Enhancing content discovery in Video on Demand services for children

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Abstract

The media landscape is changing and Internet-based streaming services for children are becoming increasingly popular. The concept of online streaming extends freedom and control over content selection but discovering new content is often experienced as troublesome. The objective of this thesis is to identify parameters to make it easier for users of streaming services for children to discover and watch unfamiliar programs. Guidelines are formed based on literature studies, interviews, observations, a survey, a benchmark, data analysis with Adobe Analytics, a workshop and finally user tests with prototypes. These guidelines conclude that content should be categorized, dynamicized, highlighted and socially engaging. Categorization based on age is primarily important but interests and genres can also be used to make children more interested in a title. Content should be dynamic, customizable and personal to each user to give more accurate recommendations based on age and interests. Making one alternative more visually prominent will make this alternative more interesting especially for younger children and social features with information about other users opinions can motivate a decision to discover new content among older children.
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1 Introduction

As our society experiences an expansive digitization we are also witnessing a transformation of the media landscape and the way television is defined and consumed [1]. Internet-based streaming services with content available at any time, referred to as Video on Demand (VoD), makes the tv-tableau decreasingly important for the television audience. The freedom to choose not only when, but also where and how, to watch a specific television program makes a significant number of consumers reject broadcast television for the benefit of VoD services accessible via apps or web browsers [2].

The overall usage of technology is moving down the ages and VoD is becoming increasingly popular even among children [3]. As a result, VoD services with not only content but also usability adoption for children is becoming more common among different stakeholders on the market, for example, Netflix¹, Viaplay² and Youtube³.

The Swedish public service broadcaster Sveriges television (SVT), launched its first VoD service in 2006 with content suited for both children and adults, SVT Play⁴. During 2014 a separate VoD service with both content and graphic interface designed to suit and attract children was launched; Barnplay⁵. This thesis is written in collaboration with Barnplay at SVT’s Interactive department with the objective to identify parameters to make it easier for users of a VoD service for children to discover new programs.

1.1 Problem Statement

The consumption of content in a VoD service differs from consumption with broadcast television. A broadcast viewer is exposed to content with no further action than starting the television and the only control the viewer can exercise is the ability to switch channels. In a VoD service, more control and responsibility is given to the user and consuming content demands an active decision about what to watch from a wide range of programs. A problem which can occur is that VoD-users have troubles with the decision making process when looking for something to watch and therefore revert to familiar content and eventually leave the service. In a VoD-services for children, this problem could potentially be more significant since children experience extensive changes in behavior and preferences as they grow older.

¹Netflix for Kids; https://www.netflix.com/
²Viaplay for Kids; https://viaplay.se/
³Youtube Kids; https://kids.youtube.com/
⁴SVT Play; http://www.svtplay.se/
⁵Barnplay; http://www.barnplay.se/
1.2 Aim and Objective

The aim of the study is to evaluate how to enhance the VoD experience for children and contribute to making users stay and come back more often. The objective of this thesis is to identify parameters to make it easier for users of a VoD service for children to discover and watch a program that is new to them. This will result in content discovery guidelines concerning VoD for children. The objective will be fulfilled by accomplishing these goals:

- Investigate how children become aware of and discover different programs.
- Investigate what the decisive elements are when a child chooses which program to watch.
- Investigate how it works when a child decides to watch a program he/she never seen before.
- Investigate how the behavior differs in different ages.
- Create and evaluate one or more solutions to encourage content discovery in a VoD service for children.

1.3 Delimitations

The scope of this study is set to cover touch-based interfaces. Moreover, children will refer to the age group 3 to 11 years old. Further, the study will not focus on the actual content, rather the presentation and selection of content in a VoD service.

1.4 Thesis Outline

The thesis is structured into seven chapters following the introduction;

Background This chapter describes the company which the thesis is written in collaboration with as well as the VoD-service used as the scope of this study.

Theoretical framework This chapter includes previous research relevant for this study; consumption of audiovisual content, content discovery, decision-making and design for children.

Benchmark This chapter includes a competitor analysis of different VoD services and their existing content discovery solutions.

Methodology This chapter describes the method and work structure used to conduct this study.

Results This chapter presents the results from different stages.

Discussion This chapter discusses the results, presents content discovery guidelines and suggests areas for future work.
Conclusion: This chapter summarizes and concludes the findings of this study.
2 Background

This chapter describes the area of work concerned with fulfilling the objective of the thesis, user experience, and the company which the thesis is written in collaboration with, SVT, and includes an introduction to the VoD-service which will be used as the scope of this study; Barnplay.

2.1 User experience (UX)

User experience as a term was first introduced by Donald Norman in the 1990s [4]. The field of user experience represents an expansion and extension of the field of usability and encompasses all the interaction aspects involved in meeting the exact needs of the end-user [5]. UX is the combined feeling about a product or service and affected by multiple disciplines such as data analysis, customer relations, engineering, interaction, graphical, and interface design.

2.2 SVT

SVT was founded on the 4th of September in 1956 [6]. Being a public service broadcaster, SVT has an exceptional position among other media companies in Sweden and therefore a special responsibility. The public service agreement is given to SVT by the government to guarantee the audience a wide range of programs and services available via television, the Internet and other publishing forms [7]. The agreement states that the content of SVT should be defined by democratic and humanistic values and be accessible for everyone [7]. SVT’s agreement is mostly financed by a license fee which is compulsory for every household in possession of a TV-set [6]. This enables SVT to be nonprofit driven and commercial free. The strategical goals of SVT’s are [8];

- **Awareness** 9 out of 10 should know about SVT’s more established services and 4 out of 10 should know about programs and services one year post launching.
- **Range** 9 out of 10 should use SVT’s channels or services a regular week.
- **Usage** The average usage across all channels and services should be at least 50 minutes a day.
- **Professional quality** 4 out of 5 should have high or fairly high confidence in SVT
- **Individual benefit** 2 out of 3 should consider SVT to have high or fairly high value for them today.
Societal benefit 3 out of 4 should consider SVT to have high or fairly high value for society today.

SVT consist of a total of seven national TV-channels and one international channel (SVT1, SVT2, SVT24, Barnkanalen, Kunskapskanalen, SVT1 HD, SVT2 HD and SVT World). Since 2006 SVT’s content are also available on the Internet via the VoD-service SVT Play. In 2014 a separate VoD-service for children was launched; Barnplay [6].

2.3 Barnplay

Barnplay is designed to appeal to children 3-11 years old, in terms of both content and interface. An important goal for Barnplay is to exist on platforms and devices which are accessible for child-users. Touch screen interfaces are prioritized since touch interaction are better aligned with children’s motor skills and cognitive abilities [9]. As of now, Barnplay has a web version, iOS, Android and Windows apps. Other important goals include the ease for every individual user of Barnplay to find content that is relevant to them and that children should be able to look for, select and watch content on their own without parents worrying about their children finding inappropriate content. Currently, Barnplay has around 250 different titles where each title consists of a number of episodes. The number of titles and episodes vary with time since new titles are added and old titles are removed continuously. New titles or episodes are usually added when broadcasted in the TV channel Barnkanalen and depending on the airing agreement concerning a specific title it can be accessible in Barnplay for different periods of time. According to data collected from Adobe Analytics¹, the most popular device used to visit Barnplay is tablet, followed by mobile, desktop and big screen.

2.3.1 User interface

Through all platforms and devices Barnplay consists of three major screens: The overview screen, the title screen, and the video screen.

2.3.1.1 The overview screen

The overview is the start screen of Barnplay and consist of seven carousel-modules which can be scrolled horizontally, see Figure 1. Each module contains program titles with a connection to the other titles in the same module. The top module contains round title images of the main character of the shows. The titles in the beginning of the list are recommendations based on the previous viewing and the second part of the list contains all titles ordered alphabetically, see Figure 1(1)(2). The second module from the top, Du har tittat på, (You have watched this), consist of rectangular images of titles the user previously watched, see Figure 1(3). The third module, Populärt, (Popular), contain titles with many views, see Figure 1(4). The fourth module has tabs for different categories; Tips, Klassiker, Pyssel, Skratt.

¹Adobe Analytics, https://my.omniture.com/
The fifth module contains titles for smaller children and the sixth for older children, see Figure 1(6)(7). The bottom module contains titles in a different language as well as titles in sign language and titles with audio description, see Figure 1(8). In the top menu of the application, there is a search function which present image based suggestions while the user types, that is, image based autocomplete. In the app, there is also a favorite section which can be reached from the top menu where the user can save favorite titles. A recently added function on the left side of the top row is "The tombola," see Figure 1(9). This is element was added to enhance content discovery and will be explained more in section 2.3.4.

Figure 1: The overview screen of Barnplay with labels for different elements and modules described in the text.
2.3.1.2 The title screen

The title screen appears when a title is selected in the overview screen, see Figure 2. To make it easier for users to find their way back to the overview screen, it is still present in the background but shaded with a dark overlay. The title screen consists of a title image and images of all the title episodes in a horizontally scrolled list. If a title comprises many seasons, each season is presented in one row. When an episode has been watched it is marked with a time line below it. A show can be saved as a favorite by clicking the star button and it is also possible to read about a show by clicking the Om (about) button.

![Figure 2: The title screen of Barnplay which consist of a title image and episodes in horizontally scrolled lists.](image)

2.3.1.3 The video screen

The video screen appears when an episode is selected, see Figure 3. The screen consists of the video content, a pause/play button, and a timeline which enables going back or forth in the video. When an episode ends, next episode starts automatically, and after the last episode of a title, a recommendation of a similar title to watch is displayed.

2.3.1.4 Content discovery in Barnplay

In Barnplay there are several functions designed to make it easier for users to discover content to watch;
**Figure 3:** The video screen of Barnplay which consists of the video content, a pause/play button, and a time line which enables scrubbing in the video.

**Images** Since children do not read very well, content presentation is image based.

**Categories** To show differences between titles and guide attention towards titles that might be of interest based on age or interest.

**Popular content** To show what most other people like.

**Personal recommendations** Based on the users previous viewing similar content is recommended in the top row of the overview screen and in the end of the last episode of a title in the video screen.

**The tombola** One click and the tombola randomly selects a title from the selection of recommended titles based on the previous viewing. Can be clicked multiple times once in the video screen to re-select a title.
3 Theoretical Framework

This chapter describes the theoretical background relevant for the study and starts with an introduction to the role of television in our lives and the psychological and sociological motivations for watching audiovisual content. It continues with how the consumption of VoD and broadcast television differs according to age, and parents involvement with children’s consumption. The following subsections summarize research about how new content is discovered and describe decision-making among adults and children. The last part of the chapter concern children’s development and design for children.

