

Design for transformative teen **experiences** at the Van Gogh Museum

By Lynn Potters



“Nowadays it is less about the art and artists. It is more about the students experiencing a museum visit and being challenged to discover themselves.”

Quote from high school teacher
(personal communication, 2019).

Colophon

Design for transformative teen experiences
at the Van Gogh Museum

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*A collaboration between TU Delft,
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Preface

I am grateful to be given the opportunity to work with the design challenges formulated by the Van Gogh Museum while developing myself as a researcher/designer. Looking back at the last half year, I am amazed by the large amount of people that inspired, guided and supported me throughout this project. Therefore, I would like to say thanks to ...

Frido for always challenging me, helping me to reach my personal zone of proximal development and appreciating the abstract and fundamental nature of the this project.

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All friends, fellow students and family that were not mentioned yet but supported me by being there for me, accepting my moments of “social absence” and cheering me up when needed.

This project felt like rafting down a waterfall, thrilling, challenging and most of all, rewarding throughout the entire ride. Having said all of this, I wish you an inspiring read.



Montmartre: Behind the Moulin de la Galette, Vincent van Gogh, July 1887

Glossary

This section briefly describes the definitions of terms and abbreviations used within this theses and potentially unfamiliar to the reader. of terms and abbreviations used within this thesis.

Terms

Teen: Teenager in the first grades of high school education, VMBO level.

Story: The telling of a happening or connected series of happenings, true or fictitious.

Protagonist: Main character within a story.

Narrative: The way in which events within a story are related and in what order.

Narrative elements: Specific elements guiding the nature and direction of the narrative.

Narrative direction: the “route” in which a person is guided from the beginning to the end of a narrative.

Interactive narrative: Narrative in which the user has certain amounts of control regarding the direction of the storyline.

Back-story: The underlying story that provides a narrative with logic and coherence.

Abbreviations

VMBO: Preparatory secondary vocational education within a high school curriculum.

VGM: Van Gogh Museum.

MMT: Multimedia Guide including different multimedia tours.

Executive summary

This thesis describes a project initiated by the Van Gogh Museum (VGM) and the Museum Futures Lab based at TU Delft. Resulting from recent research (Youngworks, 2018), VGM was advised to design for new experiences for high school teens at the museum. Currently, many of these teens describe their VGM experiences as dull and irrelevant to their personal lives. To address this, VGM formulated design challenges regarding interactive narratives and suggestions for a multimedia tour (MMT) for teens. Within this thesis, the context of those challenges has been explored. Through literature and empirical studies, the following four domains were analyzed; VGM, teens, interactive narratives and transformative experience design. The insights within these domains led to the following research question:

“How to design for transformative teen experiences at VGM while also designing a fitting interactive narrative and suggestions for an MMT?”

To ensure a holistic approach when designing for transformative museum experiences, two existing models were combined (figure 0). The first one, the Contextual Model of Learning (Falk & Dierking, 2012) which provides an overview of three contexts that influence the learning activities at museums over time. The second, the experiential journey (Bär & Boschouwers, 2019) which provides an overview of nine stages to consider when designing for transformative experiences.

The insights resulting from the earlier described studies were also translated into an overview of design requirements. This overview describes

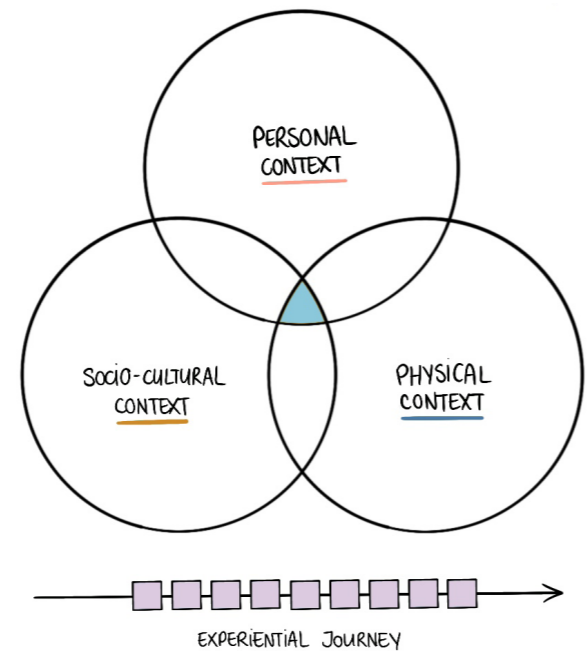


Figure 0: The Contextual Model of Learning and experiential journey combined into one model.

requirements for each of the four domains and links them to the stages nine within the desired experiential journey. Additionally, an experience vision was created to guide the design process. This vision entailed: providing the teens with an inviting and explorative experience in which they are guided to marvel about the authentic stories behind the work and life of Van Gogh. Based on the vision and requirements, six design iterations were performed: two co-creation

sessions, three individual creative sessions and VGM expert meetings. The iterations resulted in varying loose ideas, concept proposals, specific narrative content regarding Van Gogh and design implications for an MMT at VGM. Results that, all together, enabled the creation of the final proposed concept, Vincent & I.

Vincent & I facilitates transformative teen experiences at VGM. The concept describes four perspectives regarding the transformative teen experience at VGM. First, the experiential journey is presented in which not only the museum visit but also the pre- and post-visit stages (in class) are considered. Secondly, six different stages within the museum are described: introducing, exploring, selecting, discovering, recharging and wrapping-up. Within this museum visit, an interactive narrative structure was created. This structure consists of two different narrative directions, four themes (determining the narrative content), 6 “must-see” plus 4 “your choice” paintings and four narrative elements: information, open questions, multiple choice questions and activities. Finally, design suggestions for an MMT were made. These suggestions provide examples for the visual and auditory elements needed to communicate the interactive narratives.

The key principles behind the concept were evaluated with 25 teens using paper prototypes at VGM. As a result, initial transformative teen experiences were identified through the

experience of Vincent & I. Additionally, all teens reviewed Vincent & I as interesting and engaging. This in contrast to the current negative reviews of teen regarding their experiences at VGM. The insights of the concept testing study validated the potential of the proposed interactive narrative and narrative elements to facilitate transformative teen experiences at VGM.

Finally, recommendations were formulated to provide VGM with advice regarding further use and development of the proposed concept. As support, initial guidelines for a design approach towards future transformative museum experiences were presented.

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Teens on their way to the Van Gogh Museum, by Astrid ten Bosch, May 2019

I.

Introduction

This chapter provides introducing information regarding context and design challenges providing the scope of this project. Also, the approach used throughout the project is briefly described.

- 1.1 How to read this thesis
- 1.2 Introductions
- 1.3 Design challenges
- 1.4 Approach

I.I How to read this thesis

This thesis presents the process and results evolving around the challenge how to design for transformative teen experiences at VGM. The document is divided into six main chapters, each concluding with main insights relevant for the goal of the project. First, background information is discussed regarding the subjects that form the context of this project (Chapter 1.2). Secondly, specific research questions are presented based on the design challenges addressed by VGM (Chapter 1.3). Then, the approach used throughout this project is discussed including the different research and design phases (Chapter 1.4).

Hereafter, extensive literature and empirical studies are discussed through four different analysis lenses: the VGM context (Chapter 2.1), teens (Chapter 2.2), interactive narratives (2.3) and transformative experience design (Chapter 2.4).

The key insights from these analysis lenses are translated into a holistic overview of design requirements (Chapter 3.1) accompanied by an experience vision (Chapter 3.2) to guide the design process.

After this, the design approach including six different design iterations is presented (Chapter 4.1). Resulting from these design

iterations, the concept Vincent & I is proposed. The concept is presented through four different perspectives: the experiential journey (Chapter 4.2.1), the museum visit (Chapter 4.2.2), the interactive narrative (Chapter 4.2.3) and the design suggestions for an MMT at VGM (Chapter 4.2.4).

Successively, validation of the project’s research questions is discussed based on performed concept testing with teens at VGM. Both the research set-up (Chapter 5.1) and the main insights (Chapter 5.2) are presented.

Based on these insights the conclusion is presented regarding the effect of the concept proposal in relationship to the design challenge and research questions (Chapter 6.1). Additionally, limitations within the projects are discussed accompanied by recommendations for further development of the concept within VGM (Chapter 6.2). To provide guideline for future projects regarding transformative experience within the museum context, an initial design approach is proposed (Chapter 6.3). Finally, an overall reflection considering the project’s contribution to the personal growth of the research/designer behind the project is discussed (Chapter 6.4).



Do you have limited time and are you...

- ... mostly interested in the **proposed concept**?
Focus on Chapter 2.4, then go straight to Chapter 4.2.
- ... mostly interested in the **research questions and validation**?
Focus on Chapters 1.3, 3.1, 5.2 en 6.
- ... mostly interested in the **design approaches** used and proposed **towards transformative experiences**?
Focus on Chapters 1.4, 2.4 and 6.3.

I.2 Introduction

Cultural institutions such as museums have the potential to bring people together. They foster knowledge exchange through the sharing of stories and stimulate personal development. Baba Fallo Keita, Heritage Conservator Ministry of Culture Mali formulates the role of museums as follows: *“a place to show every individual and group that they each have their place in society ... museums are places where everyone belongs and can contribute something.”* (UNESCO, 2017) As promising as this may sound, Nina Simon (2010) addresses the fact that a large part of this society still feels dissatisfied when visiting museums. She formulated five commonly-expressed forms of public dissatisfaction:

- “Cultural institutions are irrelevant to my life.”
- “The institutions never change, I have no reason to go back.”
- “The institution’s authoritative voice doesn’t include my view or give me context for understanding what’s presented.”
- “The institution is not a creative place where I can express myself and contribute to history, science and art.”
- “The institution is not a comfortable social place for me to talk about ideas with friends or strangers.”

As a way to decrease these forms of dissatisfaction Simon proposes the concept of the “Participatory Museum”:

“Rather than delivering the same content to everyone, a participatory institution collects and shares diverse, personalized and changing content co-produced with visitors.”

Simon formulated three important factors to actively involve visitors in creating their own museum experience:

1. Apply an audience-centered approach
2. Treat visitors as individuals instead of crowds of people.
3. Provide tools to connect visitors with others.

Learning in museums

Researchers describe learning as “active participation of the learning with the environment.” (Hein, 1998) Addressing both the importance of (inter)activity and the context in which this activity takes place. Falk & Dierking (2012) talk about learning within the museum context as follows;

“The learning that museums support is broader and richer than merely learning facts and concepts; museums also support outcomes such as social learning and bonding, increasing self-awareness and self-confidence, and learning related to aesthetics and beauty.”

Through their “Contextual Model of Learning” (figure 1) Falk & Dierking (2012) introduces three layers of context that influence this learning activity. The personal, socio-cultural

and physical context each influence the interactions and experiences that people have at museum, including teens. The additional dimension of time explains how a personal and interactive learning experience can be created during a museum visit. Within this project, The Contextual Model of Learning was used as an important reference. This to ensure that all contextual elements influencing the learning activity were considered when designing for the new transformative teen experience at VGM, Vincent & I (Chapter 4.2).

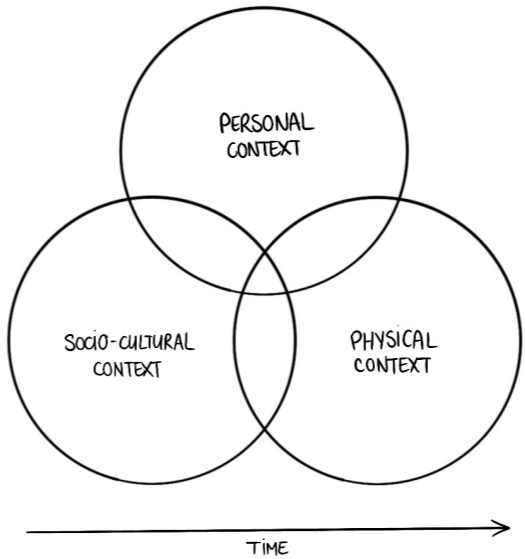


Figure 1: The Contextual Model of Learning by Falk & Dierking

The Van Gogh Museum

VGM is one of these cultural institutions seeking for innovative ways to share their collection and the unique stories behind it. In comparison to other well-known Dutch museums such as the Rijksmuseum, VGM focuses on the work of one specific painter: Vincent van Gogh. The museum displays the largest collections of work made by Van Gogh which is brought to life through his remarkable personal stories. In terms of reputation and admiration by both visitors and non-visitors, VGM ranks #2 on a global scale (Van Riel & Heijndijk, 2017). However, the museum also faces the challenges as described by Simon.

Teens

A current visitor group that shows specific forms of dissatisfaction after visiting VGM are high school teens. The majority describes their museum visit as (YoungWorks, 2018):

- Dull.
- Irrelevant to their personal lives.
- Not a “place for them”.

This especially goes for teens that are in the first-grades (age 12 - 15) of preparatory vocational secondary education, or VMBO. Within the Dutch educational system, VMBO is the minimum requirement for preliminary education. Afterwards, most of the teens continue to intermediate vocational education (MBO) before entering the job market.

Interactive narratives

Current VGM products and services such as tours facilitated by personal guides or multimedia tours are well-received by many of the visitors including the teens. However, the current portfolio does not really seem to meet the values, needs and interests of the teens. Therefore, the museums seeks for new ways to convey the work and stories of Van Gogh. Based on the success of the current multimedia tours, VGM aims to expand their current portfolio by creating interactive narratives relevant and relatable for teens. Additionally, the museum has the wish to facilitate large groups of teens with a meaningful, entertaining and personal experience. Chapter 1.3 describes the design challenges as formulated by VGM.

Transformative experiences

Years ago, “designing for experiences” was an unfamiliar saying to many professionals in the creative field. However, Pine & Gilmore (1999) addressed the progression of economic value from products moving towards service and eventually experiences. During a recent conference in Amsterdam, Pine discussed the succession of these experiences with experts in the field of experience design (Pine, Bär & Boschouwers, personal communication, 1 february 2019). Pine proposed that the economic value will progress from the need for “time well spent” (experiences) to a need for “time well invested”. A new economic value that was described as transformative experiences (figure 2).

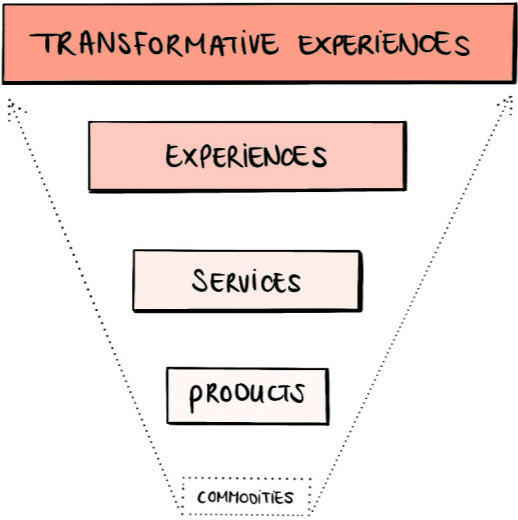


Figure 2: The progression of economic value.



Transformative teen experiences at VGM, by Astrid ten Bosch, May 2019

I.3 Design challenges

Currently, 40.000 teens per year visit VGM as part of a school activity (Van Gogh Museum, 2018). The majority of these teens, describe the museum experience as dull or irrelevant to their personal lives. Based on recent research, Youngworks (2018) provided VGM with the following advice:

- *“Develop a new tour “introduction to the life and work of Van Gogh” as a low entry experience for teens in the first grades of VMBO, teens with low cultural knowledge.”*
- *“Add active elements such as “do” assignments and keep the tours short: 45 minutes.”*
- *“Develop an MMT for teens that fits their needs in terms of content, tone of voice and duration.”*
- *“Start with a collective introduction after which the teens are split up in smaller groups, allowing them to choose a preferred route through the museum.”*

Youngworks’ research showed that teens who experienced the current MMT at VGM responded enthusiastically. *“More than 70% of the teens state that they thought of the tour as interesting.”*

Therefore, VGM formulated the following challenges as starting points for this project:

1. How to enhance the museum experience for teens who visit VGM as part of a school activity?
2. How to provide more room for personal decision-making, offering different starting points to Vincent’s (chronological) stories while maintaining a logical story.
3. What are design solutions resulting from such interactive narratives for a multimedia guide (MMT) at the Van Gogh Museum?

To specify the design challenge for this project, an elaborate context analysis was performed (Chapter 2). Building upon the challenges and advice formulated by VGM and Youngworks, the values, needs and interests within the context of this project were explored. This by considering the context of VGM, teens as visitors, interactive narratives as a potential tool to facilitate the desired experiences and transformative experience design as a new approach to guide the design process.

These four different analysis lenses enabled to translate the initial design challenges by VGM into the following research questions:

“How to design for a transformative teen experience at the Van Gogh Museum? In which the teens do not only positively experience their visit, but are also challenged to discover more about themselves.”

To concretize the meaning, the research question was divided into the following sub-research questions:

1. How to provide teens with relatable and substantial new insights based on the work and stories of Van Gogh?
2. How to design an interactive narrative structure that fits with the values, needs and interests of teens?
3. How to design narrative elements applicable for an MMT at VGM?

Chapter 1.4 describes the approach that was used during this project to find answers to these research questions.

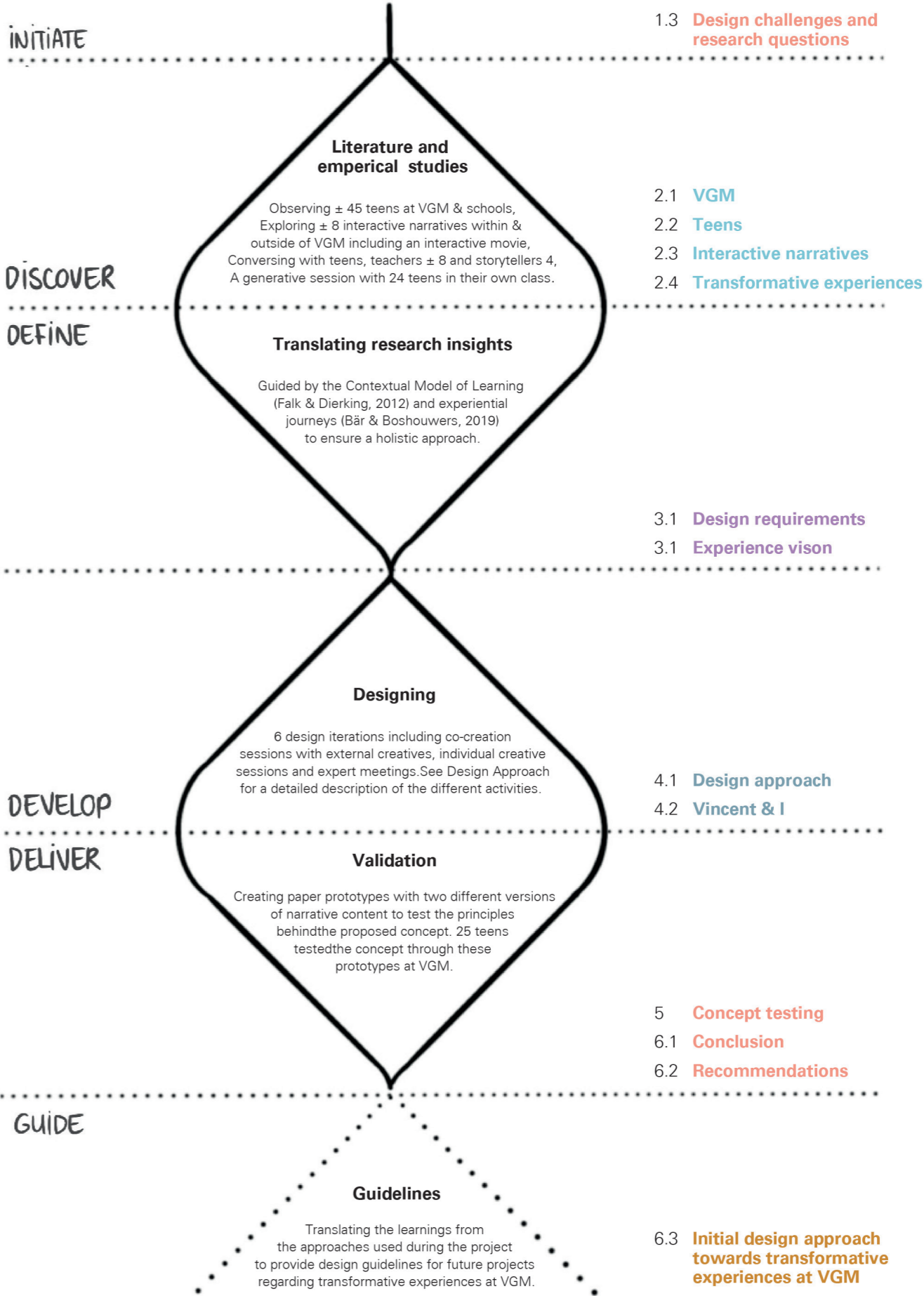
I.4 Approach

Throughout this project an approach was used based on the Double Diamond model (Design Council UK, 2005). The stages as described within the this model are: discover, define, develop and deliver. To specify the model for this project, an pre-diamond stage (initiating) and post-diamond stage (guiding) were added. The overview on the next page explains the different stages and the performed activities.

- 1. During **the first diamond**, different literature and empirical studies were performed to explore the context of this project. Next to elaborate studies, inspirational explorations such as self-participating in tours and evaluating an interactive movie with friends were performed. These activities provided mostly inspiration rather than specific insights.
- 2. During **the second diamond**, the insights gained through these studies were translated into design requirements and an experience vision. This to guide the design process.
- 3. During **the third diamond**, six design iterations were performed including co-creation session, individual creative sessions and VGM expert meetings. These iterations resulted in the proposed concept.
- 4. During **the fourth diamond**, paper prototypes were created to test the principles behind the concept with teens at VGM. Concept testing was performed after which the conclusion and recommendations for this project were formulated.

Finally, guidelines were formulated for those who will design for transformative experiences at VGM in the future.

The numbers accompanying the outcomes of the different diamonds represent the chapters in which more information related to the topic is described. Also, within these chapters references to specific appendices regarding the research and design activities were made.



2. Analysis lenses

Four different domains are discussed that form the analysis lenses for this project’s research phase. Each lens is concluded with a summary of the key insights gathered through the performed studies.

- 2.1 Van Gogh Museum
- 2.2 Teens
- 2.3 Interactive narratives
- 2.4 Transformative experiences



2.I Van Gogh Museum

As introduced, the transformative experiences designed for within this project occur in and around the Van Gogh Museum. Naturally, this context influences the character of these experiences. Therefore, literature studies were performed accompanied by empirical research to identify key insights (Chapter 2.1.5). These were translated into design requirements (Chapter 3.1).

The following subchapters respectively discuss the most relevant information regarding: the artist Vincent van Gogh, the uniqueness of VGM and the current visitor experience for teens. Finally, the key insights are discussed in the concluding subchapter.

2.1.1 Vincent van Gogh

Vincent van Gogh (1853 - 1890) was a Dutch post-impressionist painter who is world-famous today. In his relatively short career as an artist (10 years), Van Gogh completed more than 2.100 works. These include 860 oil paintings and more than 1.300 watercolors, drawings and sketches (Van Gogh Museum, n.d.). The true recognition for his art only came years after the event of his death. Thoughts that Van Gogh had in relation to his delayed fame were referred to in the movie “At Eternity’s Gate” (2019): *“Maybe I’m painting for people who haven’t been born yet.”*

Throughout his life, the painter wrote almost 900 letters which were published by Jo van Gogh-Bonger, his sister in law, after his death. *“Van Gogh’s fascinating life story is one of the reasons why his work gradually took the whole world by storm.”* (Van Gogh Museum, n.d.)

