A design for a more engaging and improved experience at DR LYD

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Abstract

The aim of this master thesis has been to research and analyze if it is possible to create a more improved and engaging experience for the age-group 19-34 on the podcast application DRLYD, as statistic shows that there is less interest and activity from that specific age group. The ground for this assertion is based on pre-reflective research, where investigative research on previous literature within the field of podcasting, the motives for listening, and the whole podcast evolution, to establish knowledge and familiarity of the existing literature. This helped delimitate and uncover the need for more researched fields within this area and opened up the problem field. To answer the problem statement, I have done a user survey of the application with the help of four participants within the age group, and afterward interviewed and observed the users regarding their experience, expectations, motivation, and overall feedback, to, in the end, help identify what the specific target group values and find interesting in a podcast application. The user survey specifically consisted of the participants using the application for podcast listening for a week, exploring and examining its content and features, but how much they used it, what they listened to, and when was on their own terms. As the purpose is to understand their experience in the app, I must understand what an experience is, which became this thesis's theoretical perspective and investigation. The collected empirical data and the supportive theories showed the need to make the experience improved and more long-lasting. These needs are more control, transparency, and insight for the user on the application. The participants of the user survey also emphasize through the day-in-the-life method that they usually use the application when on the go, and therefore a need for the application to adapt. This opened up the next step in the process, the ideation phase, consisting of methods to ideate the requirements and then sketch, which generated a selection of potential ideas and solutions. The outcome of these ideas is an algorithm to create personalized recommendations, audiovisual previews, easier-to-save and download podcasts, and self-modifiable interest features. As a result, these needs and ideas will be incorporated into the contemporary final concept. The concept is discussed with a contributive reflective purpose by reflecting on other research perspectives of the podcast growth and the potential of the established conceptual designs. This whole iterative process has been a contributing factor in the creation of the design process of developing the contemporary final concept. However, the contemporary final concept has yet to be prototyped digitally nor tested

by the users. Therefore, the thesis and the concept are still an ongoing iterative process, leaving the concept open for change and testing out by the user.

Table of Content

1. **Introduction**

This will be the first encounter and use of the Double Diamond in this thesis. At the start of each section of the thesis, Dan Nessler's revamped model on Double Diamond will be implemented, which will be used to frame and structure this thesis. One of the key aspects of this framework is that it can be adapted and used in a way that works for the individual case, likewise in this thesis. The framework will demonstrate where I am in the design process in each section, where the red circles will reflect the stage of the process (Nessler, 2016). At this point of the process, I am in the *discover* phase, where I will question and research my field of interest.
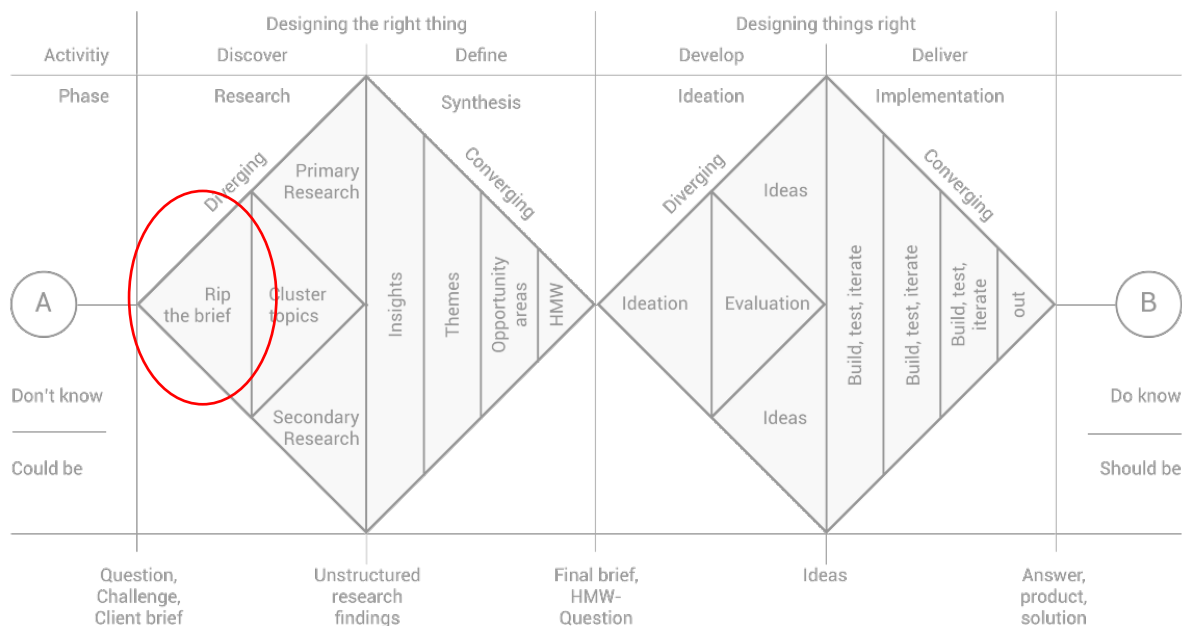
Figure 1 – How to apply design thinking – Double Diamond (Nessler, D, 2016)