3.1 Consumption of audiovisual content

For decades, television has been a major part of our lives and our popular culture. It is an important public and social service, it provides us with company, it entertains us and it connects us to the world. The television industry is very interested in what we watch but not necessarily the reasons why, even though this could be vital to understand how fundamental human psychological and sociological behavior can be used to motivate a behavior. A study about viewing motivations conducted in the 80s identified nine different clusters; program content, entertainment, relaxation, to pass time, to get information, to escape, arousal, companionship, and social interaction [10]. According to the study, younger consumers’ motivation more often concerned escapist viewing, viewing to pass time, arousal viewing and social viewing [10]. A more recent study about why we watch television identified six core reasons [11]; Unwinding (stress down), Comfort (togetherness, familiarity, and routine), Connecting (to society), Experience (fun and sharing an occasion), Escaping (to another time and space) and Indulging (satisfying personal pleasures). This study also states that VoD is better with satisfying more personal needs, such as indulging and especially escaping, but less satisfactory for more social and relaxing needs such as unwinding and seeking comfort [11].

According to a UK study, the general perception of broadcast television is that it offers an effortless viewing experience and that it allows the viewer to stay in the loop and be part of the conversation [12]. The study also found that the downside of broadcast television was that it fails to match the personal preferences and offer less freedom [12]. Free VoD services (connected to broadcast channels or others) were mostly valued to watch programs missed on broadcast television at the time of their own convenience. Most participants associated free VoD services with occasions when they had a specific item in mind, rather than general browsing. Subscription VoD were mostly associated with great content and used to binge watch series. Individual profiling and recommendations were positive aspects mentioned
by participants. Negative aspects concerned difficulty in finding something to watch unless they had a specific item in mind due to the large content libraries. When participants were asked to live without broadcast television for a day and then reflect on the role of broadcast television in their life they stated that they; Felt out of the loop, needed to plan more, but gained more control. When participants were asked to live without VoD they stated that they; Felt restricted, missed out, but had less effort and more relaxation.

3.1.1 Age and viewing preference

Viewing through VoD has grown in recent years and even though the Swedish consumption of broadcast televising is slightly declining, the total consumption of television is continuously growing [2]. In Sweden, around 50 percent watches a free streaming service on a daily basis while 16 percent use a subscribed one [13]. As often happens, the trend is led by younger users who watch less broadcast television and have an average of 1 hour of VoD viewing a day, compared to 30 minutes in the whole population [13]. A UK study comparing viewing behavior and preference of broadcast television and VoD also concluded viewing habits vary in relation to life stage [12]. Younger consumers (16-24) expressed an overall preference for VoD. They typically used broadcast television to watch live events or reality shows to avoid spoilers and for the social sake of being part of the conversation about the show. Middle-aged consumers (25-54) used a greater mix of broadcast and VoD, but VoD was rather a necessity than a preference to fit with work and family commitments. Older consumers (55+) expressed a linear preference due to familiarity and lower level of tech engagement. Among younger children, between 7-15 years old, Sifos Orvesto junior found that 57 percent watch movies, videos, series, or programs through VoD services every day. Only 32 percent in the same age span watch broadcast TV every day [3], as illustrated in Figure 4. This concludes that younger consumers are redefining their TV-experience and the way they consume content to a larger extent than older consumers.

![Figure 4: Illustrates Sifos findings about everyday usage of VoD and broadcast among Swedish children 7 to 15 years old.](image-url)
3.1.2 Children’s consumption and parental involvement

According to a Swedish study, parents feel a great responsibility when it comes to their children’s consumption of audiovisual content [14]. 91 percent state that they have rules about how late their child can watch television content and 64 percent have rules about for how long the child can watch television content. Around 50 percent say that they are present when their child watches television content and a negative correlation between the age of the child and parental presence could be observed [14]. In an Australian study with parents to 0 to 14-year-old’s, 71 percent of the parents said that they were involved in choosing the content. A direct relationship between parental involvement and the age of a child could be observed here as well. When the parents were asked to select the most important factor in choosing content for their child, 78 percent chose programs appropriate for their child’s age. Additionally, many parents also considered it very important that the content appealed to the child [15]. Swedish parents to children 0-8 years old mainly considered television programs as positive part of their child’s learning or as a fun and relaxing activity [14]. According to a UK study, 42 percent of the parents think television content is a great way for their children to learn. 16 percent watch content with their children for bonding time and 25 percent use television as a babysitter when they have to do something else [16]. In Nielsen study about web usability for children, he also states that most parents in their study perceived screen time as free babysitting time which they use it to get other things done [17].

3.2 Content discovery

Consuming audiovisual content is often associated with comfort and relaxation [10, 11]. Ideally, the viewer finds something to watch without any further effort, but finding satisfying content in the large selection of available content in a VoD service can be very demanding. When entering a VoD service, users might already know what they want to watch or they might look to discover something new. To make it easier for users to find suiting content VoD-services commonly use search functions, categories, social integration, recommendations of popular or new content and personalization features which include manual bookmarking, history and continue watching, and recommendations based on previous viewing patterns.

Previous studies argue that discoverability of audiovisual content is a three stage process from the consumer’s point of view[18][1]. The first step in the process is about initial awareness, the second is about making choices within the known content by getting more information and reinforcing interest, and the last step is about simple and user-friendly access to the content. An international research project [1] across 14 countries, including Sweden, found that the most common way towards initial awareness is through channel surfing or otherwise coming across a program when watching broadcast TV (29 percent). Learning about content through word-of-mouth was secondly most important (20 percent) were learning about new content through conversations in-person were more influential than communications on social media. The thirdly most important factor was TV promotions (16 percent). VoD-services only accounted for less than 1 percent of initial discovery according to the
study. 69 percent of the adults and 76 percent of the children start watching a new program via broadcast TV.

### 3.2.1 Content discovery for children

For younger consumers, 6-12 years old, word-of-mouth was concluded to be the most important factor for content discovery in an international research project [1]. 51 percent stated that they initially became aware of a program from word-of-mouth. In another international study targeting slightly younger children, 4 to 11-years-old’s, 36 percent stated they mainly found new content on broadcast TV channels, 18 percent relied on recommendations from family members and 16 percent relied on recommendations from friends, 15 percent mainly found content through recommendations in VoD services and 12 percent got information about shows online on social networks or though search engines [19], see Figure 5.

![Figure 5: Illustrates international findings about content discovery among children 4 to 11 years old.](image)

### 3.3 The decision-making process

VoD services are as previously mentioned appreciated for the freedom and ability to meet personal preferences [12]. The individual freedom is often considered as one of the most important components of a happy life and the number of choices we have are often used as a measurement of freedom. This had led to the popular notion that more choice is better in a choice situation [20]. Currently, there is two major approaches to model how decisions from a choice set are made; Satisfying or maximizing [20]. By satisfying in a choice situation, we choose the first option that surpasses some absolute threshold of acceptability, rather than attempting to finding the best possible choice. This theory was introduced by the Nobel prize winner Simon [21] as an idea of how we make the otherwise overwhelming task of evaluating options manageable. By maximizing however, we feel pressure to seek the best possible option within a choice domain. In this case, as the number of choices increase so does the cognitive work required to compare various options to
find the best option. This has led to the expression *The paradox of choice* which argues that choice is not always a good thing and that freedom, autonomy, and self-determination, can become excessive [22][23][20]. People are in general attracted to the thought of having many choices and therefore perceive a large set of options as more attractive, but providing more options can lead to paralysis, poorer choice and degrade satisfaction [22][20].

To decrease the cognitive workload and make a complex decision more simple choices can be concretized, categorized and conditioned [22]. The first approach concerns making cuts and fewer the number of choices if possible, the next approach is to make it easier to understand the difference between choices, the third approach is to categorize choices into groups to make choices seem less and the fourth approach is to start with a lower number of choices and gradually increasing the options [22].

### 3.3.1 Children’s decision-making

Studies about the decision-making among children are quite few but central to these are the development of the human brain and how this affect abstract thoughts, reasoning and the ability to understand consequences. One study summarized previous findings and theories and concludes that the basic processes and concepts operate from young ages, what develops slowly is the ability to understand and control these processes [24]. Even though young children have some skills in decision-making, they do not yet have the experience to understand and decide in more complex situations. Younger children are more likely to; focus on one aspect of a situation, focus on their own position, look for immediate benefits, want things now, act without thinking first, make simple distinctions between good/bad and right/wrong and make decisions based on a whim. As they develop, children are more likely to; see things from different angles, see other people’s points of view, think ahead and plan, focus on longer range goals, consider consequences, apply more complex values to their own thinking and use reasoned strategies for making decisions [25]. Author and psychologist, Mogel [26], notes that parents often give children too many options. A mother might ask her child what she wants to do this summer, but when doing this, the child often spends most of her energy simply narrowing down the options and run out of focus and patience before she reaches a final decision. As children develop skills for managing their thinking they become better at making decisions since the ability to think helps children control impulsive behavior. Children start practicing abstract thinking at around age 10-12 [9]. This makes it possible for them to interpret complex scenarios and imagine the possible outcomes of their actions and decisions in a similar manner as adults. Even though older children make better and more deliberate decision this might also suggest that the paradox of choice is more experienced for older children than younger children since they can’t manage the same level of abstract thought.

### 3.4 Designing for children

Children and adults are different and consequently designing for children and designing for adults require different guidelines. Still, many of the basic design principles
that apply for adult users also applies for children [17][9]. One similarity between children and adults is that both appreciate consistency in interaction and feedback to easier understand functions [9]. Children as well as adults both need a purpose to use a product or service and engage in an activity, but children are more open to exploring than adults who needs immediate goals [9]. Most children only need pure entertainment as purpose for using applications, services, and products, unlike adults who often have a productive purpose [9][17].

One major difference between children and adults is that children change very fast. Nielsen, therefore, argues that there is no such thing as designing for children three to 12 years old as a group and claims that there should be a distinction between different age groups due to children’s fast development [17]. Gelman, however, argues that it is possible to design for a broader age group if the service is more of a "container" with content targeting different age groups while the interface is possible to interact with even for the youngest [9].

### 3.4.1 Children of different ages

Children from 2 to 11 years old are in very different stages of development [17][9]. When designing for children it is therefore good practice to have some basic knowledge about children’s developmental stages in order to understand their cognitive and physical abilities and map the design appropriately. A younger child is not necessarily less intelligent than an older child; they just think about things differently and have different motor skills. Dividing children into age groups based on more prominent developmental differences are therefore appropriate [17].