Based on Van Gogh’s personal stories, many references have been made within the cultural industry. The animated movie “Loving Vincent” (2017) is one of the most recent examples. Older references include Don McLean’s “Vincent” (1971) a song known to many as “Starry, Starry Night” which even became a number one hit in the United Kingdom in 1972.

VGM (n.d) defined different topics in which Van Gogh’s personal stories are combined with the many artworks exhibited in the museum. These topics are formulated as:

- Nature and the artist
- On the verge of insanity
- Friendship for better and for worse
- Full of passion and dreams
- The end of a difficult road
- Inspiration from Japan
- Brother love: Vincent & Theo
- Looking for contrast
- His unrequited loves

Must-see paintings

To facilitate the current guided tours for teens, a list of must-see paintings was formulated by VGM (Broekhoven, personal communication, 2019):

- Self-portraits
- The Potato Eaters
- Work from time in Paris
- The Sunflowers
- The Bedroom
- The Harvest
- The Yellow House
- Work from time in Asylum
- The Almond Blossom
- His final Landscapes

Images of these paintings are shown on the following two pages. Based on these paintings. Broekhoven, defined three different elements as most important to discuss:

- Van Gogh’s **life story**
- Van Gogh’s **artistic development**
- Van Gogh and **teen relatability**

Broekhoven also explained *the importance of relating the tour’s content to the daily lives of the teens*. Not only to address their personal interests, but *to also let them relate to Van Gogh*.

A self-portrait



The Potato Eaters



Work made in Paris



The Sunflowers



The Bedroom



The Harvest



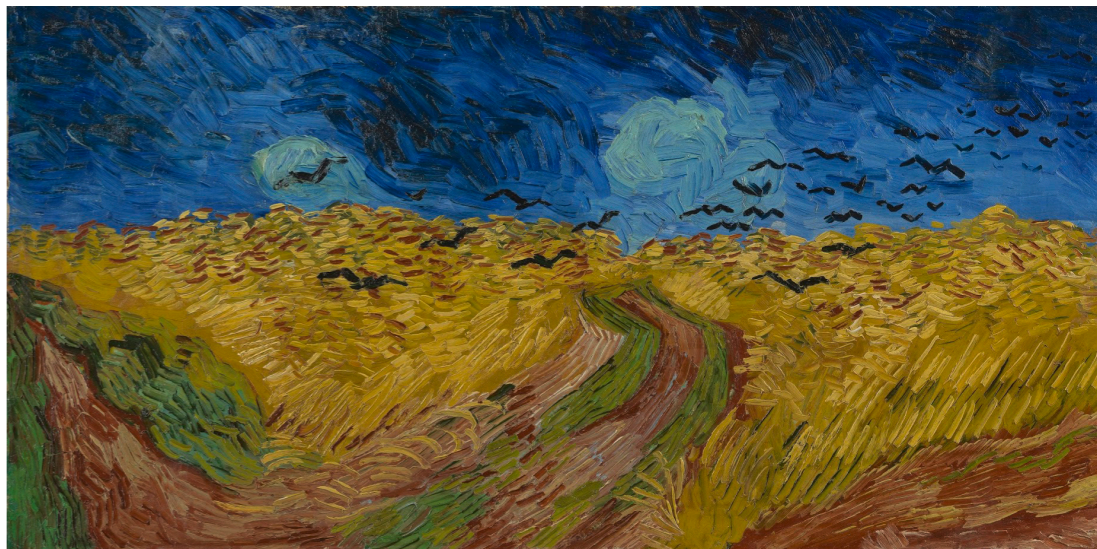
The Yellow House



Work made in the asylum



The Almond Blossom



One of the final landscapes

2.1.2 Van Gogh Museum

VGM provided both the physical and socio-cultural context within this project. Housing the largest collection of work created by the famous Vincent van Gogh, this museum has a particularly unique story to tell. The combination of the painter's work and life story attracts millions of visitors to the museum every year. In 2017, VGM even managed to be the most visited museum in the Netherlands. With 2,26 million visitors the museum outranked the well-known Rijksmuseum and Anne Frank House.

Until 1962 a large collection of Van Gogh's work was in the hands of his relatives. It was Vincent Willem van Gogh (son of Theo and thereby nephew of Vincent) who reached an agreement with the Kingdom of the Netherlands to transfer control of the entire collection (the paintings, drawings and letters) to the Vincent van Gogh Foundation. In return, the State arranged for the Van Gogh Museum to be built. This to ensure that the collection always remains accessible to the public. The Van Gogh Museum opened its doors in 1973. (Van Gogh Museum, 2018b)

VGM mission

Throughout the years, many have found inspiration in Van Gogh's paintings and his personal stories. VGM's mission contributes to this:

"VGM aims to reach, inspire and enrich the lives of its visitors by making the stories about Van Gogh's life and work accessible to as many people as possible." (Prins & Broekhoven, personal communication, 5 November 2018)

Adding to this, the objective of the Education & Interpretation department within VGM is described as *"to enrich and inspire people so that they make the connection between themselves and the artwork and/or the artist."* (Van Gogh Museum, 2018b)

Guided tours

Over the years, the museum has created different narrative structures, (informative plates next to paintings, guided tours, assignment cards, MMT, etc.) aiming to translate Van Gogh's work and his life events to the 21st worlds of today's visitors.

As part of this project's challenge, design suggestions are proposed (Chapter 4.2.4) building upon the current MMT service at VGM (figure 4). Before creating these suggestions, the current MMT and related other services were observed within the VGM context. The MMT, launched in 2014, was mainly created for first-time visitors looking for an educational service. On average, 1 out of 5 visitors make use of the service for which a €5 fee is charged. So far, research with visitors mainly resulted in positive results in which the experience aspects are rated higher compared to visitors that go through the museum without an MMT.

Different types of tours are offered within the current system, providing the visitor with the freedom to select a tour that fits best with their personal needs and interests (S. Prins, personal communication, 19 march, 2019). The current tours that are offered are:

- **Leisure**, in which the visitor can determine their own pace.
- **Highlights**, guiding visitors along the most famous paintings in 45 minutes.
- **Experience Van Gogh together**, a tour created especially for families.
- **Hockney - Van Gogh**, guiding the visitor through the temporary Hockney - Van Gogh exhibition.

VGM plans to add tours designed specifically for high school educational purposes, focussing on teens. Hence, the design challenge as formulated for this project (Chapter 1.3).

Crowds

In contrast to the positive evaluation of the MMT experience, visitors state to be less satisfied concerning the large crowds moving through the exhibition spaces. Research performed by VGM regarding visitor satisfaction showed that the increase of crowds negatively influences the overall review of the museum. VGM argues that crowds do not need to be a problem as long as the large group of visitors is divided throughout the different exhibition halls. *"It remains important to strive towards an*

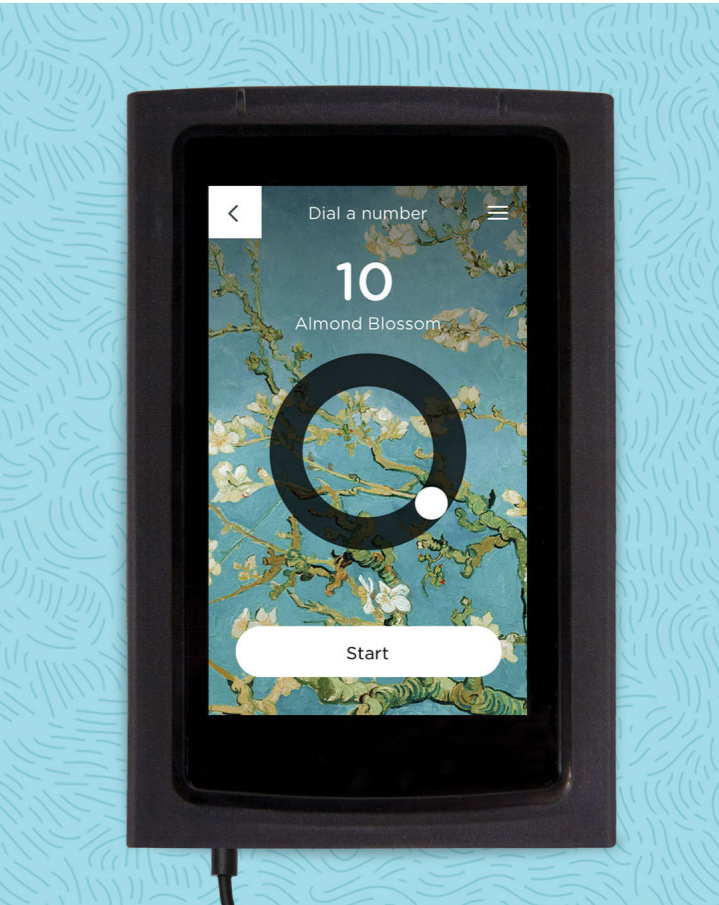


Figure 4: The current MMT by VGM.

optimal distribution of visitors throughout the entire building of the museum." (Van Gogh Museum, 2018b)

These insights describe the functional benefit for the VGM when facilitating an experience for teens through interactive narratives. *By providing different starting points throughout the museum, groups of teens can be distributed, lowering the level of crowds.* An important requirement to consider when creating such different starting points is the amount of overview provided. As the permanent collection is divided over four different floors, *a clear sense of location and direction is needed* to facilitate the needs of the teens (Chapter 2.2).

Technical developments

Several technical developments will most likely change the setup of the current MMT's, aiming to make the interactions more intuitive. One of these developments is the beacon system within the museum. This system works based on a grid which highlights when a visitor approaches a painting in a radius of 1-3 meters. Currently, the paintings are labeled using physical numbers in the exhibition spaces. Through the implementation of the beacon system, a more intuitive navigation can be facilitated. The physical numbering could be replaced with a digital and responsive system. The beacon system can also locate crowds of visitors throughout the museum. This feature could potentially be used to guide

visitors in avoiding crowds. These are design opportunities that are not yet put into practice but create room for innovative changes regarding the current VGM services.

House rules

With an average of 1600 visitors per day, the museum defined the following house rules to maintain a comfortable environment (Van Gogh Museum, n.d.):

- It is not allowed to take photographs within the museum. With exception to specific "selfie" spot outside of the exhibition halls.
- Large bags (backpacks of teens, e.g.) need to be stowed at the cloakroom.
- It is not allowed to run or scream within the museum, to prevent hindering other visitors.

Important requirements to consider when designing for an interactive and transformative experience for teens. As *"teens are a type of visitor that enjoy to actively explore and mess around."* (Teacher S, personal communication, 5 december 2018).

2.1.3 Teen experience at VGM

The number of high school teens visiting VGM has increased from 36.789 in 2016 to 44.810 in 2017. VGM believes that every (Dutch) child should know Van Gogh, irrespective of their educational or socio-economic background. Therefore, the objective was formulated that at least 10% of the museum visitors should be younger than 18 years. Based on research performed with 740 teens and 48 teachers (Youngworks, 2018) the following insights were formulated regarding the current teens experiences at VGM:

- The teens rated the museum visit with an average 7.5 out of 10. Within this evaluation, *18% of the teens stated to be more enthusiastic about the visit than expected.*
- The majority (84%) of teens considers the museum visit as educational.
- The teens were most positive regarding a tour provided by their own teacher (7.9), guided tour organized by VGM (7.8) and the MMT (7.8).

However, *only one third of the teens shared the opinion that their tour guide understood well how to engage the teens.*

Those who experienced the MMT (70%) *stated to be enthusiastic about the service.*

- Physical assignment cards were described as less inspiring and engaging compared to the guided tours.

Research insights describing the teacher's experiences stated the following:

- Half of the teachers were involved in making the decision to go to the VGM. A quarter of this group played a decisive role.
- 9 out of 10 teacher stated to visit the museum as a re-visit organized by others within their schools.
- Their main reason to visit VGM was to *let teens experience art* (65%).
- *48% of all teachers prepared the visit* with their students through pre-visit activities in class. Another 20% did not prepare the museum visit at all.
- *The preparatory materials offered by the VGM were rarely used.* Low to no awareness regarding these materials was stated as the main reason.

The above mentioned insights contributed to the advice formulated by Youngworks leading up to the design challenges as discussed in Chapter 1.3

2.1.4 Empirical studies at VGM

The amount of VMBO teens participating in the study performed by Youngworks (2018) was not described in their report. Therefore, additional empirical research was performed within VGM. The amount of VMBO teens participating in the study performed by Youngworks (2018) was not described in their report. Therefore, additional empirical research was performed within VGM. For a detailed description of the research approaches and results please have a look at the below mentioned appendices.

Observations and conversations with both teens and teachers were made during guided tours (Appendix A.1). Also, conversations were held with teachers during varying workshop at the Studiedag 2018 organized by VGM, the Rijksmuseum and the Stedelijk Museum. Finally, journey mapping sessions (figure 5) were attended within the VGM organisation based on which a journey map specific for this project was created (Appendix A.2). These different research explorations resulted in additional insights regarding pain points in the current teen’s experience at VGM.

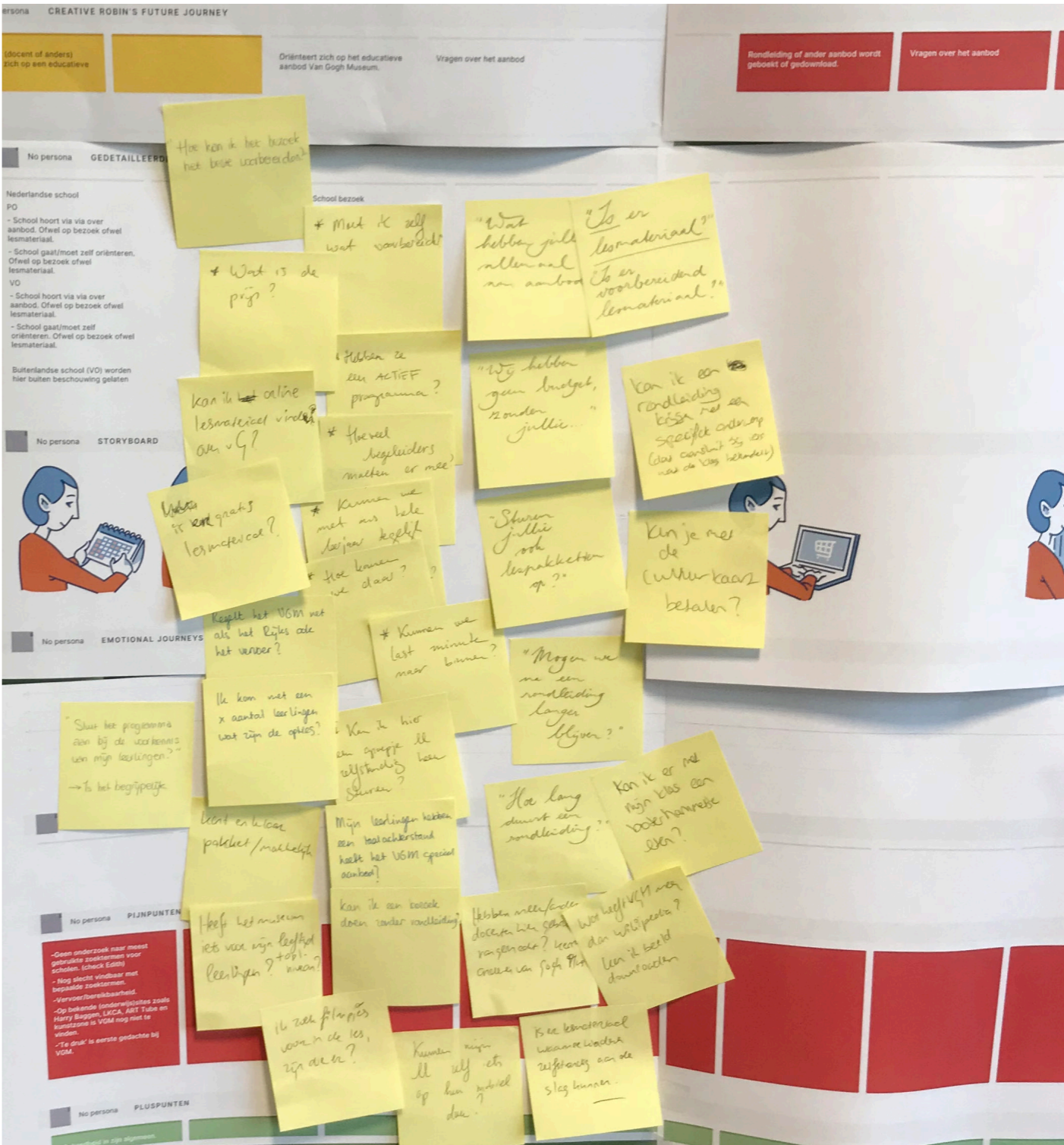
- The museum visit is **not perceived as welcoming**. For most teens the museum does not feel like a place for them.
- There is a **perceived lack of clear overview** regarding the content of the

upcoming tour.

- The existing tours mainly exist out of **listening and looking activities**, described by many teens as **boring**.
- There is **no room for personal decision-making** regarding the routes through the museum. All teens are provided with the same content.
- Little to **no breaks** are integrated, resulting in **complaints regarding physical discomfort**.
- During the wrap-up of the tour the majority of teens have lost their attention. Thus, **no moment of recollection and personal reflection**.
- There is **no post-visit material available to reflect** upon the museum visit in class to translate the discovered insights into to personal learnings.

Within this project a **vision-driven approach** was used striving towards innovative solutions rather than **redesigning** the current situation through **problem-fixing**. Therefore, the insights described previously were mostly used to evaluate the proposed concept towards the formulation of recommendations for further development (Chapter 6.2).

Figure 5: Photo taken during journey mapping sessions at VGM.



2.1.5 Conclusion

As described in the previous subchapters, VGM has a unique advance due to Van Gogh’s fascinating stories combined with his work. With their mission to reach, inspire and enrich their visitors, the museum has plenty of narrative material to do so. Important elements to discuss as defined by VGM are:

- Van Gogh’s life story
- Van Gogh’s artistic development
- Van Gogh and teen relatability

Accompanied by these must-see paintings:

- Self-portraits
- The Potato Eaters
- Work from time in Paris
- The Sunflowers
- The Bedroom
- The Harvest
- The Yellow House
- Work from time in Asylum
- The Almond Blossom
- His final Landscapes

Based on Van Gogh’s work and fascinating stories, VGM also has the opportunity to support learning within the museum that is broader than merely learning facts and concepts (Falk & Dierking, 2012):

“... museums also support outcomes such as social learning and bonding, increasing self-awareness and self-confidence, and learning related to aesthetics and beauty.”

This described increasing self-awareness links directly to the concept of transformative experiences as further discussed in Chapter 2.4. To enable designing for such experiences, the key insights discussed in the previous subchapters need to be considered closely:

- The preparatory materials offered by VGM are until now rarely used. Missing out on the chance to attract the teens attention and address their personal interests.
- The main reason for teachers to visit VGM, is to let the teens experience art. However, many describe their experience at VGM as boring.

- The museum is currently not perceived as welcoming. Also, there is a perceived lack of overview regarding the tour’s content.
- Current “looking” and “listening” activities do not seem to meet the desire of teens to actively explore and mess around.
- Within the current tours there is little room for personal decision-making. All teens are provided with the content.
- The teens were most positive about tours provided by their own teacher, guided tour organized by VGM and the MMT. However, only one third shared the opinion that these guides new how to engage them well.
- Many teens complain about physical

- discomfort during the tours.
- The large crowds at VGM are described as a form discomfort.
- VGM house rules (no bags, no photographs, etc.) were formulated to secure visitor comfort.
- Most teens have lost their attention by the time the tour is wrapped up. Resulting in few to no moments of recollection and personal reflection.
- There is no post-visit material available to reflect upon the insights discovered during the visit. Missing out on a moment to translate these insights into personal learnings for the teens.

These insights were used to formulate the design requirements presented in Chapter 3.1.



The Van Gogh Museum, photo credits to Jan-Kees Steenman.

2.2 Teens

Within the scope of this project, high school (VMBO) teens are the primary users to design for. To create a better understanding of the characteristics of these teens, literature was studied. Additionally, empirical studies were performed to enrich the findings from literature studies with present-day insights. The studies include: observations of teens during guided tours at VGM (Appendix A.1), observations at a VMBO school (Appendix A.3) and a generative session organized at one of these high school with 24 teens within a first-grade VMBO class (Appendix A.4).

This chapter first describes the demographic characteristics, followed by factors influencing the teens educational experience. Thereafter, insights related to the teens’ personal needs, values and interests, are discussed based on the results from empirical studies as described above.

2.2.1 Generation Z

The teens focussed on within this project can be categorized within “Generation Z”. If born after 1995, an individual “belongs” to this relatively new generation that follows after the Millennials. Different characteristics are formulated by Beall (2017):

Decrease of focus: mobile applications such as Snapchat and Vine increase the speed in which this generation processes information.

As a result, it is likely that their attention span shortens.

Multi-tasking: The increase of different information sources stimulates this generation to efficiently switch between those sources. For example: “creating a document on a school computer, doing research on their phone or table, while taking notes on a notepad.”

Early starters: it is predicted that more teens will start working straight after high school education rather than taking part in higher education.

Higher expectations: as they are raised in a era of technological products and services, they expect nothing less from the future. Also, “They expect businesses, brands and retailers to be loyal to them. If they don’t feel appreciated, they’re going to move on.” (Marcie Merriman, executive director of growth strategy at Ernst & Young)

Individuality: the majority was raised in a social (through media) world. Nearly 92% has a digital footprint. Comparing themselves with peers and celebrities through social media, Gen Z searches for personal uniqueness through the brands they engage with, activities they undertake and jobs they will eventually seek.

More global: it is predicted that the teens of today will increasingly become more global in their thinking, interactions and relatability. Out of 58% of adults worldwide agree that “kids

today have more in common with their global peers than they do with adults in their own country.”

Digital devices: compared to the Millenials 25% of Generation Z is more likely to say that they are addicted to their digital devices. Even 40% describes themselves as self-identified digital device addicts.

Thus, when designing for transformative teen experiences at VGM...

the short attention span of these teens need to be considered. The fact that these teens are well able to efficiently switch between information sources could provide different solutions to maintain their attention.

Also, the museum experience should be loyal to the teens values and interest by providing. This way, engaging the teens with the content of the tour should result in possibilities for the teens to relate to the personal stories of Van Gogh. Stories that in their turn should provide the teens with insights relevant for their (future) lives.

Finally, when designing for experiences that include digital products and services, the high standards of the teens need to be considered.

2.2.2 Education

This project finds itself within the educational domain as the teens visit the museum as part of their educational curriculum. To make sure that the proposed concept (Chapter 4.2) not only facilitates an entertaining, but also educational experience, literature study regarding teen’s learning activities was performed.

A societal perspective on education

The Dutch education council has recently submitted a proposal regarding the renewal of the educational curriculum (Onderwijsraad, 2018). They described the role of education as one to prepare students for their future state. This is about their personal, societal and professional functioning. The council claimed that to enable the teens to function this way, we should strive towards a contemporary educational system and frequent quality improvement.

Through this proposal, **the council substantiated the importance of balancing these personal, societal and educational elements**. One could say that through this, they implicitly **address the value of museums within the education curriculum**. As many museums bring these three elements together through their exhibitions and narrative content.