The world of podcasting has grown rapidly within the last few years (McHugh, 2016; Stoll et al., 2021). This popularity growth has allowed businesses to take on entrepreneurial feats and generate revenue by creating podcasts or podcast companies (Stoll et al., 2021). This applies to individuals, companies, and radio and production companies. This has created a big market for podcast creation and applications; therefore, various affordances and restrictions are included in individual application interfaces and content (Morris & Patterson, 2015). However, there is a significant increase in weekly users of podcasts, and more are opting to use the medium in their everyday life, as the medium functions as part of digital storytelling (McCracken, 2017).

My interest in podcasting stems from a wonder of how and why a medium, such as podcasting, has become so popular and what reasons lie behind this popularity by the individual. What motives are there for the individual to listen, and what do applications do to bring people in and attract their attention? As many of my close friends use podcasting in their daily lives, I wonder about its position in terms of other audio services, such as music and radio, and why? Many applications have begun to offer podcasts to their services, such as Spotify, Apple, and DR, and others have explicitly created has created membership-based applications, such as Mofibo and Podimo (Sejersen & Kammer, 2021). This has also created a wonder of understanding what affordances some of the individual apps offer and whether this contributes to whether the individual wants to listen to a podcast, and how this can be changed.

2. **Literature review**

The literature review will start at the *discover phase*, characterized by diverging thinking. In this phase of the design process, I will begin with primary desk research, where I will investigate and review existing publications and literature to explore and expand my knowledge and understand the area of podcasting and complexity.
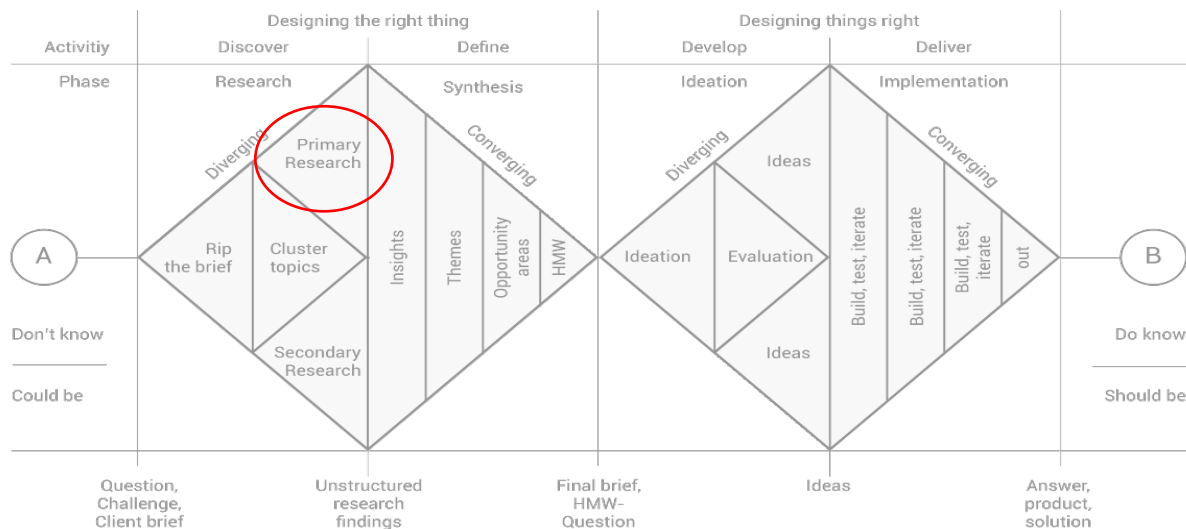

Figure 2 - How to apply design thinking – Double Diamond (Nessler, D, 2016)

2.1. **Literature search**

For preliminary research within the relevant literature, a lecture on literature review by Helle Brink helped narrow it. It determined the search area to collect relevant literature, which ended up being primarily Google Scholar to find literature.

In order to find the relevant literature, Google Scholar has been a tool for collecting and researching the interested field. As the topic of the matter concerns the usage of podcasts, the motivation and podcasts growth, and understanding how to increase listenership and engagement at DRLYD, the use of words such as: "Podcast motives," "Podcast consumption," "Podcast popularity," and "Podcast listening," were used to find relevant literature on the research field. The already established theme and wordings made are the expectation for literature search, which, as previously mentioned, support and investigates the area of why podcasts are popular and why people listen to podcasts with an average hit of 50.000-70.000 articles. I choose to narrow down the publication year to be no later than 2015 to take into account the societal

context, as I want it to best reflect the current societal context. By narrowing it down, the search reduced to around 18.000 articles, which was still a lot but better.

