

Tallinn University
School of Digital Technologies

Including Schoolchildren and Educators in the Participatory
Design. The Case of Museum Kadriorg Group Visits

Master Thesis

Author: Ekaterina Shafeeva

Supervisors: Dr. David Ribeiro Lamas
Joanna Rutkowska

Author: “ . . . ” 2016
Supervisor: “ . . . ” 2016
Supervisor: “ . . . ” 2016
Head of the Institute: “ . . . ” 2016

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DECLARATION

I hereby declare that I have written this these by myself and without support from any other person or source, and that I have used only the materials and sources indicated in the list of work cited. Neither I myself nor any other person has submitted this to any other institution for a degree or for publication.

Thesis has been supervised by PhD David Lamas (Tallinn University, Estonia) and Joanna Rutkowska (Tallinn University, Estonia).

Abstract

This thesis is the case study of the Kadriorg museum guided group tour for school children. It targets the issue of facing the needs and wishes not only of the museum educators, but also the actual visitors: students and teachers. How to include them all together into design process of the possible ICT solution for the Kadriorg museum? Existing tour was created by the educators and after a while they faced the problem that school children do not have time for creativity and the tour is not engaging for them. As the result of the observation educators revealed the fact that most of the teenagers bring their personal devices for the museum visit, and as the result the educators proposed to use ICT for supporting school children and museum educators needs during the visit. To help to create the concept and define feelings, wishes, needs and goals as museum educators, as the school children the participatory design approach was used.

The research aims to apply participatory design approach for bridging the gap of needs and expectations between three parties of the museum main users: educators, teachers and school children. During the practical part teachers refused to participate in any activities, therefore the main work was made with school children and museum educators only.

The thesis consist of two main parts: theoretical investigation of the museum experience and role of participation and the practical part, which describes the case study held in Kadriorg museum in march 2016.

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1 Introduction

Technology can change visitors experience in different ways: provoke visitor's emotions, enhance visitors learning process or increase connection and reflection to an art object.

Technologies are often support learning aims of the visitors while visitors by definition perceive museum as a learning institution (John H.Falk and Lynn D.Die (2013)). However, the problem of expectation and desire for meaningful experience still exists and was ignored by many museum design solutions (ArtLinks: Fostering Social Awareness and Reflection in Museums (2008)). As mentioned the technology can affect the visitors experience and help to build meaningful experience, but still according to the Hooper-Greenhill, 2001, the concern about engagement is growing. Author states that traditional exhibition and communication style usually fails to engage children, «depriving the museum its potential to become a central institution in society where natural and cultural heritage is explored». «The task of educators is about anticipating and negotiating between the meanings constructed by visitors and the meaning constructed by museums» (Lisa C. Roberts, 1998). The interview with the museum experts from the Kadriorg Art Museum revealed that educators acknowledge the problem of children engagement with the exhibit and want to solve it by bringing the technology into museum. Though the thesis does not address the research problem of the engagement between the children and museum by using the technology. The aiming research problem is to bridge the gap of needs and expectations of school children and museum experts. Participatory design approach was investigated to address this issue.

1.1 Research goal

The aim of the Kadriorg Art Museum case study is to investigate the participatory design process, during specially designed series of experiments, as solution to bridge the needs gap between school children and the museum educational experts. Analysis of the students and educators feelings, wishes, expectations and needs will be based on the data collected from the observations and co-creation sessions.

Hypothesis: Participatory design approach helps bridge the needs and expectations gap between school children, age from twelve to sixteen, and museum educational workers.

1.2 Research question

Research goal will be reached through the set of experiments especially designed to explore the participatory design process, with the leading question on:

- How to bridge the needs and expectations gap between teens and educators by using participatory design approach?

1.3 Research methodology

The research methodology consists of four steps, each of those has particular research methods and outcomes.

Steps of research	Research methods	Research objectives
Preparation of the design sessions and tool kits	Literature review Intro interview with museum experts	Review the previous studies on the same topic. Define the most efficient set of the design sessions
Conducting the experiments	Observation sessions Set of the co-creation sessions	Collect the information about the students and educators needs, feelings and wishes.
Analysing, interpreting and reflection on the results	Affinity diagram Experience mapping	Processign the collected data, reflection on the methods used during the design sessions
Proposing the concept		Propose the design concept based on the data

Table 1. Design of the study and research methods.

2 Museum experience

Museum as an educational institution

According to the American Association of Museums (Code of Ethics for Museums Adopted, 1991): «Museums make their unique contribution to the public by collecting, preserving and interpreting the things of this world. They serve society by advancing an understanding and

appreciation of the natural and cultural common wealth through exhibitions, research, scholarship, publications and educational activities.»

Public does learn from the museum, so it is an educational institution. However, visiting museum is not obligatory, so they are not a compulsory classroom, they are a free-choice learning environment. So when the public decided to visit the museum they create and make their own museum experience, which is not entirely appreciated the museum staff. There are numerous exhibitions designed with the institution taking the control of the visitor experience. While they should be designed for engagement in learning experience: visitor stopping, looking and making of the information presented. For instance, museum usually has a clear understanding of the defined learning outcomes. Nevertheless, just having some supporting materials to facilitate this result does not mean it will happen. «There are always some visitors who will skip the remaining exhibit, even if the visit designed in a linear way.» (Falk, J. H., & Dierking, L. D. 2013).

The case study of the Kadriorg Art Museum also revealed that some of the school children, even during the group guided tour with a direct way inside the museum, choice to go their own path and explore, watch objects that are interested in them and not added to the tour.

As can be seen, the main problem of the museum staff is that they try to establish one-way flows through exhibitions, «it is well documented that most visitors do not view exhibits in this kind of linear fashion.» (Falk, J. H., & Dierking, L. D. 2013).

Media and technology

Nowadays technology and media are widely used for the museum experience for enhancing, engaging and supporting individual and group visits.

Because of its inherently powerful visual and aural characteristics, media can support and complement the presentation and interpretation of objects and phenomena in ways that the objects and phenomena alone not be able to do (Renner, N. O. 2013).

Using the technology for museum visit were widely explored in many types of research, the result they discovered is that technology which supports and mediate the museum visit can activate the visitors' motivation by stimulating their imagination and engagement. (Yiannoutsou, N., Papadimitriou, I., Komis, V., & Avouris, N. 2009).

Most visitors not only want to see art objects and read labels on them but also, be able to manipulate with things presented in the museum. Technology and media are helping with this expectation, they make the museum more accessible generally and support the interpretation of

the entire particular ideas and concepts. For instance, such digital technology as computer games is actively used for children's visits: with family, friends or school group. It gives rich and complex learning experience by using interactive approaches to engage the visitors. However, that experience can be impeded for the structured school group visits. (Small Group Learning with Games in Museums: Effects of Interactivity as Mediated by Cultural Differences). It also should be considered that visitors' engagement with exhibits often ends prematurely due to the need to keep up with or attend to fellow group members. (Tolmie, P., Benford, S., Greenhalgh, C., Rodden, T., & Reeves, S. 2014).

3 Participation in the museum

As the way of reconnection between the cultural institution as the museum and the audience the participation is stepping out. It is time to actively engage people as cultural participants and not as passive consumers. According to Nina Simon (Simon, N.2010), visitors expect to be taken seriously and be able to discuss, share, remix what they consume. Regarding these expectations museums have to arrange participatory projects to discover the needs of the target community. There are three values, which were highlighted in the book *The Participatory museum*:

- **Desire for the input** and involvement of outside participants;
- **Trust in participants' abilities;**
- **Responsiveness to participants actions** and contributions.

