning the board a lot (T2, T3, Fam G, E). Sometimes this caused some jealousy between children (T2).



The board can be held from the underside, where there is a little handle.

The custom bag and storage

The game has two main storage situations: at home and in use at the museum. The second is important, because there are no convenient place to leave stuff in the exhibits, and the game has quite a lot of components to hold at the same time (T4).

During testing, it was found that users wanted to be able to see all the role booklets when choosing or exchanging them (T4). Therefore, a closed bag was not ideal. Instead a fabric folding map of sorts was designed to have place for all six booklets to be in sight and easily accessible. See appendix J for the sketches leading to this design.

This bag also has a pocket that can hold the Wayfinding board, would the family want to put it away.

An extra pocket is added for the 'How to play' card and a possible Activity sheet.

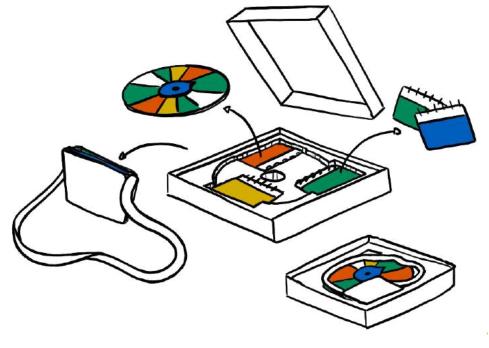
Because this bag can hold all components neatly together in one packet, these can be easily

handed out at the information desk or 'museum friends' desk. This will be a free offer, like the Activity sheets, provided that the family returns the bag at the end of their visit. The game can then be bought at the museum shop.

In the shop, the game will be stored in a box, for better protection and easier stacking (in a closet for example).

When bringing the game to the museum from home, the family can leave the box at home or with the coats in a locker.





11. Product evaluation

In this chapter, the final product is reflected upon in terms of the overarching project goals that were set at the beginning of the project.

In the brief, there were three things of most importance:

- 1. Does the product create a shared experience for families?
- 2. Does the product engage adult and child equally?
- 3. Does the product help explore and discuss the personal art experience?

11.1 Shared experience

At the start of the project, a 'shared experience' was defined as an experience one has together with another, physically and mentally. I interpreted the mental togetherness as being on the same page and understanding one another.

Both physical and mental togetherness could be seen throughout the project in different tests. The active roles (Artist, Looker, Inventor, Explorer) caused closeness by dancing or moving together. Sometimes both participating in the same action, but also many times collaborating.

Mental togetherness was strong during test 1

Mental togetherness was strong during test 1, when family D made up elaborate stories about art together. And again during other tests when weirdness was introduced more. Family members would try to understand each other's personal experiences, which strengthened the shared experience as well.

I believe the final product creates the shared experience through the discussing and exploring the art experience together.

Some components of the game might contribute more directly to this shared experience than others. However, it must be said that what contributes varies for each family, which is the main reason for not taking out the supposedly less effective parts.

- Questions that encourage multiple family members to answer the question and create discussion are most effective for the shared experience.
- ► Challenges posed by the Wayfinding board can also greatly contribute, when the family feels like they complete the challenge together, as was seen in tests 3 and 4.

11.2 Mutual engagement

First off, I think the product targets the entire family effectively. Some components are purposefully more targeted at either the adult or child, while others are more in the middle. In the end it is about equal.

In tests 1, 2 and 4 (where I was present) adults and children participated equally and seemed engaged, as well.

In every test, adults mentioned children being able to stay attentive for much longer than without the game. Some even mentioned they were usually quickly done with exhibits themselves, but enjoyed it for longer, now (mother D (T1) and mother H (T4)).

The average of 25 minutes of engagement during a museum visit stated in §4.1 is by far exceeded with this game. Families actively played between 45 minutes and an hour.

One trend I noticed, was that some parents had the tendency to direct their own questions to the children first, before answering themselves (mostly mothers G and E, who are both teachers). One the one hand, this can be good because it does not mean the parents don't participate. They still do and even encourage more active discussion this way.

On the other hand, this means that parents still regard their answers as less important than the children's. This could lead to a shift towards childcentered engagement, which isn't the desired outcome.

An example of this being a possible problem came up in the interview about family E playing for the second time (test 3). The mother described to sit out of the round and prefer to watch the children play. Though this was only one family and one occasion, there is the chance that parents would choose to sit out more often when free to do so. This would be a shame and definitely something that would have to be discouraged in a future iteration.

11.3 Personal art experience

Finally, the personal art experience.

In chapter 10, I discussed this for each final game component already. Each role has a different way of enhancing the personal experience.

Evaluating the whole, I think the influence of the game depends a lot on the attitude of the family and their interest in the art itself. Kids that are uninterested in art, will not suddenly start to like it by playing the game (as seen in test 2 with family F). The game requires a starting excitement to want to explore and discuss the art together. Tests 1 and 2 also showed how playfulness is important in the same way. More playfulness allows for more silliness and creativity, enhancing the personal experience.

That said, the game makes reaching a personal experience with art a lot easier for people who do have this excitement. The game seems suited for inexperienced museum visitors, according to mother D. The questions are simple and open to interpretation in a way that one can not do much wrong. If this belief would be proven to be true with further development of the product, this could also fit Kunstmuseum Den Haag rather well, in their position as the 'museum for everybody'.

All in all, I believe the game definitely enhances the personal experience.

11.4 Fitting the museum

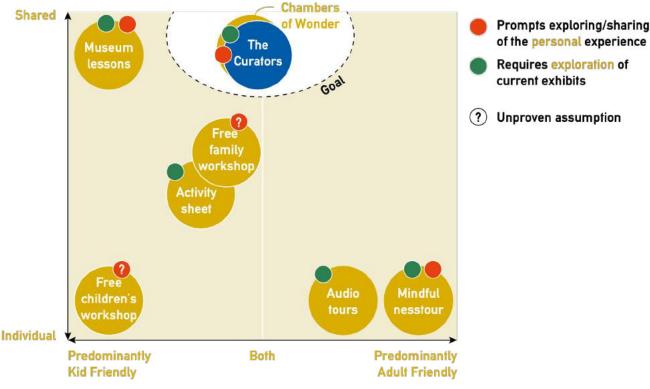
Looking at the goal and interaction of the game, I think the product fits the museum pretty well. Players explore a lot of art, not only during the discussions, but also during the wayfinding challenges. In test 4 as well as during the filming

of the video, players were comparing and looking around constantly.

The aesthetic follows the basic graphic style of the museum.

And when compared to the other products in the museum product line, it fills the gap nicely.

THINGS 'TO DO' AT THE KUNSTMUSEUM



Comparing to the similar visual in chapter 3, the new product fills the gap in the museum product line.

12. Recommendations

12.1 Essentials for future design

If Kunstmuseum Den Haag wants to continue with the design of *Family game: The Curators*, three things are essential to keep.

Variation in every aspect

Including variation within every aspect of a product is one of the most important parts to designing an effective family experience. After speaking with the education department, it is clear to me that this is already well-known by the museum. However, they can work on including it more on the topic of the personal art experience.

Because of the great diversity within the target group, what proves effective can be rather unpredictable. Therefore, it is recommended to play different angles and let the families decide what works best for them.

Variation also makes it possible to compare different experiences and explore new ones.

For Family game: The Curators, this means that the varying questions is the most important aspect to keep. It matters less in what way the questions are divided into roles, as long as different ways of discussing and exploring the personal experience are included. Think of variation in:

- Needed energy and concentration levels,
- ▶ Types of skills needed,
- ▶ Difficulty level,
- ▶ Group dynamics.

Playful choice and wayfinding

An aspect that added a lot to the game was the wayfinding aspect. This added variation in the activity, going from mostly talking to walking and looking around. It also made choosing the art more playful and sometimes even a fun challenge.

Wayfinding also fits the museum very well. It makes sure visitors get to know all kinds of different art works, of which KDH has many, and it highlights the labyrinth-like building and its non-linear exhibits.

Because of these reasons, I recommend KDH to look into keeping a version of this wayfinding mechanic in a future product.

Few rules: openness for personalisation

Family game: The Curators has a few components but is kept rather open on how to use them. This allows families to personalise the game to their needs.

It shouldn't be a surprise that personalisation works well when enhancing the personal experience, but especially the family that played the game a second time confirmed the effectiveness of this. It allowed for more engagement and a game better suited for the people and ages involved.

12.2 Themes to keep in mind

Even if KDH doesn't continue with the presented product, there are some overarching themes I would recommend KDH to keep looking into.

Enhancing the personal experience (in four ways)

I recommend looking further into the four ways I found to enhance the personal experience:

- Relatability to one's own life,
- Challenging behaviour,
- ▶ Encouraging novelty and weirdness,
- ▶ Asking the right questions.

Throughout the many iterations and tests, these themes kept coming back in different forms and kept proving themselves to be effective.

While it is fine to choose one of four as the main inspiration for a product, it is best to keep all four included in at least some way.

This is because they complement each other, but also because families will resonate with different methods of enhancing the personal experience.

Engaging the whole family (visiting the exhibitions)

When looking at families in the museum, I think mutual engagement should be looked into further.

The Chambers of Wonder do a wonderful job at engaging the whole family downstairs, however, the Activity Sheets are still mostly focussed on engaging the child. This could either be improved upon, or a new product could be introduced to be offered besides the Activity Sheets that strictly targets the family as a whole.

Encouraging critical thinking in visitors

Finally (and a bit more idealistic), I personally think families will enjoy art more if they get reminded once in a while that they are allowed to have their own opinion on the art and that all opinions are equally valid. If KDH wants to inspire personal connection with art more in the future, this might be an interesting thing to look into: 'How can the museum encourage people to believe in their own opinion? Would it be possible for the museum to learn as much from their visitors, as the visitors learn from the museum?'

At the very least, I recommend this idea to be infused into a future product concerning the personal art experience.