Consequently, I chose to look at the articles relevant to the research field and also look at the articles that have cited the relevant article. I found other articles within a similar research field and investigated the content of them and abstracts in order to create an overview of the existing literature within the search area. In the next section, 2.2, I will elaborate on the current relevant literature and how it contributes to knowledge for my thesis.

2.2. Literature review

After carrying out the literature search, I have produced a literature review, which is a review of the literature within the given area. This literature review aims to establish and demonstrate knowledge and familiarity of the existing literature of the interesting research field, which will help create a delimitation of the subject and uncover the lack of knowledge within the area.

The topic and popularity of podcasts in Denmark have developed extensively since 2019 and are still growing (Sejersen & Kammer, 2021). A few studies have been conducted on the usage, motivation, and behavioral reasoning for listening to podcasts, especially from a marketing perspective of user engagement and experience (Saabye, 2020). One of the research studies of David Garcia-Marín (2020) aims to detect the factors that influence engagement in podcasting by conducting a total of 17 in-depth semi-structured interviews. The study provides clues that commercial media can exploit that are opting for podcasting to increase their audience through a lack of in-depth investigation of listening behavior, specifically the experience behind podcast listening (Garcia-Marín, 2020).

However, the research study by Heshmat, Yang & Neustaedter (2018) investigates people's behavior and routines around podcast listening. These results of behaviors and experiences are then unpacked to draw out lessons and gather knowledge for future design decisions. In the study, Heshmat et al. (2018) applied the method of semi-structured interviews and coding to collect and handle the data. The purpose of the study is to analyze the responses of the 18 interviews to uncover how podcast users feel about their use of podcasts, especially in their alone time. According to the study, one of the uncovered data is an appreciation of the intimate connections with the host, where they valued being able to listen and engage with content while doing other activities in their alone time (Heshmat et al., 2018). Additionally, some of the uncovered data are the flexibility and the possibility to escape from the mundane, being able to

simultaneously perform an activity while also engaging their minds in other topics of interest. The study of Heshmat et al. (2018) is relevant to this research study, as it first and foremost highlights that investigating people's routines and practices around listening to podcasts is very limited. Similarly, podcasts have been discussed in relation to other audio media. For example, the research study of Li, Wang, Nazari, Chandar & Carterette (2020) is on the music and podcast streaming service Spotify. The study investigates and evaluates music listeners' incorporation of podcasts into their listening activities for the first time. The main focus is to investigate how the inclusion of podcast consumption changes users' music listening habits. Li et al. (2020) account for the content of podcasts that a cohort of new podcast users consumes. The variables collected about the users' listening habits are used to demonstrate predictions of whether an audio-listening session will contain either podcast or music. The data collected through Spotify shows that there is mild competition between podcasts and music consumption, the two types of content are not substitutes for one another, as users open another time window of 20% longer streaming timer per week to listen to podcasts. As the previous investigation (Heshmat, 2018), this research also concludes as future studies; it could be interesting to investigate the fundamental reasons underlying the differences in podcast and music listening habits (Li et al., 2020). Accompanying this, Sylvia Chan-Olmsted and Rang Wang (2022) highlight the importance of researching how different motives drive podcast users, use competing audio media at different levels, can help advance our understanding of the relationship among the media, how they might compete or complement one another going forward in the audio market.

The study also emphasizes those previous studies on podcasting, which focused on different and specific demographics, having inconsistent results, where the impact of demographic indicates that audience segmentation based on demographics could be helpful and could help with podcast content and market development (Chang-Olmsted & Wang, 2022, p. 698). The findings of the study highlight that media usage is multidimensional and should be measured from different aspects and examined in various settings. Clay M. Craig, Mary E. Brooks & Shannon Bichard (2021) dives into the same topic, but as the previous study by Chang-Olmsted & Wang emphasizes, with the use of specific demographic, different aspect, and setting. With the use of *appreciative learning* and *user and gratification* framework with the aim to uncover the strength of the relationship and engagement of their podcast usage, and in the end, get an understanding of college students how and why they seek out different forms of entertainment, such as podcasts

(Craig et al., 2021). Examples of several different studies targeting investigational research on podcast listening can be found in the literature. However, it suggests that certain areas are under-represented. This will be explored and explained in the formulation of the problem statement.