Education in practice

Reviewing the educational curriculum in

practice, Alpay (n.d) formulated different challenge that occur:

1. *“Teacher learning objectives may not be perceived as relevant by the student, and thus little motivation by the student towards the learning task.”*
2. *“The role of the teacher is likely to chance to become more facilitative and less directive.”*
3. *“The task may be perceived by the student as a threat to the self-concept through, for example, the exposure of a weak intelligence, resulting in low self-esteem.”*

To avoid unwanted effects such as low self-esteem, Gardner (1993) proposed the theory of Multiple Intelligence. Aiming to “empower learners” and not restrict them into one modality of learning. For a successful implementation of these Multiple Intelligences, Weber (1995) suggested the following changes in the learning environment:

“School authorities must alter the way in which curricula are viewed, introducing flexibility to address the different student abilities, i.e. recognition that students learn in different ways.”

Alpay (n.d) adds to this by stating that *“schooling itself must be broader in its training to enable*

individuals to realize potential abilities”.

Next to addressing the students different learning styles, researchers pointed out the importance of building upon one’s prior knowledge (Weber, 1994). They also stated:

“Humans can do nothing with the knowledge that is not in their memories. Knowledge outside the memory is educationally useless. The ever-active human memory requires knowledge to generate understanding” (Egan, 1989).

Egan added to this that anyone, even very young children can acquire knowledge if it is presented at the developmentally appropriate level. (Egan, 1983, 1989) To conclude, Gardner (1993) proposed the following:

“... perhaps more important than intelligence in the human firmament are motivation, personalization and emotions.”

Translating these statements to the domain of this project: **VGM should take part in the proposed “broader training of schooling” enabling teens to realize their own potential**. Considering closely how to motivate teens and address their emotions while providing a personalized experience.

Motivation

Researcher (Rek, et. al, 2013) described different factors that drive people’s actions, including those within the educational curriculum. These

motivational theories resulted in a selection of biological and cognitive factors. The factors as defined by Rek, et. al, are listed in the following three themes containing a total of 8 motivators:

- **Fun:** curiosity, surprise and joyous;
- **Personal Benefit:** self-actualization, reflection, sense of accomplishment and contribution;
- **Control:** independence, autonomy and tranquility/safety.

Games researcher Jane McGonigal added to this the following four things for people needed in order to be happy:

- Satisfying work to do;
- Being good at something;
- Time spent with people we like;
- Being part of something bigger.

These insights were used to create an initial understanding regarding teens and their educational journeys. To identify more specific values, needs and interest, empirical studies were performed. The insights from these studies are discussed in the following subchapter.



Teens during generative session, by Tamara Schouten, February 2019
(approved permission to publish photo with teens in a recognizable way.)

2.2.3 Empirical studies with teens

As described, observational studies were performed at VGM, first-grade VMBO classes at the Haarlem College. During these observations, conversations were held with both teens and teachers. Additionally, a generative session was organized in which 24 teens participated at the Altena College. Also, an interview was held with Jelle de Vrijer, one of VGM’s guides that facilitates tours for teens (Appendix A.6). For a detailed description of the research approaches and results please have a look at the above mentioned appendices.

The results of these studies provided additional insights regarding the values, needs and interest of teens. Building upon the literature studies, the main insights as discussed in the following paragraphs, were translated into specific design requirements (Chapter 3.1).

Values

Five main teen values were identified. In this project, a value is referred to as the “importance or worth of something for someone”.

- **Relevance** is key to the level of engagement. The topic addressed within a learning task should meet the teen’s personal interests. If the teens are not interested “*no matter how glitzy, expensive or elaborate the media, they*

will not pay attention.” (Wilson, 1992)

- **Relatability** makes new information easier to understand and more interesting to explore. Bridging unfamiliar stories with familiar situations enables teens to relate. Answering questions such as: “*how would this be like in the world of today?*”. (J. Vrijer, personal communication, 2019).

- **Autonomy**, the feeling of being able to make own decisions based on personal preferences. Such as discovering the museum exhibitions independently. “*It works well to let the teens fill in parts of the story themselves, to let them explore, compare and argument their findings.*” (J. Vrijer, personal communication, 2019).

- **Social interactions** such as feeling loved and to belong to a social group contributes positively to the self-esteem of teens. These interactions are also a way of social support, enabling teens to ask for and provide help to peers when needed. “*Daan is not in class because he is sick. I can go by his house to bring him the assignment.*” (teen, personal communication, 2019).

- **Success** such as receiving compliments for personal contributions (homework) or being part of a team, contribute to a positive self-image. It also guides the teens in achieving personal goals (such as winning a sports game or receiving a high grade).

Insights based on learning needs

Relating to these values, five essential insights were identified related to the teens within their learning environment.

- **Learning by doing** not only supports teens in their understanding of the topic, it also provides a more engaging learning activity. The following elements showed to have a positive influence, engaging teens into this “doing” behavior” (Broekhoven, personal communication, 2019).

1. **Dynamic activities** that require exploration, either in the digital or real word.
2. **Variety of activities**, addressing the short attention span of teens.
3. **Visual imagery** helps teens to quickly understand and feel immersed. Associations are more easily formed through visual imagery compared to

- plain text or listening to long verbal stories.
- **Playfulness and humor** contribute to the level of engagement and provide the teens with an overall positive feeling. A current example from a VGM guided tour is:“What do you see when you look at the painting upside down?”
- Teens react by turning their heads upside down (**dynamic**), laughing (**playful**), looking at the painting (**visual**) and discussing their discoveries (**varying activity**).
- **A safe space to experiment** is required to enable teens to explore new situations in a carefree way. In other words, the teen needs to feel as if there is a low risk to social and personal failure. “It importance to balance between challenging the teen and avoiding demotivation.” (J. van Ooyen, personal communication, 2019)
 - **Clear overview and description of activities** prevents insecurity. This lowers the barrier when starting an activity that might seem difficult at first. Addressing questions such as “where do I need to start”. (teen, personal communication, 2019).
 - **Step by step guidance**, stimulates

- the teens in moving forwards without feeling insecure about making a wrong decision. Clear feedforward also contributes to motivation and engagement, answering questions such as “I finished this part, can I continue now?” (teen, personal communication, 2018).
- **Moments to recharge** enable teens to both physically and mentally have a rest contributes to the teens level of attention. Current statements of discomfort such as “I’m tired, but there are no places to sit” (teen, personal communication, 2018) decrease the teens focus and motivation to discover the learning content.
 - Related to this recharging is the concept of **pacing**. Every teen has their own pacing processing information. Providing room for these differences in contributes to the teens motivation.
- “Having to wait too long for others to finish their task might result in boredom, where being rushed to move on to the next task could result in insecurity.” (teacher, personal communication, 5 december 2019)
- Interests**
- Next to these values and needs, four main topics that interest teens were identified. These topics are integrated in the final

- concept (Chapter 4.2), addressing the needs for personalisation (Gardner, 1993) and a loyal and unique experience (Gen Z characteristics). These topics also contribute to attracting the teens attention, sparking their interest. Followed by a desire to discover more about the topic, finally leading through awareness and understanding. These four phases are essential in order to get the teens to invest in a new experience (AIDA: Lewis, 1898). The quotes mentioned in the paragraphs below are retrieved from the generative session.
- **Friendship**: building on the value of “social interactions”, the topic of friendship is one that interests these teens greatly. Exchanging personal stories, belonging to a social group and feeling accepted. This also means relating with and opening up to others.
- De Ringh describes friendship with words: “The fact that someone not only shows, but also gives something personal to you, that they feel comfortable enough to open up.” (personal communication, 2018)
- **Love life and intimacy**: these teens are in the phase of their life in which they start exploring being in love, having their first kiss and more intimate relationships. It is a topic that fascinates them both on more fundamental (“Who will be my husband when I am older?”) and concrete levels (“What am I curious

about? Sex!”)

- **Jobs and career:** teens wonder a lot about what their future will look like. “Will I live in a nice house?”, “Will I have a nice job and earn a lot of money?”, “Will I be married?”, etc. The majority of teens does not know what kind of job they prefer, but they do indicate the desire to be successful in what they do.

- **Exploring new places:** new places trigger curiosity and motivate teens to explore. The majority of teens also described their happiest memory as one in which they were at a new or different place compared to their familiar environment (foreign country, swimming pool, e.g.).

An overview of the complete list of insights gathered from the generative session can be found in Appendix A.5. This list also contains additional insights that were used as inspiration throughout the project.



Teens during generative session, by Tamara Schouten, February 2019

2.2.4 Conclusion

Combining the insights from both the literature and empirical studies as discussed in the previous subchapters, resulted in a list of key insights. These insights are discussed in this concluding subchapter and were used to formulate design requirement (Chapter 3.1). Additionally, four teen characters were created. These illustrate how different teens prioritize the earlier described values. As the majority of teens shows comparable priorities regarding the educational needs, these were not used to differentiate the different characters.

Teen characters

The characters (figure 6) are described along the five main values, where each character prioritizes the values differently. The level of importance for each value and teen was formulated based on the insights gathered from the empirical studies. The characters were used to create different storylines in the proposed concept (Chapter 6) and to evaluate the concept in the end. The following four characters were identified:

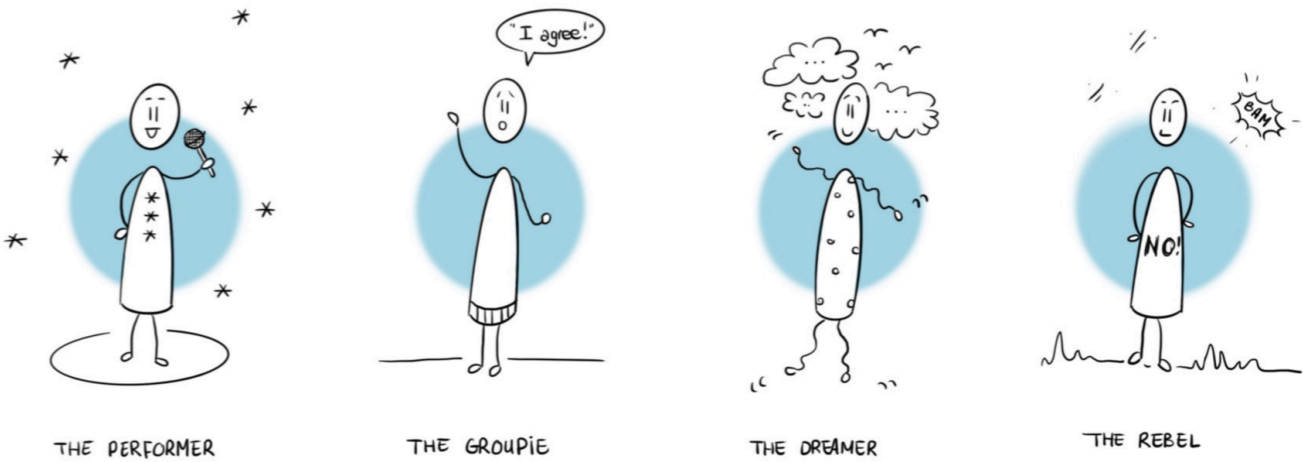


Figure 6: The four teen characters used as inspirational tools during the design process.

Key insights

- These teens have relatively short attention span. However, they are good at switching between different sources of information.
- They value brand loyalty and feeling unique during experiences.
- They are more inclined to relate to others compared to e.g. Millennials.
- They have high expectations when using digital products and are very familiar in using them.

The main identified teen values are:

- Relevance
- Relatability
- Autonomy
- Social interactions
- Success

Insights based on educational needs are:

- Varying activities are needed to address the short attention span.
- Teens are enabled best to learn when information is offered both textual, visual and auditory. Addressing the different teen abilities.
- Prior knowledge enables the teens to learn new insights.
- The teens require a safe space to experiment while learning and need clear overview and guidance along the way.
- Topics of interests are friendship, love and intimacy, discovering new place, jobs and career.
- Teens need to rest in between learning activities to recharge both physically and mentally.

- **The Performer:** active individual who seeks attention from others and enjoys spotlight time. *Wants to be acknowledged by others for being him/herself. Enjoys being in the center of attention. Feels comfortable to take initiative.*
- **The Groupie:** follower that looks up to the performer, wants to be part of a group. *Wants to belong to the popular group. Feels comfortable following a leader. Seeks acceptance from peers by adapting to the group atmosphere.*
- **The Dreamer:** individual with rich fantasy, not easily distracted by others. *Immersed in own thoughts with fantasy and big dreams. Goes their own way and does not particularly enjoy being the center of attention. Seeks inspiration, moments to wonder.*

The Rebel: individual who defines his/her own rules, acts as if they do not really care. *Values recognition for being courageous and tough. Seeks new adventures and gets bored easily. Responds in a defensive way to most forms of feedback.*

Note: an individual may possess the characteristics of several characters. E.g. a teen could identify with both groupie and dreamer. These characters are not based on quantitative research instead they are used as inspirational design tools. However, existing personality tests (Briggs, 1987) support the notion of character differences and the impact that these have on values and needs.

2.3 Interactive narratives

To identify how, for who, where and when interactive narratives can add value, literary and empirical studies were performed. Existing research was studied to create a general understanding of the topics; stories, narratives and interactive narratives.

Additionally, empirical studies were performed to identify design requirements when designing interactive narratives for teens and the VGM. Observations were made during: guided tours at the VGM. Next to this, the first time experience of existing VGM products was explored. Also, the concept of interactive movies was explored. Furthermore, an in depth interview and several other conversations with storytellers were held (Appendix A.6 and A.7).

The following subchapters respectively discuss the value of storytelling, the role of narratives, the meaning and application of interactive narrative structures.

2.3.1 Stories and narratives

Before looking into the concept of interactive narratives, an understanding of the essential elements needed to be formed. Therefore, a literature study was performed regarding the role and value of storytelling.

Stories

A story can be defined as a description of a series of real or imaginary events. (Cambridge

University Press, 2019). **Researchers describe stories as a means for human beings to make sense of the world around them.** Some even call stories *“a primary instrument for meaning-making that ensures our place within human society.”* (Bruner, 1990) With this, Bruner also claims that stories provide us with a perspective that enables us to sort out our basic needs and values. More specifically, Bedford (2001) describes stories as our most fundamental way of learning. *“They teach without preaching, encouraging both personal reflection and public discussion. Stories inspire wonder and awe.”*

A specific method to facilitate this meaning-making and thus learning, is described by Bedford (2001). He states that leaving “blanks”, **open spaces in stories helps listener’s to open up their own thoughts and feelings.** Enabling memories to expand and flow. Resulting in an internal dialogue and a real connection between story and in this case, the teen.

Based on these arguments, **stories promise to be a valuable tool in addressing the values, needs and teens during their learning activity both in school and at the museum.** Egan (1989) adds that the story is one of the most important human inventions as *“a technical tool that provides a measure of order and stability to human societies”*. A human need which has also been identified during the research with teens (Chapter 2.2.3).

It is even mentioned in the fictional work of Dan Brown (2017, p.128) using the following words: *“our predisposition to organization is written in our DNA.”*

Thus, stories enable humans to not only understand but also **make sense of the world around them.** Also, stories are described as **a tool to personally reflect on ideas and exchange them through social interactions.** Therefore, stimulating natural learning activities often even without the user noticing.

Building a story

In general, **stories consist of a beginning, middle and end,** following the protagonist (main character) on their journey. The beginning introduces a binary conflict or dilemma (will little red riding hood encounter the scary wolf?), the middle elaborates on this (the wolf tricks little red riding hood by opposing as her grandmother) and the ending provides a resolution (little red riding hood outsmarts the wolf, happy ending). A method to secure an engaging succession of these three elements is illustrated by the Narrative Arc (Freytag ,1863). In which five stages of a dramatic structure are described (figure 7).

The protagonist provides the story with **structure and unity** making a storyline easy and logical to follow. He or she has goals and

intentions, performs actions, and experiences events (Hende, 2010). Researchers argue that when people can identify similarities between themselves and the protagonist, stronger effects on **narrative transportation** will occur. (Green, 2004) A term used to describe the degree to which a person is transported into the narrative world.

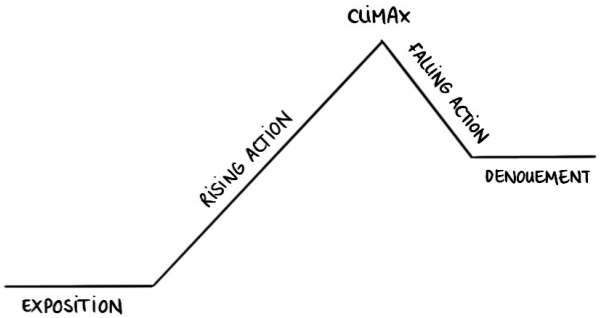


Figure 7: Freytag’s Narrative Arc.

A narrative describes the act of telling a story. Or the way in which events within a story are related and in what order. People that experience transportation, become fascinated by the story and pay less attention to their surroundings. This results in lower levels of distraction. *“they completely immerse themselves in what they watch or read and have vivid images in their mind, see themselves in the scene of the action, experience emotions, and forget the world around them.”* (Hende, 2010).

Interesting concepts, especially when we consider the teens short attention span and the crowded physical context of the VGM. Or as Boyd (2009, p. 192) formulates: *“nothing captures our attention more than the actions of others around us.”*

Thus, enabling teens to be transported into the narrative should contribute to their levels of **focus and attention** during their experience at VGM .

Existing research proposes two elements to increase narrative transportation. First, the use of drawn or photorealistic imagery as these media can contribute to the stories level of realism. Secondly, providing the user with the option to determine their own pace. It is proposed that users can more easily process information if they are not forced to follow a specific pacing that does not fit their needs (Hende, 2010).

Thus, when designing towards transformative teen experiences in which interactive narratives are used, the following elements need to be integrated: **visual imagery** and **flexible pacing**. Elements were also identified during the empirical studies performed with teens (Chapter 2.2.3).

2.3.2 Interactive narratives

Building upon the teen’s values of personal relevance and autonomy (Chapter 2.2.3) and challenge formulated by VGM (Chapter 1.3) to split up large groups of visiting teens, Simon (2010) addresses two requirements for serving people with custom content:

- **A rich content base** of different types of interpretations for any given exhibit or artifact. Referring to an interactive narrative structure in which different storylines provide the visitor with room for personal decision-making (options to choose from).
- **A mechanism** by which visitors can retrieve content of interest. Addressing the service enabling the visitor to interact with the narrative, e.g. teens with an MMT.

Simon describes the stories within these interactive narratives as **“pull-content”**. *“Information that learners actively seek based on self-interest.”*

Linking this to the effect on the museum experience, researchers claim that *“interactivity facilitating transportation should lead to an immersive and enjoyable narrative experience.”*. (Green et al., 2004) Also, the educational value is argued by Hein (1998) stating that *“interactive narratives elevate “experience” to a more important place in the effort to educate. Shifting the focus from*

the written word to learners active participation through interactive objects.”

Thus, when a story becomes **interactive, the reader starts to enact with it** rather than simply witnessing it. *“This way, the audience internalizes and personalizes the story events more deeply, leading to those events to be felt more deeply.”* (Hand & Varan, 2008) Pointing out the value of interactive narratives and referring once more to the concept of narrative transportation as described by Green (2004).

Balancing top-down and bottom-up
“Narrative meaning, is the product of top-down planning of a storyteller or designer, while interactivity requires a bottom-up input from the user.” (Ryan, 2006)

Ryan states the importance of such a top-down approach using the following words: *“If interactive narrative is ever going to approach the emotional power of movies and drama, it will be as a three-dimensional world that opens itself to the body of the spectator but retains the top-down design of a largely fixed narrative script.”*

Other experts (Wand, 2002) agree with the importance of a largely fixed narrative script. They stated that: *“interjections within*

interactive narration must be limited in number and length to prevent the plot from becoming unclear and evaporation of dramatic tension.”

Offering a solution to prevent plots from becoming unclear, Wand proposes the use of **“back-stories”**. To ensure that *“the narration remains logical and consistent with regard to content.”* Concluding, Green & Jenkins (2004) point out the different roles of the storyline and interactivity within the overall experience: *“the storyline is the most important element, and the interactivity serves to guide the narrative along different pathways.”*

Thus, when integrating an interactive narrative in the transformative teen experience at VGM, the following steps should be considered successively:

1. The values, needs and interests of teens influence the **narrative content** and **meaning**.
2. This content should provide **room for personal decision-making** while **maintaining a provide logic** and **consistent story** using back-stories.
3. The amount and type of **interactivity** integrated into the narrative **should be adapted** to these two elements.

2.3.3 An interactive narrative for teens at VGM

In order to design an interactive narrative structure suitable for the desired transformative teen experiences at VGM, existing literature was explored.

Green & Jenkins (2014) describe interactivity as both a component of the story and as the way in which the reader engages with the narrative. They suggest that “interactive narratives increase user control and decrease narrative structure.” These two factors are directly related to values and needs of teens:

- Teens need a **clear overview** of the activities within their learning environment. This refers to the amount of **narrative structure**.
- At the same time, they value **autonomy**, having room for personal decision-making. This refers to the amount of **user control**.

Koenitz (2018) shows a large number of possible digital interactive narratives accompanied by different theoretical frameworks (figure 9). These describe the value and use of the narratives within a context. To differentiate these frameworks, Koenitz defined two factors:

- The level of media specificity: the extent to which digital medium affects the narrative.

- The level of user agency, describing user control in other words.

An optimum estimation regarding the amount of overview and autonomy desired for the teens was created (figure 8). Projecting this optimum on the graph proposed by Koenitz enabled to identify **two promising interactive narrative theories** (figure 9):

- The “Evocative” theory (Jenkins, 2004)
- The External-Exploratory” (Ryan, 2006)

Each of these theories match the desired amount of user control for the teens. However, when considering the other essential factor of narrative structure, significant differences were identified between the theories. The “External-Exploratory” theory integrates

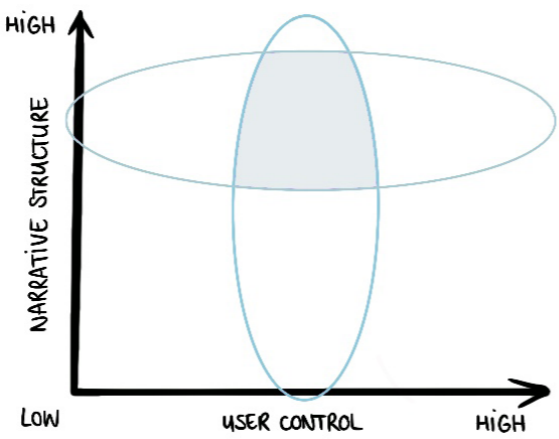


Figure 8: Estimated optimum for levels of user control and narrative structure for teens.

little to no overview regarding the narrative structure. On the other hand, the “Evocative” theory is described by Jenkins as “dialogues based on existing stories conveying new narrative experiences through the manipulation of environmental details.” Within which a clear narrative structure is used to convey these existing stories.

Therefore, **the “Evocative” theory was selected as the starting point to create an interactive narrative for teens at VGM.** (Chapter 4.2.3).

Based on Jenkins’ Evocative Stories Koenitz (2018) proposes a “Flowchart” narrative architecture (figure 10 on the next page).