12.3 Opportunities for further research

There are also a few things that I think could be interesting, but were beyond the scope of my project.

Different versions of the game

During the project, choices were made about the way questions were structured into roles and themes. Changing this up could change the game significantly. Examples could be:

- ► Loose cards instead of booklets, allowing for personalised decks.
- Mixed booklets focussed on variation within each time playing, rather than role division.
- ▶ Booklets separated by way of exploring and discussing art, allowing families to choose the appropriate one for the art in question.

In appendix L, the ideas above are discussed a bit more in depth, including possible consequences.

More testing with different families

By coincidence and availability, I mostly tested with parents who work as elementary school teachers. This significantly affects how they handle children, which in turn affects how the game plays out in terms of conversation fluency, engagement and group dynamics.

To balance out these possibly skewed results and to have a more diverse test group in general, it is recommended to test the product with more families of varying backgrounds.

Parent engagement

As mentioned in the previous chapter, test 4 showed a possible risk of parents choosing to not fully participate in the game. If this would turn out to be a more common choice for parents, this would diminish the goal of mutual engagement. Therefore, it is important to test more thoroughly what parents tend to do when given total freedom to play the game as they wish to.

KDH can also look further into how to engage adults specifically. It will help with achieving mutual engagement in the end.

Anticipation and reward

During testing, it came up that some families might have more need for a clear component of reward in the game. This did not fit in the current game, but it could be interesting to explore how one could combine the topic of the personal art experience with components of anticipation and reward.

Sources

De Hartog, M., Remmelink, M. A., & De Hartog, M. (2012). Een familievriendelijk museum. VSC.Poot, A. (2015, 25 oktober).

Klooien in het wildste museum van Nederland – Lekker Samen Klooien. lekkersamenklooien. Geraadpleegd op 14 april 2022, van https://lekkersamenklooien. nl/lekkersamenklooien-in-het-wildste-museum-van-nederland/

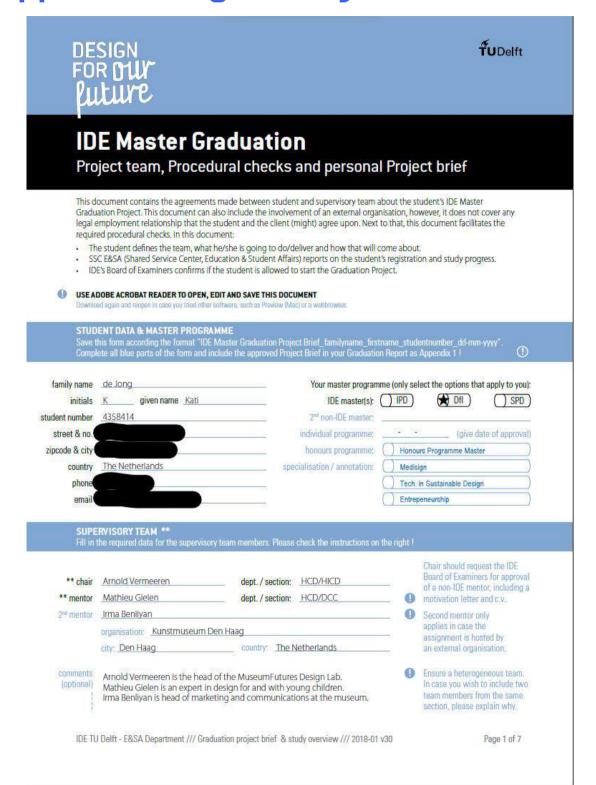
Tassoul, M., & Houdijk, M. (2005). Creative Facilitation. VSSD.

Van Heusden, B., & Rass, A. (2016). Cultuur2 (1ste editie). Koninklijke Van Gorcum.

Appendix

Α.	Signed Project brief	1
В.	Complete chart of project insights	8
C.	Brainstorm personal experience	11
D.	First game design - all components	17
E.	Reference table for tests and participants	18
F.	Ideation second design	19
G.	Brainstorm Roles	24
Н.	Test plan of second test	25
l.	Results from test 2 - Role evaluations	28
J.	Brainstorm product storage	31
K.	Final game design - complete card set	33
L.	Different versions of the game	41

Appendix A: Signed Project brief





Procedural Checks - IDE Master Graduation

APP	RO\	/AL	PR	OJE	CT	BRI	EF

To be filled in by the chair of the supervisory team.



signature Arnold Vermeeren chair Arnold Vermeeren date 08 - 09 - 2021

CHECK STUDY PROGRESS

To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total:	EC	YES all 1 st year master courses passed
Of which, taking the conditional requirements into account, can be part of the exam programme	EC	NO missing 1s year master courses are:
List of electives obtained before the third semester without approval of the BoE		
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SANSAGE (193)

FORMAL APPROVAL GRADUATION PROJECT

To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked **. Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

- . Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)?
- . Is the level of the project challenging enough for a MSc IDE graduating student?
- Is the project expected to be doable within 100 working days/20 weeks?
- · Does the composition of the supervisory team comply with the regulations and fit the assignment?

Content:) APPROVED) NOT APPROVED
Procedure:	APPROVED) NOT APPROVED
	X X	
(
-		- comment

name		32	date	signature	
IDE TU Delft - E8	kSA De	partment /// Graduation pro	oject brief & study o	overview /// 2018-01 v30	Page 2 of 7
Initials & Name	K	de Jong		Student number 4358414	
Title of Project Connecting p		necting parent and child v	while exploring art	at the Kunstmuseum	

TuDelft

Personal Project Brief - IDE Master Graduation

Connecting parent and child while exploring art at the Kunstmuseum project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 08 - 09 - 2021 16 - 02 - 2022 end date

INTRODUCTION ***

Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology,...).

My project will be set in Kunstmuseum Den Haag (KDH) and will be with and for children aged between 7 and 10 and their parents/caregivers.

KDH strives to be a museum for all ages and, therefore, offers various tours and activities for children and adults. Additionally, the museum works a lot with schools and encourages early art education. They regularly receive school classes, but eventhough, their biggest visitor group is older adults. The museum would like see more young parents with children visit the museum together.

The 'Wonderkamers' is the most significant activity at KDH, meant for children aged 9 and older (see figure 1). The Wonderkamers is an art game where children can learn about and play with art. Its design spans the entire basement floor and includes multiple game rooms and a labyrinth in the middle. Children use an interactive tablet as a guide. For very young children (4 to 6), KDH collaborated on a series of picture books about art and artists. For adults, KDH has multiple audio tours available, like the mindfullness tour and a tour about the design of the building.

KDH has a phone app that includes all the tours of the museum (see figure 2). The mindfulness tour and the architecture tour only show up in the app when present at the museum. The art history tours are always available. They also have a website where they share articles and information on exhibitions.

A goal of KDH is let visitors get "lost in the art". To achieve this, they have no clear walking routes in the museum and have an almost labyrinth-like interior design. The audio tours are a result of this, since there are no physical signs needed to follow the tour. Instead, visitors walk their own path and listen to the 'tour stops' in their own order. The Wonderkamers' labyrinth reflects this goal as well.

Another important goal for the museum is to allow visitors to get close to art and make the experience a personal one. The mindfulness tour reflects this most. It is an individual tour that encourages disregarding 'museum rules' (like reading all the signs or viewing every piece of art) and focussing on art as something that can tell you about yourself. instead. This experience can be quite involved and include complex topics, so it is not suited for children the way it is currently. It is also not a shared experience (while you use it).

While the museum offers activities for both child and adult, these activities are often more targeted towards one or the other. For example, Wonderkamers can be enjoyed by families, but ultimately targets the child. Some audio tours might be suitable for both age-groups, but are generally a more individual experience, as every visitor listens to their own tour.

There is no activity that specifically focusses on creating understanding and connection between adult and child during the museum visit.

Finally, there is a big difference between how 7-year-olds view art compared to 10-year-olds. A younger child tends to see their opinion as a collective one ('what I think, everyone thinks') and tends to fantasise what they see. They will create their own story behind the art. Older children are more aware of the artists' possible motivations and get that their opinion is their own. This affects how art is enjoyed by these age-groups (Van Heusden et al., 2016).

Van Heusden, B., Rass, A., & Tans, J. (2016). Cultuur2 (1ste ed.). Koninklijke Van Gorcum.

space available for images / figures on next page

IDE TU Delft - E8	DE TU Delft - E&SA Department /// Graduation project brief & study overview /// 2018-01 v30				
Initials & Name	K	de Jong	Student number 4358414	-	
Title of Project	Conn	ecting parent and child while e	exploring art at the Kunstmuseum		

TUDelft

Personal Project Brief - IDE Master Graduation

introduction (continued): space for images



image / figure 1: A picture of one of the 'Wonderkamers' of KDH









image / figure 2: The audio tour app of Het Kunstmuseum

IDE TU Delft - E&SA Department /// Graduation project brief & study overview /// 2018-01 v30

Page 4 of 7

Initials & Name K de Jong

Student number 4358414



Personal Project Brief - IDE Master Graduation

PROBLEM DEFINITION **

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

Kunstmuseum Den Haag aims to be a museum for all, but doesn't get as many family visits as they would like. They notice a disconnect between parent and child, where one does not understand the interests of the other when exploring the museum together.

When parents visit museums with young children, they often make sure the exhibit is made for or has an activity suited for children. This narrows down the types of art children see and shifts focus away from talking and thinking about the art on a personal level. If the children only discuss the art in the context of a game, the discussions will stay rather superficial and steered by the museum.

Parents going to childrens' exhibits might enjoy the exhibit less, since it is not made for them. Or they might miss out on art they want to see, because they think it's not suitable for children. When visiting together, the parent will likely focus on the child more than the exhibit. If they talk about the art, it will be about what the child thinks of it.

While both child and parent will have interesting viewpoints on the art and experience it completely different, they are not able or encouraged to share those differences with each other. Even when sharing could make the experience more valuable for both.