3. Empirical Research on Podcasts development

As the previous section, this section will continue in the same path of diving into the first half of the diamond, doing desk research to explore and understand the current research that has been done. However, this part will work as an empirical background of how podcasts are seen and understood as media and the development. I will delve into literature and research of the area to uncover and understand the medium and its growth. Additionally, seeking how the medium came about, how it differs from radio, how it has developed, and how the medium is viewed today from an academic point of view. This section will work as the grounds and support for the path of this thesis and will help define the problem statement.
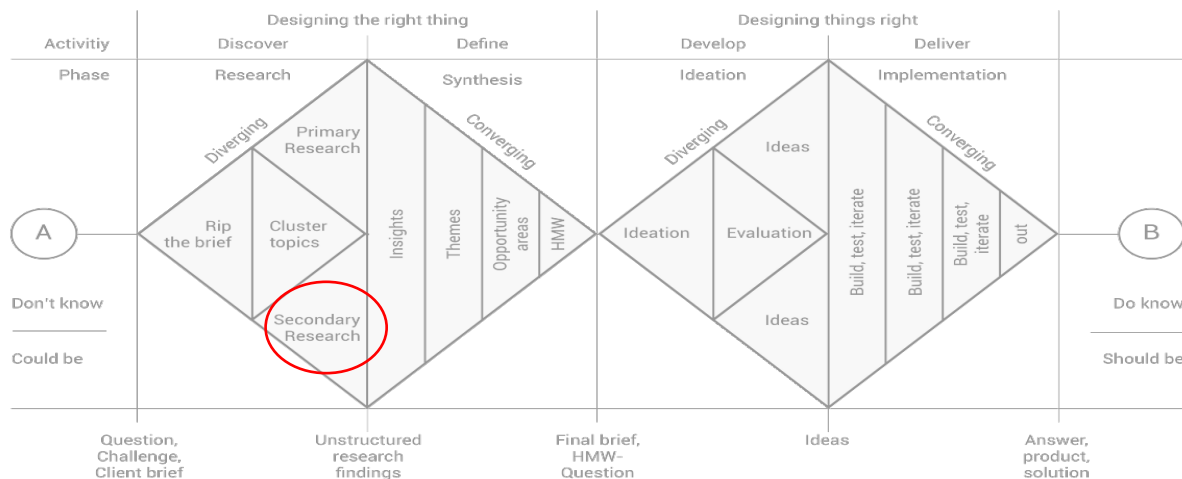

Figure 3 - How to apply design thinking – Double Diamond (Nessler, D, 2016)

3.1. The Emergence of Podcasts and its Growth into Society

Podcasting has been a thing for over 20 years, dating back to 2000, and got a breakthrough in 2005, when it became the year of podcasting, as Apple integrated podcasts into their software (Bottomley, 2015, p. 164). However, as a new medium, podcasting has had struggles to break through, as other mass mediums created competition, such as YouTube, and associated with Apple and iPod becoming obsolete. A podcast is media files that can be played on computers or handheld devices like tablets, phones, and other digital audio players. The digital audio files are delivered via Really-Simple-Syndication (RSS) to one of the devices, which means that the listener subscribes to a feed, and new recordings are pushed to the listener's devices (Bottomley, 2015, p.166). The essence of podcasting is creating audio content of whatever might seem

attractive for that person, for others to listen to whenever, wherever, and, however. The modes of consumption are up to the individual and can be consumed through headphones, car sound systems, home computers, and mobile phones. Often, these podcasts, and series of podcasts, can be subscribed to and downloaded to follow the podcast and listen whenever (Jham et al., 2008, p. 278). Apple was the first to make it possible for users to search and subscribe to podcasts (Bottomley, 2015, p. 164). This technological delve made it possible for podcasts to be delivered in a way that made the medium more advantageous and accessible. The flexibility of listening and lack of editorial and formal scrutiny in production gives the medium distinctiveness and has become more major and culturally urgent than radio. Podcasts use an appealing approach that results in a more conversational, informal, personal, and supportive atmosphere. Podcasting allows and gives opportunities to create spaces for niche and cult content. This openness for specialism also makes a form of inclusivity for everybody, as there is a podcast for everything and anyone, and if not, the possibility to create your own. Silently participating in podcasts by listening and relating to other people's interests, lives, conversations, and experiences establish this sense of connection with the sender (Llinares et al., 2018, p. 2).

Nevertheless, podcasting never completely disappeared and has grown year after year. One of the influential and markable factors happened in 2014, when the American-produced podcast *serial* got released, with 77 million downloads in 7 months, and has been seen as an important influence on the growing interest in both listening to podcasts and producing (Bottomley, 2015; Berry, 2015). Podcasts began to be seen as a symbol of a significant step for podcasting, where podcasts have gone from being considered a niche activity to being a mainstream media platform (Berry, 2015). The podcast *Serial* was a significant moment in its history and development, as it fell into what is described as 'The Golden Age of Podcasting' (Markman, 2015).

In order to better understand podcasts as an audio medium, many media researchers have examined the medium in the context of other similar media, specifically its close connection to radio. Therefore, I will explore the relationship between these two in the following section.