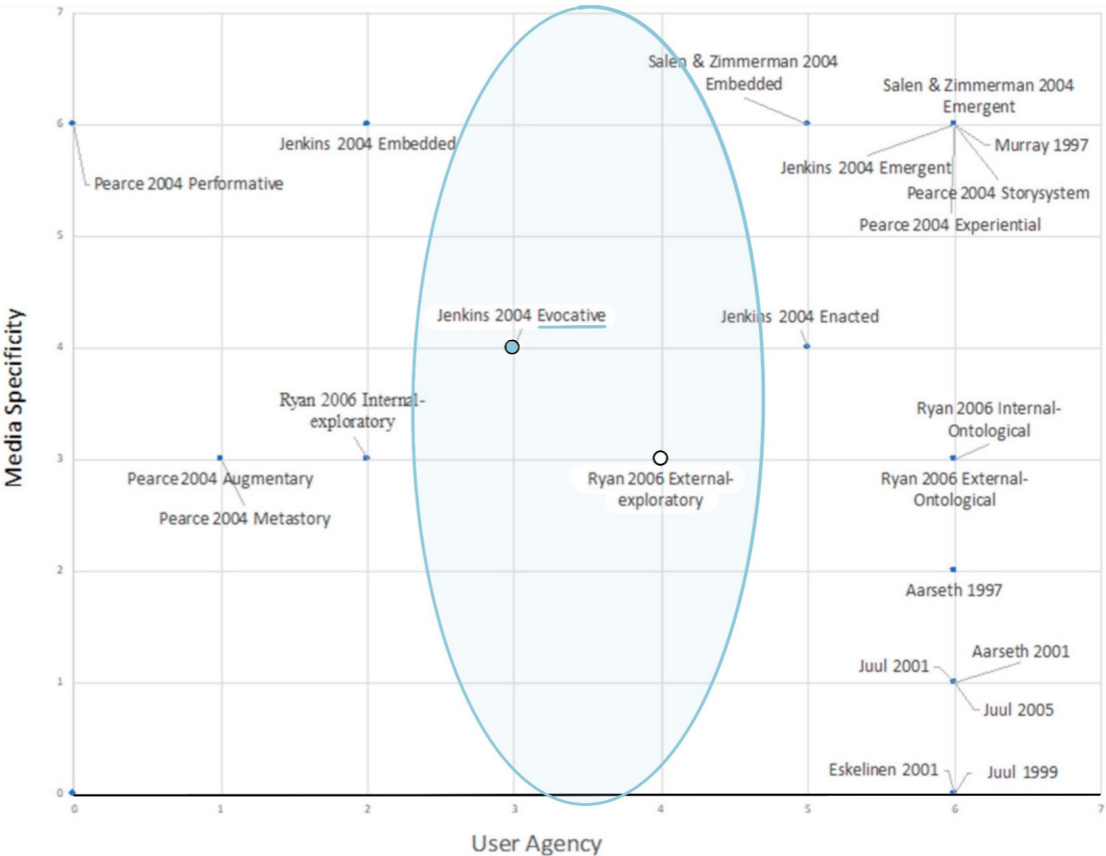


Figure 9: Mapping of different interactive digital narratives by Koenitz (2018).

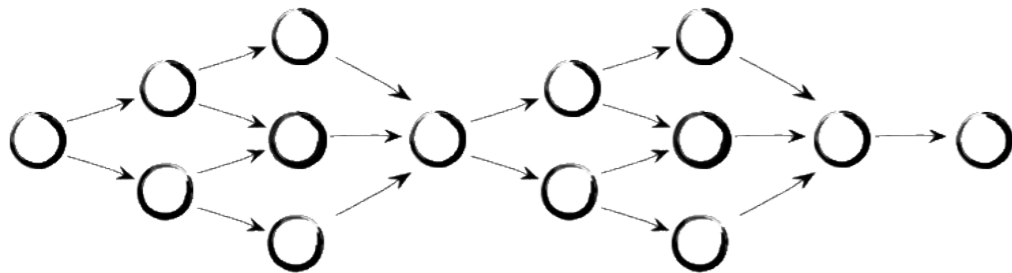


Figure 10: Example of flowchart narrative architecture.

Design implications for MMT

Koenitz defined the level of media specificity for Evocative Stories on a scale of 4 (figure 11). Meaning that “there are specific digital narrative genres, yet these are enabled by non-digital forms.” Implying that a digital medium effects the narrative, while leaving room for non-digital means of communication. Thus, also regarding the scope of this project involving design suggestions for an MMT, the Evocative theory provides as suitable framework.

| Score | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|-------|--|--|--|---|---|---|---|
| Desc. | Narrative is not affected by the digital medium, it is the same entity as a book or film | There is some influence of the digital medium, yet narrative is properly manifested in non-digital forms | Some genres of digital narrative exist; however, these are digital versions of analog manifestations | Some aspects are specific to the digital medium, but not enough to consider them different entities | There are specific digital narrative genres, yet these are enabled by non-digital forms | There is a clear influence of the digital medium on narrative, yet some form of media agnosticism is still maintained | Narrative is considerably affected by the digital medium; it is a different entity, in contrast to a book or film |

Figure 11: Table explaining the different degrees of media specificity (Koenitz, 2017).



Concept testing with interactive narrative at VGM, by Astrid ten Bosch, May 2019

2.3.4 Conclusion

Thus, to provide the teens with sufficient narrative overview while also providing room for personal decision-making, a Flowchart architecture was used as a starting point to create the interactive narrative within the proposed concept Vincent & I (Chapter 4.2). While doing so essential elements regarding storytelling and interactive narratives were considered closely.

Storytelling essentials

An engaging and coherent story includes:

- A clear beginning (binary conflict)
- A clear middle (elaboration)
- A clear ending (resolution)
- One of more protagonists
- Mysteries or dilemma’s
- Actions and events
- Back-stories
- Visual imagery

Interactive narrative essentials:

An engaging and coherent interactive narrative includes:

- Different storylines
- User control: decision points and flexible routes to provide the teen with a sense of autonomy.
- Pull-content: stimulating teens to actively seek information based on their own interest.
- Narrative structure: a clear overview of the narrative content.
- Open spaces for the teens to fill in themselves, stimulating personal meaning-making.

“Storytelling is an ideal strategy for realizing the “constructivist museum,” an environment where visitors of all ages and backgrounds are encouraged to create their own meaning and find the place, the intersection between the familiar and the unknown, where genuine learning occurs.”

Quoted from Hein (1998)

2.4 Transformative experiences

Having explored the three contextual layers influencing learning within the museum experience, the dimension of time still needed to be considered. Therefore, design tools and methods within the domains of user-experience (UX) and transformative experience (TE) design were explored. This exploration, mainly based on existing literature, emphasized the newness of the transformative experiences domain. As there are no holistic approaches yet to guide the design process for these transformative experiences, existing tools and methods were combined. The following subchapters respectively discuss the definition of experience design and the transition to transformative experiences.

2.4.1 Experience design

Currently, UX design is used as a buzzword and described in various ways. It is often illustrated through digital products and services focussing mainly on wireframes and graphic user interfaces. However, it goes without saying that the spectrum of experiences goes beyond this digital world. Our physical surroundings influence our daily experiences, both digital and real life.

Bär & Boshouwers (2019) support this by stating that the need for physical spaces, in which to wonder and imagine, is increasing. Especially now that the online world grows faster than ever. *“People seek out those*

spaces to indulge in immersive experience and social interaction.” They describe immersive experience design as: *“the art of creating spaces that tell a story”*.

This statement illustrates the relation between the different analysis lenses (Chapter 2): VGM (space), teens (people) and interactive narratives (stories).

Additionally, researchers contribute to the importance of imagination by stating that people become engaged with activities and experience them when imagining. As a result, consumers have shown increased perceived likelihood of an event when levels of imagination increased. (Carroll, 1978; Gregory, Cialdini and Carpenter, 1982) Adding an economic perspective to these psychological arguments for tangible experiences, Pine and Gilmore (1998) state the following: *“Today the concept of selling experiences is spreading beyond theaters and theme parks.”* Implying that the domain of experience design is spreading from a restricted amount of physical spaces to others such as cultural institutions.

Thus, in order for the teens to become engaged within the transformative experiences at VGM, their imagination needs to be addressed. This by making VGM a place to experience Van Gogh’s stories in an immersive and social way.

2.4.2 Transformative experiences

The findings as discussed in the preceding chapters imply that more than purely entertaining experiences are needed to cater the values, needs and interests of today’s teens. Adding to this, museums hold the potential to inspire and enrich teens by stimulating them to personally reflect upon the provided information. Such museum experiences go beyond entertainment and progress into experiences that can be called transformative.

During a reading about the future of the experience economy, attended in Amsterdam, Joseph Pine elaborated upon the need for transformative experiences using “the Progression of Economic Value” (figure 12). He stated that people move towards a need that focuses on **“time well invested”** (transformative experience) rather than “time well saved” (entertaining experience) (J. Pine, personal communication, 2019). As there is no agreed-upon definition to describe these

transformative experiences, the following definition by Bär & Boschouwers (2019) was used as a reference: *“Transformative experiences have the ability to expand people’s minds. They are informative, narrative and evocative.”*

This definition was specified for teens at VGM by formulating three succeeding lengths of a transformative experience.

- **Eye-opening:** based on Van Gogh’s work and stories, the teens generate substantial and relatable new insights.
- **Growing:** by relating these insights to their personal situations, (new) skills can be developed.
- **Acting:** this development of skills leads to new behavior and new lifestyles.

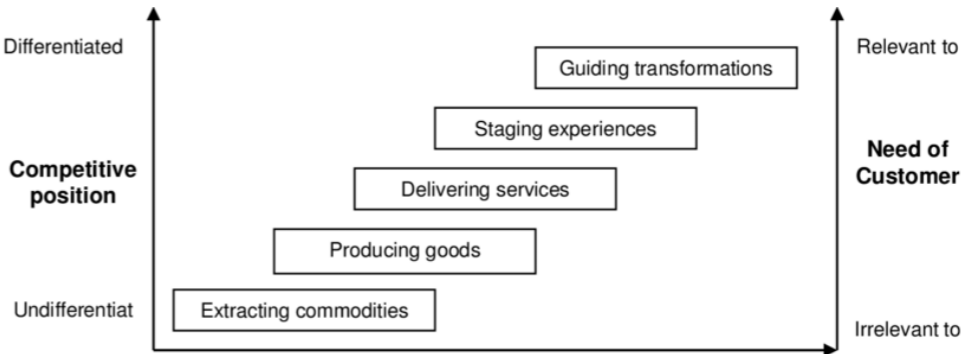


Figure 12: The progression of economic value according to Joseph Pine (2019).

A specific example of such a transformative experience for a teen at VGM described in a storyboard illustrating the proposed concept Vincent & I (Chapter 4.2). This storyboard can be found in the back-cover of this thesis.

Core principles that position the needs, values and interest of teens within a transformative experiences were related to Maslow’s Elementary Pyramid (1943). Please refer to Appendix A.5 for this overview.

Measuring the development of new skills and especially behaviour requires time span longer than the time available within this project. Therefore, **the validation of the proposed concept** (Chapter 5) **focussed on the facilitation of substantial and relatable new insights** for teens at VGM (eye-opening length).

Bär & Boshouwers propose an experiential journey to guide the design process towards such transformative experience (figure 14). Their approach is based on Campbell’s (2003) Hero’s Journey in which the different stages of a transformative experiences are described along the journey of a “hero” (figure 13). The nine phases described within the experiential journey are:

- **Invitation:** “call to adventure” preparing the visitor for their upcoming museum experience.

- **Transition:** the moment of transition from the outside to the museum world in which a warm welcome is crucial.
- **Introduction:** the moment of introducing the visitor to the upcoming stories and activities.
- **Exploration:** encouraging visitors to go their own way and discover the museum content.
- **Admiration:** providing the visitors with inspiration that stimulates their engagement.
- **Immersion:** the visitor experiences the story in an intimate way, engaging multiple senses at once.
- **Connection:** moments to connect the provided information with the visitors personal life. “Without this step, the experience may be interesting, but not transformational.”
- **Recollection:** a moment to discuss, reflect on and internalise the discovered information.
- **Integration:** moments after the visit during which the visitors integrated their museum experience into new behaviour.

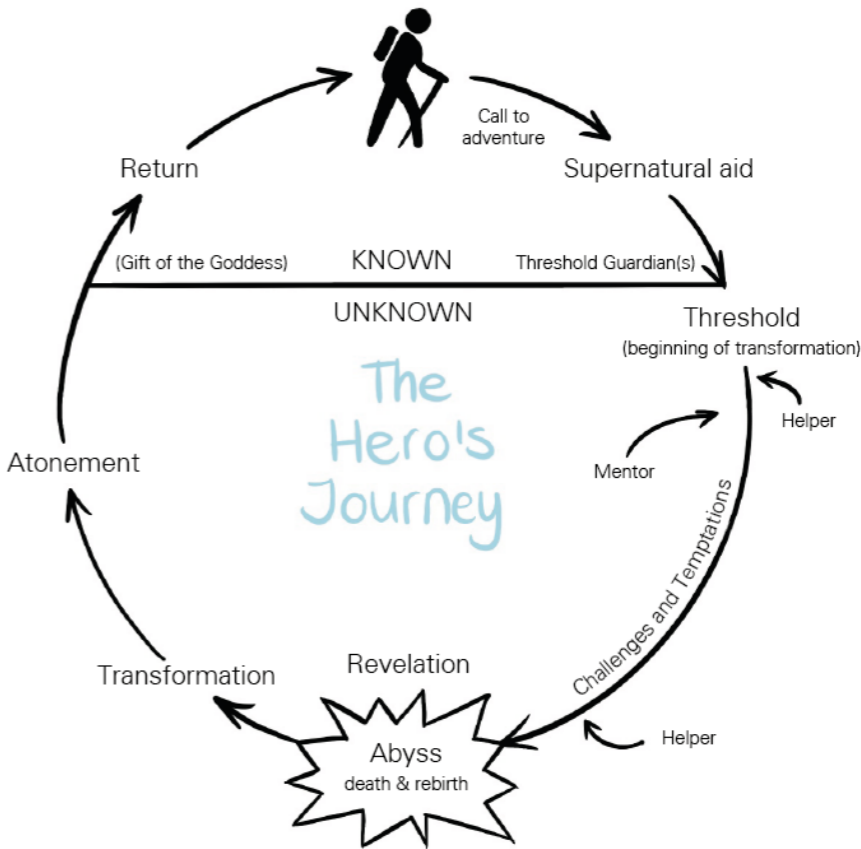


Figure 13: Campbell’s Hero’s Journey.



Figure 14: The nine stages of an experiential journey according to Bar & Boschouwer (2019).

These nine phases address the importance of the pre-visit and post-visit stages towards transformative experiences. Therefore, these stages have been included in the proposed concept (Chapter 4.2) while focussing mostly on the during visit stage to also provide design suggestions for an MMT.

Placing these transformative experiences in a larger perspective, that of the teens educational curriculum, different transformative dimensions were identified during this project.

- **The museum visit**, during which substantial and relatable new insights are gained facilitated through interactive narratives.
- **The experiential journey** (pre-, during and post-visit), during which these insights are integrated into new skills.
- **The educational curriculum** (VMBO), during which these new insights and skills lead to new behavior.

Figure 15 shows a schematic overview of these three different dimensions including the location of an MMT within those dimensions.

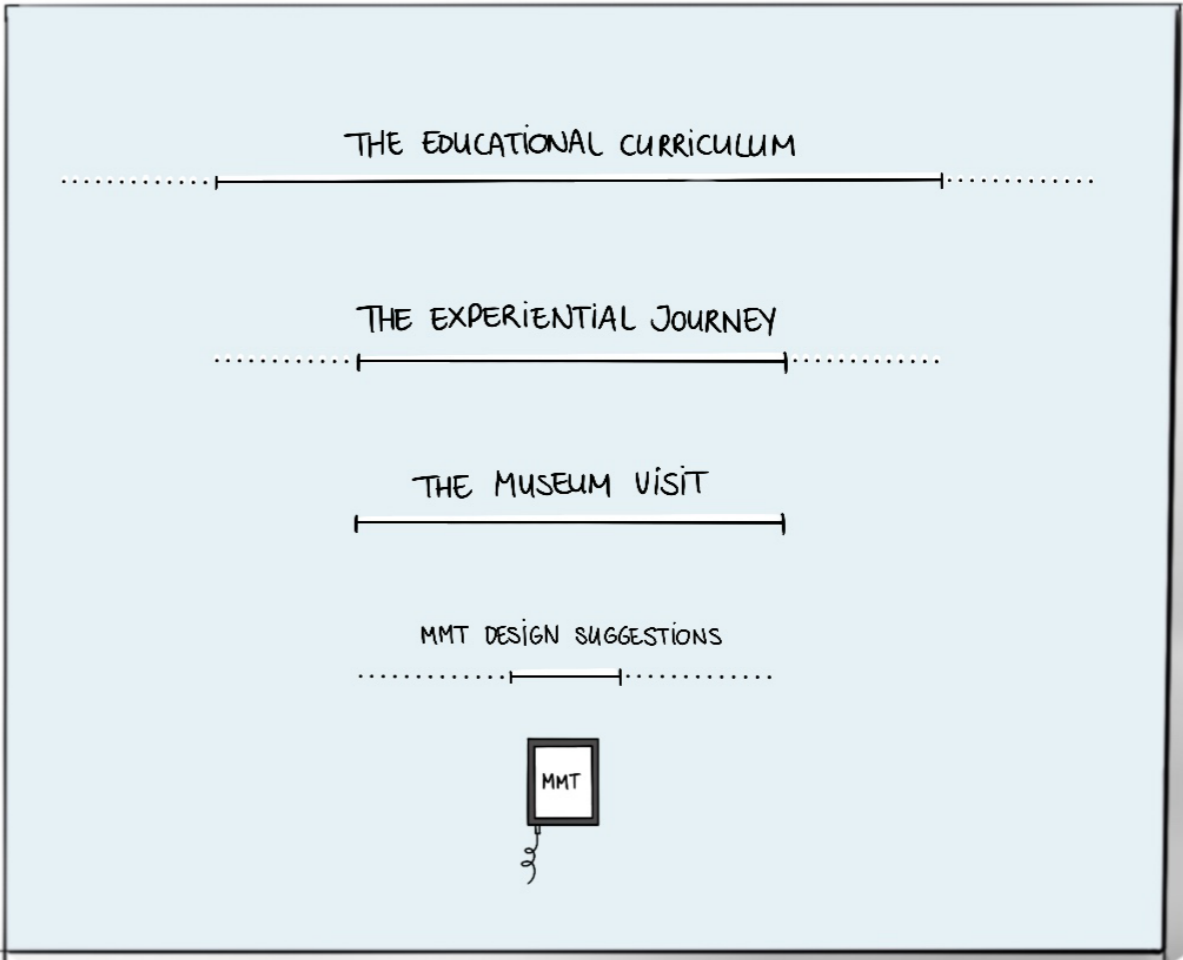


Figure 15: Three different transformative dimensions including the position of an MMT.

2.4.3 Conclusion

When designing for transformative teen experiences at VGM, both entertainment and education need to be combined. VGM should play a facilitative role to guide the teens towards substantial new insights which they might not have discovered when purely following their personal interests.

By combining the Contextual Model of Learning (Falk & Dierking, 2012) with the experiential journey (Bär & Boshouwers, 2019), a holistic model was created to guide the design process towards transformative teen experiences at VGM (figure 16).

The experiential journey by Bär & Boshouwers (2019) offers a valuable tool for designing these transformative experiences including the pre- during and post-visit stages regarding the museum visit. The experiential journey consists out of the following nine phases:

- Invitation
- Transition
- Introduction
- Exploration
- Admiration
- Immersion
- Connection
- Recollection
- Integration

Transformative experiences were defined within this project through three different succeeding lengths:

- **Eye-opening:** new insights.

- **Growing:** new skills.
- **Acting:** new behavior and lifestyles.

To guide the design process, three context different dimensions were specified including these three lengths of transformative experiences.

- **The museum visit**, during which substantial and relatable new insights are gained facilitated through interactive narratives.
- **The experiential journey**, during which the insights (gained at VGM) are integrated into new skills in class.
- **The educational curriculum** (VMBO), during which these insights and skills form new behavior.

Thus, the transformative teen experience at VGM should be considered within the overarching educational curriculum.