This project should aim to make the experience at KDH more fun and memorable for both child and adult, instead of only for one of them, allowing the family to share the experience and feel connected to one another.

The project should determine how to fulfill this goal, taking into account the vision and designs of the museum, as well as the fit to the exact age of the children.

ASSIGNMENT**

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

Lwill design a product that makes visiting KDH a shared experience for parent and 7-10 y.o. child by letting them explore art together, ultimately creating understanding between them and enjoyment of art on a deeper level. To manage this, I will do literature and context research on how child and adult view and think about art, what they value and how they communicate about it. I will also research current practices in art education and family interactions in the museum.

I expect to deliver a physical product that takes the families through the museum. There is an opportunity to have part of the product be used at home, before or after the exhibition, if this seems fit. Because the focus will be more on the visitors and because this fits the vision of the Kunstmuseum, the product will ideally be applicable for different exhibits instead of being connected to one particular one.

While I prefer the idea of a fully physical design, I don't exclude the possibility of a digital counterpart. This could be in the form of an app or digital platform. Likely using the platforms KDH already has.

The final design will be mainly conceptual and focus on testing the desired experience rather than a final embodiment design. I wish to create a prototype of the conceptual product to evaluate and make a final video presenting the final design.

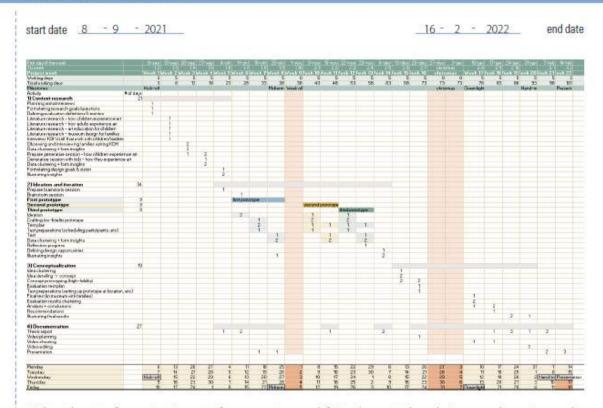
DE TU Delft - E8	Page 5 of 7				
nitials & Name	K	de Jong	Student number 4358414		
Title of Project	Connecting parent and child while exploring art at the Kunstmuseum				



Personal Project Brief - IDE Master Graduation

PLANNING AND APPROACH **

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.



Right at the start of my project, I want to focus some time on defining the project by ordering research questions and goals and determining clear metrics for abstract concepts like 'enjoyment'. Using those, I will then start context research (desk research, interviews and observation visits). After some initial concluding of results, I would like to do a generative session with children about how they experience art.

In the second phase, I want to go through three quick cycles of iteration. How much of this is in context and with the right age-group is not determined yet. That will depend on what it possible, how much time is needed and how important it is for the test.

I want to alternate these design iterations with data clustering, so I don't procrastinate on documenting insights. The choice to do repeated data clustering activities is also related to the next section: "personal ambitions".

The final phase will include concluding on the design, detailing and testing. The final test will be in the right context with children. I will then also shoot the video and finish the report.

Because of this uncoventional planning, the midterm presentation falls in between the second phase cycles. This means I will mostly present my context research results, but also cover a first design and upcoming steps.

I have planned some time off after my midterm presentation the 29th of october. Besides that, the christmas vacation is the only time off.

IDE TU Delft - E8	Page 6 of 7			
Initials & Name	K	de Jong	Student number 4358414	
Title of Project	Conn	ecting parent and child while	exploring art at the Kunstmuseum	



Personal Project Brief - IDE Master Graduation

MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, Stick to no more than five ambitions.

I set up this project to combine my passion for art and culture with my newly found interest in the target group of young children.

I want to use and further develop my competences gained during the elective courses 'Design for Children's Play' and 'Research and Co-design with Children'. Besides that I would like to further train experience design processes as taught in the course Exploring Interactions. This means using generative research tools and involving the users at an early stage to discuss, design and explore together. I also think this way of designing should fit the young targetgroup better.

In Exploring Interactions, we were encouraged to iterate quickly and test plenty. At the time, I did not manage to do this as much as I would have liked. In this project, I hope to try this again more succesfully. However, it needs to be kept in mind that the young age-group might make contacting them more difficult, because of ethical reasons.

This project also includes my interest in psychology in general. I hope to learn a lot about how people, and children in particular, think and learn. I would like to learn how design and research methods can facilitate discussion and insights on these topics, and if they don't, how I can adapt them to do so.

Finally, I wish to strenghten my data clustering skills. I am still often overwhelmed by data and unsure how and when to start going from data to insight. By planning smaller clustering activities more often, I hope to relieve this feeling.

FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant

IDE TU Delft - E8	SA De	partment /// Graduation project be	rief & study overview /// 2018-01 v30	Page 7 of 7			
Initials & Name	K	de Jong	Student number 4358414				
Title of Project	Conr	Connecting parent and child while exploring art at the Kunstmuseum					

Appendix B: Complete chart of project insights

Research into the current context

Children found receiving and showing of a reward of some kind always fun. [#]

When children could release energy between periods of concentration, they engaged for longer. [#] Kids like holding things, it represents autonomy. Importance is greater the younger the child. [#]

Novel technology and design got families engaged, but also distracted from the game. [#]

Both adults and children should use their skills for an ideal family visit. [#]

Turn taking leads to iealousy. Children want to feel equally 'in charge'. [#]

Children like to search for details and are generally good at it.

Adults know more than kids and like teaching them what they know. [#]

Enhancers of mutual engagement:

Anticipation and reward. [#]

Appropriate novelty and challenge. [#]

Roleplay and autonomy. [#] Facilitation of varied energy levels. [#]

Kröller Müller visit and brainstorms

Different roles can provoke the use of both the adults' and children's skill set. [#]

The Kröller Müller Dice game is similar to my goal. [#]

One can focus on either deepening or broadening the personal experience. Different methods. [#]

Testing of the first prototype - at the museum

Personal stories came up, because people naturally seemed to relate art to their own life. [#]

The game turned more fun and funny when facts were not allowed to be true anvmore, [#]

The Detective clicked for the 5yo: she pretended to hunt clues and could follow the auestions. [#]

While challenged to fabricate 'facts', users answers and created stories. [#]

One card with all the questions leads to built upon each other's players reading it fully for every artwork. It takes a long time. [#]

Questions perceived as creatively challenging led to originality, surprise and excitement. [#]

Adults wanted badly to answer the Expert questions factually. They would stop to read signs for it. [#]

A long interaction (more time per artwork) led to deepart discussed. [#]

Sometimes the answer was too obvious: less fun. The question ening of topics but less should fit the art to be most provocative. [#]

Enhancers of the personal experience:

Relating to one's own life. [#]

Encouraging novelty and weirdness. [#]

Pushing and challenging behaviour. [#]

Asking the right questions. [#]

Asking the right questions - museum tour

Parents are likely able to identify 'the right question' for the artwork if given a choice. [#]

With abstract art analysing what one sees can be novel, but with realistic art more fantasy is needed. [#]

Brainstorms and expert's feedback

Experimentation showed spinning the board to be more exciting than spinning the arrow. [#]

Large visiting families (>4 people) are not uncommon. Grandparents or friends come allong [#]

Children have a short attention span. It is best when one's able to stop the game at any time. [#]

A short, broadening interaction fits KDH better than a long, deepening one. One sees more art. [#]

A deck of cards is annoying when dropped. Roles can get mixed. [#]

Testing of the second prototype - at home

Parent found Looker, Detective and Expert to be best for playing with her 6yo. [#]

Dreamer was always first choice for adults. Never chosen by children during the game. [#]

Artist and Looker were never first choice, but regarded as 'very fun' after playing. [#]

The Artist role name was unclear. Adult: "I can't imagine what it does". [#]

Looker seemed to connect with the youngest player (6yo) the best. [#]

Frequently chosen roles were associated with desirable attributes. [#]

Questions that included fantasy and opinion often caused discussion among family members. [#]

Without any storage options, users awkwardly hold the many game components. [#] Expert and Detective were always first choice for children. Never chosen by adults. [#]

Children really liked spinning the Wayfinder. It caused some jealousy sometimes. [#1] Children felt disconnect between the Detective name and questions. They expect to search more. [#]

The Dreamer '2D or 3D' choice leads to confusion. They hold the booklet wrong so don't notice the options. [#] Users liked to be able to buy the game after playing it in the museum. [#]

The associative Vlogger questions seemed to resonate the best for that role. Very fun answers. [#] The design of the Wayfinding board wrongfully encourages users to spin the arrow not the board. [#]

Some kids wish to find 'correct' answers. The Detective does not seem to satisfy this for them. [#] The Family Friend role did not add as much 'relating to one's own life' moments as imagined. [#]

The Family Friend role did not add as much 'relating to one's own life' moments as imagined. [#]

Design experiments - at the museum

The adult didn't put away booklets. She "wanted to see all the options when choosing a new role". [#]

With the new names and key words, Inventor and Explorer were universal first choice. [#] Key words are preferred over full sentences. They are quick to read, thus read more often [#]

Since the redesign of the Dreamer choice cards, this interaction seems to go smoothly. [#] Relatibility to roles leads to enthuasiasm early on in the game. Players want to find 'their' role. [#]

> The Wayfinding board inspired self-invented challenges. Solving these made the whole family feel proud. [#]

Product test without me - interview

The game affords families to decide their own way of playing. This seems to improve the experience. [#]