3.2.   **From radio to podcast**

Even though having to exist for quite some time, it is still hard to define podcasts as a genre, especially how to distinguish podcasts from radio. As mentioned and seen above, some literature has taken the opportunity of elaborating on the matter better to understand this new medium and

its sudden popularity. In correlation to this, there is a general understanding in the literature that podcasts cannot simply be perceived as an extension of the radio medium. Therefore, I will delve into the parts of the literature around podcasting that view podcast and radio to each other in order to be able to specify how podcast both resembles and differs from the well-known radio medium, so I, in the end, can achieve an understanding of the podcast medium as a genre. There are still debates over what podcasting is, what radio is, how the podcast phenomena position themselves to radio, and whether podcasting status is seen as a new medium or just an extension of radio (Berry, 2016b). However, it is worth noting that radio is still a well-functioning and established medium in the media landscape and is still produced diligently. That said, podcasting has neither replaced nor "killed" radio, and podcasting has developed definite features that distinguish it from radio (Berry, 2016a).

The two mediums share auditory codes and production practices. However, podcasting is a "new" form, as it enters a new perspective of the creative production of audio by people and groups with no broadcasting background. This new form of creative production demonstrates a different sound aesthetic, as what radios commonly known for in linear broadcasting, in terms of language, content, duration, and structural conventions are bent (Llinares et al., 2018, p. 4; Berry, 2016a)

The two mediums have their advantages, where the new medium of podcasting takes on forms that allow the audience to time-shift their listening, create a more personalized experience, and generally require little to no advertising (Markman & Sawyer, 2014). It can be argued that the purpose of the new medium is to circumvent the mediated practices of radio and create and deliver independent content directly to people, and this creates certain advantages over the radio, as it allows listeners to use the medium unaffected by time, while at the same time allowing them a direct and more personal listening experience (Llinares et al., 2018, p. 4; Mark & Sawyer, 2014). The podcast format is listened to in an intimate setting, with a personal form of communication, shared and presented in the community of interest, and where content is often searched for. Radio is argued to have a complex set of practices, determined by a combination of technology, culture, and audience, and where there is not so much focus on the content but more on the radio station itself and its format (Berry, 2016a).

With this being said, the growth of podcasting, the discussion of its positioning in other audio services, and its influence have been interesting to investigate further as podcasting has entered a

phase where technology has made it possible to be innovative (Llinares et al., 2018, p.4). The embracement of content sharing and diversity is seen as a way of including society and different cultures (Berry, 2016). As elaborated in the literature review, some important perspectives are overlooked in the podcast's exploration. Where Llinares et al. elaborated perspective supports the basis of this thesis, as it is expressed that the reasons why the audience listens to podcasts and what needs the audience has, are overlooked (Llinares et al., 2018, s. 6). Consequently, this supports this thesis argument for investigating the podcast audience's engagement and experiences, as I see a lack of studies, in the literature, that specifically addresses these aspects of the podcast's entry into the digital age.

3.3. Podcast Today

As stated earlier, the world of podcast listening has significantly evolved all over the world. This thesis takes its underlying basis on the Danish audience, and the contextual data will reflect the Danish population. A statistic on weekly podcast listeners in Denmark goes back to 2013 when only 5 % of Danes listened. However, from 2016 to 2017, there was a significant increase in the number of Danes listening to podcasts weekly from 7% to 15%. After that, there has been a steady increase every year. Within those percentages, the younger generation of ages 15-34 listens to podcast weekly to a much higher extent than the entire population (Ziengs, 2022). In the latest data, in 2021, the percentages are up to 30% of the Danish population listened to a podcast weekly. Out of the 30%, podcast listening is still most widespread among young people. In 2020, 77% of the aged 12-18 listened to the podcast, and 79% of the aged 19-34, respectively, listened to podcasts (Mediernesudvikling, 2021). Most of the statistical data done on podcasts are from 2018-2020. There is also data on what percentages of the Danish population, in terms of age, on what platform they listen from 2020-2022 (see figure 4). Here it is illustrated that DRLYD lies at the top with 44,8 %, Spotify at 33,5 %, and Apple Podcast at 21,8 % (Sejersen & Kammer, 2022). DRLYD has the highest listening views in the age group 50-75. However, DRLYD has the lowest percentage of platforms used by ages 18-39. In contrast, the same age group has the highest on Spotify, as Spotify is quite known already in connection with Danes streaming music (DR Mediernesudviklingen, 2021).