#### 3.4.1.1 Preschoolers (Ages 3-5)

Preschoolers spend most of their time playing with friends at a daycare center or similar. They are yet to form assumptions about the world and have a wide imagination and like to explore and play around [9]. These children are extremely curious and interested in mastering new skills and learning new things [9]. Repetition is a very important part of learning, but for these children it is also a major part of playing. They play by repeating even the most trivial tasks over and over again. They also appreciate challenges but they lack the ability to focus for longer periods and easily get sidetracked. Distinguishing important information from less important information is difficult and they easily get overwhelmed when too many things compete for their attention. At this age children focus on the details instead of seeing the whole picture [27]. Preschoolers do not yet understand concrete logic and commonly only see things from their own perspective. Their memory function is only developing and therefore they rely heavily on the visual information in front of them, every necessary piece of information needs to be "in the world". Physically they are capable of walking and running, but only started to develop fine motor skills. Most use varying level of spoken language as a communication tool and those who do not usually understand the things they hear. These children cannot read, some understand letters and some are capable of writing simple words.
3.4.1.2 Young school children (Ages 6-8)

When children start elementary school, their sphere of influence expands from their family to include others such as idols and friends [9]. Starting at age 6 they are becoming increasingly aware of the world around them. By age 7, they acknowledge that there are other perspectives than their own and the opinions of others are becoming more important. This additional awareness causes them to feel a lack of control, as a result, they like situations they can master and orchestrate. While younger children prefer exploration these children want information up front to make sure they are following the rules and get everything right the first time [9]. They like to create guidelines for themselves and when playing a large amount of the time comprise setting up rules about roles and context [9]. Children in this age group are able to think logically about ideas or events but have difficulty understanding abstract concepts. They use inductive logic, that is applying reasoning from a specific situation to a larger more general situation. From this age, the child has the ability to think about the parts and the whole independently and make multiple classifications [27]. As they grow older their memory increases which make it easier for them to keep information in the head instead of physically present. With increased memory function they are also able to focus for extended periods of time which sometimes turns into an obsession where they work on a particular task over and over again until they master it. These children are aware of the continuity concept whereas a younger child would expect a movie to start from the beginning when turned on, these children would expect it to start up from the point at which it was previously turned off.

Children six years onward strive for perfection and are fully aware of the concept of winning and losing. They do not simply want to achieve the goal, they want to be first and best [28]. Physically their motor skills are even further developed, especially the fine motor skills using muscles in hands and fingers [29]. Reading and writing skills are developing but longer texts are still troublesome. At this age children start to become hesitant about meeting new people and many are quite shy or even scared about talking to strangers.

3.4.1.3 School children (Ages 9-11)

These children see a big development in terms of cognition and independence and they do not like to be treated as little children anymore [9]. These children have a strong desire for social acceptance in their group and the "cool" factor is very important [9]. They are starting to use technology more as a social tool rather than for pure entertainment. As part of their self-identification process they try to find things and interests that make them who they are, things that they are good at [9]. Increasing cognitive abilities including developing of abstract thought and logic make it possible for them to think creatively and take multiple aspects of into account during problem-solving [9]. These children prefer more complicated challenges that require them to use their cognitive abilities, unlike younger children they are not satisfied with repetition.
3.4.2 Design guidelines for children

To design good digital experiences for children, certain things should be considered:

**Age and development**

Fast change among children is a problem since a two-year-old and an 11-year-old are very different in terms of developmental stage and preferences [9]. Therefore it is difficult to design for all children. Some services which work more like a container to content targeting different age groups, like a VoD service for children, can be designed to target a broader age group if the container is easy to interact with for the youngest and the content is adjustable to age. The biggest differences to consider between children of different ages consider cognitive abilities but also the level of motor skills, reading and writing abilities, preference for familiarity and the need for social acceptance.

**Cognitive abilities** Cognitive abilities make it more difficult for younger children with memory and keeping things in their head instead of in the world, to see things from other perspectives, to acknowledge the whole picture and to think and reason. To make it easier for children to direct their attention and acknowledge the important parts of the interface do not overuse too many different colors and make it clear whom the interactive elements are. Older children understand classifications and grouping of elements but younger children will only see the parts and do not understand grouping. Since younger children do not master abstract thinking they might not understand the symbols and icons that are obvious for adults.

**Reading and writing abilities** Children have poor reading skills and rely heavily on visual presentation and images instead of copy. For example, when children search for an item on a retail site they tend to use visual filters, such as color or pattern. A product or service for children should never rely solely on text as a communication tool, other forms, such as visual och auditory communication are preferable [9, 30].

**Motor skills** With the development of the touchscreen better interaction possibilities for children has arisen. Due to younger children’s poor fine motor skills they tend to use tablets and big elements are always better for interaction. Older children have more developed fine motor skills, can handle smaller objects and prefer the freedom of their own smartphone device.

**Familiarity and repetition** Younger children love to repeat things over and over and it is an important part of both play and learning [9]. While adults like variety, young children are creatures of habit who needs repeated confirmation that things stay the same. They find comfort and security in familiarity and rituals which help them figure out how the world works and therefore repetition should be planned for [31, 9]. As children grow older they become aware continuity and want to be able to continue a task instead of repeating it.

**Individuality and social acceptance** As children grow older they are more concerned with the things that make them who they are and individual preferences
and interests become more important. They want to feel special, be able to find their certain areas of interest and they like to be a part of customizing their own experience. When starting elementary school children get more aware of people around them and their opinions. As they get older they become increasingly aware of the "cool" factor, about staying in the loop, about fitting in and also to express themselves to others.

**Playfulness**

Most children use applications, services, and products for pure entertainment. Levin Gelman points this out in her book about designing for children; *"When you are designing for adults - even when designing games for adults - the goal is to help them cross the finish line. When you are designing for children, the finish line is just a small part of the story"* [9]. This refers to that children are not as goal oriented as adults and they prefer a more playful road towards accomplishing something. Play helps to get and hold children’s attention and should not only be used in game development. The younger the child the more they are drawn to aesthetics with cheerful colors, large images, and animations. These attributes alert children that these experiences are meant for them, rather than for adults. For older users who do not want to be referred to as small children anymore and are concerned with the "cool" factor, they tend to like interfaces that look slightly more grown up.

**Caretakers are also users**

Parents, teachers, caregivers, and grandparents are all possible users of child products and services. The younger the user the more influence and sometimes direct control their caretakers have over their life. When designing for children it is important to consider caretakers' concerns, make them see the benefit for them or their children with using the product or service and to give them the tools they need.
4 Benchmark of VoD services

This chapter describes other VoD services and evaluates their existing solutions for content discovery. Each VoD service will be evaluated based on features regarding visual appearance, structure, navigation, personalization, customization, and use of the social community. The conclusion of the competitive analysis is summarized in the last section.

4.1 Netflix

Netflix, see Figure 6, is the world’s leading subscription VoD service with content for both adults and children and over 100 million members in over 190 countries. Netflix is account-based and offers multiple users per account. In the settings for each user it is possible to customize content by adjusting the age of the user to young or old children. Child mode has a different interface than regular Netflix and content suited for the age group. User-mode is important for Netflix since they base their content presentation on responsive personalization based on previous viewing. Netflix’s structure is built upon categories of horizontally scrolled carousel-lists with title images. The list can, for example, be funny, sing and dance or more obvious personalized content like since you have watched Snow white. There is also a list of the most popular content among other users. The top list has no label and features round images of the main character of a show instead of the regular title images. From the overview screen, it is possible to start an episode directly or go to the title screen and select an episode. In the title view, one episode is selected as the featured episode and the user can also find recommendations of similar titles.

4.2 Viaplay

Viaplay, see Figure 7, is the leading subscription VoD service in the Nordic countries for TV, sport, film and kids content. Viaplay only has one user per account and the child section is accessible from the main menu. Similar to Netflix the structure is built upon categories of horizontally scrolled carousel-lists with title images. The top list has no label and features round images of the main character of a show instead of the regular title images. The content of Viaplay is static and not personal except for the continue watching list which includes previously watched titles. New and popular content are featured in the lists and other specific categories such as based on books, Disney, short episodes and content for children of different ages.

\[^2\]Viaplay, https://viaplay.se/press
The lists are expandable and open a screen where titles can be sorted based on popularity among other users or novelty. In the title screen ratings from IMDb and recommendations of similar content is visible.

4.3 Youtube

Youtube\(^3\), see Figure 8, is an an American video sharing platform with over one billion user worldwide were users can upload or watch content. Most content is uploaded by individuals but media companies also upload content here. Youtube is

\(^3\)Youtube, https://www.youtube.com/yt/press/statistics.html
free and earns money from advertising. The content on Youtube is very dynamic, personalized and customizable and allows users to rate, share, add to favorites, comment on videos and subscribe to other users. The total number of views, like and dislikes and comments are visible on each video on Youtube. The application is structured in four major menu views, *home*, *popular*, *subscriptions* and *library*. The home view contains a feed of big images of content with a shorter text description. The feed is only vertically scrolled. The popular view contains popular content among other users with some degree of personalization. The subscription view shows content from channels the user chooses to subscribe to and the library view shows playlists made by the user, content uploaded by the user and previously liked content.

When starting a video on Youtube a playlist of similar content to the first video is created and it is easy to go back and forth in the playlist. Youtube has no child mode, instead, there is a separate application for children; Youtube Kids.

4.4 Youtube Kids

Youtube Kids\(^4\), see Figure 9, is a separate version of Youtube designed for children which use filters powered by algorithms to select content from YouTube. Videos on Youtube Kids are grouped into four categories; *shows*, *music*, *learning* and *explore*, and presented in horizontally scrolled carousel-list. These videos are selected using automation and human reviews. There is also a *recommended* category which is based on what has been watched or searched for by the user previously. Settings to adjust content to the age of the child are accessible only with a code which caretakers can use. As with Youtube, a playlist is automatically started with similar content when starting a video. The list of videos is visible in the bottom of the screen and it is easy to go back and forth in the playlist either by selecting one of the images.

\(^4\)Youtube Kids, https://support.google.com/youtubekids
or with the next and previous button.

![Image of Youtube Kids interface]

**Figure 9:** The user interface of Youtube Kids

### 4.5 SF Kids

SF Kids\(^5\), see Figure 10, is a subscription VoD service for children by SF, the Swedish Film industry, which is the leading commercial movie production company in the Nordic countries. The structure of the application is based upon one major explore-screen which can be navigated in every direction. The screen features round images in varying sizes of the main characters in the titles. Settings to adjust content to the age of the child or to set a timer for how long the app can be used are accessible only behind a child-proof lock which caretakers can use. There is also a category section which expands in relation to the age of the child. For older children it has \textit{new} content, \textit{popular} content among other users, seasonal content like \textit{for easter}, titles sorted from \textit{A-Z} and a \textit{favorite} section where the user can save content.