Most of the participatory projects are usually based on these three values. The «outside participants» usually represent the community or experts by themselves, the institution uses them for the consultation and to ensure the accuracy and authenticity of the new exhibitions, programmes and other materials. The other reason to engage in participatory, collaborative project is to test and create new programmes and materials with the target users to improve the chance of their success. One more point is to provide educational opportunities for participants to design and create their own content or research.

3.1 Teenagers participation

Teenagers as a community are ready to participate and represent their own needs and beliefs. As an example of the statement two Case studies can be explored. Using the school children as participants already used by the museums in deferents programmes and aspects, that can make them an active and responsible contributors to the design process as well

Case study: St.Louis Science Center

The case study of the community-based programme in St.Louis Science Center named YES shows how teenagers can work in collaboration with the institution to increase the interest within the community. The programme has 250 employed teenagers to participate in «science learning, professional development and service back to the community» (Simon, N.2010). Students work in close collaboration with adult employees in co-creative environment, which was teen-led. Publishing content on several networking museum websites about the programme was managed by teens to show their digital presence. Regarding the co-creation approach there were no restrictions or requirements about content themes and topics, sometimes it leads to the absolute unrelated to the science or technology posts. The interest and understanding of science were increasing but from the marketing perspective teens are not appropriate reporters to represent the museum by social media. This case study reveals the challenge for the institutions, which are trying to experiment with participatory projects of any type. The development of the organisation's future strategic policy on participation can be helpful for taking such challenges in the future.

Case study: Engaging teenagers as collaborators

An example of a successful collaborative museum project is Investigating where we live by National Building Museum. During the project teens and staff members creating a temporary exhibition of photographs and creating writing about local neighbourhood. This program runs since 1996 and has good feedback from both sides, as from students as from the museum staff. The programme described by teens as «leveling educational experiences, community project, and leadership opportunity» (Simon, N.2010).

The case studies presented show that teenagers are active participants in museum programmes, they have the interest in representing their community.

3.2 Competitors review

The existing ICT solutions for the children's museum experience were investigated: Trailblazers application for mobile devices by Australian Museum, MoMa Art lab application for iPad and Destination Modern art web portal by Museum of Modern Art in New York City, #metkids web portal by Metropolitan Museum of Art, Baron Ferdinand's Challenge application for iOS by the

British Museum. Five presented solutions are supporting children during the museum visit or preparing them for the exhibition context before the actual visit.

List of the digital solutions

Trailblazers by Australian Museum

Trailblazers Kids App is the mobile application for kids to explore and search through the exhibition. The user can pick a character, also use radar and clues to find all the items for their trip. It is a game that helps kids to visit the exhibition and complete their own expedition at the same time. The application is available for iOS and Android mobile platforms.

The application design as a game with no strong relation with the real art objects presented at the exhibition, there is no such option as get more information about the item, so it might be hard for kids to build the connection between the real exhibition and the game. On the other hand, the colourful design and game challenges can be fun and intriguing for kids. The application support only solo visit of the child with no collaborative group activities with other children (siblings or friends) or the whole family.

MoMA Art Lab

An iPad application for collaborative group drawing with kids and family. This digital play has nine activities based on the real artists; there is the options to do sound compositions, group drawing, then save and share the artwork. The application is recommended for kids age seven and under.

Comparing to the presented solution, the MoMA Art Lab has two main advantages. First of all, it is collaborative activities, where the whole family or group of children can be involved. The second key positive aspect is that the application can be used before, after and during the museum visit. Although the collaborative and creative aspects are really strong, the educational outcomes are not highlighted.

MoMA Destination Modern Art

The web page solution for kids from 5 to 8 so they can explore the sculpture, paintings and get the knowledge about Modern art before or after the visit. The online tour is cartoon style and guided by the alien through the intergalactic journey.

The web page is focused on the preparation for the museum visit, there no special options to use it on the portable devices. The group activities are not highlight, but it is possible to watch the cartoon and do the collages activity with friends or family.

#metkids

Web portal «made for, with, and by kids». It has the «time machine» for searching the information from time periods, geography and ideas perspective. Also videos and an interactive map of the museum available on the web page. The site is for kids from age seven to twelve. The comprehensive amount of information presented on the #metkids web portal mostly focused on the preparation to the visit and also after the visit. The site is adaptive and can be used on portable devices during the visit if needed.

Baron Ferdinand's Challenge by the British Museum

Mobile application where the user can join the main character Baron Ferdinand in the treasure hunt through the British museum. The game has six challenges, which are involve 183 art objects. All additional information about objects can be discovered. Also, the objects can be reorganised by age, height and such unique parameter as «weirdness». The application is for the children age nine to eleven.

The challenges and information packed into fun and interesting design of a game, which can seem attractive for children. There are no collaboration options at the application, also no ability to share the result with the friends.

Results

All presented digital solution support the museum children visit the museum, but the target age of the children is from seven to twelve years old. The design concept for the Kadriorg Art Museum is focused on the teenage age group (from school seven to ninth grade: twelve to sixteen years old). There are no solutions focused on the group visit of the school children. In addition to that, only one solution has the kids involved in the creation process while there are no solutions there all three parties participated in the design process.

3.3 Involving three parties into design process

To bridge the gap between needs and expectations of museum experts, educational workers and the actual users – school children they all were invited to participate in the design process.

School children

The accessibility and engagement issues of the museum exhibitions were discovered from the literature review and also from the interview with the experts. Also, teens are already active

participants in participatory programmes in other institutions, so they can be quickly involved in the design process.

Teachers

The teachers are an important community, which visits museum regularly and also brings the groups of children. This community refuse to participate in the design sessions but agreed to contribute by bringing their student to the museum visits and co-design session after it.

Museum educators

Experts themselves see the problem of the accessibility and engagement level of the guided group visit for school children and were eager to participate in the design process.

«Participatory Design (PD) refers to the activity of designers and people not trained in design working together in the design and development process.» (Sander, E. B. 2013)

The participatory design does not see people who are using design as just users or consumers, instead of that they are seen as are valuable partners in the design process, the experts in an understanding of their field of work or way of living.

The place of the participatory design in the process can vary from one project to another. In the case study: Kadriorg Art Museum participatory design was in the vague front end of the design process when it was not clear what exactly the ICT solution for the museum visit can be: an application for mobile phone, for iPad, or digital kiosk, or special web service or something else. The goal of this pre-design phase was to define the main problems, needs and expectation of both parties and identify the opportunities to explore. Also, the participatory design was used for the Discovery part of the process.

4 Methods

A Huge amount of methods, techniques and tool sets appeared as a result of the growing interest in Participatory design. Sanders, Brandt and Binder (2010) proposed a framework for organising rapidly growing collection of tools and methods and all currently documented tools of Participatory design can be placed on it.

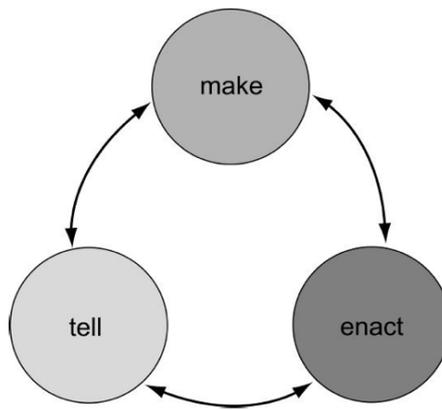


Figure 1. Making, telling, and enacting as complementary, connected activities in codesigning.
(Brandis, Blinder and Sanders, 2012).