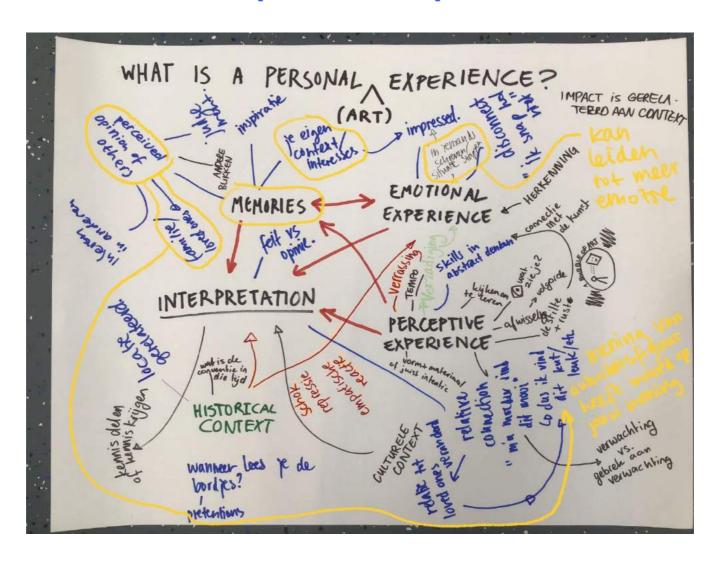
Kids enjoy the game for longer when walking around the museum with the Wayfinding board. [#] The user imagined the game to be very suitable for families who don't visit museums often. [#]

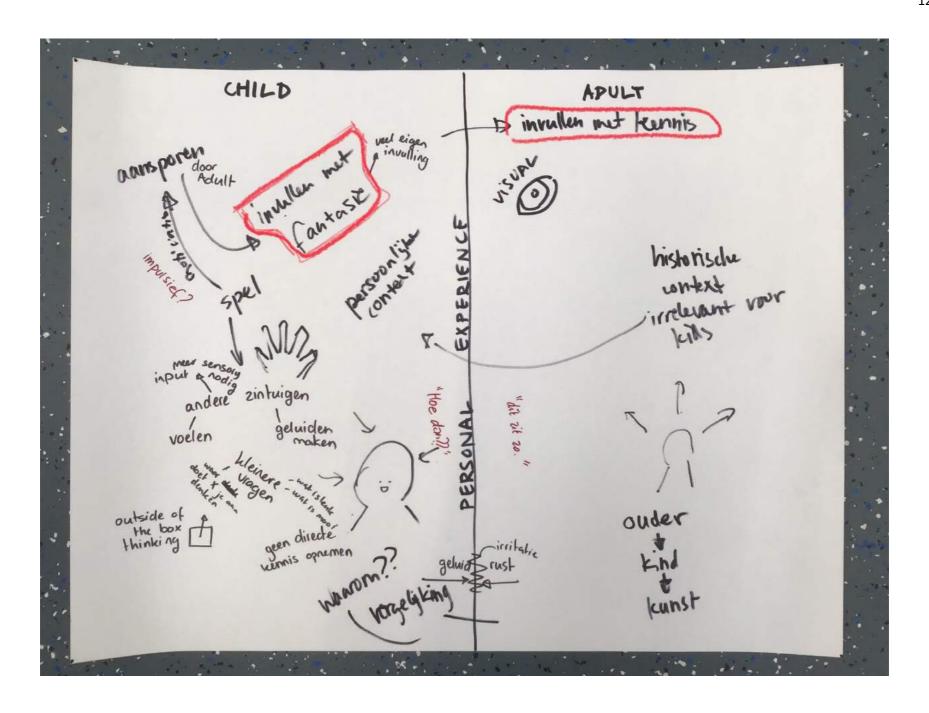
The simple Detective, active Looker and direct Vlogger questions were favourite and repeated. [#]

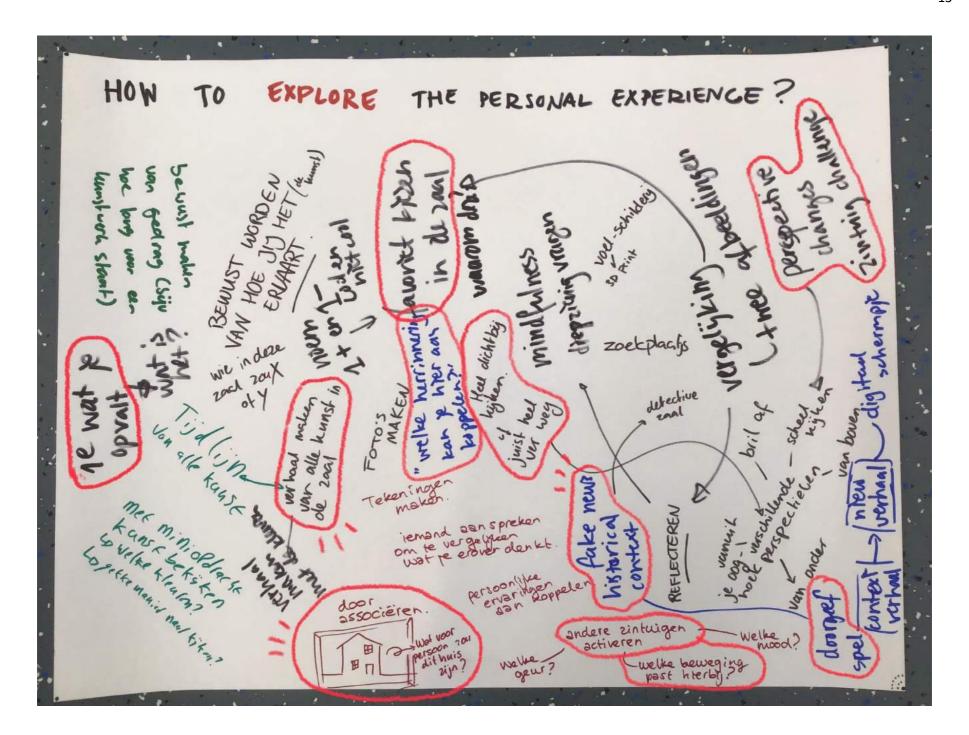
The physically active roles draw interest from other visitors. This acts as marketing and rewards players. [#]

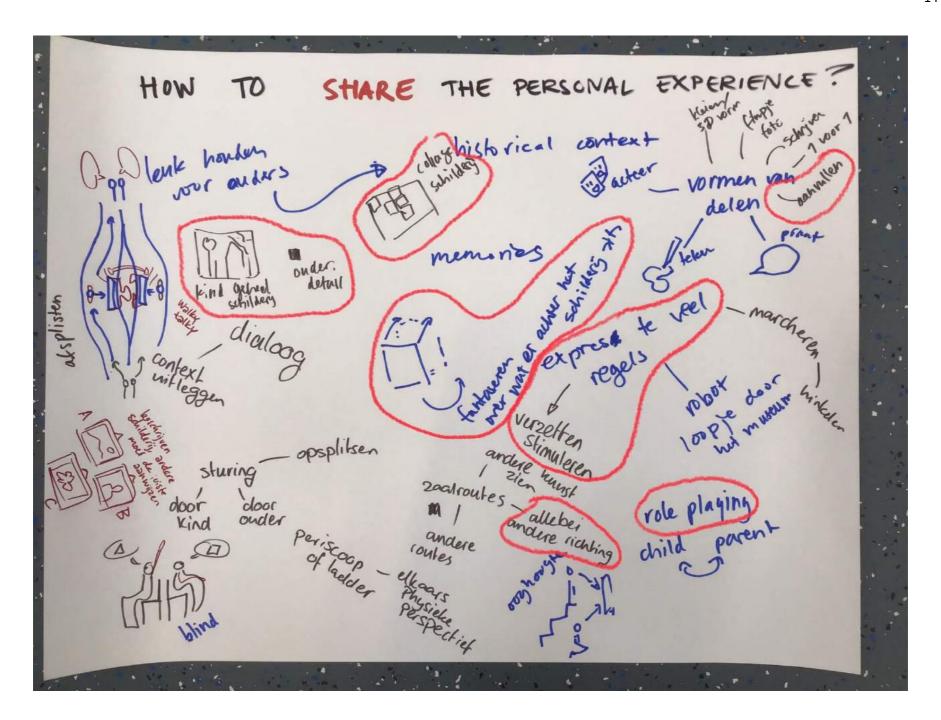
Final design

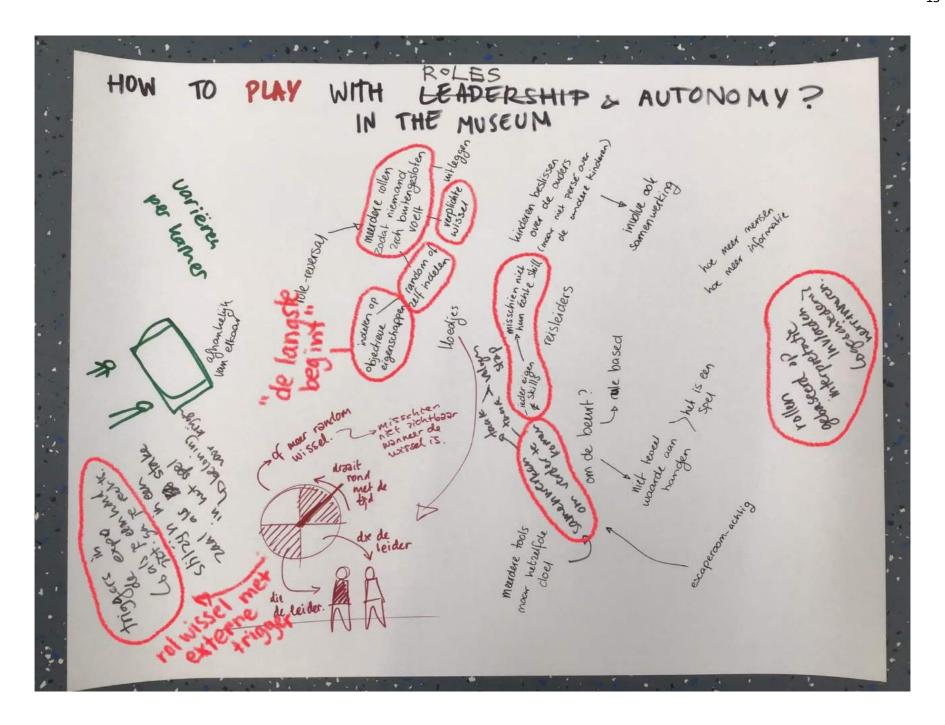
Appendix C: Brainstorm personal experience