![Image of SF Kids interface]

**Figure 10:** The user interface of SF Kids

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\(^5\)SF Kids, https://sfkids.com/sv/
4.6 NRK Super

NRK Super\(^6\), see Figure 11, is a Norwegian free VoD service for children from the Norwegian public service broadcaster NRK, and consequently the Norwegian correspondent to Swedish Barnplay. NRK Super is account-based with multiple users per account. The structure of the application is based upon one major explore-screen with all content represented in an image matrix. The size of the images vary and the big images are rotating slide shows with images from a specific title. The application is in landscape mode and the explore-screen is only horizontally scrolled. There is also a search function where the user can type or choose titles starting with a specific letter in the alphabet or a language. There is also a user section with a photo of the user, a list of viewing history and options to adjust content to different age groups. In the title view, the newest episode is the featured episode and the other episodes are in a carousel-list, recommendations of similar content can be found at the end of the list.

Figure 11: The user interface of NRK Super

4.7 Summary

To summarize the evaluation of VoD services all use smaller images to present video content. Some services use personal profiles and different degree of personalization to enhance the personal experience. Customization options to filter content by age are commonly used by almost every service to present more interesting content to each user.

Most services use categorization by grouping similar or related content to motivate decisions, while a few services use more of an exploratory structure with visual attention to certain content to motivate decisions. To make passive discovery easier some services use playlists with similar content.

New and popular content are featured in most services and sometimes sorting content based on popularity or novelty is possible. The popularity of content is often demonstrated by number of views or by showing ratings of content, but few services let users react to content in the services.

\(^6\)NRK Super, http://tv.nrksuper.no/
5 Methodology

In this section the method used in this study will be introduced, which is the 4A’s in designing for kids [9]. The method comprise four phases; Absorb, Analyze, Architect and Assess, where the architect and the assess phase are iterative.

The absorb phase included absorbing data about children and their behaviour through a literature study and user research. The user research included observational research with children, interview with children, surveys to parents and quantitative analysis of user data in Barnplay.

The analyze phase included analyzing the data found during the absorb phase, generating ideas during a workshop, analyzing, clustering and forming major concept ideas.

The architect phase included making paper sketches based on the conceptual ideas, refining the sketches, making mid-fi prototypes and re-architecting the prototype based on the assess phase.

The assess phase included user testing the prototypes, going back to the architect phase to make adjustments and perform more user tests.

5.1 Absorb

The Absorb phases included absorbing data about children and their behavior through a literature study and user research with Barnplay.

5.1.1 Literature study

Literature was found through searches with specific words and phrases in regular as well as academic search engines. Different areas of interest were; television and VoD consumption for adults and children, content discovery, decision-making, children’s development and designing for children, workshop methods and data analysis. The literature consisted of scientific articles, books, and credible blogs.

5.1.2 User research

There are many different ways to conduct research with children. In general, anything that involves activities where children can express themselves in a comfortable setting instead of a strict interview is better since children have a hard time expressing their feelings and thoughts verbally [9]. In order to understand how children
behave and what they like it is good practice to conduct observational research [9], therefore user observations were scheduled with children in a school and a preschool. The observations included 12 participants aged between three and 11. Since children change fast, research and testing activities should be tailored to the cognitive, physical, and technical skills of the particular age group participating in the test. School children were therefore also interviewed with a semi-structured technique to learn more about their habits regarding consumption of audiovisual content. Preschool children were not interviewed, instead, their parents received a survey about the habits of their child. Nielsen purposed co-discovery as a method to make it easier for children to express their thoughts since talking to someone in their own age makes the conversation more natural[17]. This method was previously proved especially effective with middle-aged children, therefore this was applied with children 8-9 years old. The children attending these sessions were told to make decisions and solve problems together. Every user session was video recorded since taking notes can distract the child and make them feel evaluated [9]. In order to make video recordings with a child, it is important to have the permission of a parent or a caretaker [9]. This was obtained via a consent form (appendix A) distributed to every parent before the occasion of the user sessions.

5.1.2.1 Observation

To make the participants more comfortable, each observational session were started with a conversation about things the child liked. To make it easier for participants to stay focused potential distractions were avoided by having them seated in a quite test area facing away from the windows. User observations can either be task-based or based on asking the child to play around to see how they behave [9]. For smaller studies, it is usually better to give participants specific tasks to perform [32]. These tasks are framed around goals where the researcher can observe the participants methods for achieving the goals. Without tasks, it is more difficult to see patterns of usage and recurring problems among participants.

The observation consisted of four major tasks;

1. Starting the app and finding a program (a program they said they liked during the interview).
2. Starting an episode.
3. Go back to the other programs.
4. Show some other programs they would like to watch.

Depending on if the participants tried or mentioned the tombola on their own accord or not they were asked question concerning if they seen or tried it before, how they perceived the function and their opinion about it.

5.1.2.2 Semi structured interview

For the seven school children, a semi-structured interview format was chosen to supplement the observation. A semi-structured interview is a compromise between a
structured and a unstructured interview [33]. Structured interviews are not flexible and follow a strict interview schedule with predefined questions in the same order for each interviewee [34]. An unstructured interview is a format where interviewees are encouraged to speak freely about a specific topic [34]. A semi-structured format was chosen since specific questions needed to be answered and because it is important to be able to adjust the structure according to the situation and the specific participant when working with children. According to Barnplay’s UX-designer, using a manuscript is not the right way to go, remembering the major focus areas and keeping the conversation natural is key [35]. The major focus areas during the interview are presented below and an interview guide can be found in appendix C;

VoD and broadcast usage habits with broadcast and VoD, the channels and services they watched/used/preferred, if they usually watch alone or together with someone, at what time of day they used TV or VoD.

Device usage what type of devices they had experience of using, specifically for VoD, and if they had a device of their own.

Parents involvement parents or other caretakers rules regarding consumption of audiovisual content and device usage.

Content discovery how often they know when entering a VoD service or start the television what they want to watch, how often they do not know and how they do to find something and how they firstly discovered the programs they watch now.

As a researcher, it is important to consider the special needs of the group being interviewed, children, for example, have a limited attention span and lengthy interviews should therefore be avoided. The language used for phrasing questions should also be considered and appropriate for the group of people being studied [34]. Examples of how to phrase a question with children are to avoid questions which can be answered with a yes and no, like "Can you tell me about..", instead, phrase the question like '"Tell me about..'. By doing this, it is easier for children to express themselves and rebellious 'no' answers can be avoided [36].

5.1.2.3 Survey

The observation of preschool children was supplemented with a survey to their parents about their child’s usage of different devices, Internet habits, consumption of audiovisual content, parents rules and involvement and content discovery. This method was chosen since younger children have troubles expressing their behavior and thoughts through words [9]. The survey (appendix B) was sent out to six parents together with a consent form (appendix A) regarding video recordings. The survey was structured around the same focus areas as the interview with school children and included both open-ended questions and multiple choice questions. The questions were inspired by Ungdomsbarometerns investigation for SVT about younger consumers (15 to 24-year-old) consumption of audiovisual content and content discovery [37].
5.1.2.4 Statistics

To better understand user behaviors, quantitative data from Barnplay were analyzed with Adobe Analytics\(^1\). The relevant statistics concerned video starts per module, video starts of a new title per visit, from which module most new title starts were made, and the ratio of new video starts per module.

5.2 Analyze

After the Absorb phase the next step in the design process is the Analyze phase where all data collected was analyzed to decide what this could mean for the design. The recordings from the user session were analyzed after all sessions were completed since no time existed in between the sessions and since it is better to analyze all material together to find patterns [33]. Rowley concludes that there is no universal recipe for success in data analysis [33]. Nevertheless, a process of organizing, getting acquainted with, classifying, interpreting and presenting the findings are desirable [33]. To analyze the material it is preferred to watch the recordings and take notes on the important points and with this try to find reoccurring details and patterns [33]. The information found during the literature study were compared to the results from the absorb sessions with users to identify major focus areas for discoverability of audiovisual content. These areas were then used as background material for the idea generation workshop.

5.2.1 Workshop: Idea generation

To generate new ideas it is good practice to bring people together, therefore five people from the development team of Barnplay were invited to participate in a workshop. In order to get the right questions answered and reach the intended goals, the idea generation process needs to be thought through. For this study, a 6-step approach purposed by the Nielsen Norman Group was used to effectively plan a UX workshop[38];

Articulate goals

In this case, the purpose of the workshop was to generate a number of initial ideas in a broad spectrum. The focus areas were based on findings from literature and research; word-of-mouth, broadcast television, parents involvement.

Questions

In order to reach the goals three questions based on the focus areas were formulated;

**Encouraging conversation** The opinion of people we trust and the feeling of connection to others are important motivators in the discovery process. How can

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\(^1\)Adobe Analytics, https://my.omniture.com/
we make it easier to see what others like and share opinions in Barnplay?

**Serving content** Many children discover programs more passively by starting the television or channel surfing. How can we make choosing content less demanding and better serve content in Barnplay?

**Parent friendly** Many of the users are actually parents and caretakers who feel responsible for their children’s consumption. How can we make it easier for them to discover content in Barnplay?

**Choose process**

The workshop method was influenced by different workshop methods from a book about creative processes [39]. The method was put together since three focus areas needed to be covered in a short period of time and since it was supposed to generate many small ideas in a broad spectrum.

**Workshop**

The workshop included an introduction to the problem with a background of previous studies, user research and statistics. The participants were asked to individually come up with as many separate ideas as they could based on the focus areas. After this, they were asked to team up with another person and present their ideas to each other. From their initial ideas, they were asked to combine and refine ideas, one for each of the three focus areas. The three ideas were then presented to the rest of the group with a following discussion around the different ideas.

**Analyze**

The ideas from the workshop were clustered and analyzed using the theoretical framework and by benchmarking content discovery solutions for excising VoD services on the market. For more information about the benchmark method, see subsection 5.2.2.

**Act**

The last step of the process was to form the major concept ideas and to plan for the architect and assess phases.

**5.2.2 Benchmark**

To get inspiration and learn more about existing content discovery solutions, a competitor evaluation of different VoD services were conducted. The evaluation was performed in a review format were the author investigated a series of different services [40]. Competitors included in an evaluation should be services which offer similar content and functionality as the service of interest, use an innovative design, are the strongest competitors or the competitor most likely to be compared against
The services chosen were all services which offer similar services as Barnplay; Youtube and Youtube Kids, Netflix, Viaplay, SF Kids and NRK Super. Youtube was mostly chosen due to its strong position and popularity among school children. Netflix and Viaplay were chosen since these are well known VoD services popular among adults and therefore strong among their children as well. Youtube Kids, SF Kids and NRK Super were chosen since these are all VoD services designed only for children and therefore offers similar value as Barnplay. The main goal of a competitive evaluation is to improve the design by focusing on the relevant features within the competitors design. Therefore interesting features were things which could affect discovery such as visual appearance, structure, navigation, personalization and customization, and use of the social community. The findings from the analysis were summarized and considered when evaluating the ideas from the workshop.