«Design research is an inherent creative activity, and should therefore be flexible, allowing appropriateness to be determining factor in selecting best methods for information collection.» (Sanders, E. B., & Stappers, P. J. 2012). According to the framework “Tell, Make, Enact” (Sanders, E. B., 2013) the methods used in the case study can be grouped:

Making tangible things:

- 2-D collages using visual and verbal triggers (image set and words set).
- Prototypes and design artefacts from the future (Museum of the future).
- 2-D mappings using visual and verbal components on patterned backgrounds (Ideal workflow of the future).

Talking, telling and explaining:

- Cards to organise, categorize and prioritise ideas. (Activity cards prioritising)
- 3-D mock-ups using foam, clay, LEGOS or Velcro-modeling (Devise of the future, Museum of the future).
- Exploratory and generative methods were combined for this research to cover the perspectives of museum visitors and workers.

The exploratory methods used for two main reasons:

- to inform the construction of the toolkits for the participatory design session.
- Discover the key issues, thoughts and behaviour from both perspectives (educators and school children).

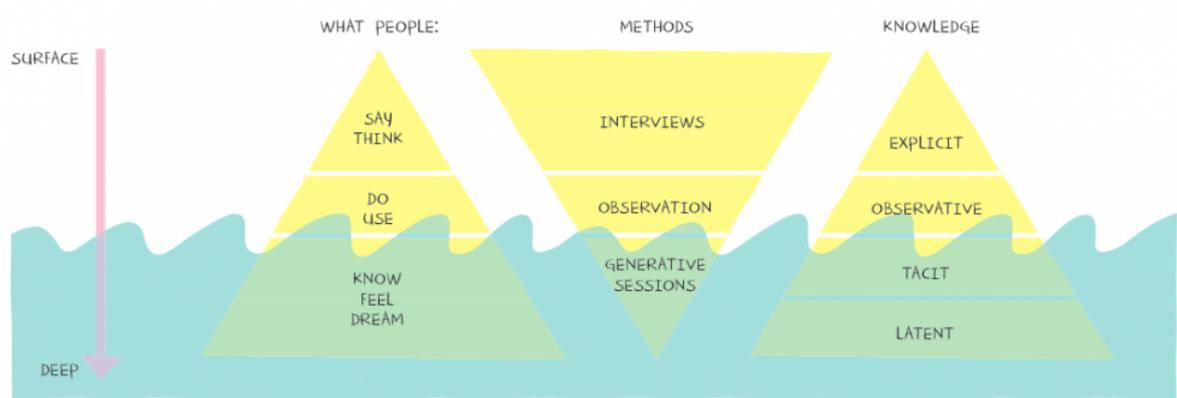


Figure 2. Different level of knowledge reached by different methods. (Sanders, E. B., & Stappers, P. J. 2012).

A combination of approaches "Say, Do, Make" were applied for the research.

- **What people say?**

Comments from educators and students.

- **What people do?**

Observation sessions during the group visit.

- **What people make?**

Four «make sessions» with the school children: Collage, Museum of the Future, Activity Cards, Creating a device. Two sessions with educators: Museum of the Future, Creating a device.

4.1 Observation

Participant observation is immersion in the culture. (Fetterman, D. M. 2009). The ideal situation is when the researcher can spend up to a year, learning the language and seeing patterns of behaviour over time. For this thesis, the simple version of the field work was used, as the timeframe was limited from the beginning. As a result the researcher spent a month (one observation session each week) observing the museum visitors and workers.

The field visit gives the information about people environment and their actual behaviour and emotions. People often idealise their needs and desires. "Statements about personal preferences often don't correspond to actual needs, values, and behaviour." (Kuniavsky, M. 2003). And it is the main reason to use this particular method. One more reason is that it helps to interpret the participants' assumptions, proposals and comments during co-design sessions within the context of the museum environment.

The goals of the field work conducted at the Kadriorg museum during school children group visit was to identify the environment, behavioural changes and emotions of all three parties: students, teachers and educators. In addition to that, the observation was focused on a place for technology during the museum visit. There were several questions to address: What is the frequency of the technology usage among the teenagers during the tour? What are the spots during the educational programme «The history of Kadriorg museum» are appropriate for including ICT solution? What is the general behaviour and mood changes of the school children during the visit? What is the general behaviour of the educator, who guided the tour? What is the role of the teacher during the tour?



Figure 3. School children at the Main Hall.

All the results were analyzed and mapped out at the Practical section of the thesis.

4.2 Interviewing

Formally structured and semi-structured interviews are verbal approximations of a questionnaire with explicit research goals. (Fetterman, D. M. 2009).

Informal interviews seem to be a casual conversation and have a particular but implicit agenda. It helps the researchers to discover what participants think about the topic and how one person's perception compares to others. The comparisons contribute to identify as shared values and as individual contradictions at some points.

For the Kadriorg Art Museum case study the interviewing part was a necessary step to establish and maintain a healthy rapport between the educators and researcher.

The Non-directed interviewing approach was used for the sessions to minimise the effect of the interviewer's perspective. As educators were very initiative about their participation in the design concept creation and as they were trying to search for approval from the researcher, they decided to create a dialogue and get an opinion on their ideas from the interview. For the researcher, it was hard not to maintain the conversation and do not lead or bias the answers of the educators.

4.3 Collages

Collages is the tool forms for the group meeting as for personal reflection. Collages may be related to the time, be about the future or past experience. The session at Kadriorg was based on the previous experience - school children reflected on the tour right after it has ended.

«Collage allows participants to visually express their thoughts, feelings, desires, and other aspects of their life that are difficult to articulate using traditional means.» (Martin, B., & Hanington, B. M. 2012).



Figure 4. Collage workshop with school children.

Making a collage as a task for the school children group brought up fewer insights and aspects of their museum experience than expected by the researcher. As there were teachers and educators in the same room and the task mentioned the Kadriorg particular visit- students did not discuss any negative aspects of the visit. The approach can be used in the future by modifying the task to more abstract, with no relation to the exact museum or experience.

4.4 Love and Break up letter

Love Letter and Break Up Letter is a romantic way to explore the relationship with the design or service through personification. The personal letter helps express real deep feelings, memories from the past and plans for the future.

The method was created in 2009 by Smart Design (a global innovation consulting firm). It based on a familiar format in which to express thoughts and feelings about a product or a service in an informal, accessible way (Bruce Hanington, Bella Martin, 2012).

The technique was used as a home assignment for one of the participants and as an «ice breaker» at the beginning of the co-design session for others. The participants read their letter aloud to each other, which helped them to start the discussion about the existing issues of the guided group visit.



Figure 5. Love or break up toolkit.

4.5 Create activities

Depending on how to view or use co-creation: it can be a mindset, method or tool. (Sanders, E. B., & Stappers, P. J. 2012). At this paragraph, the co-creation is the set of tools and techniques that compared to other methods.

The set of creative activities were held:

- Creating The ideal workflow of the future (educators);
- Creating Museum of the future (school children);
- Creating the device for the future museum (both parties).

The Museum of the future and device of the future – both assignment uses prototyping as a technique. It is a rapid role-playing tool, which helps to construct rough physical representations of the technological concept by using craft materials. (Fuks, H., Moura, H., Cardador, D., Vega, K., Ugulino, W., & Barbato, M. 2012). This technique was used to reveal the detailed ideas of school children and educators about the new interactive solution for the Kardiorg Art Museum.



Figure 6-7. Left: Museum of the future by school children. Right: Educators creating the ideal work flow.

What people make: participants performing a creative act to express their dreams, feelings and ideas.