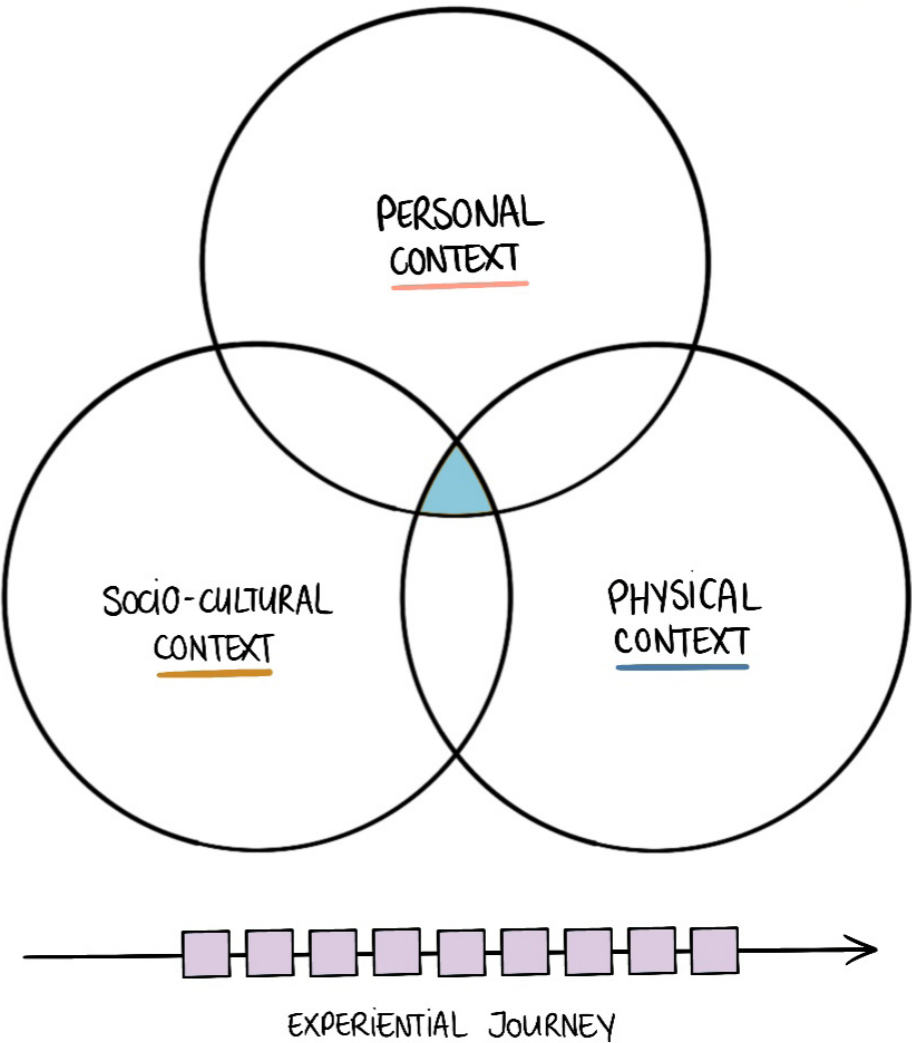
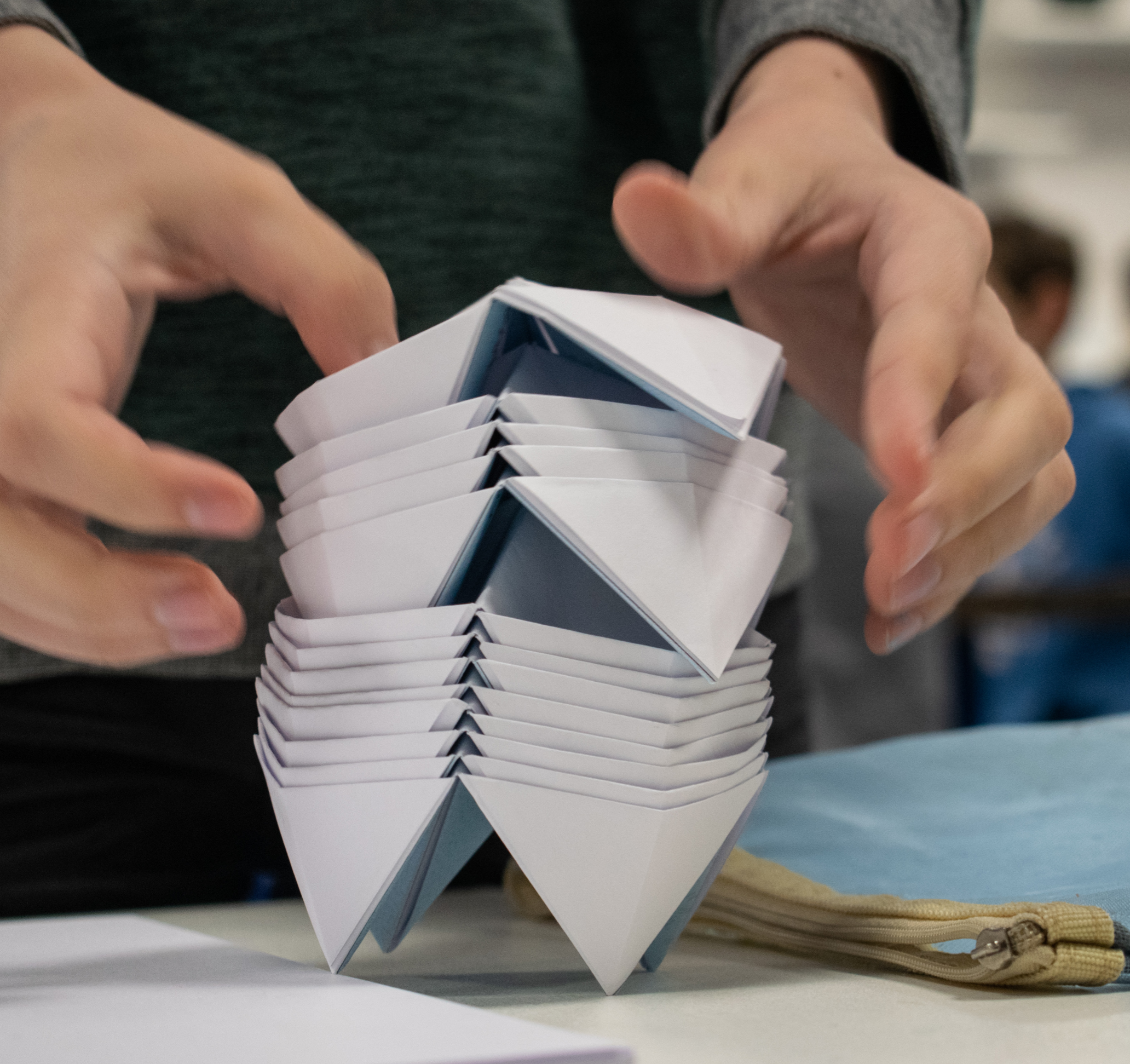


Figure 16: Combination of the Contextual Model of Learning and experiential journey into a holistic model to guide designing for transformative experiences.



3. Requirements and vision

Within this chapter, an overview of the design requirements is provided. Additionally, the experience vision guiding the design process is discussed.

- 3.1 Design requirements
- 3.2 Experience vision

3.1 Design requirements

To enable designing for a feasible, viable and desirable transformative teen experience at VGM, design requirements were formulated. These as based on the key insights identified through the four analysis lenses: VGM, teens, interactive narratives and transformative experiences (Chapter 2). The requirements are described in the following two pages.

The overview (figure 17 on page 75) summarizes these requirements by formulation of the desired experiential journey. Therefore, the nine different phases (from invitation to integration) are defined. The individual requirements that are related to these phases are also presented in the overview. With this overview of requirements, the dimensions of the Contextual Model of Learning and experiential journeys are brought together (figure 16).

The majority of requirements are linked to the actual museum visit. This due to the scope of the project to also consider the role of an MMT at VGM. **When validating the research questions** (Chapter 1.3) through concept testing (Chapter 5), **the initial focus lied with identifying whether transformative experiences took place**. Subsequently, the design requirements as described within this subchapter were evaluated.

B. Teens requirements

1. The narratives should be relevant to the teens, by addressing the teens values and interests. These interests include friendship, lovelife, jobs and new places.
2. The narratives need to be relatable, enabling teens to imagine the relation to their personal lives.
3. Different narrative perspectives need to be provided to create room for personal decision-making (autonomy).
4. The experience should include moments of social interactions to share, discuss and reflect upon the narrative content.
5. Moments in which the teens can experience personal success need to be integrated in the narratives (fulfilling an activity, being asked for own opinion, e.g.).
6. The experience should include a set of varying activities that enable teens to learn by doing.
7. Verbal and textual narratives should be alternated with visual imagery.
8. Narratives to be presented in a comprehensive way building upon the existing knowledge of the teens.
9. Throughout the experience, the teens should perceive a safe environment in which they dare to try out new things (experiment).
10. During the experience, moments to rest and recharge (both physically and mentally) need to be integrated.
11. Clear overview and guidance should be provided regarding the narrative elements.

A. VGM requirements

1. The narratives should include information regarding Van Gogh's life story, his artistic development and relatability to the teens lives.
2. The narratives should include must-see paintings as described in Chapter 2.1.5.
3. The experience needs to inspire and enrich the teens by enabling them to relate to the work and stories of Van Gogh.
4. Different starting points to the narratives need to be created to divide large groups of teens and decrease crowds in the museum.
5. Design suggestions for the implementation of an MMT within the experience need to be made.
6. The product-service system should be adaptable as the location of artworks changes over time.
7. Within the experience the VGM house rules need to be respected.

C. Interactive narrative requirements

1. The narratives should consists out of a clear beginning, middle and end.
2. The narratives should include one of more protagonists.
3. Mysteries or dilemma's need to be introduced during the narratives.
4. Actions and events need to be integrated throughout the narratives.
5. The narratives should be designed based on a clear back-story to maintain logic and coherence.
6. Different storylines (themes) need to be created based on the same back-story.
7. An average amount of user control and high amount narrative overview need to be integrated into the narratives.
8. Activities that stimulate the teens to actively seek information within the narratives based on their own interests need to be integrated (pull-content).
9. The narratives need to include "open spaces" to enable teens to fill in the narratives based on personal meaning.

D. Transformative experiences requirements

1. The experience should facilitate the teens to at least gain substantial new insights relatable to their personal life's.
2. The new insights should enable the teens to develop (new) skills.
3. These skills should stimulate the teens towards new behavior.
4. The overall experience designed for needs to consider the: experiential journey (a), the museum visit (b), the interactive narrative (c) and design suggestions for an MMT (d).

Desired experiential journey

Integrated requirements

| | |
|---|--|
| Invitation: The experience needs to include a pre-visit activity in class to attract the teens attention and spark their interests. | B1, B2, B3, B4, B5, B7, B8, B9 C1, C2, C9 D4a |
| Transtition: The museum needs to be perceived by the teens as welcoming, making the teens feel unique. | B4, B5, B7, B8, B9 C1 D4a, D4b |
| Introduction: The museum visit needs to start with a clear introduction and overview regarding narratives. | A4, A5, A6, A7 B3, B4, B5, B7, B8, B9, B11 C1, C2, C3, C4, C5, C6, C7, C8 D4a, D4b, D4c, D4d |
| Exploration: The experience needs to be perceived as authentic, stimulating the teens to keep exploring the narratives. | A1, A2, A5, A6, A7 B1, B3, B4, B5, B6, B7, B8, B9, B10, B11 C1, C2, C4, C5, C6, C7, C8, C9 D1, D4a, D4b, D4c, D4d |
| Admiration: The narratives need to enable the teens to marvel about the work and personal stories of Van Gogh to not only attract attention and interest, but also spark desire to learn more. | A1, A2, A5, A6, A7 B1, B3, B4, B5, B6, B7, B8, B9, B11 C1, C2, C4, C5, C6, C7, C8, C9 D1, D4a, D4b, D4c, D4d |
| Immersion: Different senses (sight, sounds, touch, e.g.) need to be stimulated through the narratives to engage the teens. | A1, A2, A5, A6, A7 B3, B4, B5, B6, B7, B8, B9, B11 C1, C2, C4, C5, C6, C7, C8, C9 D1, D4a, D4b, D4c, D4d |
| Connection: The narrative content should be relatable for the teens in order to connect the discovered insights to their personal lives. | A1, A3, A5, A6, A7 B1, B2, B3, B4, B5, B6, B7, B8, B9, B11 C1, C2, C4, C5, C6, C7, C8, C9 D1, D4a, D4b, D4c, D4d |
| Recollection: The museum visit needs to be wrapped up in an attractive way, stimulating the teens to recollect their insights gained through the VGM narratives. | A5, A6, A7, B1, B2, B3, B4, B5, B6, B7, B8, B9, B11 C1, C2, C4, C5, C6, C7, C9 D1, D2, D4a, D4b, D4c, D4d |
| Integration: Post-visit material needs to be available to enable discussion and reflection in class after the visit. | B4, B5, B7, B8, B9 C1 D1, D2, D3, D4a, D4b, D4c |

Figure 17: Overview of desired experiential journey for teens at VGM together with the related requirements.

3.2 Experience vision

After specifying the design challenges and requirements for this project (Chapter 1.3 and Chapter 3.1) an experience vision was created to inspire the design process. The experience vision describes the desired qualities and characteristics of the experience facilitated by the proposed concept (Chapter 4.2). In other words, “how” the design challenge (“the what”) should be addressed. The vision was described as follows:

“The transformative teen experience at VGM should feel like climbing a tree with friends in the park.”

*You feel **invited** to climb in the tree as it provides a welcoming feeling that ensures that this is a place for you. Moving up, you are curious to **explore** the different branches to find out where they might lead to. The old tree offers a real and **authentic** environment in which you start to **marvel** about the different views that you discover when looking at the world through the rustling leaves. It should feel like an **accessible** adventure that **inspires** and **enriches** you through discovering new perspectives in an active way.*

This vision combines the characteristics such as inviting, explorative, authentic and marvelous with the VGM vision to reach (accessible), inspire and enrich their visitors.



Trees and Undergrowth by Vincent van Gogh, July 1887

4. Designing

This chapter describes the different design activities that led to the final concept proposal. Additionally, this concept, Vincent & I, is described and illustrated.

- 4.1 Design approach
- 4.2 Vincent & I
- 2.3 Interactive narratives
- 2.4 Transformative experiences



Work in progress during the design phase, by Lynn Potters, 2019

4.1 Design approach

To design for transformative teen experiences at VGM, multiple design iterations were performed. These are summarized below and visualized in figure 18 on the following page.

1. Co-creation session to address the design challenges in an initial ideation session.

Outcome: two concepts for new teen experiences at VGM accompanied by many additional separate ideas (Appendix B.1).

2. Individual creative session to enriched these ideas and concepts with implicit knowledge regarding the project’s context (as the participants of the session were not deeply invested in the project’s topic).

Outcome: three conceptual directions still consisting out of many separate ideas (Appendix B.2).

3. Co-creation session facilitated by Potters. Guided the experiential journey, the teen characters, e.g.

Outcome: two different journey concepts for teens at VGM (Appendix B.3).

4. Individual concept development to evaluate and enrich these concepts with implicit knowledge.

Outcome: Four conceptual directions for teen journeys at VGM (Appendix B.4).

5. VGM expert meetings with Curator of Education (Broekhoven, personal communication 2019) and Programme Manager Multimedia (Prins, personal communication, 2019) to evaluate the conceptual directions, specify missing narrative elements and implications regarding design for an MMT.

Outcome: Specific Van Gogh narratives, including must-see paintings, proven to be successful in practice (Broekhoven). Main reasoning and considerations behind the current MMT at VGM (Prins).

6. Individual concept refinement towards a holistic concept proposal.

Outcome: The concept Vincent & I described through four different perspectives: the experiential journey, the museum visit, the interactive narrative and design suggestions for MMT. This concept proposal is presented and discussed in Chapter 4.2.

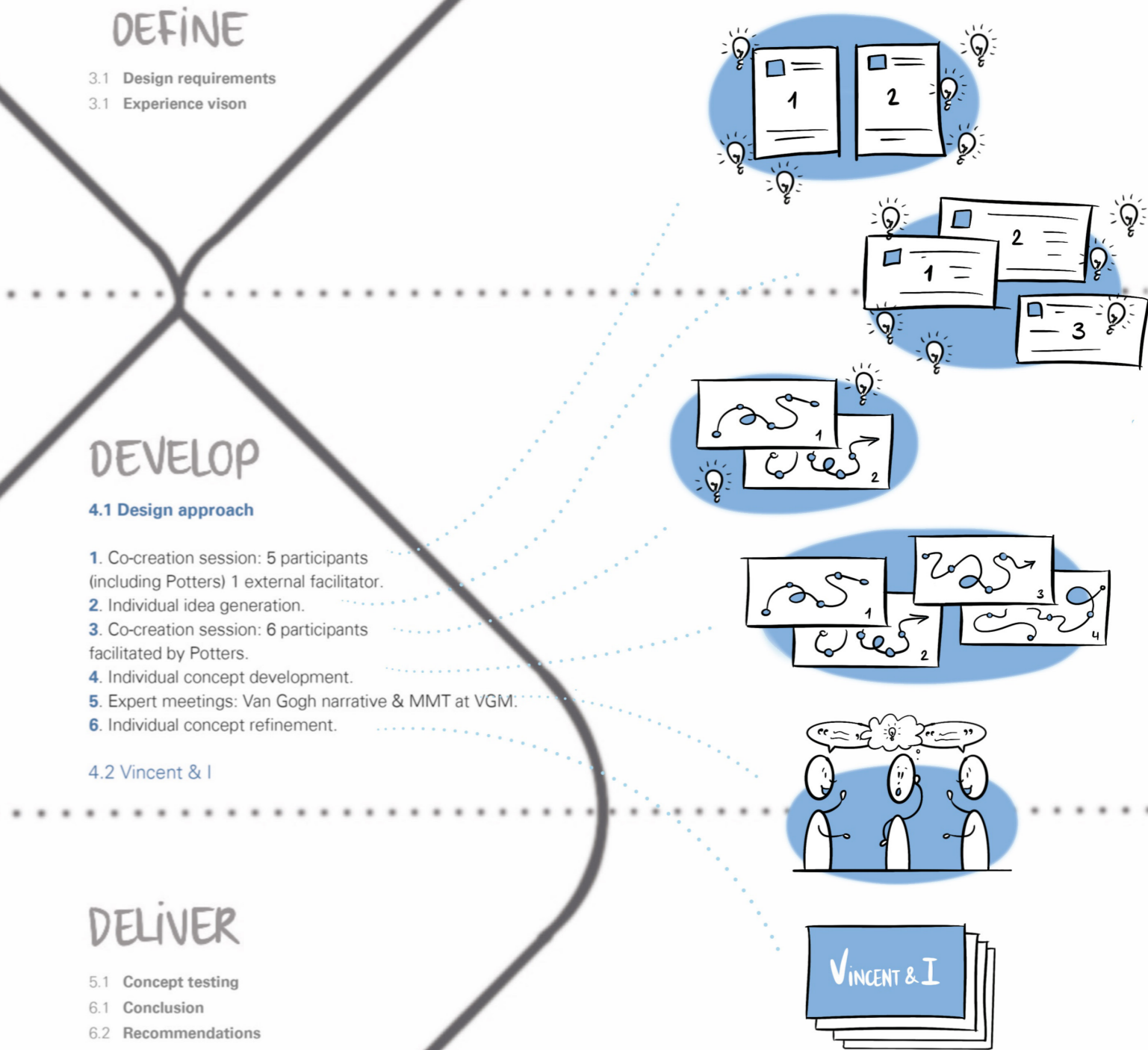


Figure 18: Overview of the six different design iterations.

4.2 Vincent & I

Addressing the project’s design challenges, a new concept was proposed. Vincent & I resulted from the different design iterations (Chapter 4.1) based on the design requirements (Chapter 3.1) and the experience vision (Chapter 3.2). To create an informal experience, Vincent van Gogh is referred to as Vincent. These subchapter describe the concept through four different perspectives (figure 19):

Chapter 4.2.1 The experiential journey

Describing the role of Vincent & I within the educational curriculum of teens.

Chapter 4.2.2 The museum visit

Describing the 6 different stages from introducing the tours to wrapping up the visit at VGM. Also, discussing the four proposed narrative elements to facilitate TE’s.

Chapter 4.2.3 The interactive narrative

Describing the back-story and two storylines with different starting points.

Chapter 4.2.4 Design suggestions for MMT

Describing how the interactive narrative could be materialized in a tangible product-service combination for VGM.

Finally, a storyboard was created to illustrate the desired transformative teen experience at VGM facilitated by Vincent & I. This storyboard can be found within the backcover of this thesis.

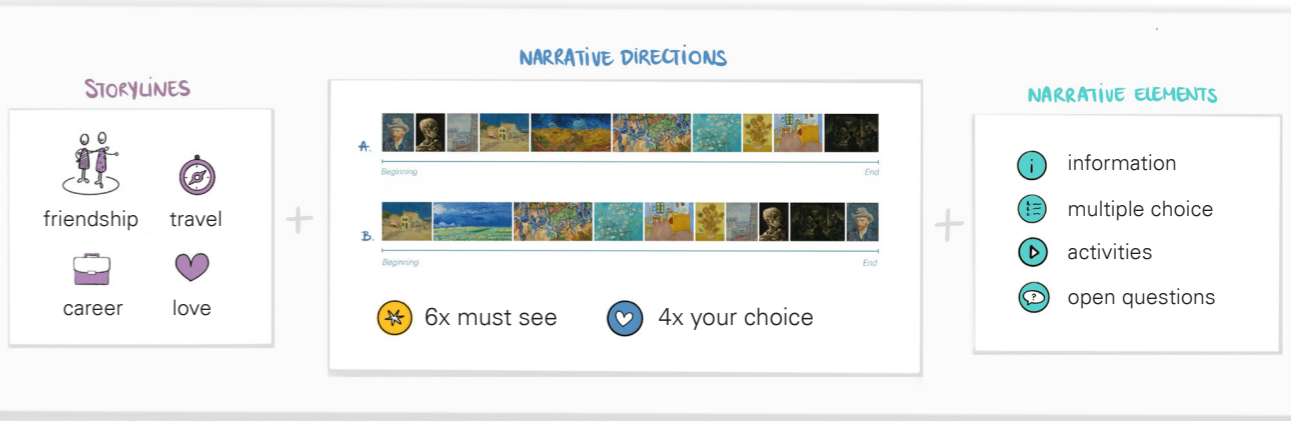
EXPERIENTIAL JOURNEY



MUSEUM VISIT JOURNEY



INTERACTIVE NARRATIVE STRUCTURE



MMT DESIGN SUGGESTIONS



Figure 19: Overview of the four different concept proposal perspectives.

4.2.1 The experiential journey

Vincent & I offers schools and their students an educational and entertaining experience at the VGM. One that starts in the classroom and continues to resonate after visiting the museum (figure 20). Throughout the experiential journey the attention, interest, desire and awareness (AIDA: Lewis, 1898) of the teens is addressed. The personal characteristics, interests and ambitions of these teens are linked to the work and stories of Vincent by means of an interactive narrative structure (Chapter 4.2.3). This way, Vincent & I aims to facilitate transformative experiences in which the teens are guided to discover relatable and substantial new insights during their visit at VGM. Leading to awareness and growth concerning their personal behaviour and lifestyle. The journey is divided in three stages:

- 1. **Pre-visit**
- 2. **During the museum visit**
- 3. **Post-visit**

As the scope of this project also entailed the design suggestions for an MMT, the “during visit” stage was focussed on during designing (Chapter 4.2.4). Therefore, initial suggestions for the stages “pre-visit” and “post-visit” were formulated but not detailed.

Pre-visit

Through an inviting activity, such as a personality quiz or a self-assessment assignment, the teens discover their personal characteristics

and interest in class. These insights are linked with the tours of Vincent & I in which the teens choose a preferred theme. As these themes are based on the teens’ interests, their attention is drawn and expectations towards the content of the tour are managed.

During the museum visit

The teens are guided through the museum via an MMT. Six different stages are varied during the tours to create coherent and continues narratives from beginning to end. These stages are described in Chapter 4.2.2

Post-visit

The data generated during the teens unique tours is summarized and made available for the teachers. The information from this collective Vincent & I journey should be used in class to discuss personal experiences, similarities and differences between the teens. This to not only reflect upon the museum visit, but to also address the substantial insights towards personal growth of the teens (enriching the transformative experience).

Parallel to this, the teens have access to their personal Vincent & I tours within an online

community. This community creates the opportunity to not only review tours, but to also connect with others that also experienced Vincent & I and, for example, share similar interests.



Figure 20: An abstract representation of the experiential journey.

4.2.2 The museum visit

The six different stages that are proposed to create inviting and coherent narratives are:

- 1. **Introducing**, inviting the teens to the tours of Vincent & I and informing them about the upcoming journey through the museum.
- 2. **Exploring**, guiding the teens from painting to painting throughout the tours.
- 3. **Selecting**, providing room for personal decision-making next to the fixed must-see paintings in the tours (Chapter 2.1.2).
- 4. **Discovering**, stimulating the teens to discover Vincent’s paintings and the stories behind them, leading to relatable insights.
- 5. **Recharging**, supporting the teens in finding a moment to rest and sit down.
- 6. **Wrapping up**, recollecting the teen’s personal journey during Vincent & I.

Narrative elements

Throughout these phases, an MMT guides the teens. They are challenged to formulate their personal meaning based on Vincent’s stories. Four different narrative elements are proposed to guide the process of discovering new and relatable insights leading to transformative experiences:

- A. **Information** about Vincent’s paintings, techniques and personal life.
- B. **Open questions** relating Vincent’s stories to the teen’s personal lives.
- C. **Activities** to discover more about Vincent’s paintings and techniques.
- D. **Multiple choice questions** to discover more about Vincent’s life.

These elements are illustrated in the following pages and are visualized in terms of design suggestions for MMT (Chapter 4.2.4). With the help of Sieb Posthuma (personal communication, 2019) a scenario was created to visually explain each of the six phases and the role of the interactive narrative elements within.

Introducing

First, each teen receives a personal MMT through which the upcoming tour is introduced. The teens are informed about the possibility to review their personal journeys afterwards and that those will be shared with their teachers to discuss later in class.

Secondly, short information about Vincent is provided explaining the amount of paintings that he made (in only 10 years time) and the more than 800 letters that he wrote during his whole life. The teens are asked to choose from four themes to discover specific parts of Vincent’s extensive collection of paintings and personal stories.

After this, the teens are provided with a visual preview of their upcoming tour before they start to explore the museum (figure 21).