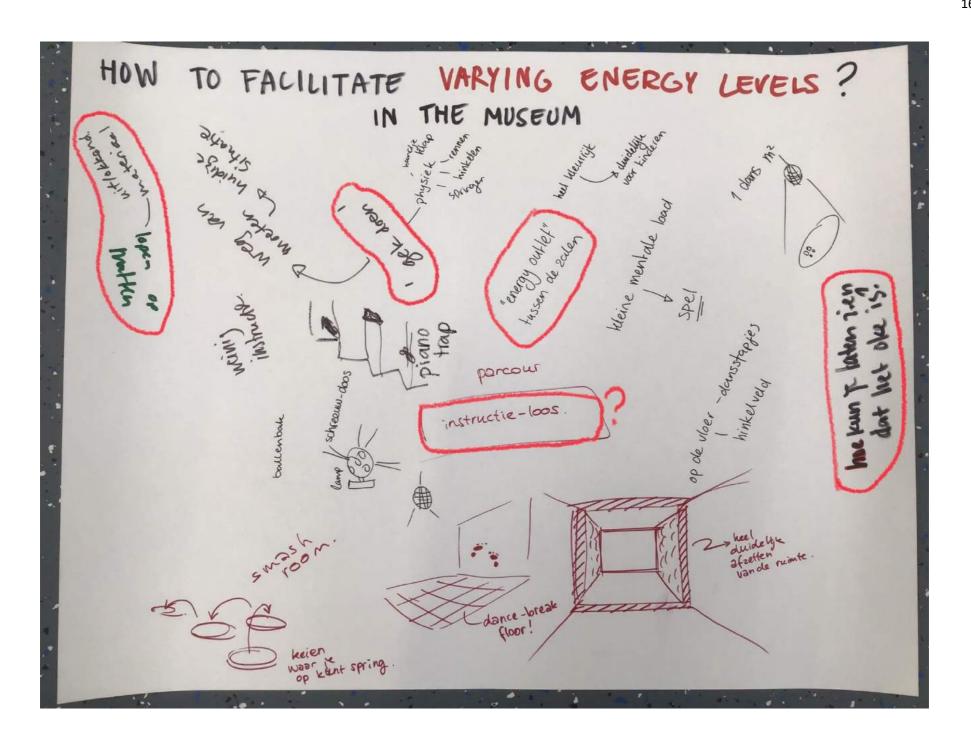












Appendix D: First game design - all components



Familietentoonstelling Curator Team

Welkom in het Kunstmuseum Den Haag! De tentoonstellingen die je kunt zien zijn door ons team van curators samengesteld. Curators bekijken de kunstwerken van veel verschillende kanten om te kiezen welke werken in de tentoonstelling passen. Ze denken no over de geschiedenis, de bedoeling, de invloed en de uitvoering van elk werk.

Met dit spel kunnen jullie als familie in de rol van de curator stappen en op een nieuwe manier naar kunst kijken. Wat voor een tentoonstelling stellen jullie samen?

- Geef ieder familielid een rolbutton en -kaartje en kies een kunstwerk.
 Zijn jullie met minder dan 4? Dan krijgt iemand er gewoon 2!
- 2. Laat ieder zijn roltaak uitvoeren. De vragen op het kaartje zijn er om te helpen, maar voel je vrij je eigen ding te doen!
- Aan de hand van wat jullie gehoord en gezien hebben, besluiten jullie nu samen of dit kunstwerk in jullie tentoonstelling past of niet.
- 4. Wissel nu de rollen en kies een nieuw werk om te bespreken!

Het is jouw taak om te zoeken naar mooie details en die te presenteren aan de rest.

- Q Welk detail valt het meest op?
- Q Welk detail mag de rest niet missen?
- Q Welk detail zegt iets over het kunstwerk?
- Q Wat is het beste detail?
- Q Wat is het saaiste detail?
- 9. Wat is het meest verstopte detail?

Het is jouw taak de rest te vertellen over de achtergrond van dit werk (dit mag best een beetje nep zijn).

- ❤ Wie heeft dit gemaakt?
- Hoe heeft de kunstenaar dit werk gemaakt?
- Kan je wat vertellen over het leven van de kunstenaar?
- Waarom heeft de kunstenaar dit werk gemaakt?
- Heeft de kunstenaar nog andere werken gemaakt?

Detective

Het is jouw taak de rest te vertellen over wat dit werk jou laat voelen en denken (lekker persoonlijk!).

- Welke emoties voel je bij het werk? Maakt het je blij?
- Vind je het werk mooi of niet?
- Waar herinnert het werk je aan? Aan iets of iemand?
- Waar denk jij dat het werk over gaat?
- Wie geef je dit werk kado?
- Waar lijkt het werk op?

Filosoof

Historicus

Het is jouw taak iets nieuws te maken van het werk. Laat het jou en de anderen inspireren!

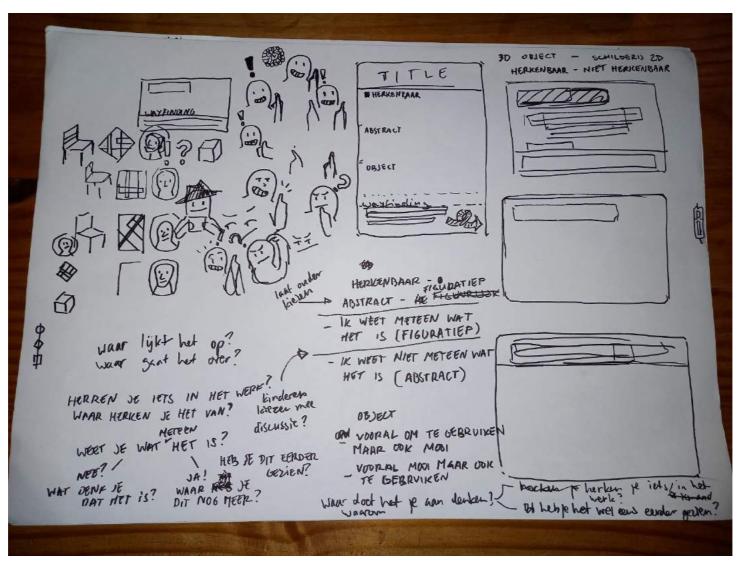
- Hoe ziet dit werk er uit als dansbeweging?
- Kan je wat tekenen dat bij het werk past?
- Hoe klinkt dit werk? Kan je het laten horen?
- / Kan je het werk uitbeelden?
- Kan je een gedicht verzinnen dat bij het werk past?

Kunstenaar

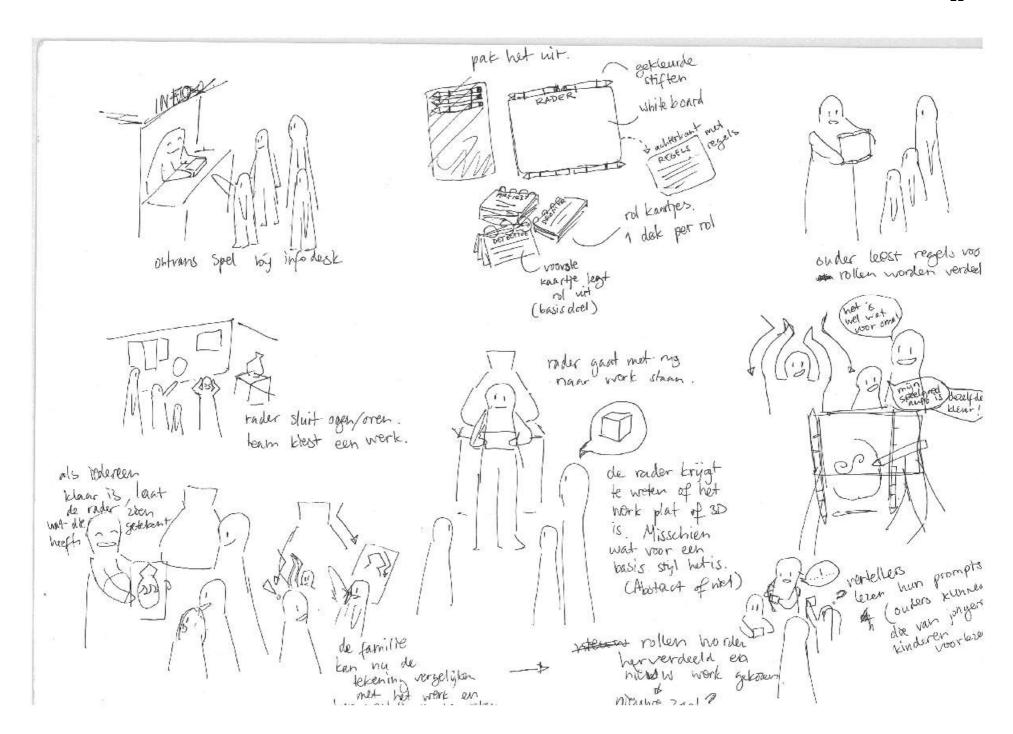
Appendix E: Reference table for tests and participants

Test	Reference	Family	Family member ref.	Age
First design (Family exhibit curator	T1	Α	Mother A	
team) tested in KDH.			Father A	
			Son A	10
		В	Mother B	
			Grandmother B	
			Son B	14
			Daughter B	8
			Daughter B	5
		С	Father C	
			Son C	8
		D	Mother D	
			Father D	
			Daughter D	9
			Son D	6
Second design (Family game: the	T2	Е	Mother E	
Curators) tested at home.			Daughter E	9
			Son E	6
		F	Mother F	
			Father F	
			Son F	11
			Son F	9
		G	Mother G	
			Mom G	
			Daughter G	9
			Son G	9
Second design tested in a museum	T3	E	Mother E	
without me present. Interview after.			Daughter E	9
			Friend E	9
			Son E	6
Design experiments (iterated	T4	Н	Mother H	
second design) tested in KDH.			Daughter H	9