5.3 Architect

After the Analyze phase, the next step in the design process is the Architect phase where the ideas from the Architect phase are followed up and the structure and function of the ideas are created. The Architect and the following Assess phase are iterative and comprise a procedure of creating, evaluating, and re-architecting, simply because the first design will fall in some areas. With children’s limited cognitive abilities and deductive reasoning skills, they have a hard time understanding the function of an intangible idea or imagining how the actual interface would work. Therefore testing with a functioning digital prototype are preferable before any conclusions are drawn [9]. The prototypes created in this study were therefore decided to be interactive mid-fi prototypes for tablets with real titles as content. One problem with investigating how the discovery of new titles is affected in the prototypes is that it is difficult to know which titles that are new to the participant. Therefore it was decided to create fake titles and include them in the prototypes together with real titles and measure the selection of these titles. Nine fake titles were created, six mostly designed to attract older children and three to mostly attract younger children. Titles created comprised an image and a label with the name of the title.

5.3.1 First iteration

In the first iteration of the architect phase paper sketches of the three design ideas from the analyze phase were made. Theses sketches were then developed in the design software Sketch\(^2\) and filled with some of the existing title content in Barnplay and some of the fake titles created. The idea was to give the fake titles attention in the parts of the prototypes were the new functionality was used. Through all prototypes the same real and fake content were used. Finally, the designs were made interactive by importing the Sketch-design to the prototyping software InVision\(^3\) resulting in three mid-fi prototypes.

\(^2\)Sketch, https://www.sketchapp.com/
\(^3\)InVision, https://www.invisionapp.com/
5.3.2 Second iteration

From the results of the first iteration, a new prototype was created where ideas were combined and refined. The main idea was designed in Sketch and the design was made interactive by importing the Sketch-design to the prototyping software Marvel\(^4\). Fake titles were used in this prototype as well.

5.4 Assess

The Assess phase follows the Architect phase and is about evaluating something created through user tests. The point of testing is to discover problems with the current design by observing children while using the prototypes. The Assess and the Architect phase are iterative and the findings from the Assess phase can be used to re-architect the solution. In this study, the assessment were performed in two iterations and user tests were scheduled on schools and preschools.

5.4.1 First iteration

During the first iteration three different prototypes were evaluated by preschool children, school children and parents of the youngest preschool children. More information about these prototypes can be found in the result section 6.3 and an observation schedule can be found in appendix D. The test included 6 children from five to 10 years old and three parents of two to three-year-old children. Involving parents in the assess phase and listening to their thoughts and opinions is a good way to make sure they will approve of their children using the design [9]. It is important to note that the control the parents have over their children decreases as children get older which makes it more important to involve parents of younger children in the design process.

5.4.1.1 Procedure with children

The session with children was preceded by starting the video recorder for the children which parents had agreed to this. Firstly the agenda were presented to the participant and a shorter interview was conducted to learn about the participant’s name, age, television and internet usage, device usage, and previous contact with Barnkanalen and Barnplay. Participants were also asked to take a photo together with the researcher, this photo was later used to live-edit one of the prototypes and insert this image as a profile photo. After this, the current version of Barnplay where six of the titles was changed to the fake titles was shown to the participant’s and they were asked to look around and indicate which titles they wanted to watch. If they only mentioned titles they watched before they were encouraged to point out titles they did not see before but wanted to try.

A shorter episode of a title of the participants choice was watched to give the researcher time to edit the first prototype and to be able to test if the participant

\(^4\)Marvel, https://marvelapp.com/
wanted to react to the content after watching the video by selecting a smiley dislike or like button in the end of the video. If they did this they were directed to a page to create their own profile page with photo, name and age. The researcher assisted in taking a fake photo with the device by updating the prototype before giving it back, resulting in a user page with the participant’s photo and name. The participant received questions about the icons for age, how they perceived them and which one they wanted to use and were then asked to go to the page with all programs. When they mentioned the pictures of other children in the prototype they were asked how they perceived this function and what they thought it was. Finally, they were asked to point out the titles they would like to watch in the prototype.

For the next prototype, the participants were asked to look around in the prototype, if they did not mention anything about the TV they were asked if they could find something new. When they mentioned the TV they were asked what they perceived would happen if they clicked on it, and when they did, what they thought it was. They were asked to try it out and received questions about the age icons and category icons when they clicked on them. When they manage to start the TV-machine they were asked to point out the titles they would like to watch from the playlist.

For the last prototype, the participants were asked to look around in the prototype and show programs they wanted to watch. If they did not try the age filter or the sorting by popular or new content they were asked about what they thought those functions did. When they tried them they were asked which alternative they liked the best and were once again asked to show programs they wanted to watch.

To complete the session, participants got to rate the three prototypes based on how much they liked them. This was done by showing each prototype again, and using a measurement where the participants got to make a mark on a line from sad smiley to happy smiley and explain what they liked and did not like about the prototypes.

5.4.1.2 Procedure with parents

Parents of younger pre-school children were interviewed and got to test the prototypes and express their opinions. Each session was preceded by asking the participant if they were comfortable with having the session recorded and a brief explanation of the agenda followed. The parents were asked question about their children’s age, TV and Internet habits, device usage, previous contact with Barnkanalen and Barnplay, rules and parents involvement, and content discovery. An observation where the participant was asked to think aloud while testing each prototype were then carried out. This method lets the participants express what they see, think, feel and expect when interacting with the prototypes and helps to discover how users perceive and feel about the design [32].

5.4.1.3 Hypotheses

To validate the concept and design a few hypotheses for each prototype were created before the user tests.

Hypotheses for the first prototype:
Older children trust in people around them for recommendations and care about what other children in their age or other people they look up to think, we know this if they want to watch titles liked by people they know or recognize

**Hypotheses for the second prototype:**

- When children and parents customize the result the end result is more appealing to them, we know this if filtering content makes them find more titles
- Old and young children have different preferences and make decisions easier if content is less but more accurate to their age group. We know this if they find more titles they would like to watch when the content is filtered for their age group

**Hypotheses for the third prototype:**

- Old and young children have different preferences and make decisions easier if content is less but more accurate to their age group. We know this if they find more titles they would like to watch when the content is filtered for their age group
- Young children choose content based on what's attention-catching. We know this if they like to watch bigger titles in the top of the matrix when content is filtered to their age group

### 5.4.2 Second iteration

During the second iteration, one prototype with different content and adoption for younger and older children were evaluated by preschool children and school children. The research included 9 participants, three preschool children (3-6) and six school children (7-11). Each session was video recorded and preceded with a conversation about programs and other things the participant liked. The three-year-old participants were only showed the program page for young children in prototype and asked to look around to find a program they would like to watch while the other participants from six to 11 years old got to try the entire solution. Similar to the first iteration photos were taken with these participants to later edit the prototype and inserting this image as the participant’s profile photo. A shorter video was watched to give the researcher time to edit the Personal-prototype and to be able to test if the participant wanted to react to the content after watching the video by selecting a smiley dislike or like button in the end of the video. After this, they were directed to a page to create their own profile page with photo, name and age. The researcher assisted in taking a fake photo with the device by updating the prototype before giving it back, resulting in a personal page with the participant’s photo and name where they could choose their age and save the user. They were asked to go to the program page and look around to see what they wanted to watch. The users who selected age seven to 12 got the version for older children while the users who selected two to six years old got the version for younger children. If the older did not mention the titles recommended by friends or the number of likes on the titles they were asked about their opinion about these functions. The children were also
asked about the type of programs they wanted to see and their opinion of the filter function. An observation schedule can be found in appendix E.

Hypotheses:

- Older children care about what other people think and do not want to miss out, we know this if they want to watch titles with many likes or content which their friends like.

- Older children have specific interests and want to customize content, we know this if they like to adjust content by filtering

- Young children are impatient and choose content based on what's most attention catching. We know this if they like to watch the title with a big image and a play button in the top.
6 Results

In this chapter, the results from each phase of the methodology are described. The chapter is preceded with information found during user research, then introduces the focus areas found when analyzing the information, the design concepts created and the results of user testing these concepts.

6.1 Absorb

This section describes the results from the absorb phase including observational findings, interview findings, survey answers and statistics from Barnplay.

6.1.1 Observation with preschoolers

The main findings from the observation with preschoolers are divided into two subsections.

Interaction and Navigation  These children have troubles with understanding horizontal scroll but the vertical scroll is not a problem. The first program they choose is often chosen directly without looking around. Problems occur when wanting to close video since the 'x' is not visible when the video is playing and also with the title view since "x" is not visible. They do not use a structured pattern of searching through one row at a time and doesn’t seem to see the difference between rows and the connection between titles in a row.

Attention and discovery  Picture, position, size and color is important to catch attention. Most children start looking in the multiple category row which has a colorful background or in the first row which has bigger round images instead of smaller square ones. All the titles they wanted to see were titles they previously watched. When wanting to see a program, two of the children repeatedly clicked the title picture to start the video since that picture was more colorful and more attention catching than the episode pictures. These children also often get distracted and forget when they are looking for something and find other titles they want to see. Non of the participants knew the function of the tombola and one girl stated that the program she got was for older children like her sister.

6.1.2 Observation with school children

The main findings from the observation with school children are also divided into two subsections.
**Interaction and Navigation** These children navigate in a structured manner one row at a time and understand the grouping of titles into categories. They have no problem with any type of navigation. The search function was used when something was difficult to find. After the observation with Barnplay two 8-year-old participants showed a video on Youtube and wanted to express their feelings by hitting the like-button.

**Attention and discovery** Which category the content belong to seem to be very important and they usually look for programs in for the oldest and popular category. Non of the participants understood why they got the program they did from the tombola and one girl commented "Well, you could always try it 100 times until you find something".

### 6.1.3 Semi structured interview

Most children state that they use a smartphone and got their own around age 8-9. Younger children have rules about television and Internet usage regarding the time of day and amount of time and all children have a restricted phone policy in school. The VoD services they primarily use are Youtube but also Netflix, Barnplay, TV4 Play and SVT Play. When watching these they usually use their smartphone or watch it on a big screen. Broadcast channels mentioned are Nickelodeon, Disney channel, Barnkanalen and TV4. These children usually watch broadcast with their family and often watch VoD alone. Fun or spooky and exciting programs are popular among all participants. Popular programs are interesting and it is important that the program is for older children. When encountering a program for younger children in the popular category one participant said "that program is not popular". They often know what they want to watch before entering Barnplay, they have programs they usually watch and sometimes they use Barnplay to watch a program they missed in broadcast. If they do not know what to watch and do not see anything that appeals to them in the popular or for older children category, they like to think in terms of what type of program they would like to watch to make it easier to decide and know where to look. Decisions about what to watch are often based on title image and the category label connected to the content. Usually, they discover programs through recommendations from friends or family members and sometimes they find something accidentally watching broadcast television.