5 Case Study: Kariorg Art Museum group visit

The practical part of the master thesis consists of the applying the participatory design approach to propose the ICT solution for the Kadriorg Art Museum group visit for school children. The planning, conducting and analysing the participatory design sessions, ideation and reflection on the insight and result to create a concept to support the group visit. To bridge the gap between school children and the educators both parties were used for co-design sessions to define their main activities, needs and feelings.

It consists of the four observation sessions to identify the natural flow of the devices usage during the visits by school children. Also four group co-design session with students were held. In addition to that, series of design sessions with educators have been organised with the goal to involve them in the design process. It is noteworthy that teachers refused to take part in any co-design sessions proposed to them. Meanwhile they were easy to convince to bring their students to the museum for the sessions.

6 Sessions: School children

All co-design sessions were held right after the group guided tour “The history of the Kadriorg museum”, the tour was guided by the educator, and supervised by the school teachers. The school children groups were mixed between seven and nine grade, the number of the participant were varied from fourteen to eighteen students.

Schoolchildren session name	Native language of participants	School
1. “Collages”	Russian	Narva school (visiting group)
2. “Museum of the future”	Estonian	Uhtna kool (visiting group)
3. “Activity cards”	Russian	Tallinn school (local group)
4. “Museum device”	Estonian	Tallinna Saksa Gümnaasium (local

			group)
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Co-design sessions were designed from vague (sessions one and two) to more structured (session three and four) ones. The results of each previous session were considered to design the next one.

6.1 List of the sessions

Session 1: Collages

Task: Create the collage about your visit experience at Kadriorg museum.

Tools: A5 paper, colour markers, various stickers

Set of images (positive and emotional, neutral, negative, colourful and black and white)

Set of the words (negative and positive)

Goal: Define the feelings, emotions and reflection on the visit.

Session 2: Museum of the future

Task: Create the Museum of the future: what it should look like? What activities visitors can do there?

Tools: A5 paper, colour markers, various stickers, LEGO, modelling clay

Goal: Define the wishes and possible activities, as well as see the reflection on the visit.

Session 3: Activity cards

Task: Fill in the activity card “in the museum of the future I can...” and prioritize them after.

Tools: set of the cards, colour pencils, stickers

Goal: Based on the previous sessions - prioritize the museum activities and needs of the school children.

Session 4: Paper prototype co-creation

Task: Create a device which can be used in the museum of the future.

Tools: A5 paper, colour markers, various stickers, LEGO, modelling clay, set of the buttons

Goal: Get the school children perspective on technology and design in the museum by creating a paper prototype.

6.2 Challenges

6.2.1 Timeframe

As museum guided tours for school children scheduled in close cooperation with the school and teachers the time for the co-design session was depending on the each particular teacher or school. The educator way of leading the programme (some of the educators prefer a slow path, some of them agreed to adjust the to the shorter timeframe, so there would be more time for the session).

Therefore, all the sessions were designed with strong time restrictions.

6.2.2 Children in a group as participants

Conducting the session with the school group requires certain knowledge about the group of teenagers in general.

«Teens are very highly motivated to fit with their peer group, altering their behaviour, clothing, preferences, media consumption, technology, and social media use in order to do this.» (Fitton, D., Read, J. C., & Horton, M. (2013).

As all participants was already in a group and knew each other for a long time, they were trying to influence each other and adjust into the environment of the school group, instead of focusing on their own reflection.

And as it was the first time when I was facilitating the session with youngsters, finding the right attitude and expressions took some time. For instance, the task of prioritization of the activities card was redesigned completely after the first try. The direct question to mark what is more or less important was not taken seriously by the group they start choosing the funnier card to show off them self in the group. The solution was to give every group of for an empty card and ask to write down the activity, when all 4 groups wrote their several cards, all the cards were brought together on the one table, where we could together find the similar ones.

6.3 Reflection on the sessions

Observation (4 observational sessions)

Goal	Define the regular behavior during the visit of the student group: what activities they take part in, what reaction do they have on the proposed activities.
What worked	General observation session helped to reveal the general mood of the group visit, as at the beginning students are active, at the end of the tour they have the tendency to stay in the abstract. While the direct question about the visit they answer that it was interesting and exciting all over.
What did not work	Observation showed that educational programme has the scenario, but each educator presented it slightly different, which affected the overall group behaviour. For instance, some educators dressing up for the tour, some of the using special cards with questions.
Result	The observation revealed that most of the students have their personal mobile devices with them during the visit and they trying to use it for making pictures. Even considering the fact that mobile phones usage is not recommended during the visit some of the students got separated from the guided tour to make a photo (as there is no special time for personal reflection on the tour).
Goal	Define is there a place for using of the devices.
What worked	From the first session, it was clear that students use personal devices and some of them taking pictures of the museum. And by the end of the 4th session it became clear what exact time and stop of the program have time and task for using the device. (The assignment about baroque architecture movement at the Main hall).
What did not work	By the observational session, the only one stop was defined for using the device while educators interview revealed more stops where educator would like to use technology.
Result	By the end of the 4 observation session the particular room and the time at the program was found there the device used by most of the students (Main Hall). More stops are undefined, and require more sessions to reveal them, as already mentioned the program changing from educator to educator, so do stops.

Collages Session 1	
Goal	Reveal dreams and feelings about the group guided visit with the educational program “The History of the Kadriorg Art Museum”.
What worked	Keywords used by the students showed that the museum is magical, soulness, has secrets, mysterious, cosmic.
What did not work	The task was based on the Kadriorg experience of the visit and it lead to the certain barriers: <ul style="list-style-type: none"> • Students tend to think that they should thank the teachers and museum for the visit and show their knowledge. No negative words used. • Also, teachers tried to help them “made the task quicker”. • Time limits.
Result	The collages helped to find the first impression on the particular visit, also, it was used to create the next session without connection to the particular visit or particular museum.
Museum of the future Session 2	
Goal	Define the dreams and activities possible inside the museum from the student perspective.
What worked	The design session was more engaging for the students than the “Collages”. There were no limits in images or words to be used and some crafts materials were proposed: LEGO, modelling clay, post in notes, markers, glitter, stickers. Different materials helped to set the creative mood, also easier generate and show the ideas.
What did not work	Due time limits, there was no time for general discussion about all the proposed activities and project, so the projects were presented one by one only.
Result	The session helped to define as an activities as general impression on the visit as well. One group use the post-in-notes on their museum “No time to be bored” and said they were slightly bored at the Kadriorg Art Museum.

Open card sorting	
Session 3	
Goal	Propose and prioritize museum activities.
What worked	Based on the session two, some card with activities were proposed and other cards were empty to feel in. Dividing students into the group helped to find matching activities between groups such as “Listen to the music”.
What did not work	The prioritising task did not work with the student group, and every student tried to push own idea, or group with a friend to push the idea together. Some student created activities just to show their life position - fitness lifestyle or love to animals (ducks).
Result	The session was as engaging and generative as the Session three but it helped to reveal such activity as play and listen to music.
Paper prototype	
Session 4	
Goal	Create the design solution with the students.
What worked	Various materials were proposed from the beginning in addition to that five buttons (activities from the previous sessions were given) which helped to create the mood of building the technology solution.
What did not work	-
Result	The session helped to define how the student see the future device which can be used inside the museum. It revealed the tendency that student prefer more fun functionality as taking a picture and listen/watch music and prefer not to use “take a test” in their project.

6.4 Results

The sessions were designed from the felling by creating the collage to the co-design of the real museum device. Each next session was based on the results, advantages and disadvantages of the previous one. The process went from the foundation - understanding the needs to the generation, creating the design together as a group. The all three key angles of the framework «Say, Make, Do» by Elizabeth Sanders were involved into the participatory design process.