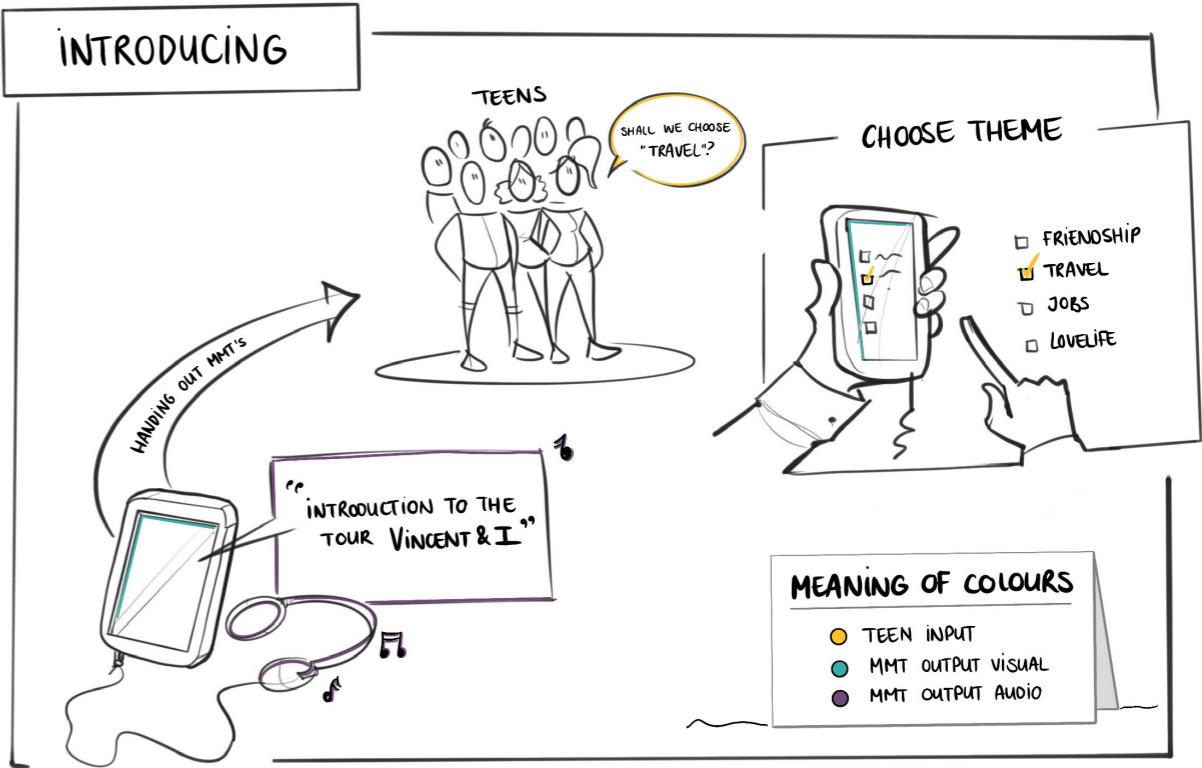


Figure 21: Scenario sketch of the “introducing” stage, by Sieb Posthuma, 2019.

Exploring

The MMT informs the teens in which direction to walk, supported by a visual map. Varying audio elements provide an ambiance that fits the location in the narrative (background sounds to simulate locations such as Montmartre or the Dutch countryside). Short auditory messages provide the teens with fun facts related to the upcoming stories and paintings, triggering their curiosity (figure 22).

For example: *“Vincent had a big argument with one of his good friends, let’s find out what it was about.”*

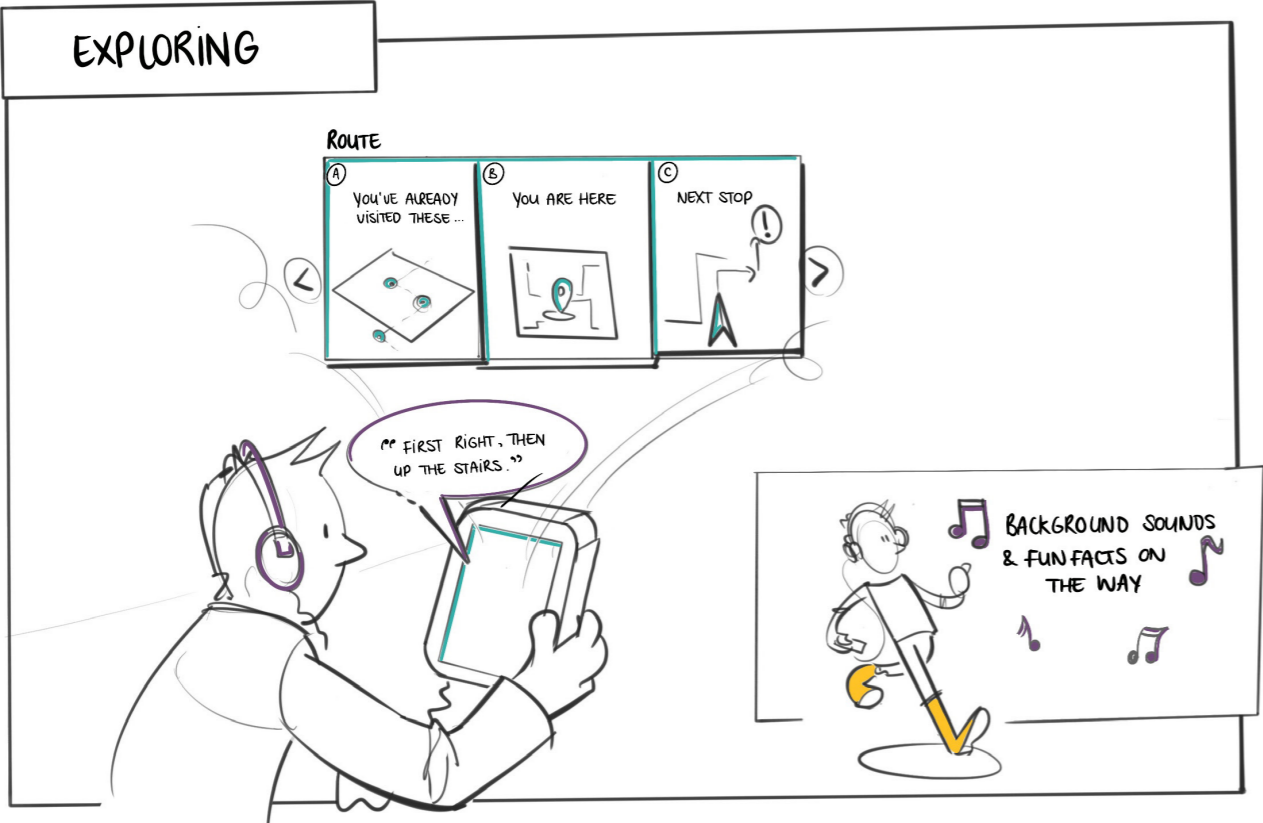


Figure 22: Scenario sketch of the “exploring” stage, by Sieb Posthuma, 2019.

Selecting

Next to six must-see paintings, four additional paintings (“Youre choice”) are free for the teens to choose along the way. Based on their chosen theme, one painting is proposed at the following four artistic topics in the permanent collection:

1. **Self-portraits**
2. **Paintings made in Antwerp**
3. **Paintings made in Paris**
4. **Landscapes**

The teens can either choose to explore more about the proposed painting or to choose another one within the same topic (figure 23).

Discovering

Once arrived at a painting, the four earlier narrative elements (information, open question, activity and multiple choice) are communicated through the MMT (figure 24 on the next page). Examples of these elements are described below using the painting “The Potato Eaters” and the theme “Friendship”. Visual examples of these narrative elements translated into design for an MMT can be found in Chapter 4.2.4.

A. **Information**: the story about Vincent and Anthon van Rappard. How Van Rappard’s criticism to Vincent’s first masterpiece ended their friendship.

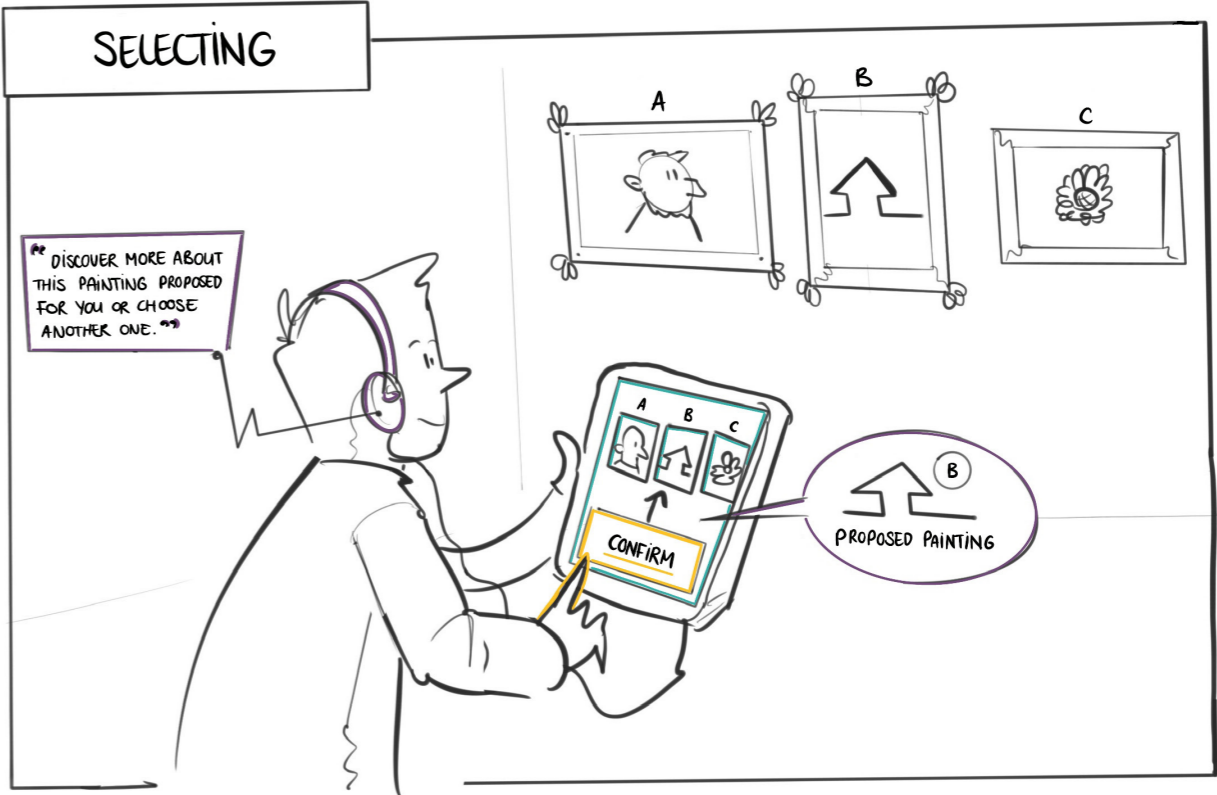


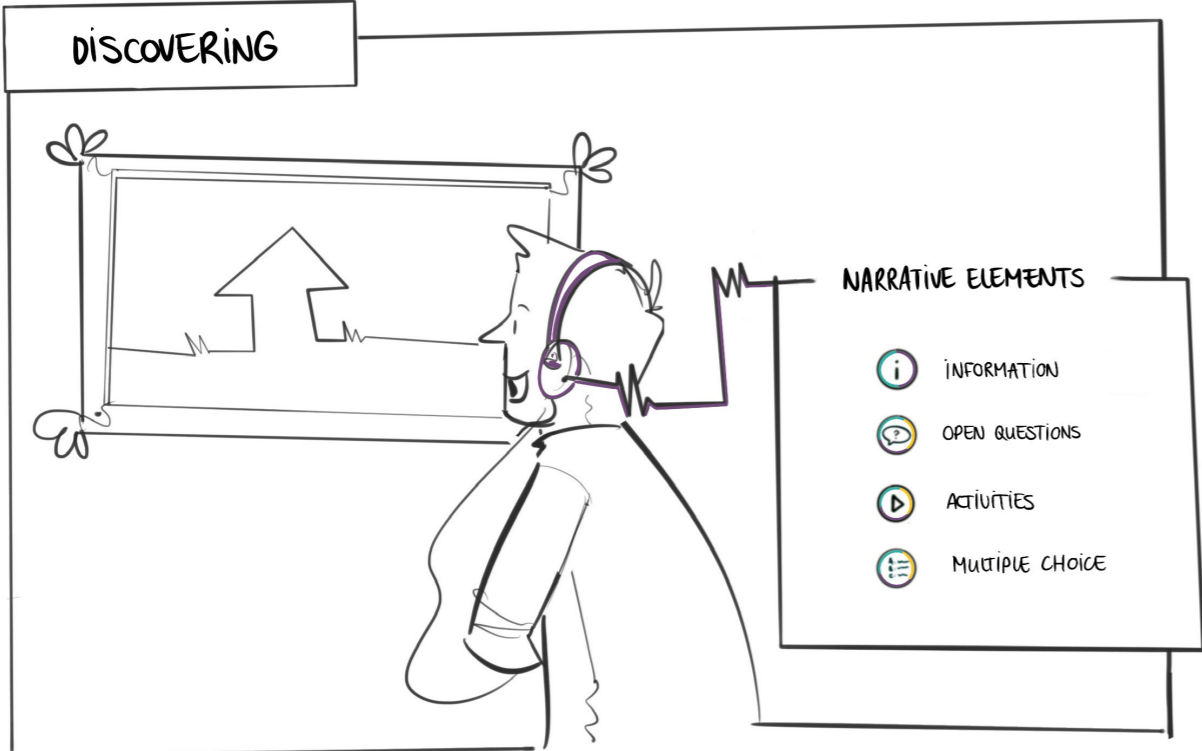
Figure 23: Scenario sketch of the “selecting” stage, by Sieb Posthuma, 2019.

- B. **Open question:** challenging the teens to think about the advice that they would have given to Vincent in this situation. Relating Vincent’s situation to their personal lives.
- C. **Activity:** stimulating the teens to look closely at the painting to discover the dinner time of the Potato Eaters. The clock painted in the upper corner shows 19:00, a rather late time to have dinner in the Dutch 1800’s .
- D. **Multiple choice:** asking the teens what they think Vincent’s experience was when living with his parents at the age of 28 after having lived by himself

for 12 years. Providing three options to choose from followed by short explanatory information.

These narrative elements are based on techniques used and validated during the current guided tours with teens at VGM (J. Vrijer & S. Broekhoven, personal communication). The number of four different narrative elements addressed at each painting proved to be appreciated by teens, whilst not exceeding their attention span (Chapter 5.2).

The elements should be shuffled throughout the tour. This way an new interactive order is offered to the teens at different paintings to avoid predictability and boredom for the teens.



90 Figure 24: Scenario sketch of the “discovering” stage, by Sieb Posthuma, 2019.

Recharging

After the first 7 paintings, the MMT proposes a moment to rest and “recharge”. Places to sit down will be shown on a map after which the teen can decide to either accept the recharging proposal or continue with the tour. During this recharging stage, the MMT continues to provide background sounds to keep the teens immersed in the narrative (figure 25).

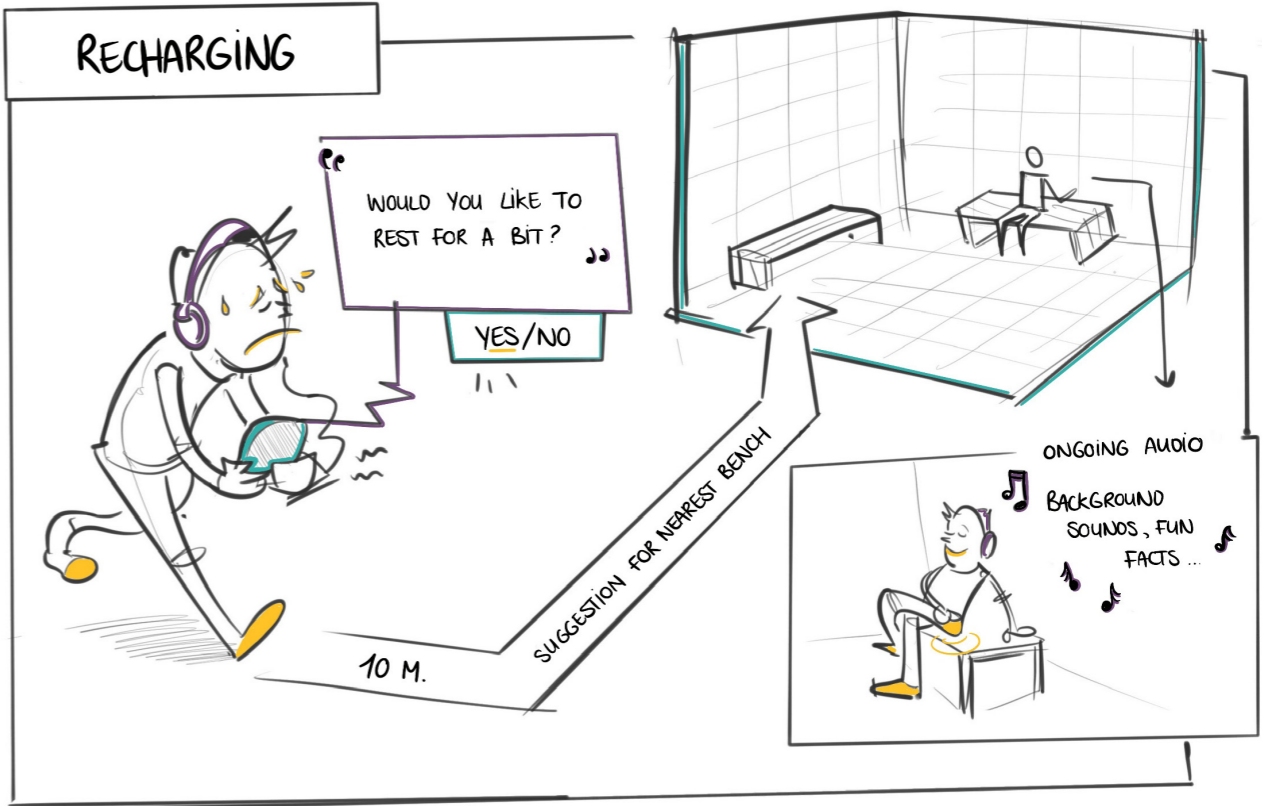


Figure 25: Scenario sketch of the “recharging” stage, by Sieb Posthuma, 2019.

Wrapping up

After the tenth and final painting, the MMT provides directions back towards the group entrance. Along the way, the teens are thanked taking part in the Vincent & I journey. The MMT provides a visual overview of the teen's personal tour through the museum and enables them to share their experience with other through social media (such as Instagram and WhatsApp).

Additionally, the teens receive a unique QR code that grants access to the online Vincent &

I community. Here, the teen cannot only review their personal tour, they can also compare theirs with those of other teens that experienced the Vincent & I as well.

Finally, after having discovered new insights related to the paintings and the teens personal lives, the teens are asked to vote for their favorite painting. A moment to enable the teens to share their opinion through which data can be gathered useful for VGM towards improving the tours within Vincent & I (figure 26).

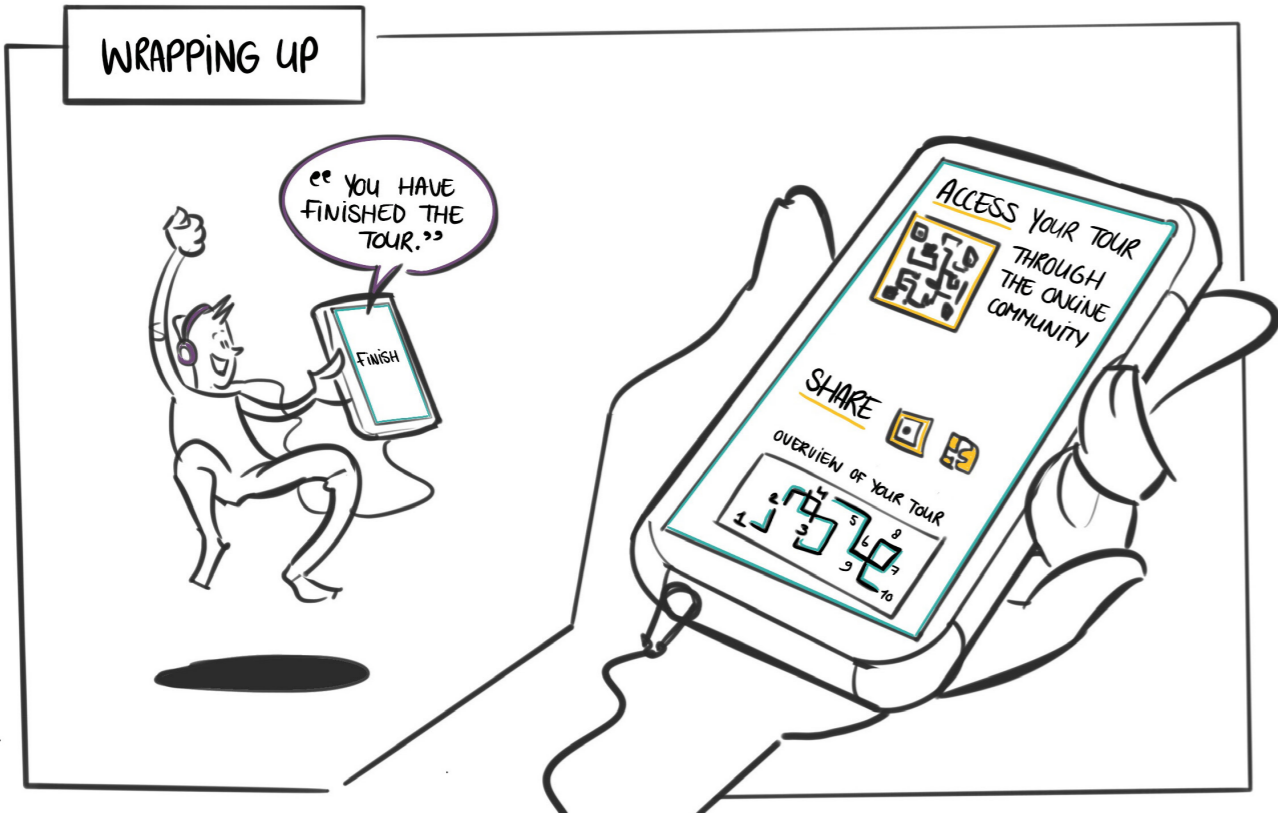


Figure 26: Scenario sketch of the “wrapping up” stage, by Sieb Posthuma, 2019.

4.2.3 The interactive narrative

Based on the Hero’s Journey (Campbell, 1949) (Chapter 2.4.2), Bar and Boschouwers (2019) state that the phases Exploration and Connection play the most crucial role in facilitating a transformative experience (Chapter 2.4). Therefore, concrete design solutions during the museum visit focussing on this exploration and connection have been detailed in terms of storyline content, and narrative structure. The following paragraphs describe these elements in more detail.

An engaging message

Before it was possible to combine the teen’s interests (Chapter 2.2.3) with the existing stories of Van Gogh, an engaging and overarching message needed to be formulated. Following the five principles of Freytag’s Narrative Arc (Chapter 2.3.1), the following message was formulated: “How did Vincent van Gogh become the famous painter as we know him today?”Addressing the principles as:

Exposition: Van Gogh searches for his “calling”, explores different jobs to find out where his qualities lie and how he can contribute to society.