### 6.1.4 Survey

From the information collected from parents of preschool children, 5 out of 6 children used the Internet to watch audiovisual content. All parents stated they had rules about VoD and television usage and the ratio between VoD and broadcast varied between children. Some parents estimated the VoD usage to be 75 percent of the total consumption while some said it was 0 percent, the most frequent answer were 25 percent. 2 out 6 children used more than one device and one didn’t use any device at all. The most popular devices for streaming were tablet and big screen and almost all children shared the devices with other family members. VoD was mostly used after coming home from preschool relaxing together with siblings and sometimes alone, while broadcast was mostly watched during weekday evenings and
weekend mornings together with siblings or parents. The most popular VoD service was Barnplay, but other services like Netflix and Youtube were also mentioned. Parents more often said their child could manage to start audiovisual content by themselves and that they occasionally helped. Most parents experienced that their child usually made up their mind about what they wanted to watch before they entered a VoD service, but 3 out of 5 said that they sometimes looked around for something to watch. When watching television, 2 said they already knew which program to watch while some only watched what was on Barnkanalen and some looked around on different channels. Parents said their children mostly discovered new audiovisual content with their help by them introducing something new or at a chance by watching broadcast television. They also thought images in VoD services, television commercials/trailers, and recommendations in VoD services helped.

6.1.5 Statistics

The data collected from Barnplay with Adobe Analytics:

**Video starts per module** Most video starts are made from the history list. Other modules with many video starts are the second part of the top list module with round title images with titles from A-Ö, the first part of this module with recommendations based on previous viewing, and the popular list.

**New video starts per module** The modules with the number of most new video starts are the second part of the top list module with round title images with titles from A-Ö, the tombola, the first part of the top list module with recommendations based on previous viewing and the popular list. The ratio of new video starts per total starts in the module is biggest in the tombola, in for the oldest list, and in the tips list.

**New video start per visit** The number of new video start per visit vary from 0.2 to 0.4 depending on time and day.

6.2 Analyze

This section describes the results from the analyze phase and includes the focus areas for the idea generation workshop based on the findings from the absorb phase. The concluding design concepts based on workshop ideas and benchmark findings are also described.

6.2.1 Focus areas

Areas found to affect content discovery in a VoD service for children based literature studies and user research:

- Word-of-mouth
- Broadcast television
- Parents involvement
6.2.2 Workshop ideas

Encouraging conversation

- Personal recommendations
- Liking content
- Most liked content

Serving content

- Dynamic content
- More categories
- Playlists
- Trailers

Parent friendly

- Customizing content
- Playlists

6.2.3 Concept ideas

Based on the main idea clusters generated during the workshop and the benchmark of other VoD services three concluding concepts were generated:

**The TV-Machine** This idea involved enhancing the functionality of the existing tombola by making the concept of fast starting content more clear and to add controls to customize the experience.

**The personal page** This idea involved a user page and the ability to like, share and get personal tips.

**The matrix** This idea involved a dynamic and personal matrix with all titles in a vertically scrolled view with functions to sort and filter content.

6.3 Architect

In this section, the design concept and prototypes created during the architect phase are visualized and described.
6.3.1 Sketches

As a first step of the architect phase sketches were made to visualize the three design concepts and their features. *TV Machine* is presented in Figure 12, *The Personal page* in Figure 13 and *The Matrix* in Figure 14.

![Figure 12: The TV Machine concept which includes a television element to customize and fast start a playlist](image1.png)

![Figure 13: The Personal page concept which includes a user page and the ability to like, share and get personal tips from other users](image2.png)

6.3.2 Fake titles

To be able to test how the discovery of unfamiliar titles was affected in the design concepts nine fake titles were created, see Figure 15. These were also used in the current design of Barnplay to investigate how much attention the fake titles got in the current design compared to in the prototypes, see Figure 16.

6.3.3 First iteration prototypes

The first three interactive prototypes were created based on the sketches. The content used in the prototypes were real titles from Barnplay as well as fake titles. In the Personal-prototype the fake titles are featured in the list of recommendations from others, in the Matrix-prototype the fake titles are featured as bigger images
Figure 14: The Matrix concept which includes a dynamic and personal feed with all titles to scroll through vertically with functions to sort and filter content.

at the top part of the page and in the TV-Machine-prototype the fake titles are featured in the list of titles purposed by the machine. Screens from the TV Machine prototype is presented in Figure 17, screens from The Personal page is presented in Figure 18, screens from The Matrix is presented in Figure 19.

6.3.4 Second iteration prototype

From the findings from the assess phase a second prototype which comprised the functionality which seemed promising from the first iteration were created. The central functionality was a more dynamic and personal feed with a distinction between older and younger users due to their developmental differences. The concept included a personal user page with age settings to filter content to the right age group and also change some of the functionality, see Figure 20. The content feed could be customized by a category filter. For older children, content could be liked and disliked and most liked content within the filtered context were featured in the top of the feed and bigger in size than other titles. Older children could also see content liked by their friends, see Figure 21. Younger children did not have this functionality, instead, a bigger recommended title with a play button was featured in the top of the feed, see Figure 22.

6.4 Assess

This section presents the results from the user observations with the prototypes. The assessment was performed in two iterations were the first iteration included three different prototypes and the second included one final prototype.

6.4.1 First iteration prototypes

All of the participants knew about Barnkanalen and most had used Barnplay. Devices used for VoD among school children were desktop, smartphone and tablet, and
tablet or big screen among preschool children. School children often talked about program types they liked, for example, funny, spooky and exiting and animal programs, while preschool children talk about specific titles. None of the participants mentioned they wanted to watch any of the fake programs inserted to the current design of Barnplay, see Figure 16. All of the participants firstly mentioned titles they had seen before. When encouraged to find unfamiliar titles they wanted to try some of the participants pointed out titles in the tips category and some said they did not know. In the prototypes with the new concepts, many of the participants became interested in the fake titles. Younger children were still more skeptic to new titles while older children usually found the fake titles interesting. The matrix was better for making younger children interested in new titles while the matrix and the TV-machine were good for older children. The personal page did not make any of the younger children interested in new titles while the older children liked the function but rather got recommendations from friends than just familiar faces.

The TV-machine

During observations with the TV-machine prototype, most children believed they would start a new program or see what was on broadcast at the moment by clicking the television. At the setting page, most children had troubles with understating what to do and sometimes instantly closed the machine. Younger children expected something to happen instantly when clicking a button or that the content in the lists in the overview would have change when they closed the machine. Older children understood that that content was filtered with the different options and usually selected the option for older children and started the machine. The participants were less satisfied with the result if the machine was started for the wrong age group. If the machine were started for the right age group, some children wanted to start the first program in the playlist, which was a fake title, while some wanted

Figure 15: The fake titles made for the prototypes to test how discovery of unfamiliar titles is affected. The upper six titles target older children while the bottom three target younger children.
to select another program which they recognized in the list. Parents of younger children liked the narrowing down of options to find new titles to introduce for their children but did not find the playlist function necessary.

The matrix

During observations with the matrix prototype, the structure and appearance were appreciated by all children. They liked that content were given more space and that images and titles were bigger. The younger children did not see the filter and sorting buttons and did not understand the function, but when using it they preferred the view filtered for younger children. These children were mainly focused on titles they recognized but showed some interest for the bigger fake titles in the top. The older children all understood the filter and sorting functions and preferred to have the content filtered for older children. One of the children mentioned that she wanted to be able to decide if she wanted to see a fun or spooky program as well. Parents of younger children liked this concept since it would work perfectly for children to handle on their own if they firstly adjusted the age. They mentioned that making the age setting less available could prevent smaller children from later changing the settings by mistake.
The personal page

During observations with the personal page prototype, all children wanted to create their own user and most children understood the concept of liking a video. The older children wanted to adjust the age to 7-12 years old and thought this would make the content adjust to older children. The younger users did not really understand this function. The older participants immediately saw the recommendations from other children while the younger were more focused on other things and did not understand the function. One of the older participants got really excited about if other children could see what she was watching from her computer at home. Parents of younger children did not see the need for this function for their children but though it was fun for older children. They mentioned that the recommendation should be based on titles actively liked and not just titles watched since some programs might be embarrassing to watch in a certain age.

6.4.2 Second iteration prototype

During the second iteration, one final prototype was tested. Among the younger participants, the most important finding was that everyone wanted to watch the title in the top with a big image and a play button. Even though two of them previously mentioned other titles they really liked that also could be found in the feed they firstly chose the top title. The concept for older children with liking a video, creating a user, see likes of videos, see what friends like and category filters was pretty clear to most participants with some confusion about why their friend’s photos were in the prototype. These children had very distinct personal interests regarding programs like horses and baking but also more recurrent ones like fun, spooky and exciting. They said that they did not know which type of program they wanted to see each time but they knew it was some of the types they liked and did not want to see the other program types they did not like. Therefore, they appreciated the filter function where they could create their own feed. Most participants found the images of other children they knew interesting but some said that they had different taste and wanted recommendations from people with the same taste as them, while some were willing to try a program if a friend liked it. The children who did not trust friends recommendations were generally more positive to titles liked by many but they were still concerned about the category label of the content to make sure it was the type of content they could like.
Figure 17: Screens from the TV Machine prototype. (1) Shows settings for age, (2) shows settings for interest, (3) shows settings for limited time, (4) shows a featured episode of the selected title in the playlist, (5) shows a playlist of selected titles from the filter in the TV machine.
Figure 18: Screens from the Personal page prototype. (1) Shows like and dislike button in the end of an episode, (2) shows the user page and the different users on the account, (3) shows setting for the age of the user, (4) shows a list of other users in the same age group as the user and celebrities among children in this age group, (5) shows a list of titles which this user liked.
Figure 19: Screens from the Matrix prototype. (1) Shows settings to filter and sort the content in the feed based on age and novelty or popularity, (2) shows some titles as bigger and in the top of the feed.
Figure 20: The user page in the final prototype which includes a photo of the user, the name of the user, a drop down to edit the age which will filter content by age, a settings button, and a button to close the user profile page.
Figure 21: The feed for older users in the final prototype. (1) Shows settings to filter the content in the feed based on categories, (2) shows some titles as bigger and in the top of the feed, (3) shows the number of likes of these titles, (4) shows a list of titles liked by friends of the user.
Figure 22: The feed for younger users in the final prototype. (1) Shows settings to filter the content in the feed based on categories, (2) shows one title as bigger and with a play button to fast start a featured episode.
7 Discussion

This chapter discusses the relationship between the underlying research theory and the results from different phases of the methodology. This will result in fulfilling the objective of the thesis by introducing guidelines for content discovery.