In need of fun

Observation sessions helped to define the general behaviour of the school children when visiting the Kadriorg museum together as a group. At the beginning of the tour children tried to participate and ask questions, then after 25-30 minutes they start getting bored and distracted, at one of the observational session some students even tried to escape into another room to check the museum by themselves. Noteworthy, that at the first design group session «Collages» all participants denied that they were bored during the visit. The reasons for that is the teachers' and educators' presence in the room during the session, also the strong connection with the particular visit. The next co-creation sessions helped confirm the assumption about students being bored. At the session «Museum of the future,» children created designs where «no time to be bored», also «can do everything you want» and «really for children». In addition to that card session, and «Creating device for the museum» showed that teenagers want to have activities such as taking pictures and listen to the music, have more fun and be intrigued by the museum.

Personal devices

The field work helped to reveal the spots where the technology can be used «natural», as the student already using their personal devices during the visit. The journey of the visit started at the ground floor of the building there everyone announced that using of the mobile phone is only allowed in the mute mode. During the tour, there is no time to use the smartphone, also teachers thing to make students more attentive to the visit and asking not to use the phones often. That does not mean that students were trying to reach their phones all the time, but there are particular spots where they tried to do it. The main Hall of the Kadriorg Castle has outstanding ceiling and interior which were photographed by children, also banquet hall interior was tried to be photographed, but at this stop, they had a risk to be asked to come back from their own journey and pay more attention to the group visit.

The third stop there the teenagers tend to use their personal devices was the room after the President cabinet spot, due the fact it is the end of the visit some of the participants were tired and tried to entertain themselves by using mobile phones.

Museum ICT by children

The card session showed that school children place the regular life activities like walking, enjoy the museum, sleep, eat in the same row as digital activities as taking pictures and listen/play the music. Expectations from the Museum device were defined by paper prototype session: student created fun and interactive devices. Although the paper prototype set had the «take a test» and «learn more» buttons in it, children decided to exclude it from their design concept. It shows that school children used to interactive technology, and clearly see the possible activities with technology in the museum. Only they see it as entertainment and not the part of the educational process.

7 Sessions: Educators

Design sessions with the educators were held at the Kadriorg museum, all participant guide the educational programme “The history of the Kadriorg museum” for the school children and have a strong opinion on it. Two of educators usually hold Estonian groups and one educator mostly focused on the Russian-speaking children. Also, one of the educators have been working as the teacher in the past and the teaching background and experience helped all group to see additional angles of the designing the programme.

The central question before starting the project, in general, was “What are the needs of the educators? What they are aiming to reach by bringing ICT into the museum?”

From the first interview with Kadriorg educators, the overall core goal was found:

Educators firmly believe that having an ICT inside the museum will help them to reach the schoolchildren easier.

This statement can be divided into the two main goals:

- Educators want to engage schoolchildren with the museum visit (teach them “play with museum”, show them that museum can be interesting);

- Educators want to make students come back to the museum later (the belief that having a technological solution may attract youngsters).

From the work experience, educators noticed that school children use their personal devices regularly, that lead them to the idea that it is possible to create the digital solution, which would be attractive to teenagers. And this way they would support the school children behaviour. Also, they have an understanding that the educational programme “The history of the Kadriorg museum” have space for improvement due it has the lack of interactive activities.

Pre-session: Love or Break-up letter

Task: Write a love or break-up letter to the educational programme “The History of Kadriorg museum”.

Tools: pen, envelope, stickers;

Goal: Define current feelings, emotions and doubts about the programme.

Session 1: The ideal flow

Task: Create the ideal future flow for the educational programme;

Mark the most important part with the start sticker.

Tools: A5 paper, colour markers, various stickers, post-in notes;

Goal: Define needs, expectation and wishes about the programme. Get insights and ideas for the future concept.

Session 2: Paper/LEGO prototype the museum device

Task: Create the ideal future flow for the educational programme;

Mark the most important part with the start sticker;

Tools: A5 paper, colour markers, various stickers, post-it notes

Goal: Define needs, expectation and wishes about the programme. Get insights and ideas for the future concept.

7.1 Reflection on the sessions

Session	Goal	What worked	What did not work	Result

Interviewing	Initial understanding of the educators needs and goal.	The key activities and wishes of educators: what programmes do they have, what materials use.	The interview part showed that educators really want to have a technology involved, and they want to create an iPad application for the visit. It was, therefore, hard to conduct the interview about their work and goals, instead of talking about mobile or iPad application.	The key aspects and problems of the educators work were revealed. The main issue they want to address is that youngster does not know how to visit museums and be in museum alone.
Observation (4 sessions)	Define the regular behaviour during the visit, the way the information presented by the educators, and how they guide students through the programme.	General observation session helped to reveal the general mood of the group visit, and showed that the personality of the educator has a huge effect on the way the educational programme is guided. For instance some educators	Observation session of the educator's work can be improved by reading the script of the tour first and discussion session before that.	The observation revealed that the tour is predetermined with no space for the group discussion or reflection.

		dressing up for the tour, some of the using special cards with questions.		
Love or break up letter	Define feelings and wishes about the educational programme.	Educators enjoyed the task and wrote the love letter, which helped to find out their feelings and also how they see near future together.	As the educator had the choice the love or break up and all of them choice the love letter, there were not many negative aspects mentions in the notes.	The main feelings and wishes of the programme were revealed: the programme is too broad and not easy to navigate through.
Ideal Museum of the future	Define the perfect visitor journey from the educators perspective.	The ideal future workflow was designed by educators, they were engaged with the task the whole time, discussing between each other and stayed longer to make the flow complete.	-	The expected outcomes from the programme were revealed: learning outcome about history and architecture, also having a “creative assignment” for the school group. Also, the group visit and personal visit become separated by the end of the session.
Paper Prototype	Create the design solution	The museum plan with	Comparing to schoolchildren	The task worked successfully, the

	<p>from the educators perspective.</p> <p>How can the device or design be used by educators and for what purpose?</p> <p>What kind of learning outcomes educators expects to be taken by students?</p> <p>Can be activities and functionalities proposed by student used by educators during the visit?</p>	<p>interactive activities were designed by the educators, while designing the museum programme the key expectations were revealed: Give the students basic knowledge about architecture and the history of Kadriorg connected with the Peter the first family.</p> <p>The activities proposed by educators included quizzes, games, quests, also information searching (Google).</p>	<p>session it took some minutes for educators to start to actually build something from the craft, they said there too many aspects to consider so it's hard to start. Also comparing to students educators put most of their knowledge to the prototype, they used "learn more" button and take the quiz, also they came up with an educational game.</p>	<p>participants were engaged with the assignment and spend more time on it than it was proposed.</p>
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7.2 Results

Comparing to the school children session list the museum educators had less amount of co-creation sessions, instead of collage an activity card sessions they had an interview and home task to prepare. Since museum educators took the design process and sessions with a high level of responsibility, they have been given a home task to complete - write a Love or break up letter.

The first interview provides the essential information about the educators issues and why they think the group visit can be improved. The «Love or break up» letter helped to set the mood for the first co-creation task and also showed what educators feel about the current visit. There was no letter about break-up, but all love letters were intense and full of emotions. By using the «Ideal flow of the future» session educators could create the brand new, more enjoyable visit, which had a technological solution involved.

ICT as a support for educators

From the interview and the letter assignment, it was clear that the primary goal of the educators is to attract the school children by using ICT during the visit and make the visit more interactive. The ideal workflow co-design session helped to discover more needs of the educators. The need of showing the information and give creative assignments related to the Kadriorg museum history that means using the ICT for educational purpose.