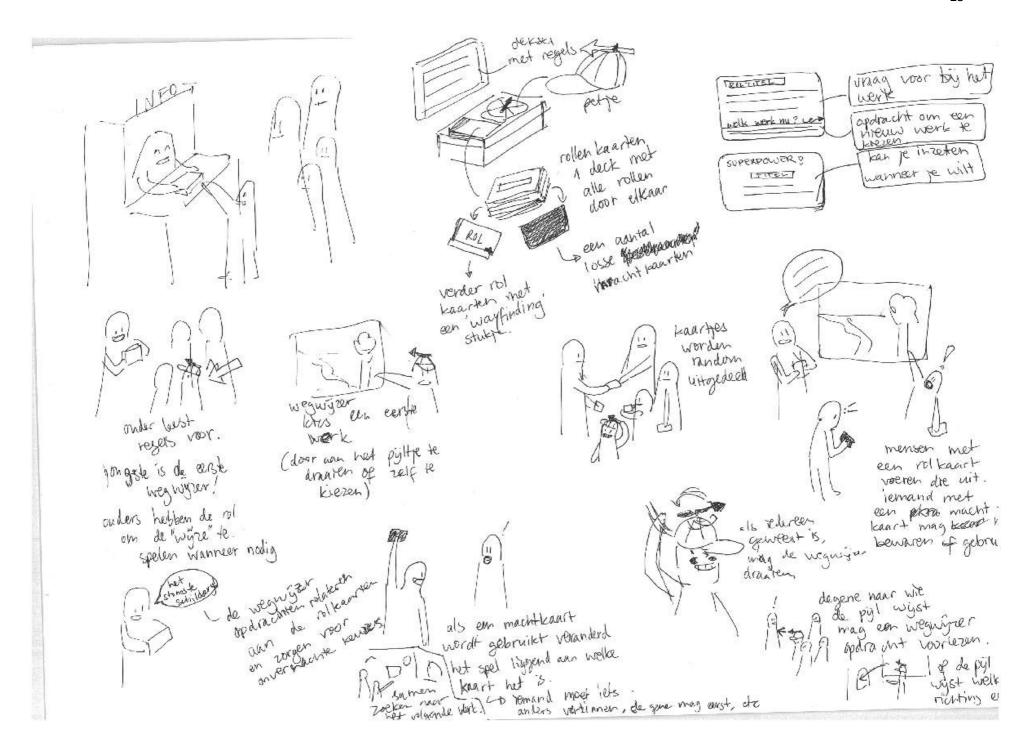
Appendix F: Ideation second design



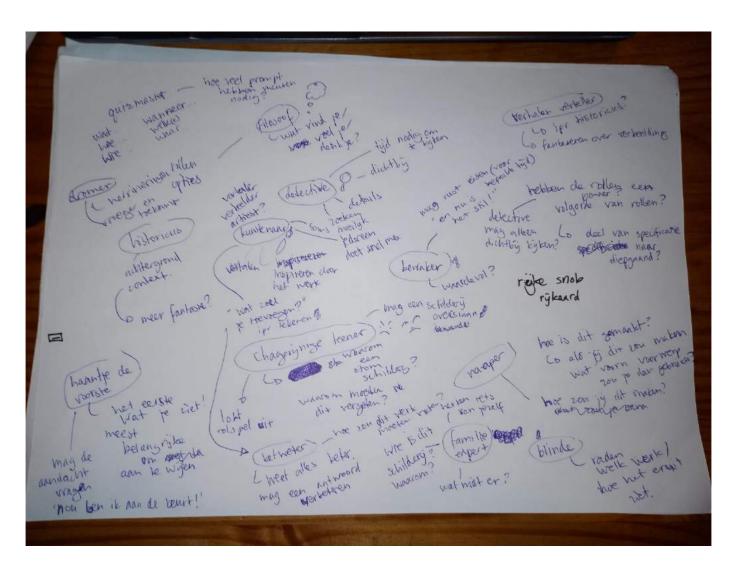








Appendix G: Brainstorm - Roles



Appendix H: Test plan of second test

RQs:

Hoe begrijpelijk is het taalgebruik voor kinderen?

- Voor kinderen vanaf 7
- Voor kinderen jonger dan 7
- Welke spelelementen helpen hierbij (niet)?

Hoe vanzelfsprekend is het spel?

- Hoe denken mensen dat het gebruikt moet worden, zonder regels te lezen?
- Na het lezen van de regels, hoe 'correct' wordt het dan begrepen?
- Welke spelelementen helpen hierbij (niet)?

Hoe vloeiend is het spel?

- Hoe goed zijn de vragen te beantwoorden? (Het antwoord hoeft niet altijd 'makkelijk' te zijn, maar het moet niet zo moeilijk zijn dat het tegenzit)
- Hoe vlekkeloos gaat de overgang tussen spelfases? (oriëntatie rolverdeling - 1e werk - wegwijzer -2e werk, etc)

 Welke spelelementen helpen hierbij (niet)?

Hoe leuk is het spel?

- Welke onderdelen zorgen voor zichtbare lol?
- Welke rollen zijn favoriet en waarom?

Opzet

- Plaats 10 kunstwerken (5 schilderijen, 5 voorwerpen) rondom het huis/de kamer
- Introduceer het experiment:

"Super leuk dat jullie meedoen! Ik heb een spel ontworpen voor gezinnen die het Kunstmuseum Den Haag bezoeken. Ik wil dus ook net doen alsof we daar zijn. Zoals jullie hebben gezien, heb ik hier en daar wat kunstwerken geplaatst die jullie zo kunnen bekijken. Probeer ze te zien als echte werken in het museum. Je kan ze dus niet aanraken tijdens het spel.

Na dit experiment, gaan we even rustig zitten en kunnen we wat dingen nabespreken. Is het goed als ik foto's maak tijdens de test? En eventueel video?"

- Consent

"Met dit spel gaan jullie samen speels kijken naar kunst en bespreken wat jullie zien. Ik geef jullie nu eerst het spel zonder regels. Bekijk het even en vertel mij dan hoe jullie denken dat het gespeeld zal moeten worden."

- Geef spel zonder regels.
- Hoe denken ze dat het gespeeld moet worden?

"Oké, dan heb ik nu de regels voor jullie. Vanaf dit punt kunnen jullie het spel spelen zoals jullie in het museum zouden doen en mag je mij negeren. Ik observeer jullie en zal dus af en toe foto's maken. Ik zet een timer voor 30 minuten en dan zien we of jullie nog verder willen spelen of niet."

- Geef regels
- Zet timer
- Observeer

OBSERVATIE

Zie ik Iol? → Wat doen ze dat het aanwakkert? Zijn er bepaalde rollen die het aanleiden?

Wat | Waarom | Betrokken spelonderdelen

Interviewvragen

Zou je het spelen/willen hebben?

Hoe zouden jullie het spelen denk je?

- Hoelang zouje het spelen? → hoeveel werken?
- Zou je het met iedereen spelen of opsplitsen? Vanaf hoeveel zou je het spelen? 2?
- Zou je liever allemaal 1 vraag beantwoorden per werk?

Positieve punten en negatieve punten?

Wat vond je het leukst?

- Leukste rol?
- Leukste vraag?
- Waarom?

1. Als je dit werk 100 jaar terug in de tijd zou plaatsen, zou het er dan anders uit zien? Wat is er anders? Wat is juist hetzelfde?





2. Stel je eens voor dat je dit werk uitzoomt en je nu de dingen kan zien die buiten de randen vallen. Wat zou je dan nu nog meer kunnen zien?





3. Wat denk je dat het werk voorstelt? Waar zie je dat aan? Is de rest het met je eens of denken zij wat anders?



1. Is het werk vies? Wat zou het werk viezer maken?



2. Kan je iets noemen wat jij en het werk gemeen hebben? Op welke manier zijn jullie hetzelfde? Het kan ook maar een klein stukje van het werk zijn!



Appendix I: Results from test 2 - Role evaluations

Detective

De detective is de populairste rol onder de kinderen. De naam van deze rol is de voornaamste reden voor het kiezen ervan: kinderen vinden een detective cool klinken. Veel kinderen verwachten ook dat ze moeten zoeken en details moeten bekijken. Dit lijken kinderen leuk te vinden. Tenslotte zijn het simpele vragen.

De detective rol werd in alle testen in de eerste ronde gekozen, en altijd door een kind. Er lijkt een kans te zijn dat deze door stillere, introverte kinderen wordt geprefereerd.

Son F (8), over wat hij denkt dat het inhoudt: "Wat je ziet. Details."

Daughter E (9), wijzend naar de detective rol:
"Ik word sowieso deze."

Son G (8)... wilde het hele spel alleen maar detective zijn, omdat "de detective de gaafste baan is

van de dingen die ik zag."

Het kan dat de rol het idee geeft dat er goede antwoorden zijn, of puzzels bijvoorbeeld. Kinderen verwachten meer te 'speuren' dan ze uiteindelijk misschien doen. De naam is zeer verbeeldend voor kinderen. Son F... koos de rol omdat hij houdt

van puzzels.

Daughter E... over waarom ze de rol het

leukst vond: "Ik hou van dingen onderzoeken van hoe dat komt

en zo."

Son G (8): "Ik snapte de 'hoeveel is het

waard?' vraag even niet, want ik snapte niet waarom je dat zou vragen als je een detective bent. Tenzij er echt een dief is

geweest!"

Mother G: "Misschien dat hier nog meer

een spelelement moet zijn dat je echt iets moet vinden of dat

je gelijk kan hebben."