7.1 Results

In this section, findings and decisions from the absorb, analyze, architect and assess phase will be discussed.

7.1.1 Absorb

During observations, the main finding consistent with the design guidelines for children and children’s decision making in the theoretical framework was that school children and preschool children are very different. Young children do not see parts of the whole and they did not understand categorization of content into lists. They have troubles with keeping things in their head instead of in the world and they did not understand that lists could be horizontally scrolled even though a title was only half visible. Young children also have troubles with focusing their attention and they mainly focused on bigger or more colorful elements and titles. They like familiarity and repetition and were mostly interested in the titles they recognized. Older children had no trouble with navigation, they clearly see parts of the whole and understood categories. Their decision about what to watch was often based on the category label and the appearance of the title image. Popular content and content which clearly is for older children were preferred, probably since these children are more concerned about others opinions and have other preferences than younger children. They also like to think in terms of interests and the type of content they like which related to the theoretical framework regarding understanding grouping of content and using interests as part of their self-identification process. They put more energy and thought into the decision-making process than younger children who made more impulsive decisions based on something that caught their attention.

Findings from the interview and survey consistent with the sections about content discovery and caretakers influence in the theoretical framework were that most school children said they mostly discovery new programs by recommendations from friends or found something passively watching broadcast television. Parents of younger children had more influence over the selection process, as also mentioned in the theory, and said they often introduced new content to their children or their children found something by chance watching broadcast television. We believe that the fact that
children more often find new content watching broadcast television is probably because they do not have to make an active decision to watch something new compared to when using a VoD service. The threshold for watching something new is lower since the child only has to start the television and watch the program which is on, which sometimes will be something new.

These findings conclude that there is a difference between content discovery for younger and older children since younger children are less aware of social acceptance and other children’s opinions and more dependent on parents rules and opinions. Areas which affect content discovery for all children are more passive discovery with broadcast television, recommendations from others for older children and parents involvement for younger children.

7.1.2 Analyze

The ideation workshop generated a number of ideas based on the focus areas established after user research. A benchmark of other VoD services was carried out to get insight about how other stakeholders on the market handled content discovery and to find inspiration about how the ideas from the workshop could be applied in design concepts. By combining these findings with ideas from the workshop three concepts emerged. One focused on a combination of serving content and being parent friendly by using customizeable playlists; The TV-machine. One focused on a different approach of serving content and being parent friendly by using customizeable and dynamic content; The matrix. And one focused on encouraging conversation by liking of content and personal recommendations; The personal page.

The Matrix
Some of the ideas concerned a more personal view which focused on the content with less static grouping. These ideas boiled down to making a dynamic and personal matrix with functions to sort and filter content. Making content adjustable to age was something we experienced could be beneficial according to the findings from user research about content discovery. Older children were also interested in knowing about new content and motivated by popularity among others. Therefore sorting of content by these parameters were included. Younger children had less patience and focused their attention on more visually dominant elements and therefore new titles were decided to be bigger and instantly visible to enhance discovery. These children also experienced problems with horizontal scroll and therefore the matrix was decided to be scrolled vertically without horizontal navigation.

The TV-Machine
Some of the ideas concerned playlists and settings. These ideas boiled down to enhancing the functionality of the existing tombola by making the concept of fast starting content more clear and to add controls to customize the experience. Many discover new content more passively watching broadcast television but the concept of the tombola was very unclear to the participants who seemed to experience a lack of control during user research. To give users more control over content selection adding adjustments for age and interests were something that could be beneficial according to information about content discovery from the user research.

The personal page
Some of the ideas concerned being more personal and sharing
personal preferences to other users. During user research participants wanted to like content on Youtube and many older children stated they discovered new titles by recommendations from friends. These ideas boiled down to making a user page and the ability to like, share and get personal tips from people they know to motivate discovery.

The idea regarding serving content by using trailers was not taken further in the design concepts since it regards content rather than the presentation of content and goes beyond the scope of this study. Though we believe, that trailers in the service could potentially be a good way to create awareness and enhance discovery of unfamiliar titles since discovering something new often happen more passively.

7.1.3 Architect and assess

The design concepts were prototyped and evaluated during the assess phase through observational research. The main finding was that there is an observable difference between children of different ages. They all seemed aware of the fact that certain content is meant for younger children and certain content is meant for older children. New content meant for their age group were always more interesting. This relates to the theoretical framework with regards to that VoD services for children should be designed as containers where the content is adjustable to age to make discovery easier.

The decision to choose something new seemed to be motivated by different features among older and younger children. Younger children made more impulsive decisions to select something new when something caught their attention, as the big title with a play button. This relates to the parts of the theoretical framework which state that younger children have a problem with directing their attention and easily get sidetracked by visual clues. Older children also noticed visually prominent content but were more concerned with the category labels and content liked by other children to make sure it could be something they could like. This relates to the parts of the theoretical framework which state that older children use more reasoned strategies for decision-making and have more developed individual preferences as well as care more about other others opinions. It also seems consistent with the statistics from Barnplay which stated that the ratio of new video start was highest among all lists in the for the oldest category.

One difference mentioned in the theoretical framework between children of different ages consider the preference for familiarity and repetition. This was also something experienced during user studies where younger children were less interested in new content and preferred familiar content while older children were more interested and stated they actively tried to discover new content in VoD services. School children, therefore, seem to be a better target audience for functions which enhance discovery of new content while it is less important to younger children who are more contempt with repetition.
7.2 Concluding guidelines

With references to the results and discussion following the absorb, analyze, architect and assess phase we can conclude that content discovery can be improved by following these guidelines.

**Categorize** Use different parameters to divide and group content to make choices more clear. Children have very different preferences due to developmental differences and a child is more likely to select an unfamiliar title which targets her age group. Therefore grouping content by age is most important. According to the theoretical framework, older children think in terms of part of the whole and understand grouping of similar content. As a part of their self identification process they develop distinct interests which they identify themselves with. Therefore a genre or special interests can be used to make older children more interested in a title.

**Dynamicize** Provide every individual user with a personal experience designed for them instead of the same static experience among all users. By giving users the opportunity to contribute to and customize their own experience users will feel more motivated to try the featured content. In VoD services for children making it possible to customize content to age is most important since children are more likely to select an unfamiliar title which targets their age group. Making the content dynamic to age will also make it possible to tweak motivational features for different age groups and raise the importance for older age groups.

**Highlight** Use different visual parameters to create a hierarchy of attention where one or few alternatives are experienced as more important. Younger children prefer familiar content but are impatient, impulsive and have a hard time focusing their attention. Making one alternative more prominent and easily accessible with parameters such as size, position and color will make this choice more interesting to them even if it is unfamiliar.

**Socially engage** By building a bridge between users and allowing them to express themselves it will create a collective feeling where the service is experienced as more personal. Older children are often interested in other peoples opinions, especially friends, and featuring a combination of quantitative and qualitative information about other users behavior can therefore motivate a decision to watch something unfamiliar.

7.3 Limitations and Future Work

This thesis only focused on how to improve content discovery of unfamiliar titles within a VoD service while the area of influencing the user are much more extensive and connected to marketing efforts. Some examples which also should be considered are trailers and commercials or by targeting caretakers on social media or email with recommendations for their children. Due to the time limitations there are several
ways to improve the methodology used in this thesis. Limitations and drawbacks include:

**Number of tests** A limited number of fifteen user tests with prototypes were carried out to establish the guidelines.

**Prototype fidelity** Mid-fidelity prototypes were used during user tests which might have affected the participant’s experience of the features.

**Content** The content used to investigate content discovery were fake titles instead of real titles unfamiliar to the participant. Content discovery in the test could therefore be dependent on special preferences among the participants.

**Integrity and law** The parents participating in the study did not see a problem with the integrity aspect of storing users behavior and displaying it to other users though personal recommendations. This type of feature needs further investigation with more parents and children to establish the acceptance. Also, new laws about children and social network usage will be established in the European Union 2018. These state that children below 16 or 13 years old need the permission of a parent to use these type of platforms whereas now this is something between the user and the company. Social features like friends recommendations would therefore by law require parents approval in the future [41].

For future research, it would be interesting to develop features of the prototype and analyze these live to see how content discovery is affected. The aim of this study was to enhance the VoD experience and make users more contempt, therefore it would also be interesting to investigate how consumer loyalty is affected in long term by a VoD service which promotes discovery of new content instead of promoting content seen before.
8 Conclusion

The objective of this thesis was to identify parameters to enhance content discovery of unfamiliar titles within a VoD service for children. This comprised investigating how children discover new programs, identifying what affects a decision and how decisions are made, and looking into how the behavior differ in different ages. Following a methodology called The 4 A’s in designing for kids, including an absorb phase, an analyze phase, an architect phase and an assess phase, four guidelines for content discovery were produced.

During the absorb phase literature studies, as well as user research were conducted, including observations with children, interviews with school children, a survey to parents of preschool children and collection of quantitative data with Adobe Analytics. During the subsequent analyze phase three focus areas for content discovery were identified: passive broadcast viewing, word-of-mouth and parents influence. These areas were used as a basis for an idea generation workshop which yielded a number of initial ideas. A benchmark of other VoD services was carried out for additional inspiration and from this three concepts were created: the TV-machine, the matrix and the personal page. The TV-machine concept included customizable playlists, the personal page included a user page and the ability to like, share and get personal tips from other users, and the matrix included a dynamic feed with functions to sort and filter content. These concepts were actualized during the first iteration of the architect phase with design and prototyping software. The prototypes were then evaluated during the first iteration of the assess phase through user observations with school and preschool children and parents to the youngest children. From these findings, a new prototype was created during the second part of the architect phase which comprised the functionality that seemed promising from the first iteration. This prototype was evaluated through observational research during the second part of the assess phase.

With references to the results and discussion following the absorb, analyze, architect and assess it was concluded that content discovery can be improved if content is categorized, dynamicized, highlighted and socially engaging. Categorizing content based on age is most important since a child is more likely to select an unfamiliar title which targets her age group. For older children grouping content by genres and special interests can be used to make them more interested in a title. Making the service dynamic and personal and allowing users to customize their own experience will give users more accurate recommendations and increase motivation. Customizing based on age is most important, but customizing content by genres and interests to make content with selected parameters visible will also make the result more interesting to older children. Making one alternative more prominent and easily accessible with parameters such as size, position and color will make this alternative more interesting especially for younger children who have a hard time...
focusing their attention and make impulsive decisions. By allowing older users to express themselves and feature other users opinions it can motivate a decision to watch something unfamiliar.

Due to the time limitations, there are several ways to improve the methodology used in this thesis such as number of tests, prototype fidelity, and content in the prototypes. For future research, it would be interesting to develop features of the prototype and analyze these live to see how content discovery is affected.
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Hej!