Set the learning outcomes about the visit:

- Barocco architecture movement (show the key aspects and difference of the style);
- Historical personality of the Peter the Great and his wife, Ekaterina.

Show the additional materials:

One more need was discovered during the session is showing the additional materials as pictures of the past, images of the art objects which are not part of the Kadriorg museum exhibition.

Examples mentioned by the educators: show the connection between Kadriorg and Peterhof, show more picture of Ekaterina (as there is only one portrait at the Kadriorg Palace).

Educators showed their willingness to participate in all proposed activities and even mentioned that they could use some of the co-creation workshops as the part of their regular job routine.

Educators want to develop an ICT solution to cover their needs of making the visit more creative and engaging, to give students information about the history and architecture of the Kadriorg museum, make the whole educational programme more intriguing and entertaining.

They expect that having a technology included in the visit will make the whole programme more exciting for schoolchildren. The solution would be beneficial for the educators as they could use new activities, show materials and present the new kind of information, such as before and after photos of the historical places.

8 Analyzing process

As a method of analysing the qualitative data, the Affinity diagram was used. It helped to define the main groups of issues to address, as well as insights and ideas.

«The affinity diagram organizes the individual interpretation session, or affinity, notes into a wall-sized, hierarchical diagram grouping the data into key issues under labels that reveal the customer’s needs. The affinity shows in one place the common issues, themes, and scope of the customer problems and needs.» (Holtzblatt, Burns, Wendell & Wood, 2005)

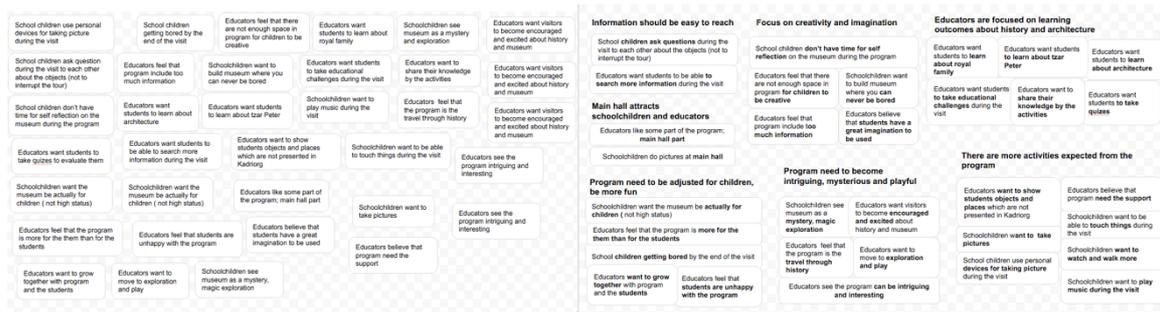


Figure 8. Grouping the data.

Steps

1. As a first step all the feelings, wishes and proposed activities were written down. The data was taken as from school children as from the educators.
2. All the insight were grouped by the common theme.
3. The groups were named.

8.1 Affinity diagram results

Group	Finding
Information should be easy to reach	School children ask questions during the visit to each other about the objects (not to interrupt the tour). Educators want students to be able to search more information during the visit.
Main hall attracts schoolchildren and educators	Educators like some part of the programme; Main hall part. Schoolchildren do pictures at Main hall.

Program need to be adjusted for children, be more fun	<p>Schoolchildren want the museum to be actually for children (not high status).</p> <p>Educators feel that the programme is more for them than for the students.</p> <p>School children getting bored by the end of the visit.</p> <p>Educators want to grow together with programme and the students.</p> <p>Educators feel that students are unhappy with the programme.</p>
Focus on creativity and imagination	<p>School children don't have time for self-reflection on the museum during the programme.</p> <p>Educators feel that there are not enough space in programme for children to be creative.</p> <p>Schoolchildren want to build museum where you can never be bored.</p> <p>Educators feel that programme includes too much information.</p> <p>Educators believe that students have a great imagination to be used.</p>
Educators are focused on learning outcomes about history and architecture	<p>Educators want students to learn about royal family.</p> <p>Educators want students to learn about Peter the Great.</p> <p>Educators want students to learn about architecture.</p> <p>Educators want students to take educational challenges during the visit.</p> <p>Educators want to share their knowledge by the activities.</p> <p>Educators want students to take quizzes.</p>
Program need to become intriguing, mysterious and playful	<p>Schoolchildren see museum as a mystery, magic exploration</p> <p>Educators want visitors to become encouraged and excited about history and museum</p> <p>Educators feel that the programme is the travel through</p>

	<p>history</p> <p>Educators want to move to exploration and play</p> <p>Educators see the programme can be intriguing and interesting</p>
<p>There are more activities expected from the program</p>	<p>Educators want to show students objects and places which are not presented in Kadriorg</p> <p>Educators believe that programme needs the support</p> <p>Schoolchildren want to take pictures</p> <p>Schoolchildren want to be able to touch things during the visit</p> <p>School children use personal devices for taking picture during the visit</p> <p>Schoolchildren want to watch and walk more</p> <p>Schoolchildren want to play music during the visit</p>

8.2 Results

Educators want to develop an ICT solution to cover their needs of making the visit more creative and engaging, to give students information about the history and architecture of the Kadriorg museum, make the whole educational programme more intriguing and interesting.

They expect that having a technology included in the visit will make the whole programme more exciting for schoolchildren. The solution would be beneficial for the educators as they could use new activities, show materials and present the new kind of information, such as before and after photos of the historical places.

9 Mapping the experience

«A customer journey map provides a vivid but structured visualisation of a service user's experience.» (Stickdorn, M., & Schneider, J. 2011) In our case, it is museum being a «service», and visitor being a user. The journey constructed based on the interaction points of the visitor. The crucial touch points of the visits were identified by observation sessions, interviews and co-creation sessions. As the touch points were identified, they were connected; also, the general mood of the visitor have marked in between of the touch points.

The journey map is made from three perspectives: educators journey map, school children journey, the actual way through the museum. It makes possible to compare all three experiences in the same visual language, highlight the pain points and the moments of joy.

Museum visit

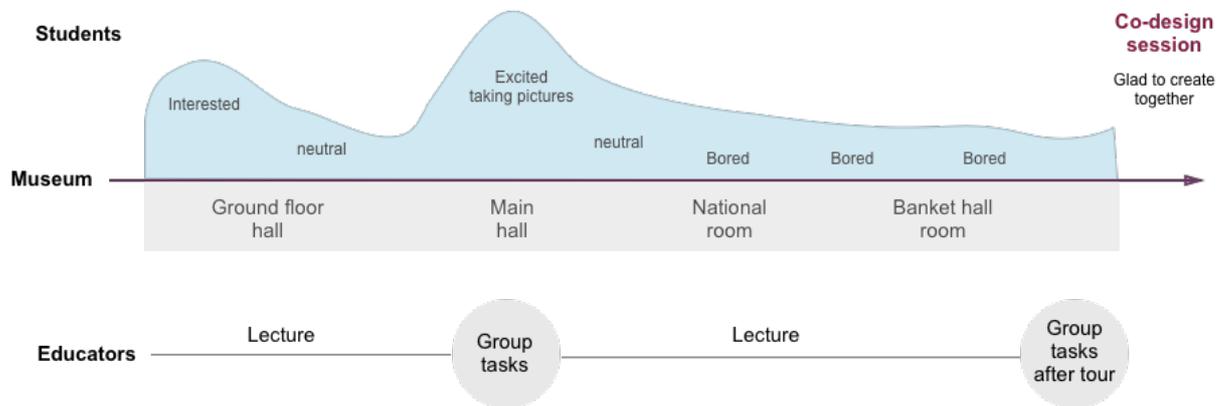


Figure 8. Museum visit journey

As can be seen from the figure, the moment of the excitement of the students group is the same time as the they enter the main hall and get the group task from the educator. For the educators, this moment also highlighted, as they can communicate with the group, provoke them to reflect and think about the museum. The general tendency of the group visit from school children perspective is getting interested in the beginning, start to listen to information after that, and get excited at the Main Hall about the interior and the group activity, by the end of the visit students get tired and bored.