Anvendelsen af podcast-afspillere på tværs af alder

☐ Alle　■ 18-34 år　■ 35-49 år　■ 50-75 år

Apple Podcasts
- 21,8 %
- 27,6 %
- 24,9 %
- 9,2 %

DR Lyd
- 44,8 %
- 27,0 %
- 45,6 %
- 70,7 %

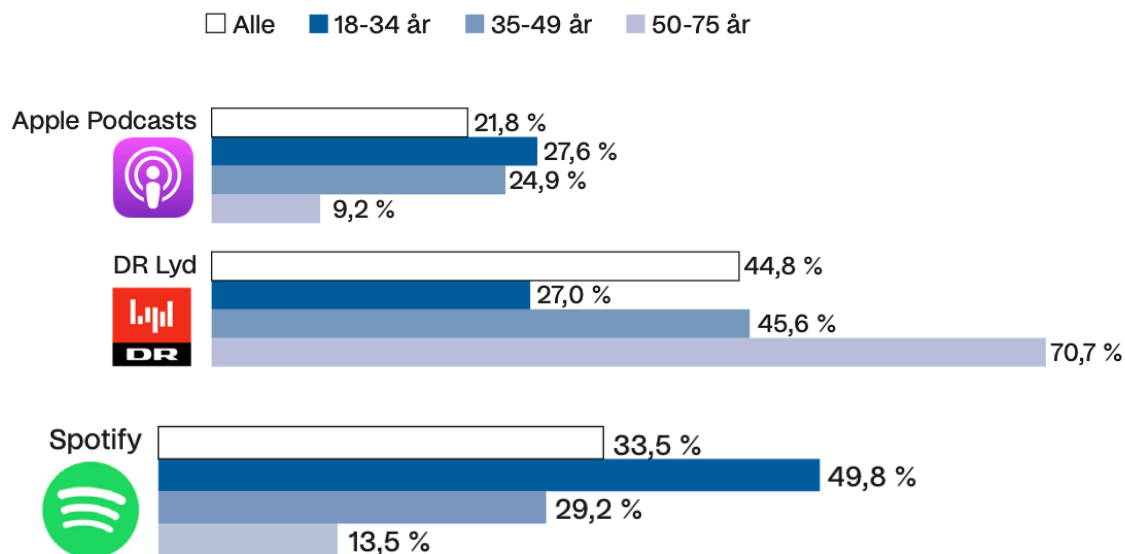**Spotify**
- 33,5 %
- 49,8 %
- 29,2 %
- 13,5 %

Figure 4 - Use of podcast streaming services across age groups (Sejersen & Kammer, 2021).

The age-group 18-34 has the highest podcast listening tendencies on Spotify but the lowest listening tendencies on the DR LYD application compared to Spotify. This is the reason for choosing this application and age group as the focus of this thesis.

3.4. DRLYD

For this reason, a heuristic description and wireframe of DRLYD are necessary, as this application and its usage of it will be the main focus of this thesis.

DR, and DRLYD, is a public service offer whose purpose is to deliver content to the Danish population for free. The application has undergone some changes and was previously called DR-Radio, as it only offered radio. To understand how the application appears and functions, it is necessary for me to do a heuristic page layout, also called a wireframe. A wireframe is where information, interface, and navigation design are correlated into a unified, cohesive skeleton. I will incorporate some of the different various navigation systems that will convey a different view of the architecture of the application, as the method is a detailed depiction of all the components of the app and how they fit together. There will be nine wireframes to capture and serve as a reference for the visual work of the different screens that is relevant to this study to convey the complexity (Garret, 2011). All wireframes can be seen at Appendix 25. When you

open the app, you are met with the front page of the application (see figure 5). It is possible to scroll up and down on the app to see different content (see figure 6). The front page consists display of highlighted random podcast and their description, and it is possible to swipe right to see the next random podcast. Underneath these are a red box, where it is possible to log in to continue where you left off.
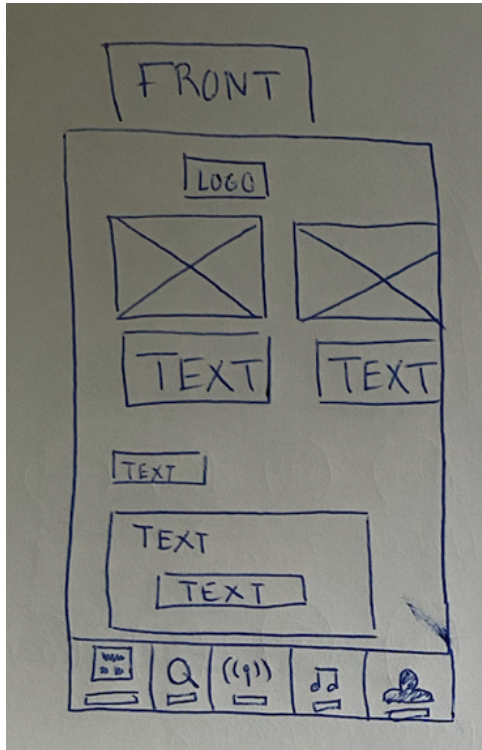