Rising action 1: Van Gogh starts exploring the field of drawing and painting and develops himself into a talented painter.

Rising action 2: The vulnerability of Van Gogh’s starts to take his tole, leaving the painter to feel anxious and lonely.

Climax: Van Gogh’s death and the mystery about what happened exactly.

Falling action: The events that happened after his death. The role that Jo (wife of Theo) played in exhibiting Vincent’s work and publishing his many letters.

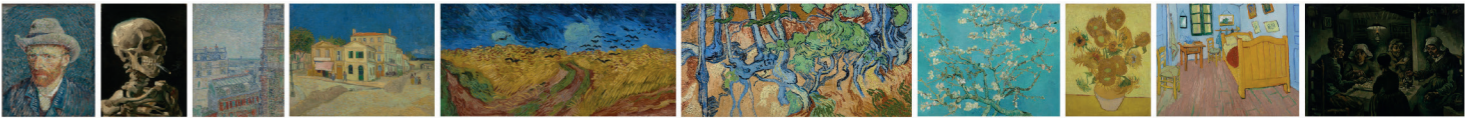
Denouement: The day of today, the fame of Van Gogh and the reason why he is so famous.

Two narrative directions

Based on this message, two narrative directions are proposed. These are based on the evaluated work of Broekhoven with teens at VGM (personal communication, 2019). The two directions do not only provide the teens with an option to choose, it also enables dividing a large group of teens over different museum floors. The narrative directions (A and B) are described as follows:

A. Start with a initial description of the man Vincent van Gogh (self-portraits). Work chronologically towards his learnings and achievements (models and work made in Antwerp, work made in Paris), address his vulnerability (The Yellow House, final landscapes and The Almond Blossom) and the event of his death. Finally discuss how he eventually became this famous after his death (The Sunflowers, The Bedroom, The Potato Eaters) (figure 27).

B. Start with the story about Van Gogh’s ear and his vulnerability (The Yellow House). Work towards his final paintings and the event of his death (final landscapes). Then discuss what led to his fame (Jo: The Almond Blossom) by exploring some of his most famous paintings (The Sunflower, The Bedroom), describing how his artistic style changed over the years (work made in Paris, Antwerp and The Potato Eaters). Finish with a summary of who Van Gogh was and describing what makes him special (Self-portraits) (figure 28).



Beginning

End

Figure 27: Narrative direction A: starting with a self-portrait and ending with the Potato Eaters.



Beginning

End

Figure 28: Narrative direction B: starting with the Yellow House and ending with the self-portraits.

These narrative directions can be related to Vonnegut’s (2007) “Cinderella” (figure 29) and “Man in Hole” (figure 30) storylines, shapes that have proven in practice to engage readers.

While creating these different starting points, the overall flow across the different museum floors has been taken into account (figure 31). Creating consistent visitor flows and concluding the tours at the lower levels of the museum. This to address the teens current complaints regarding climbing stairs and physical discomfort towards the end of the visit (personal communication, Broekhoven).

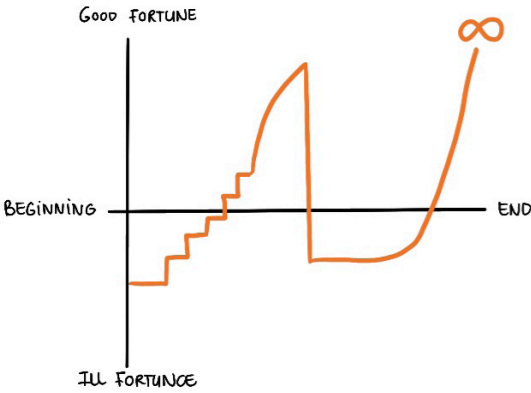


Figure 29: Cinderella story shape by Vonnegut.

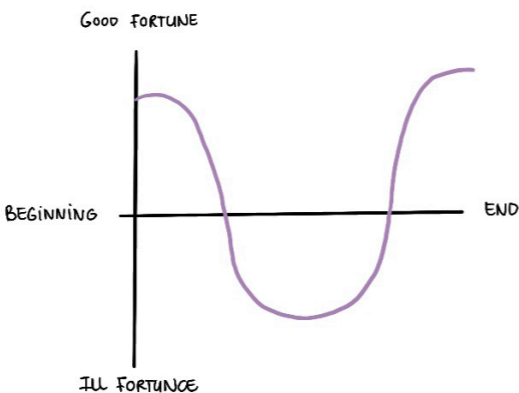


Figure 30: Man in Hole story shape by Vonnegut.

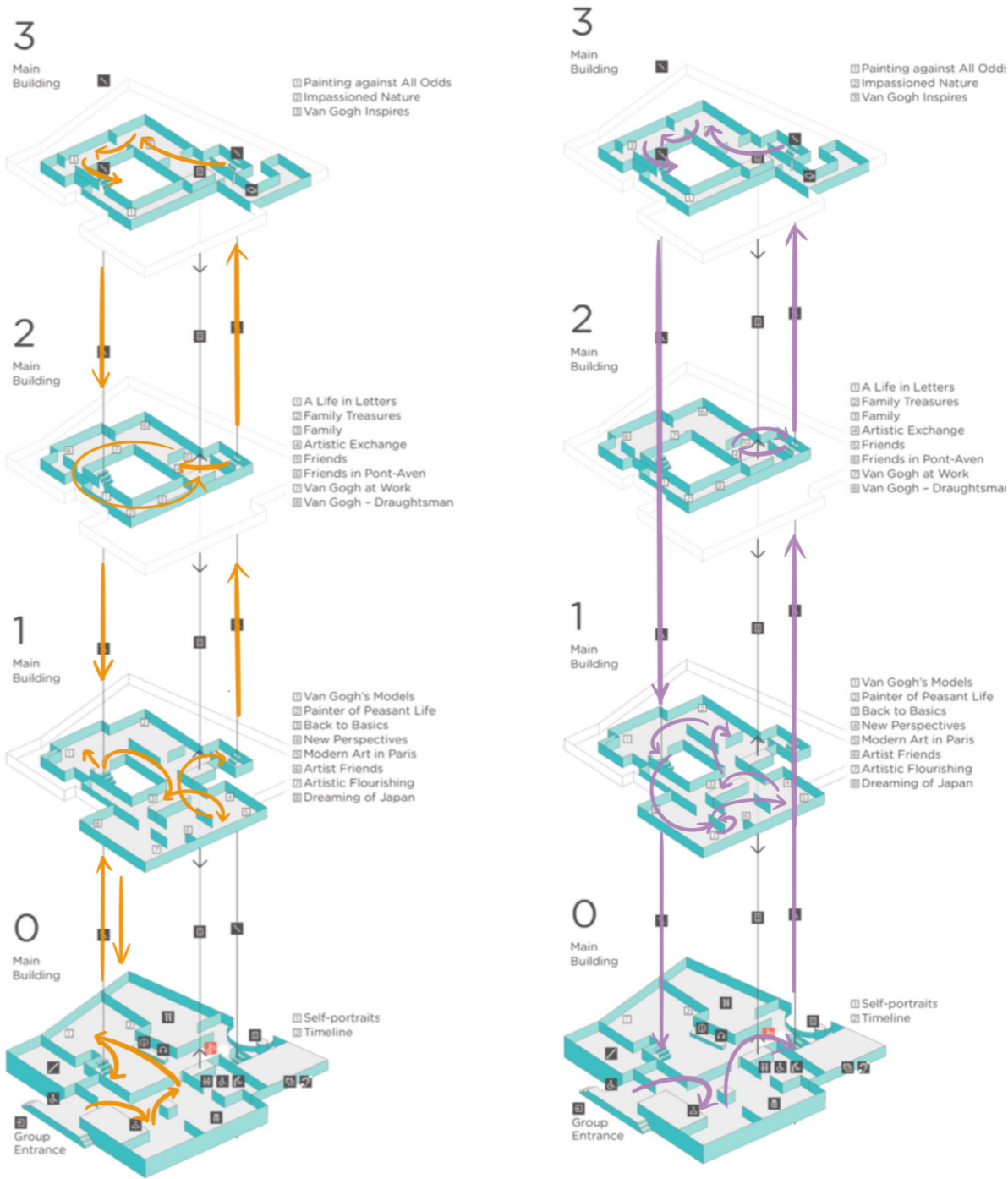


Figure 31: Visitor flow through the museum based on the two different directions.

Four different storylines

As described in the experiential journey (Chapter 4.2.1), the teens are asked to choose a theme for the tour based on their personal interests. Based on the main interest of these teens (Chapter 2.2.3) and the back-story (previous paragraphs), four themes were formulated:



This combination of teen interest and VGM perspective aims to not only cater a personalized experience, but to also provide new perspectives to enrich the teens through their visit (VGM vision). This by addressing paintings and stories which the teens might not have chosen themselves. When formulating the themes, existing Van Gogh stories have been considered closely. This to validate whether sufficient and appropriate narrative material is available to feed into the different routes create through these themes.

The interactive narrative structure

To provide the teens with an experience in which they are guided (needs: clear overview and guidance), yet are able to determine part

of the route themselves (values: autonomy), an interactive narrative structure has been created. Based on Jenkins’ (2004) Evocative Stories theory and the “flowchart” type of narrative architecture (Ryan, 2006) an interactive narrative structure was designed fitting the needs and values of teens within the VGM context. The structure integrates the following elements:

- **Two narrative directions** A: start at self-portraits, B: start at Yellow House.
- **Four themes** fitting with each of the two narrative directions, resulting in eight different starting points.
- **Six “Must-see” paintings** integrated in all different routes, including Vincent’s most famous paintings.
- **Four “Your choice” paintings** paintings within four specific artistic topics (self-portraits, Antwerp, Paris and landscapes). The teens can either choose to explore more about the proposed painting (based on the selected theme) or choose another one within the same topic.

The overview of the interactive narrative structure (figure 32 on the next page) illustrates the variety of flexible routes for the teens to interact with. One of these many routes has been highlighted as an example: narrative direction A starting at the Yellow House.

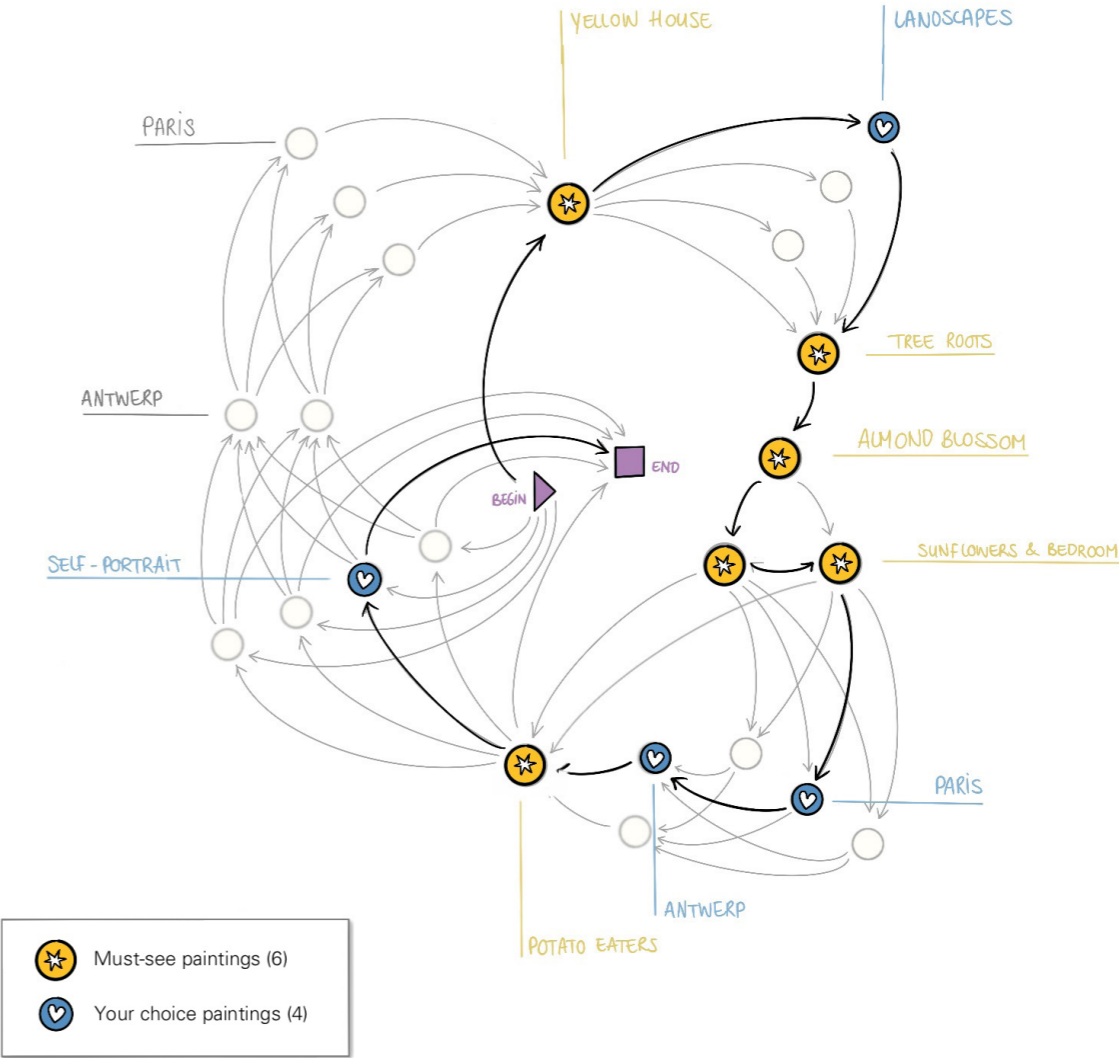


Figure 32: Overview of the interactive narrative structure for teens at VGM.

The paintings illustrated in this structure are based on the current exhibition layout. As this layout changes throughout months and years, it is recommended to have “back-up” paintings included in the narrative script fitting the same artistic topic.

“The dots (paintings in this visual) for the various locations within the story worlds (Van Gogh stories), and the oriented line (arrows) for the journey of the hero (the teen).” (Ryan, 2006).

4.2.4 Design suggestions for MMT

The challenge of this project was not to design a new MMT but rather to describe how to design for the principles behind such a guide. Therefore the aesthetic appearance of the MMT has not been detailed during this project.

However, in order to discuss the requirements for the concept of Vincent & I towards a tangible product-service combination, design suggestions were made. An initial overview was created giving an impression of the amount and type of screens needed in an MMT (figure 33). Additionally, specific screens illustrating the six visit phases and four narrative elements (Chapter 4.2.4) were illustrated to provide visual examples (figure 34 on pages 102-103). Also, short scripts were written as examples for the audio message.

The initial overview of required MMT elements also enable the concept validation as discussed in Chapter 9. By selecting a limited number of screens and audio fragments, the content and narrative elements of the Vincent & I MMT were tested.



Figure 33: Initial overview of MMT design elements based on the narrative direction starting at The Yellow House.

“Welcome to the tour Vincent & I during which you will not only discover stories about Vincent but also explore what they mean to you! ”

“As there are countless stories to discover, you get to choose a theme you like most.”

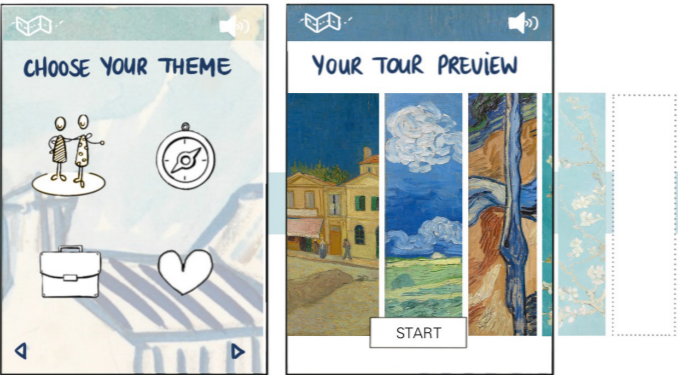
“Did you know that two close friends stimulated Vincent to start painting? His brother Theo and friend Athon van Rappard.”

“Vincent called this painting his first masterpiece. After asking Van Rappard’s opinion, he received harsh criticism: *“that nose looks like a pipe stalk with a dice on top of it!”*”

“The argument with Van Rappard resulted in the end of their friendship.”

“This peasant family had to work on the land until the sun went down. They were poor and could not afford to work less ours. Vincent admired and respected that a lot.”

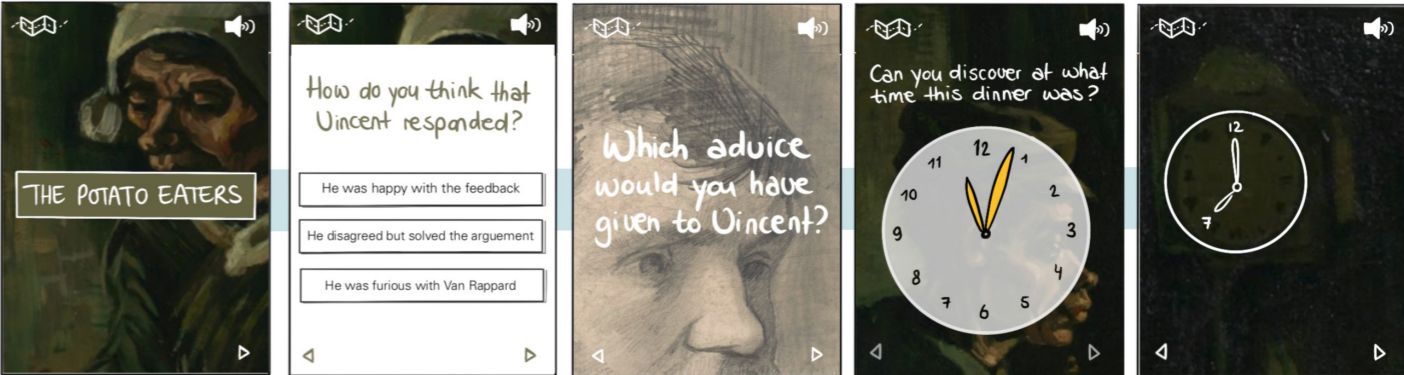
ONBOARDING



EXPLORING



DISCOVERING



SELECTING



RECHARGING



WRAPPING UP



“You arrived at the paintings that Vincent made during his time in Paris. Within the theme “Friendship” we propose this painting. You can also have a look around to see if another painting interests you.”

“There are four more paintings to explore before the end of the tour, would you like to sit down for a little bit?”

“You finished the Friendship tour of Vincent & I! Which painting is your personal favorite? You can share your personal tour with others to share your experience at the Van Gogh Museum.”

Figure 34: Specific screens illustrating the six visit phases and four narrative elements.



5. Concept testing

To validate whether the concept Vincent & I offers an answer to this project's research questions, the concept was tested with teens at VGM. The following subchapters describe the concept testing set-up and the main insights.

- 5.1 Research set-up
- 5.2 Key insights

5.1 Research set-up

This chapters briefly describes the research method and set-up of the validation study and presents the main insights. Please refer to Appendix C for a detailed overview of the research materials and results.

Research questions

Based on the project’s research questions (Chapter 1.3) and experience vision (Chapter 3.2), the following research questions were addressed during the study:

1. Transformative experiences

To which extent do the participants discover substantial new insights that are relatable to their personal lives?

2. Museum visit experience

What is the overall opinion of the participants regarding the inviting, explorative, authentic and marvelous character of the visit experience?

3. Interactive narrative

To which extent does the content and the room for personal decision-making align with the values, needs and interest of the participants?

4. Design solutions for MMT

How do the participants perceive the different narrative elements as integrated in the tour?

Participants

During this study, 25 first-grade VMBO students from the Montessori Lyceum Amsterdam (MLA) participated. The age of the participants

ranged between 12 and 14 years old. Amongst the participants were 12 boys and 13 girls of whom 19 had already visited VGM before. The participants were divided in 8 groups: 7 groups with 3 participants and 1 groups with 4 participants.

Method

The different phases in the museum visit journey (excluding “recharging”) (4.2.2) and the narrative elements (Chapter 4.2.3) were tested through a short version of Vincent & I. This due to limited available time per participant. The tour was tested over 3 days in which 8 session of 45 minutes were organized at VGM. These consisted out of three parts: an introduction with questionnaire, concept testing and an evaluation (figure 35 the next page). After receiving permission from the participants, audio was recorded during each session. A back-up plan was created in case it would not be possible to test with teens at the museum. The overview of both the applied and back-up research plan are described in Appendix C.1.

Materials

Paper prototypes (image on page 108) were used to guide the participants during the tour through the museum (image on page 111). The aim of these prototypes was to merely focus on the content and narrative elements rather than the aesthetics and user interface of the concept. The researcher (Potters) accompanied the participants during the tour to mimic audio messages. See Appendix C.3 for the materials.

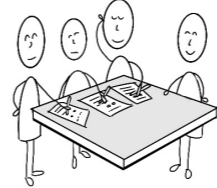
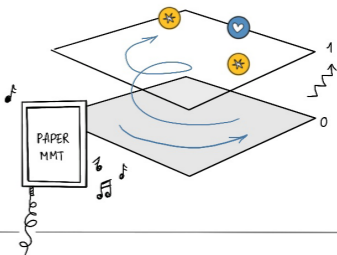

| | 1 INTRODUCTION & QUESTIONNAIRE | 2 TEST IN MUSEUM | 3 EVALUATION |
|----------------|--|--|--|
| TIME (minutes) | 5 | 25 | 10 |
| DESCRIPTION | Short list of questions including name, age, gender and frequency of visiting museums. | 1. Choosing one of the themes Friendship or Travel 2. Towards to painting 1 3. Discovering at painting 1 4. Towards painting 2 5. Selecting a painting 6. Discovering painting 2 7. Towards painting 3 8. Discovering painting 3 9. Wrapping up: voting for favorite painting and rating the tour. | Group conversation led by interview questions based on the research questions. |
| MATERIALS | Paper questionnaire, pencils, audio recorder.  | Two versions of the paper prototype (Friendship and Travel versions), pencils, stickers, clipboard, tour script for researcher, audio recorder and camera.  | Cheat sheet interview questions for researcher, audio recorder, cookies, thank-you presents for participants.  |

Figure 35: Overview of the research set-up for concept testing with teens at VGM.



Paper prototypes for concept testing, by Lynn Potters, 2019

5.2 Key insights

Based on the evaluation sessions with participants, key insights were summarized. These insights were translations from the research results (Appendix C.2) and are described in the following paragraphs. The quotes used to illustrate the insights were formulated by the participants of the study.

1 Transformative experiences

The majority of the participants stated to have discovered (more) personal stories behind the paintings about Vincent.

“There are much more stories behind these paintings than you think at first.”

Out of the 25 participants, 11 stated to have started thinking about themselves and their own lives based on the content of the tour.

Formulating what they actually started thinking about seemed to be difficult:

“I don’t really know about what exactly, but it does make you think.”

However, some participants were able to describe their insights. These are some examples:

“It’s better to solve an argument, talk about it, because you never know what might happen.” & “Vincent showed his emotions through the paintings that he made and that it is okay to show your own emotions as well.”

2. Museum visit experience

All participants stated that they would have liked to continue with the tour longer. Some even said that the tour felt very short and that they would like to continue because they thought that it was very interesting. The tour was rated with an average of 3,75 out of 5 stars. **The majority of the participants rated the tour with 4 stars** (11 ratings) followed by 3.5 stars (8 ratings).