9.1 Ideal journey map

Museum visit: improved

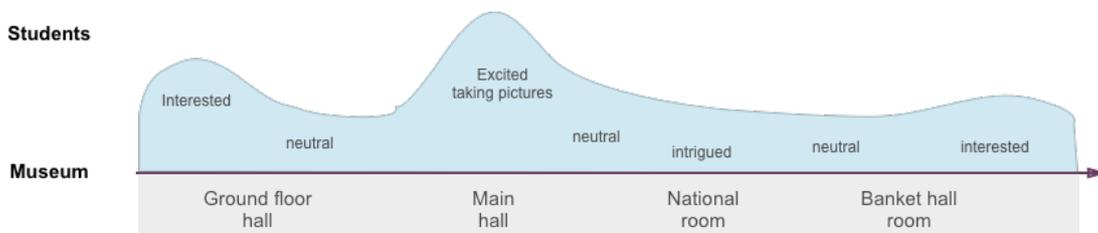


Figure 9. Improved Museum visit journey

There are clear points of the downfall at the figure Museum visit map for the school children which can be improved. The ideal flow of the visit for school children would be to reduce the

«bored» parts and as the minimum remove them with neutral states and as a maximum goal add «intrigued» and «interested» parts as well.

10 Mapping the ideas

There are clear points of the down break at the figure Museum visit map for the school children which can be improved. The ideal flow of the visit for school children would be to reduce the «bored» parts and as the minimum remove them with neutral states and as a maximum goal add «intrigued» and «interested» parts as well.

Museum visit



Figure 10. Museum visit journey with all ideas

List of the ideas

1. An application with 8 stops with information about museum (Educators)

An application which helps visitors by giving them information: 8 stops, some stops about architecture, so of them about history.

- Choosing between several Ekaterina's (photos of historical personalities presented on the screen, the visitor should choice the Peter the first wife)
- Show Ekaterina's big portrait 9 no good portrait at the museum)

- Photos of the past
- Photos of the Peter favourite palace in Peterhof Monplaisir Palace (connection with the black and white floor at the Kadriorg Art Museum)
- Past/present pictures of the key moments
- The symbols and details of baroque style (important) - make a picture from the one side of the hall and after that, the other hand, to see the similarity.
- Creative assignment at the end with the Questions, the results can be sent to the teacher.

The visit can be guided (only assignment at the end) and self-guided - only with the application.

Schoolchildren

2. Kids museum concept (Schoolchildren)



Figure 11. Kids museum.

- Free wi-fi room
- Touchscreens
- Video about how the exhibit was created
- You can take the picture with the sculpture
- Parents will bring kids and play **together** (not separated!!)
- And touch all the things
- Can take pictures everywhere

3. Museum of 174 faces (Schoolchildren)

The visitor can see the road of different colour which helps him or her to navigate to the museum, show the way to the museum. Also, the museum uses only electronic tickets, one ticket works for all institutions.

Also, visitors can charge their phones inside the museum.

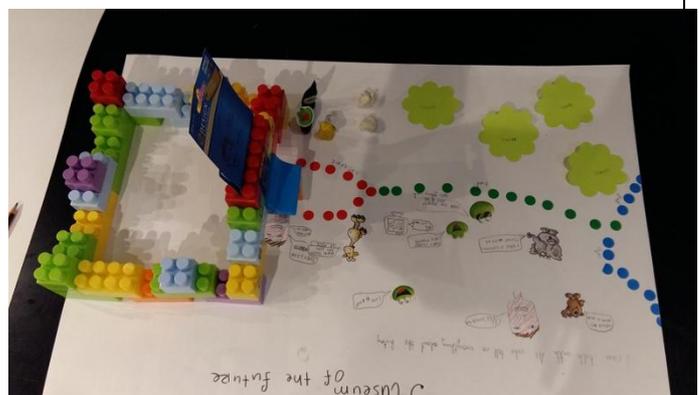
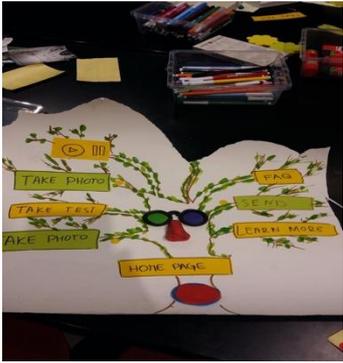


	Figure 12. Museum of 174 faces.
4. 5 star Museum	
<p>Visitors can sleep and eat They can do everything there and check the time</p>	 <p>Figure 13. 5 star Museum.</p>
5. Estonian Museum	
<p>Nature around (museum in the forest) You can taste food Hear sounds Hear the radio Do the Skype calls Sleep And have a sauna!</p>	 <p>Figure 14. Estonian Museum.</p>
6. The tree	
 <p>Figure 15. The tree.</p>	<p>A visitor can use the glasses and watch inside the tree and inside it, the visitor can take a picture, take a test, play music, send and learn more options. Also, students added FAQ and Homepage for the tree.</p>
7. Toy robot	

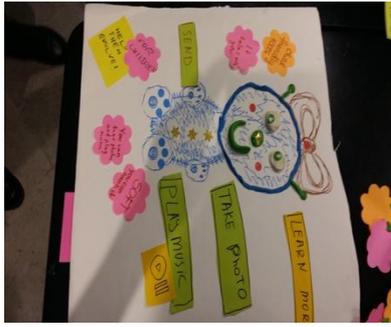


Figure 16. The toy robot.

The fluffy and soft robot helps children to navigate inside the museum, talk to them, plays music, take pictures, tells children more about the museum.

8. Playground



Figure 17. The Playground.

The playground outside the museum for everyone, because the group decided that there is no point to do the device or special solution inside. It is much better to play outside.

9. Museum filter



Figure 18. The Museum filter.

The special museum filter, take a photo and apply filter right after. No more functions needed.

10. Tour from educators



1. Read the rules
2. Take five questions test: if all answers are right then the visitor is the King and will go the shorter track if the visitor has the wrong answer when the role is the servant and the track will be longer.

<p>Figure 19. The museum tour.</p>	<p>3. King: The theme of the baroque in the main hall with the photo challenge: make a group photo on the left and after that the same photo from the right side of the hall.</p> <p>4. Servant: Meet the royal family, can google the information after they moved to the room they can see before and after pictures.</p> <p>5. Banquet Hall: Game with the rooms: create and name the palace. (Magnets)</p> <p>National room: The symbols of Estonia - four presidents connecting stories with «Kalevipoeg».</p>
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11 The experience concept

By analysing the presented ideas and the possible journey map, the next concept can be created. The solution should be unobtrusive, but still provide the element of fun for school children and cover some educational needs of the museum workers.