Figure 5 – Front page of DRLYD

At the button, the app has a global navigation panel with five different clickable widgets that each lead to its own pages. The first wireframe visualizes the app's front page (figure 5). That is what everybody is greeted with when entering. The second wireframe of the front page is how the app looks when you scroll down (figure 6).
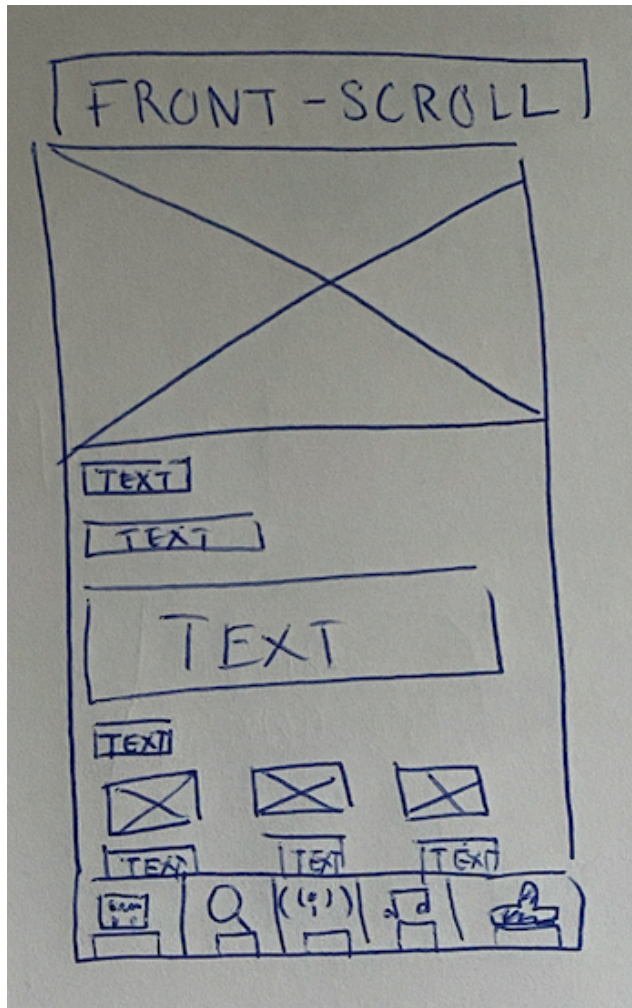
Figure 6 – Front scroll

Here, different categories are displayed, such as highlighted podcasts, popular podcasts, and thematical genres. When clicking on a podcast, you are transferred to the individual podcast's page, where you can read the podcast's description (see figure 7). You can click send to a person, follow the podcast, and click on an alarm to get notified of a new episode; however, not possible without logging in. Underneath this, the podcasts are categorized under the month of publication, where you can click each month. Here each podcast is displayed with a play button and a description. You can click again on the specific podcast to read more information about it, play it, send it, or download it. The save function is only displayed by clicking on the specific podcast episode, and the download function is when clicking on the specific feature. The following wireframes (figure 5,8,10,11,12) visualize each page's appearance when clicking.
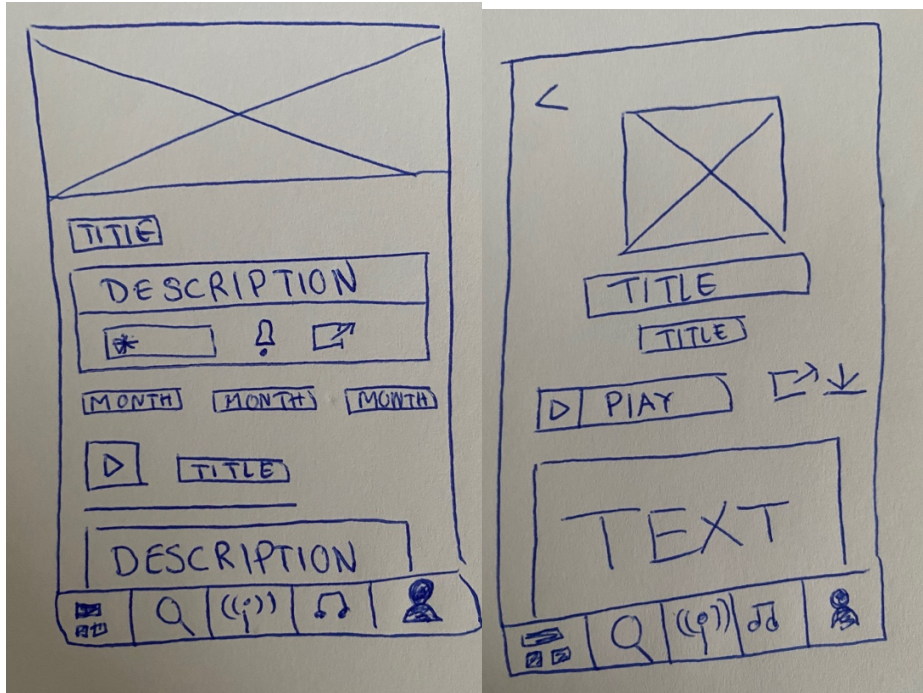
Figure 7 – Interface of podcast show page & individual podcast page