Son G dacht het misschien wel leuker hebben gevonden als er goede antwoorden waren geweest.

Dromer

Deze rol is erg populair bij de ouders. Veel ouders zeggen dat ze zelf wel houden van fantaseren en denken over kunst dus dat ze de rol bij hen vinden passen. De naam is een karaktereigenschap waar ouders zich direct in kunnen vinden. Het suggereert een focus op denkvragen.

Ook deze rol werd in alle testen in de eerste ronde gekozen, altijd door een ouder.

Father F: "Fantasie. Laat zich

verwonderen en stelt zich dingen daarmee voor. Vragen

als: Waar doet het aan

denken?"

Father F: "Ik hou van m'n gedachten de

vrije loop te laten."

Mother G: "Ik ben de dromer en ik maak

van alles meer."

Mother E: "Ik kies de dromer, want ik ben

zelf wel een beetje een

dromer."

De naam wordt correct geassocieerd met fantaseren. Kinderen vonden de rol ook aantrekkelijk maar niet het meest aantrekkelijk.

Daughter G (8), puur afgaand op de naam van de rollen: "Ik zou expert zijn of dromer, want bij dromer dacht ik 'ik hou wel van dromen'."

Dit boekje heeft veel vragen waar er gekozen moet worden tussen schilderij of voorwerp. Deze keuze is nog niet duidelijk bij de gebruikers. Het tekstje op de voorkant die het aangeeft wordt overheen gelezen of niet begrepen. De gebruikers klappen het boekje om zodat ze maar één vraag zien en hebben zo niet door dat ze moeten kiezen.

Expert

Net als de detective, is de expert een favoriet bij kinderen. Er was een sterke associatie met slim zijn, iets wat kinderen leuk vonden.

Daughter G (8): "Bij expert dacht ik 'oeh

dan ben ik slim'."

Son F (11): "Iemand die slim is."

De rol werd in alle testen in de eerste ronde gekozen, en altijd door een kind. Er lijkt een kans te zijn dat deze door drukkere, extroverte kinderen wordt geprefereerd.

De rol werd in eerste instantie geassocieerd met meer kennisvragen. De uiteindelijke vragen waren minder kennis en meer 'lekker zelf weten'. De naam is daarom wellicht verwarrend.

Father F: "De expert is heel erg gewend

om naar kunst te kijken."

Daughter G: "Expert is een beetje 'alle

dingen veranderen' en daar

houd ik wel van."

Daughter G: "Expert zou ik niet echt expert

noemen, maar meer

'veranderaar' ofzo.. Want die

veranderd iets."

De expert leek ook geschikt voor jongere kinderen omdat, volgens Mother E, de antwoorden meestal makkelijk te geven waren en voelde als een juist antwoord. Zij vond dat ook een goede inkomer.

Mother E: "Deze prikkelt het

enthousiasme, want je weet

meteen het antwoord.

Laagdrempelig."

Kijker

De kijker werd bij geen enkele test als eerste gekozen, maar zorgde wel voor heel veel lol toen hij gespeeld werd. Hij werd zowel door kinderen als ouders gekozen. Hij werd achteraf ook genoemd als een van de leukere, vooral door de ouders.

Mother E zou de kijker sowieso mee nemen, als ze er 3 moest kiezen. Samen met de expert en de detective.

De kijker zorgde ook voor meer activiteit in het spel, net als de artiest dat doet. Veel grappige antwoorden kwamen van deze rol. Het zorgde ook voor verhoogd enthousiasme bij kind en ouder.

Mother E: "Ik weet zeker dat, na Victory

Boogie Woogie, hij [Son E (6)] elk schilderij ondersteboven zou

willen zien."

Mother G... koos de kijker als een van haar

favoriete rollen. "Op andere manieren kijken maakt het

fysiek."

Mother E: "Wie had dat gedacht? Als je

Victory Boogie Woogie

omdraait, zie je Hedwig! Dat

gaan we vaker doen,

kunstwerken ondersteboven

bekijken."

Vriend

De vriend werd in een van de testen als eerste gekozen door een ouder. In een andere testen is hij ook door ouders gespeeld, maar dan als tweede keuze.

Son G (8) noemde de vriend als een rol die hij nog wel zou willen spelen als detective er niet was geweest. Vooral de naam sprak hem aan.

De naam werd ook niet altijd juist gekoppeld aan de soort vragen.

Mother F: "Misschien een vriend van het

museum? Vragen over waarom je het belangrijk vind dat de

werken er hangen."

Niet alle vragen van de vriend sloegen goed aan, maar sommigen waren wel heel leuk (Bijv.: Wat heb jij met dit werk gemeen?). Het voegde niet per se het 'relating to ones own life' toe, zoals ik voor mij zag. Dat punt kwam over het algemeen nu meer terug in de rollen, dus het nut van de vriend was te betwijfelen. Er is een mogelijkheid deze te integreren met de Vlogger.

Artiest

De artiest was tot mijn verbazing geen populaire rol bij het kiezen. Wel was hij, net als de kijker, achteraf genoemd als favoriet en zorgde hij voor actieve interactie.

Mom G... koos deze rol als favoriet. "Het

uitbeelden en de

dansbeweging waren heel

leuk."

Son G (8) en Daughter G (8) dachten dat de rol niet snel gekozen werd, omdat de naam niet zo aanspreekt. De gebruikers voelen zich minder verbonden met de naam dan bij sommige andere rollen.

Het is ook niet direct duidelijk dat het doevragen zijn.

Son F (8)... over wat hij dacht dat de rol

inhield: "Hoe kun je dit werk beter maken? Misschien dat het over de kunstenaar aaat?

Father F... over wat hij dacht dat de rol inhield: "Ik kan mij niet zoveel

voorstellen bij de artiest.."

In de eerste test is deze rol niet echt getest, vanwege Daughter E (9) die stiekem haar mond hield en haar beurten oversloeg terwijl haar moeder dat niet doorhad.

In de tweede test was deze rol niet heel positief ervaren, omdat de moeder iets heel anders verwachtte toen ze de rol koos.

Daarnaast deden de zoons niet echt mee met het spel, wat zorgde voor wat gevoelens van gêne toen de moeder moest gaan dansen. Er is een gevoel van speelsheid nodig om deze rol leuk te vinden.

Vlogger

De vlogger werd ook niet als eerste gekozen, maar wel door kinderen. De naam werd geassocieerd met de jongere generatie, een rol voor kinderen of teeners.

De rol werd door Daughter G gekozen als favoriete rol achteraf, samen

met expert.

Daughter G (8): "Vlogger is een beetje

van dit en van dat."

Daughter G: "Ik hou van mijn mening

geven!"

Mother G: "Vlogger had ik niet gekozen,

want ik dacht 'dat is modern, ik ben niet van die generatie'. En toen zag ik dat 'oh, je laat je mening horen' en dat vind ik wel weer leuk."

Er waren een paar hele leuke vragen bij de vlogger. Vooral de vragen die gaan over het werk overdrijven of aanpassen op een manier: 'Wat zou het werk droeviger/liever/viezer maken?' Deze vragen zorgde voor interessante gesprekken en waren een favoriet voor Mother G.

Mother G: "Bij al die Jesus schilderijen zie

je alleen maar ellende, ellende. Wat zou het dan nóg droeviger maken? Dat iedereen in de hel

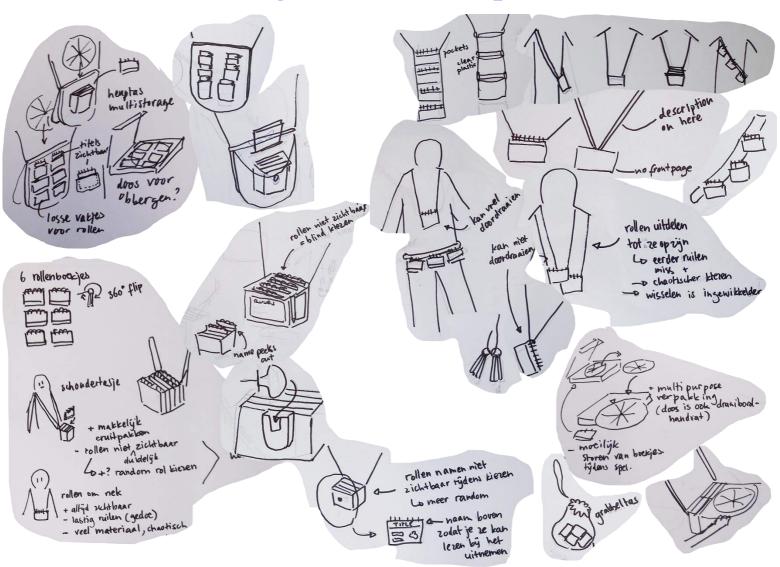
ligt? Haha."