Museum visit concept

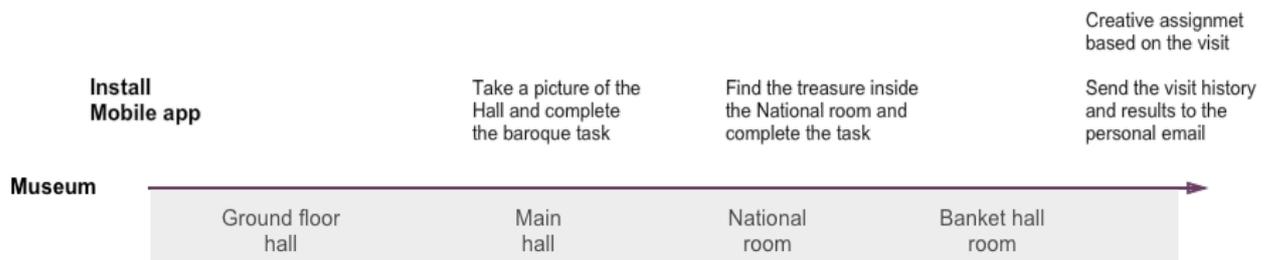


Figure 20. Proposing the concept.

By analysing the presented ideas and the possible journey map, the next concept can be created. The solution should be unobtrusive, but still provide the element of fun for school children and cover some educational needs of the museum workers.

The concept based on the main educators and school children needs. On the one side, school children already using personal devices inside the museum and ready to interact with technology and have fun, on the other side educators are aiming to teach students the history of the Kadriorg museum.

The use-case scenario for the application is:

1. Visitor enter the museum and download the application;
2. Visitor install the application on his personal device;
3. An application welcomes the user and shows information about Kadriorg museum.
4. The visitor gets a notification when enters the Main Hall: take the group picture with friends and mirror it. This task is related to the baroque style concept.
5. The visitor can see the basic information about architecture style after the task completed.
6. The application suggests the user be aware of the treasure hidden at Kadriorg.
7. When a visitor enters the National room the notification about the treasure is popping up.
8. The visitor can collect the “treasure” - the right art object to take a picture.
9. After the visit application asks to email the all visitor experience to personal email.
10. The application can also be used as a part of the creative task after the visit.
11. The application allows visitor share the pictures between each other.

Fitting in the design principles for museum technology, the principles were described at *"Playing with" museum exhibits: designing educational games mediated by mobile technology, 2009.*

Design in respect to the organisation (museum): the solution represents the institution goals to facilitate school children learning outcomes about the History of Kariorg Art Museum.

Design for unobtrusive presence: the application do not encourage the user to spend much time watching the screen, it notifies the user depending on his/her location inside the museum and with the strong connection with the guided tour.

Design for engaging the users i.e.: the application allows a user to take pictures of the art objects, also save the information about rooms.

Design for enriching the spectrum of interaction between the museum end user: the application allows a user to take pictures of the art objects, send information and photos on the personal email.

Design for collaboration: take pictures together as a group, share your experience with a friend who are also on the tour.

12 Conclusion

In the present research, the use of the participatory approach to design the concept design for the Kadriorg Art Museum and bridge the needs and expectation gap between Educators and School children was investigated. The set of participatory design methods and tools were adopted, starting with the field work and observation to the co-creation sessions and structured analysis. The resultant insights, needs, feelings and expectation of both parties helped to map the current and improved version of the school children group visit, and consider the needs of museum educational experts. Also of opportunity for new solutions were defined.

Based on this challenge, the research question of this thesis is how to bridge needs and expectation gap between school children and museum staff. As the way to address this challenge, the set of participatory inquiries was proposed. The thesis is not focused on the design for engagement for children, other papers and resources already covered this topic widely. Rather, the thesis is investigation and reflection on the design process and application of participatory design approach for linking two communities: educational experts and teenagers.

Starting at the museum space

The place of the design sessions was The Kadriorg Art Museum. The place itself had a significant impact on the participant. School children from the beginning of the interviewing part were addressing the Kadriorg environment: garden, building, memories from the part if they already been at the Kadriorg park. Educational experts were at their workplace and the accustomed environment. For the Case Study purpose, as the study was addressing the particular group visit type, the location of the design sessions become an advantage for setting the right mood and bringing the memories.

More to that, the design sessions were held right after the group visit and it affects the school children strongly. On the one hand, it helped easily to reveal information about the Kadriorg Art Museum. On the other hand, the at the Collage session the group visit fresh memories were preventing students from the deep abstract reflection on their museum experience.

Design sessions: engaging way to define the needs

Co-creation sessions for the museum staff become an engaging and structured way to figure their needs and expectation. Working as a group of educational experts, participants remarked that sessions helped them reflect on the situation about this particular educational programme,

also, it helped them to identify the structure, pain points and advantages of the programme. Educators enjoyed the co-creation sessions, and mentioned that would love to do it more often for all their programmes, as it helped them to see the bigger picture and play with the ideas in a semi-structured way.

School children also marked that the co-creation session was an excitement way to discuss and show their version of the museum visit. For the facilitator it was noteworthy, that only «say» methods would not force teenagers to tell their true feelings and wishes, rather than «make» tool create a playful, engaging atmosphere which helped teens express their needs, dreams and desires through co-creation process.

Museum educators: expert opinion shift

The sessions process from the start interview to co-design sessions helped showed the shift of educators opinion on the topic of the group visit requirement, their own needs, such as showing pictures and giving creation interactive assignments. More to that, the educators perspective on the ICT solution for the visit changed from the straight forward need of the some technology, to the clear understanding where and how it can be used by the museum staff and by school children, and what goals it will cover.

The aim of the case study was to bring two communities into the participatory design process to bridge the needs gap by using the participatory design approach. The results of the experiments showed that participatory design process can be used as a way to bridge the gap between the school children and museum staff needs and expectations.

13 Acknowledgements

I would like to thank my supervisors David Lamas and Joanna Joanna Rutkowska for their patience, comments and encouragements through the whole process.

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Koolilaste ja pedagoogide kaasamine ühiskavandamisse Kadrioru Muuseumi rühmavisiitide näitel

Käesolev magistr töö esitleb juhtumiuuringut, mis viidi läbi Kadrioru Kunstimuuseumi lastele suunatud ekskursionide näitel. Uuring käsitleb muuseumitöötajate ning külastajate soovide ja vajaduste arvestamist, kaasates nii õpilasi kui õpetajaid disainiprotsessi, mille eesmärgiks on luua IKT-lahenduse prototüüp Kadrioru Kunstimuuseumile. Senine ringkäik on loodud muuseumi- ning haridustöötajate poolt. Kõnealune lahendus pole olnud oma sihtrühma jaoks aga piisavalt paeluv, mille tulemusena on valdav osa õpilastest hakanud ekskursionidele kaasa võtma isiklikke nutiseadmeid. Sellest lähtuvalt on muuseumi- ning haridustöötajate soov luua erinevaid IKT-lahendusi, mille abil muuta muuseumikülastused õpilastele senisest veetlevamaks. Aitamaks defineerida sihtrühma kui muuseumipoolseid vajadusi ning eelistusi, viidi läbi hulk kaasavaid disainisessioone. Uuringu eesmärk oli läbi kaasava disainiprotsessi ühendada kolme eraldiseisva osapoolse soovid ning vajadused: haridustöötajate, muuseumitöötajate ning õpilaste. Töö praktiline osa keskendub õpilaste ja muuseumitöötajate peal läbi viidud disainisessioonidele. Magistr töö koosneb kahest osast: teoreetiline uuring muuseumi senistest kogemustest kaasava disaini valdkonnas ning praktiline uuring, mis kirjeldab Kadrioru Kunstimuuseumis 2016. aasta märtsis läbiviidud disainisessioone.

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