Vi på Barnkanalenens digitala avdelning på SVT jobbar med att göra appar och spel för barn mellan 3-11 år. För att kunna göra enkla och roliga upplevelser träffar vi ofta barn och provar tjänsterna tillsammans. På så sätt kan vi bättre förstå hur barnen använder tjänsterna. Det brukar gå till så att vi låter barnen prova delar av vår webbplats eller appar och berätta vad de ser och upplever.

När vi provar tjänsterna med barn vill vi gärna dokumentera det genom att filma hur barnen använder apparna och spelen. Vi använder filerna internt för att kunna upptäcka vad som är roligt, tråkigt och vad som är svårt att förstå.

Vi hoppas att det går bra att vi dokumenterar när ert barn testar våra tjänster!

☐ Jag godkänner att mitt barn (barnets namn: ___________________________) får filmas för internt bruk av SVT enligt informationen på denna blankett.

__________________________  Datum: / 2017

Förälders namnunderskrift

Vill du veta vad vi har sparat om ditt barn kan du när som helst kontakta oss på:

Sveriges Television AB
105 10 Stockholm
tel. 08-784 00 00
tittarservice@svt.se
Personuppgiftsansvarig: Roland Pihl
Om ditt barns vanor kring TV och streaming-tjänster

Om någon fråga är svår att svara på, indikera gärna detta i övriga kommentarer (sista frågan).

1. Mitt namn

2. Mitt barns namn

3. Mitt barns ålder

4. Använder ditt barn ibland internet för att se på program / filmer / serier / videos?
   Markera endast en oval.
   ☐ Ja
   ☐ Nej

5. Hur stor del av alla program / filmer / serier / videos ditt barn ser på en vanlig vecka använder hen internet för att titta på?
   Markera endast en oval.
   0% - Nästan inget (bara vanlig TV)
   1  2  3  4  5
   100% - Nästan allt (bara streaming-tjänster)

6. När brukar ditt barn se på streaming-tjänster?
   Markera alla som gäller.
   ☐ I sängen innan hen kliver upp
   ☐ Vid frukosten
   ☐ I bilen/bussen
   ☐ På förskolan/skolan
   ☐ På raster
   ☐ Vid lunchen
   ☐ Kommit hem från förskolan/skolan
   ☐ Vid middagen
   ☐ Tar det lugnt ensam
   ☐ Tar det lugnt med andra
   ☐ Sitter på toaletten
   ☐ I sängen innan hen sonnar
7. När brukar ditt barn se på vanlig TV?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

8. Vilka streaming-tjänster brukar ditt barn använda?
Markera alla som gäller.

☐ Barnplay
☐ SVT Play
☐ Youtube
☐ Netflix
☐ TV4 Play
☐ Viaplay
☐ Annat

9. När det gäller streaming-tjänster, brukar ditt barn oftast veta vad hen vill se eller brukar hen starta en streaming-tjänst och leta efter något att att titta på?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

10. När det gäller vanlig TV, brukar barnet oftast sätta sig vid TV:n för att se ett specifikt program eller sätter hen sig vid TV:n och letar efter något att titta på?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

11. Hur stor del av allt ditt barn tittar på under en typisk vecka är saker som hen följer aktivt sedan innan
Markera endast en oval.

1 2 3 4 5

0% - I princip inget ☐ ☐ ☐ ☐ ☐ 100% - I princip allt
12. Hur tror du ditt barn upptäcker program/filmer/videos som hen inte sett förut som hen vill titta på?
Markera alla som gäller.
- Föräldrar hittar
- Kompisar tipsar
- Slumpmässigt utifrån bilder i streaming-tjänster
- Letar runt efter något utifrån kategorier i streaming-tjänster
- Ser reklam/trailers på TV
- Hittar av en slump vid TV-tittande
- Bläddrar runt bland kanaler
- Får rekommendationer i streaming-tjänster baserat på tidigare tittande
- Får rekommendationer om vad andra tittat på i streaming-tjänster
- Annat

13. Tycker du att ditt barn ser olika typer av innehåll (filmer, korta videos etc.) genom olika typer av medium (vanlig tv, streaming) beroende på när på dagen samt vilken dag det är?

14. Hjälper du som förälder till att starta program eller sköter barnet sig själv?

15. Använder ditt barn...
Markera alla som gäller.
- Tablet?
- Smartphone?
- Dator?
- Smart-TV (eller Apple-TV)?

16. Delar barnet enheten med någon annan (syskon, föräldrar) eller har den en egen?

17. Tittar ditt barn oftast på streaming-tjänster ensam eller tillsammans med någon? (I så fall vem?)

18. Tittar ditt barn oftast på vanlig TV ensam eller tillsammans med någon? (I så fall vem?)
19. Har ditt barn begränsad TV-tid eller bestämmer ditt barn själv när/hur mycket hen tittar?

20. Har ditt barn begränsad internet-tid eller bestämmer ditt barn själv?

21. Om ditt barn använder Barnplay, vilka program brukar hen se?

22. Övriga kommentarer
C Absorb: Interview guide and observation schedule

Absorb: Intervjuguide på skola

1. Vad heter du?
2. Hur gammal är du?
3. Tycker du om att kolla på filmer, TV-program och videoklipp?

Va kul, för jag tänkte att vi skulle testa en app som heter Barnplay idag där man kan kolla på program!

4. Vet du vad Barnplay är?
5. brukar du använda Barnplay för att kolla på program?
6. Berätta lite om dina favoritprogram på Barnplay?
7. brukar du använda andra streaming-tjänster för att kolla på program och videos och filmer också? Vilken mest?

Jag tänker att du ska få berätta för mig om hur du brukar kolla på videos/program/filmer och lära mig om hur Barnplay fungerar!

8. Har du några syskon förresten?
9. brukar du kolla på program/videos/filmer tillsammans med *syskon* eller någon annan eller brukar du oftast kolla ensam?

10. När du kollar på program på "streaming-tjänster", brukar du använda en padda, eller en telefon eller en dator eller appar i TV:n?

11. Har du en egen "device" eller har ni en tillsammans i familjen som alla kan använda, både du och "syskon"?

12. Bestämmer mamma och pappa hur mycket du får använda "den" och kolla på program eller får du ha den hur mycket du vill?

13. När brukar du kolla på på program och videos och filmer på "sån" då?

14. brukar du kolla på vanlig TV också?

15. När brukar du oftast kolla på vanlig TV dá?


18. Hur brukar du hitta nya program som du vill se?
Absorb: Observation

1. Kan du visa mig hur du startar appen och hur du gör för att hitta “program X”.

Om sök:
- Jaha, man kan söka efter program! Brukar du alltid göra så?

Om kategori:
- Jaha, men hur visste du vart du skulle leta det programmet då?
- Vad är det som är speciellt med den raden?
- Brukar du leta efter program där?

D.o.D. : Hittar rätt program, är i titel-vyn.

Följfrågor:
- Vad är det för skillnad på dom här olika bilderna då?
- Den där stjärnan då, vad händer om du trycker på den?
  - brukar du använda den?
  - Hur hittar du dom programmen sen?


3. Vart tror du att man trycker för att komma tillbaka till dom andra programmen nu?

D.o.D. : Trycker på krysset, är tillbaka i titel-vyn.

4. Förutom det programmet du nyss såg, kan du leta fram och peka på några andra program som du skulle vilja se?

Följfrågor
- Har du sett det programmet förut?
  - Om inte - varför skulle du vilja se dom?
- Brukar du leta efter nya program som du inte har sett förut här?
  - Hur brukar du hitta nya program som du vill se då?
- Men, vet du om dom runda bilderna och dom fyrkantiga bilderna är olika?
  - Vilken rad tycker du bäst om? Varför?
- Har du använt dom där färgglada flikarna?
  - Vad tycker du om dom?

6. Vad är den där snurran? Har du använt den? Vad händer om man trycker där?

Följfrågor
- Vad tycker du om den?
Assess 1: Observation med barn och föräldrar

Föräldrar
- Namn, barn ålder på barn, syskon?
- Barnkanalen?
- Internet och Barnkanalen-play? Annan play-tjänst? Device?
- Själv, hjälper till? Hur hittar något att kolla på?
- Hur brukar du välja, hitta program?
- Nya förslag, Testa prototyper med think aloud

Barn
INTERVJU
- Starta inspelning
-Presentera mig, Barnkanalen + appen + nya saker
- Namn och ålder
- Brukar du kolla på Barnkanalen?
- Använder Barnkanlen-play? På vilken device?
- Knäppa kort

BILD PÅ NUVARANDE
- vilka program skulle du vilja se här, peka på. Har sett? Varför?

TEST
- Labyrint? Ska vi kolla på ett avsnitt om robotarna?

Personlig sida
- Gillar, gillar inte?
- Ja just ja, man måste logga in. Skapa en användare?
- Din sida! Vad tror du ikonerna betyder?
- Om vi vill se vilka program som finns och stänga den här sidan, hur gör vi då?
- ...Ser du något nytt som du inte känner igen?
- Vad är det där för något tror du?
- Kika runt och visa vilka program skulle du vilja se!

TV-Maskinen
- Kika runt och visa vilka program skulle du vilja se!
- ...Ser du något nytt som du inte känner igen? vad är det där för något tror du?
- Vad tror du ikonerna betyder? Vad tror du knappen/ikonerna betyder?
- Skulle du vilja se något program här? Eller skulle du hellre se något annat program?

Matrisen
- Kika runt och visa vilka program skulle du vilja se!
- Vad tror du ikonerna betyder? Vad tror du knappen/ikonerna betyder?

UTVÄRDERA
- Bilder på lösningarna i slutet, kryssa i på papper vad dom tyckte om den
E Assess: Observation schedule second iteration

Assess 2: Observation med barn

PROCEDUR
- Starta inspelning
- Presentera mig, Barnkanalen + appen + nya saker
- Knäpp kort tillsammans

INTERVJU
- Namn och ålder
- Brukar du kolla på Barnkanalen?
- Använder Barnkanlen-play? På vilken device?
- Labyrint? Ska vi kolla på ett avsnitt om robotarna?

TEST
- Gillar, gillar inte?
- Egen sida. Vill du göra det eller inte? Hur tror du man ska göra?
- Om vi vill gå till programmen nu, hur gör vi då?
- Kika runt och visa vilka program skulle du vilja se!
- Ibland så kanske man tröttnar på dom program man brukar kolla på. Man skulle vilja se ett nytt program, hur brukar du göra när du ska hitta nya program?
- Hur skulle du göra här? vilket skulle du välja?
- Fråga om tips från andra, fråga om likes, fråga om meny

FÖRSKOLA TEST
- Kika runt och visa vilka program skulle du vilja se!