Considering the **experience vision** (Chapter 3.2) the concept Vincent & I seems to facilitate the desired experience:

- The participants felt **invited** to start with the tour. They enjoyed choosing a theme as this contributed to them knowing what to expect.
- The participants enjoyed most the **explorative** nature of the tour, discovering stories and specific elements in the paintings.
- The content of the tour was described as interesting and personal providing an **authentic** experience.
- The majority of the participants **marvelled** about Vincent personal stories. They enjoyed discovering new information that was described as interesting and unexpected.

Additionally, most of the participants stated to have preferred choosing their own group for the tour. (For the study they were randomly grouped). A few participants described not to have a preference, one participant even stated:

"I actually liked it like this (being placed in a group), because this way you discover what others like as well."

When being asked to choose between forming an own group or having the possibility to choose a preferred theme, 10 participants stated that they would choose selecting their preferred theme. The other 15 participants still preferred to choose their own group.

3. The interactive narrative

All participants stated to enjoy the possibility of choosing a theme for the tour. The majority (23 participants) selected "Travel" over "Friendship" as their preferred theme:

"It is nice because if you get to choose a theme you already know a bit what to expect." & "My friends are important to me but I don't need to know more about Vincent's friends, that's not really interesting."

Additionally, all participants stated to have experienced enough room to make personal choices. A few participants described that they might have liked even more room for personal decision-making.

"If I could decide, I would make half of the paintings in the tour "must-see" and the other half free to choose for myself."

4. Design for MMT

Vincent's personal stories were described by most participants as the element they liked most during the tour.

"It is much more fun to know the stories behind the painting."

Others described the possibility to choose a theme, the assignments and multiple choice questions as the elements they liked most.

"The questions help to discover more about the story." & "If you get a question, you look closely to find out the answer, I like that."

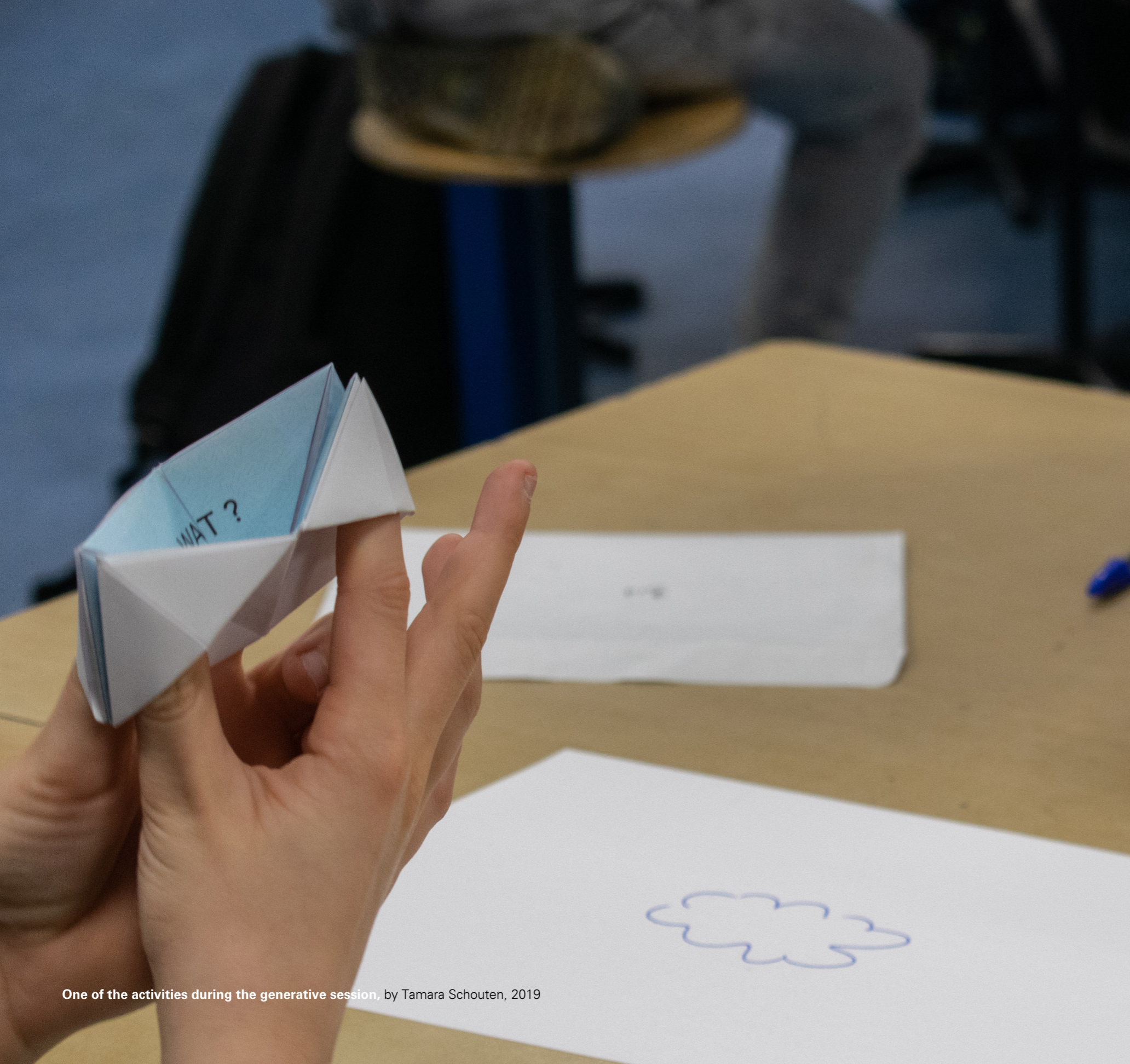
Content wise, none of the participants was able to point out elements they disliked during the tour. *"I expected that I would be a bit boring but that was not the case."* A few participants mentioned the crowdedness in the museum.

Also, the following suggestions were made:

- The content could be made more exciting;
- It would be nice to have more activities such as searching for the time at the Potato Eaters,
- It would be fun if teens could "finish the stories" themselves.



Concept testing with teens at VGM, by Astrid ten Bosch, 2019



One of the activities during the generative session, by Tamara Schouten, 2019

6.

Conclusion

The final chapter of this thesis describes the conclusion of the project results. Additionally, a discussion regarding the research and design limitations is described. Also, recommendations were formulated accompanied by a proposed design approach for future projects. The personal reflection concludes this chapter.

- 6.1 Conclusion
- 6.2 Discussion and recommendations
- 6.3 Designing for transformative museum experiences
- 6.4 Personal reflection

6.1 Conclusion

The overall aim of this project was to identify how to design for transformative teen experiences at the Van Gogh Museum. Additionally, an interactive narrative structure facilitating such experiences needed to be designed. Finally, suggestions for an MMT needed to be created.

In order to achieve this, a holistic overview of requirements was created accompanied by an experience vision. These provided starting points for six different design iterations that resulted in the proposed concept Vincent & I. This concept was presented through four different perspectives. This to not only consider a tangible MMT and interactive narrative, but to also consider the different phases during the museum visit. Additionally, an experiential journey within the educational curriculum of the teens was presented, including the pre- and post-visit stage regarding the museum visit.

Vincent & I was tested through paper prototypes with 25 teens at VGM. This study focussed mostly on identifying whether Vincent & I facilitates the desired transformative teen experience at VGM. Additionally, the four narrative elements (information, activity, e.g.) were tested. This to evaluate whether the teens values regarding; relevance, relatability, autonomy, social interactions and personal success were addressed in a desired way.

The insights as discussed in Chapter 5.2 indicate **first signs of transformative teen experiences at VGM**. Therefore, an answer to this project’s main research question was found. Additionally, Vincent & I was **positively reviewed by all of the 25 participants**. The interactive narrative was described as interesting and engaging, where the paper prototype of an initial MMT played a supporting role. These insights address the challenges formulated by VGM regarding an entertaining interactive narrative for teens.

Thus, **the proposed concept**, based on extensive literature and empirical studies **provides a foundation** for the further research and development. This regarding transformative teen experiences at VGM.

Although a holistic approach was used throughout this project, I would describe the research and design explorations plus their outcomes as initial stepping stones. Most of the defined requirements are met. However, specific elements such as details regarding a tangible MMT and activities during the pre- and post-visit stage need to be detailed further (figure 36).

Therefore, Chapter 6.2 discusses the limitations within this project and the recommendations for further research and design processes.

Desired experiential journey

Integrated requirements

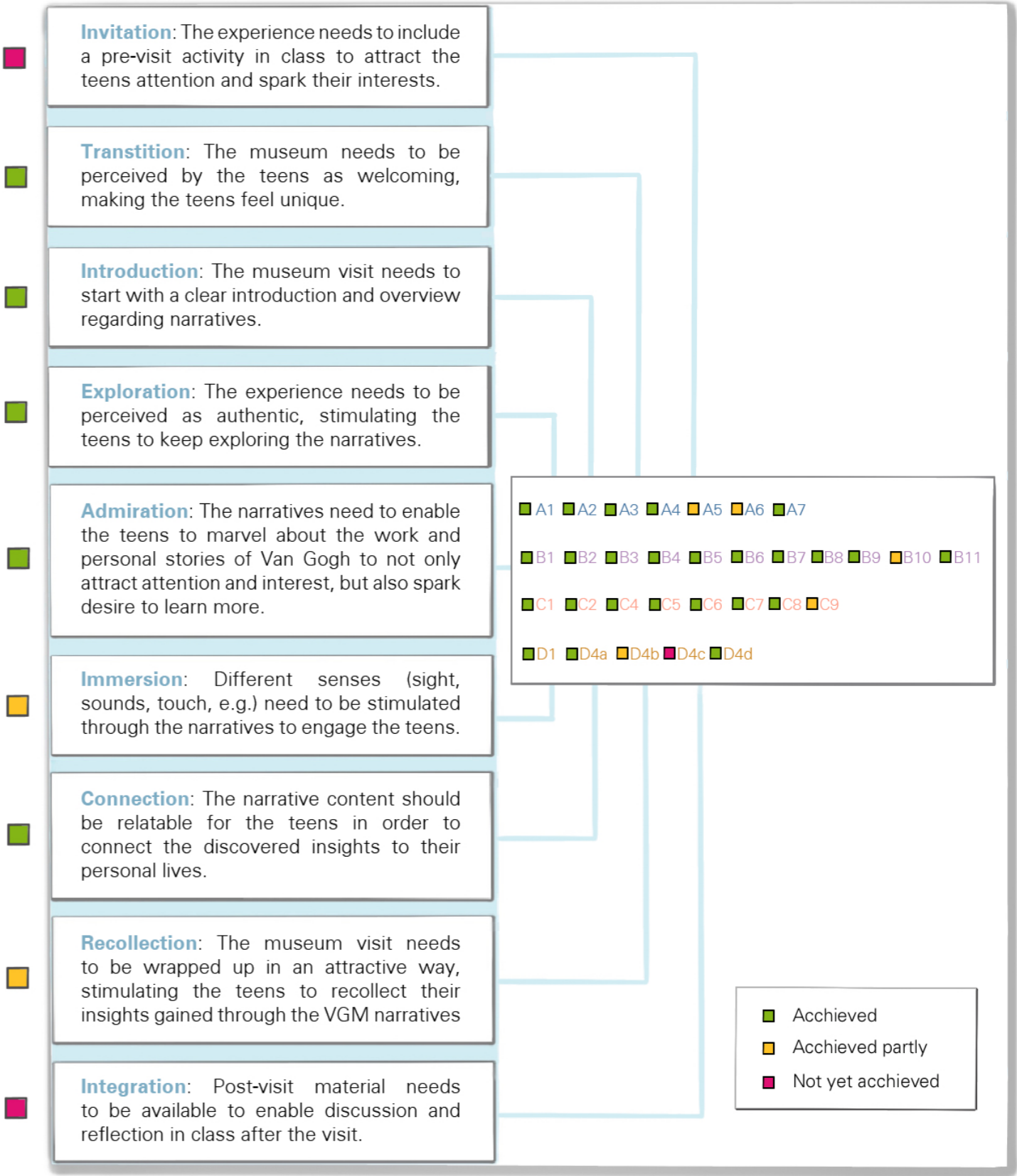


Figure 36: Evaluation of design requirements.

6.2 Discussion and recommendations

Towards concluding this thesis, the limitations of this project were discussed. This also enabled the formulation of recommendations regarding further research and development of the proposed concept.

Analysis lenses

Within this project, it was decided to explore four different analysis lenses. This approach resulted in a holistic overview of the context but also caused for the lenses to be described in more abstract ways. The lenses considering VGM and teens were explored in a quite detailed manner including different empirical studies. The other two lenses (interactive narratives and transformative experiences) have been explored mainly based on literature studies. Therefore, value could be added by exploring these two domains further. This to specify potential design guidelines and requirements that were not yet identified within this thesis.

Additionally, many of the research activities were performed as qualitative explorations to iteratively gain insights and inspiration. Therefore, the main findings described in this thesis were summarized from but not directly linked to the specific studies. This might cause inconvenience for the motivated reader that wished to know where the different insights precisely come from. However, the insights from the generative session were documented and referred to in a structured way.

Design requirements and vision

In contrast to the very specific design

requirements that are formulated when creating a product or service, the requirements described in this thesis are less tangible and more dynamic. In other words, frequent maintenance (evaluation and reformulation) of these requirements is needed. This to ensure that the values, needs and interests of teens remain addressed appropriately.

Designing

The results from the design iterations within this project were evaluated implicitly. In traditional product development processes, multiple concepts might be developed, tested and compared. During this project, successive design iterations contribute to one proposed concept which was tested during the final phases of this project.

A recommendation for further concept development and testing, concerns the frequency of testing. When possible, simple and quick validations of assumptions can lead to numerous valuable insights. Nevertheless, the time and energy required from the test participants needs to be considered closely. In order to gather meaningful insights, testing should be executed with individuals representative to the actual target group.

The concept

Vincent & I is presented in a rather abstract manner. Meaning that few details regarding product materialisation were included in the concept proposal. Therefore, the different dimensions (experiential journey, museum visit,

interactive narrative and design suggestions for MMT) should be explored and developed further. More specifically:

1. Designs regarding the pre- and post-visit stages of Vincent & I need to be created. Now that the potential of the concept regarding transformative experiences has been identified. More value can be created by including these two stages.
2. Within the museum visit, the “recharging” stage has not been specified nor tested. This should be done during further development of the concept to ensure that the narrative stays engaging during these “break” moments.
3. The proposed interactive narrative shows to be valuable towards entertaining and transformative teen experiences. Therefore, it is recommended to build upon this narrative. By considering the narrative content and meaning first, more interactivity should only be added if strengthening the purpose of the narrative.
4. Lastly, initial examples for a multimedia tour were created through visual and auditory examples. Based on the insights from the concept testing and experience already available within VGM, the specific MMT narrative should be created. It is recommended to closely involve teens and teachers during this process.

Further concept testing

During the concept tests performed within

this project, the researcher played an active role (acting as the audio messages within Vincent & I). It is very likely that the presence of the researcher influenced the perception of the experience. Therefore, the concept should be further developed into more advanced prototypes that enable autonomous testing. During such tests, the researcher should only be present to observe. Ideally, this would be done from a distance to not influence the teen experience at all.

As designing for transformative experiences cannot directly be compared to designing products or services, a specific design approach is recommended. This is described in the following chapter.

6.3 Designing for transformative museum experiences

As described in the previous chapters, transformative experience design is a new domain in the creative industry. This also means that there is not yet one appropriate approach to guide the creative process of designing for such experiences. Therefore, different existing design tools and methods were explored during this project. The most promising ones, contributing to the evaluated concept of Vincent & I, are combined in the initial design approach (figure 37) as proposed in this subchapter.

- 1. **Define the project's purpose:** described the main reason behind the desired new experience.
- 2. **Visitor characters:** identify the values, needs and interest of the primary users of the experience.
- 3. **Experience vision:** formulate the desired qualities of the experience.

A. Visitor and vision requirements: create a first list of requirements based on the purpose, visitor characters and vision.

4. **Experiential journey:** specify the desired experience through the nine different phases of the experiential journey (Bar & Boschouwers, 2019).

B. Experience requirements: update the list over requirements with the elements described in the experiential journey.

First creative session: focus on the ideal experience for you and your visitors.

5. **Narrative**
Consider the requirements for a compelling story.

Then, review the existing narrative content of the museum. Link this to the interests of your visitors.

6. **Interactive narrative**
Consider the requirements for an interactive narrative. Then create an interactive narrative that meets the visitors values and needs.

C. Narrative requirements: update the list of requirements based on the desired interactive narrative content.

Second creative session: focus on interactive narrative forms within the desired experiences.

7. **Space:** consider opportunities and limitations regarding the available physical space. This step includes the institutions house rules.

8. **Portfolio:** review the museums current portfolio and determine the appropriate type of product/service to facilitate the desired experience.

D. Product/service requirements: update the list of requirements based on the desired type of product/service.

Third creative session: focus on the product or service to guide the interactive narrative within the desired experience.

These steps should result in **one or more concepts** based on a **holistic list of requirements (E)**. The next steps include concept testing with visitors and evaluation of the concept(s) based on the requirements. Finally, the approach should be repeated frequently to address the ever changing needs and values of the visitor and their context.

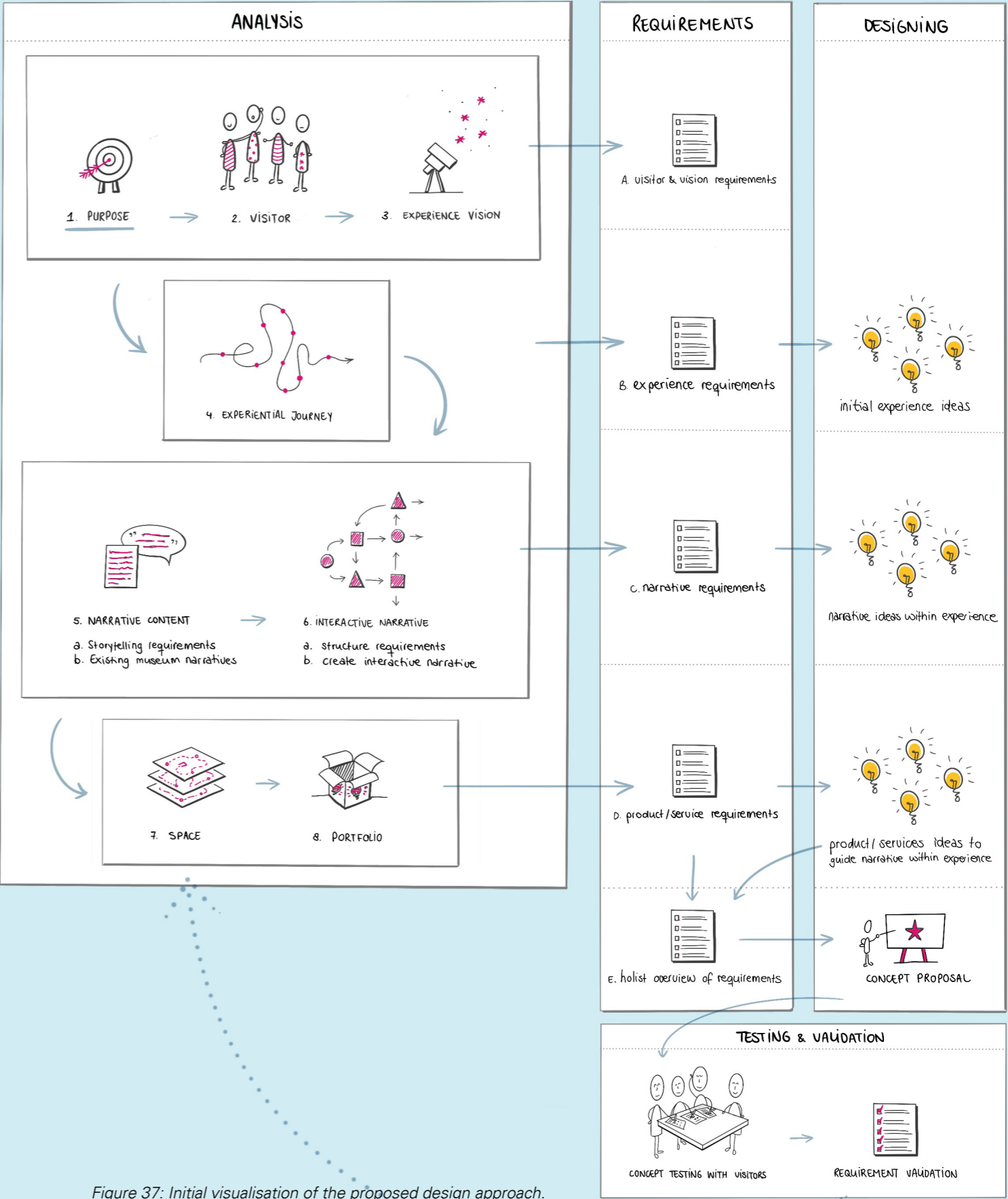


Figure 37: Initial visualisation of the proposed design approach.

6.4 Personal reflection

After finishing this thesis, I looked back at the personal and professional learnings which this project brought me.

Even before getting in touch with VGM, I was (and still am) greatly fascinated by the domain of storytelling. Curious towards the possibilities of storytelling regarding behavior change, I first explored the opportunity of setting up a graduation project by myself. It was during this process that I stumbled upon VGM's assignment regarding interactive storytelling based on their permanent collection.

Managing and defining expectations

This project provided with me with new experience regarding expectations management. It was a challenge for me to balance stakeholder values (both VGM and TU Delft) with my personal learning objectives. What I take away most is the importance of defining the project expected outcomes as clearly as possible. This to ensure a shared understanding and agreements.

The value of intuition and curiosity

Next to the initial challenge of designing for an entertaining teen experience, I was curious about how to implement elements of behavior change within the project. This because I think of museums as places with great potential to contribute to personal learning (and thus behavior). Pursuing this additional challenge proved to be very rewarding. I was able to formulate design requirements and guidelines

towards designing for transformative experiences at VGM. Additionally, evaluation with teens showed that the proposed concept Vincent & I actually facilitates these transformative experiences. Therefore, I gained confidence in following my intuition and having a curious attitude. This despite the extra energy that it costs me throughout the project.

Process

Throughout this project I have learned that designing for a transformative experience is quite different compared to designing a product or service. One of the biggest differences is that a designer cannot design an actual experience but only design for one. This because an experience is subjective and therefore has a different meaning for every individual. This project taught me that it is of great importance to first consider the desired effect, followed by the desired experience to facilitate it. Then, the desired interactions should be specified followed by specific product or service solutions to support the overall experience.

Within the masters Design for Interactions, I learned about many design techniques and methods that proved their value during this project. However, I missed clear guidelines how to specifically design for an experience (not only for the interactions within). Thus, this project taught me to critically reflect upon existing guidelines and experiment with creating my own.

Broad perspectives and validation

It has been very valuable to study the context of this project in through four different perspectives. Nevertheless, this also made it difficult to find focus. This also resulted in challenges regarding clear communication of research insights with stakeholders. Additionally, as so many insights and assumptions were gathered, only few could be validated during this project. This again forced me to prioritize and select elements within the project to focus on.

To conclude, I would like to say that this project really stimulated me to work **outside of my comfort zone**. Working with many different stakeholders, diving into the world of teenagers and addressing the rather unfamiliar topic of transformative experiences enabled me to grow both personally and professionally towards the experience designer that I aim to become in the near future.



During concept testing with teens at VGM,
by Astrid ten Bosch, 2019

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