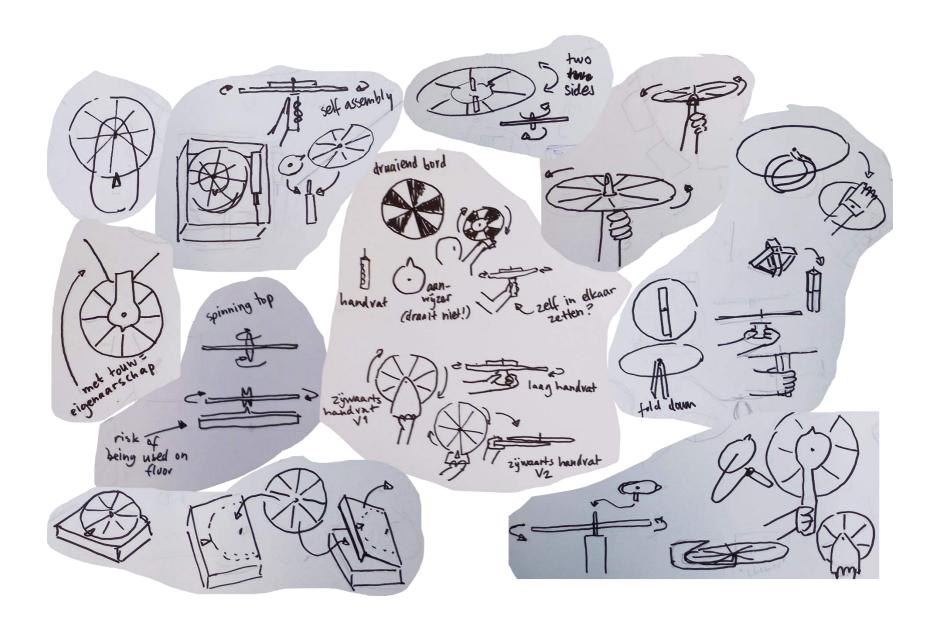
Daughter G: "Het werk lijkt op een

lammetje, dus om het liever te maken moet alleen het koppie een beetje ronder", terwijl ze naar een kleurvlek wijst. Hier lokte de vraag onverwachts uit tot een uitleg over wat ze zag in het abstracte schilderij.

Samen met de vriend en de dromer, werd deze rol als wat ingewikkelder ervaren door Mother F.

Appendix J: Brainstorm product storage





Appendix K: Final game design - complete card set

Uitvinder

De uitvinder vindt inspiratie in kunst!

Bewegen Creatief doen



Detective

De detective houdt van speuren!

Goed kijken Vergelijken



Dromer

Jouw fantasie kent geen grenzen!

Verzinnen Fantaseren



Vlogger

Als vlogger laat jij je mening horen.

Vinden Voelen



Expert

Als expert weet jij alles beter!

Verzinnen Veranderen



Ontdekker

Jij houdt van nieuwe dingen uitproberen!

Bewegen Goed kijken



Uitvinder

Hoe ziet dit werk er uit als dansbeweging?

Jitvinder *- Jitvinder*

Schilderij of tekening Voorwerp? Zie volgende kaart↓

Kies een stukje van het werk uit en beeld het uit.

Kan de rest raden welk stukje jij gekozen hebt? **Uitvinder**

Kan je een fantasiewoord bedenken om het werk te omschrijven?

Uitvinder

Kan je een gedichtje verzinnen dat bij het werk past? **Uitvinder**

Voorwerp of object Schilderij? Zie vorige kaart ↑

Hoe kan je dit voorwerp gebruiken om muziek mee te maken?

Hoe denk je dat het klinkt?

Uitvinder

Wat voor een kledingstuk zou jij ontwerpen wat bij dit werk past?

Welke kleuren kies je dan?

Uitvinder

Wat voor een soort muziek zou jij maken dat bij het werk past?

Zou dat hard of zacht zijn? Welke instrumenten gebruik je dan?

Uitvinder

Kan je dit werk uitbeelden?

Dit kan je ook samen met iemand anders doen!

Uitvinder

Hoe klinkt dit werk? Kan je het laten horen?

Detective Detective Detective Kijk goed naar het werk. Welk stukje van het werk valt het meest op? Kijk eens goed om je heen. Kan je iets vinden wat nog niemand had gezien? Kan je iets vinden wat deel van het werk had kunnen zijn? Waarom valt het op? Detective Detective Detective Net als Memory! Wat kan je vinden in het werk dat jullie thuis hebben, of lijkt op iets dat jullie hebben? Welk stukje van het werk zegt iets over het werk? Hoeveel paren van dezelfde dingen kan jij vinden in het werk? Wat zegt het precies? Detective Detective Dromer Welk stukje van het werk past niet bij de rest van het werk? Kan je een ander werk in deze ruimte vinden dat Welk dier zou in dit werk passen? bij dit werk past? Waar?

romer rome

Schilderij of tekening Voorwerp? Zie volgende kaart ↓

Stel je eens voor dat dit werk een raam is waardoor je een andere wereld kan zien.

Zou je in de wereld van dit werk kunnen leven? Zou jij er dan hetzelfde uit zien?

Schilderij of tekening Voorwerp? Zie volgende kaart ↓

Wat denk je dat het werk voorstelt? Waar zie je dat aan?

Is de rest het met je eens of denken zij wat anders?

Schilderij of tekening Voorwerp? Zie volgende kaart ↓

Stel je eens voor dat je dit werk uitzoomt en je nu de dingen kan zien die buiten de randen vallen.

Wat zou je dan nu nog meer kunnen zien?

Voorwerp of object Schilderij? Zie vorige kaart 1

Stel je de wereld eens voor waar dit voorwerp in thuishoort.

Zou je in die wereld kunnen leven? Zou jij er dan hetzelfde uit zien?

Dromer **Voorwerp of object** Schilderij? Zie vorige kaart †

Waar denk je dat dit voorwerp voor gebruikt wordt?

Kan je nog 3 andere dingen verzinnen die je er mee kan doen?

Voorwerp of object Schilderij? Zie vorige kaart †

Als jij dit voorwerp zelf had, wat zou je er dan mee doen?

Zou je dat heel vaak doen of maar

Hoe zou dit werk er uit zien als je het 100 jaar terug in de tijd zou plaatsen?

romer

U

Dromer

Wat is het eerste woord wat in je opkomt als je dit werk ziet?

> Denken de anderen aan hetzelfde woord?

Dromer

Dromer

Hoe zou dit werk er uit zien als het in de toekomst gemaakt zou zijn?

Vlogger Dromer Noem 1 ding dat je goed vindt aan het werk en 1 ding dat je slecht vindt. Er zit iets verstopt in dit werk... Zou jij dit werk in een Niemand kan het zien. museum hangen of zetten? Wat denk jij dat het is? En waar zit het verstopt? Zou de rest dezelfde dingen er noemen? Vlogger Op welke manier zijn jij en het kunstwerk hetzelfde? Is het werk spannend? Is het werk lief? Wat zou het werk (nog) Wat zou het werk (nog) liever spannender maken? maken? Het kan ook over een klein stukje van het werk gaan! er Vlogger Vlogger Welke emotie voel jij bij het werk? Word je er vrolijk van? Of juist niet? Bij wie uit jullie familie past dit werk goed of juist helemaal niet goed? ls het werk droevig? Wat zou het werk (nog) droeviger maken? ger Voelt de rest deze emotie ook?

Het bordje bij het werk klopt niet! Dit is helemaal niet gemaakt door die Expert Expert Het werk mist nog iets... kunstenaar! Als je dit werk een nieuwe naam mocht geven, hoe zou je het dan Wat zou jij er aan toevoegen om Door wie is dit wel gemaakt? noemen? het af te maken? En waarom heeft die dit gemaakt? Expert Zonder op de bordjes te kijken! In musea schrijven ze vaak een leuk Expert tekstje bij het werk dat iets vertelt Blinde mensen willen ook wel eens Kan je een ander werk in deze ruimte vinden die gemaakt is door dezelfde kunstenaar? over wat er bijzonder aan is. naar een museum. Hoe zou jij dit werk beschrijven aan een blinde? Wat zou jij op het bordje zetten van dit werk? Waar zie je dat aan? Expert Kunst wordt verkocht op veilingen. Het werk is nog niet perfect... Vaak voor heel veel geld. Wat zou jij veranderen om het werk beter te maken? Hoeveel geld vind jij dat dit werk waard is?

ntdekker

Kijk eens vlak langs het werk.

Wat zie je nu?

Ontdekker

Bekijk het werk eens van heel hoog of heel laag! Als je lang bent, ga je door je hurken. Als je kort bent, vraag je of een ander je op wilt tillen.

> Hoe ziet het werk er van dit punt uit? Wat valt op?

Ontdekker

Bekijk het werk eens ondersteboven.

Hoe ziet het werk er nu anders uit?

Ontdekker

Kijk eens naar het werk terwijl je scheel kijkt.

Wat zie je nu?

Kan je niet scheel kijken? Kijk dan door je wimpers! Ontdekker

In musea kijken mensen soms heel lang naar één kunstwerk. Kan jij dat ook?

Kijk eens 20 tellen goed naar dit werk. Zonder iets te zeggen!

Zie je iets wat je eerst nog niet had gezien?

Ontdekker

Maak met je handen een kokertje en kijk erdoor naar het kunstwerk.

Zijn sommige dingen makkelijker te zien dan andere?

Ontdekker

Ga eens heel ver weg staan van het kunstwerk.

Zie je nu andere dingen dan van dichtbij? Wat zie je? Ontdekker

Kijk eens goed naar het werk en doe daarna je ogen dicht.

Weet je nog hoe het werk er uit zag? Probeer het te omschrijven. Zonder spieken!



Appendix L: Different versions of the game

Loose card decks could be interesting, since it affords the users to mix up role questions if that is what they prefer. They could even create a personalised deck before even coming to the museum. This makes the game even more open to be adapted by each family.

Risks that would need to be fixed then, would be:

- How to prevent a whole deck of cards from falling on the ground in the museum, causing a huge mess.
- How to store the decks away while keeping the possibility of easy exchange of decks. The folded bag would still be possible, but not as logical if the cards would all be loosely stored.

Mixed booklets that are not separated by role but purely by colour or some other neutral division, and contain various types of questions. This eliminates the need for role-exchange and will always make sure there is a lot of variation in the game. This might make it more suited for families that only play it once when visiting the museum and don't buy it after. Replayability and the feeling of autonomy (everyone having their own task) might not be as strong, since the booklets are essentially all the same.

Booklets that are not separated by roles but by way of exploring and discussing the art, like 'change', 'fantasize', 'examine', etc. This would work sort of like a truth or dare, where the family decides what fits the art best. A very empty artwork could be interesting to fantasize about for example, while there is plenty to look at with a busy one, making examining it more fun.

This might make the questions fit the art better, making the resulting conversation more personal.

However, it eliminates the autonomy of the roles, which might lower mutual engagement.