Where figure 8 displays the option to search for the desired podcast when clicking on the search box and the possibility of scrolling through categories and clicking on a specific category, which leads you to another page (figure 9), where all the podcasts within the particular category are displayed. Here, all podcast shows within the category are displayed on one page, where it is possible to scroll down, and beside each podcast show, there is a star where you can save the podcast show, which again cannot be saved until logged in. When clicking on a podcast, it will return to the display, as figure 7.
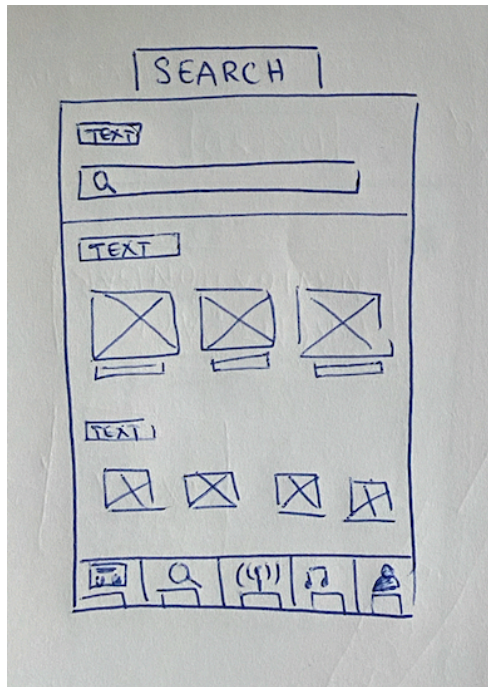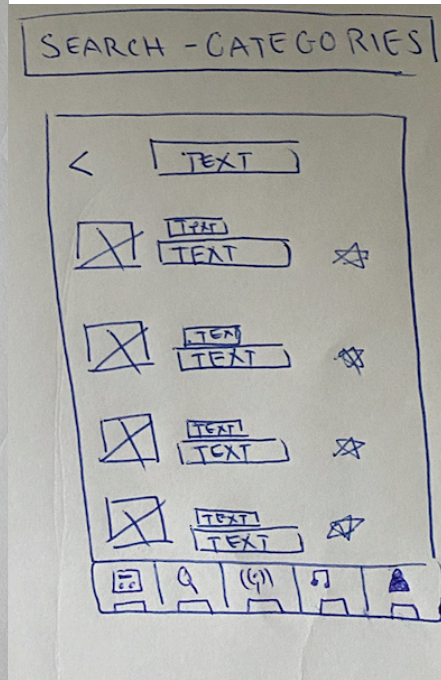
Figure 8 – Search   *Figure 9 – Search categories*

Figure 10 displays the wireframe of live radio channels and the possibility to select through what is distributed according to public service, also giving you the option to see the program for yesterday, today, and tomorrow, where it is possible to read about the program or listen back to previous shows (figure 10). Figure 11 displays the music category, where the display is on the front page, just as a music edition. Here it is possible to scroll up and down and see different shows and categories within music playlists and program series of music mixtapes influenced by the genre, mood, season, entertainment, etc. (figure 11). The option to click into the different series of mixtapes to find individual mixtapes looks like figure 7. Figure 12 displays the last option at the global navigation, where when you enter the page, it is possible to log in by clicking on the red box, which will lead you to a separate net browser page where you can log on or create an account.
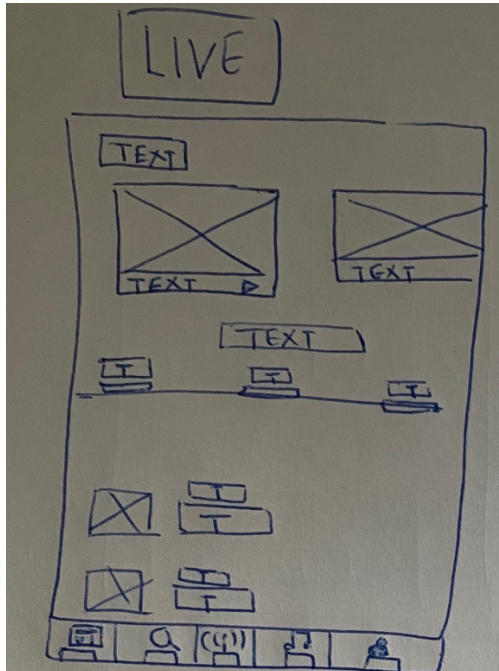
Figure 10 - Live

Underneath the log-in box, you can click on three boxes – follow, download, and history. Each displaying content if you have logged in and saved and downloaded content. A tool icon is displayed on the top right of the page, leading to a new page. Here you can scroll up and down, where it is possible to click to adjust sound quality, delete search results, delete downloads, give feedback, rapport mistakes, and read about the app and its policy, which all lead to their separate pages. At the button, there again is a red log-in button.

Figure 11 – Music   *Figure 12 - Account*

3.5. **Podimo**

Podimo is one of the reoccurring podcast applications that DRLYD is to be compared to by the participants of the user survey. Therefore, a description and wireframe of the platform are necessary to create a holistic understanding of this thesis, the data, and the general approach of this thesis. Podimo is a Danish company founded in Copenhagen in 2019. Podimo is a premium audio en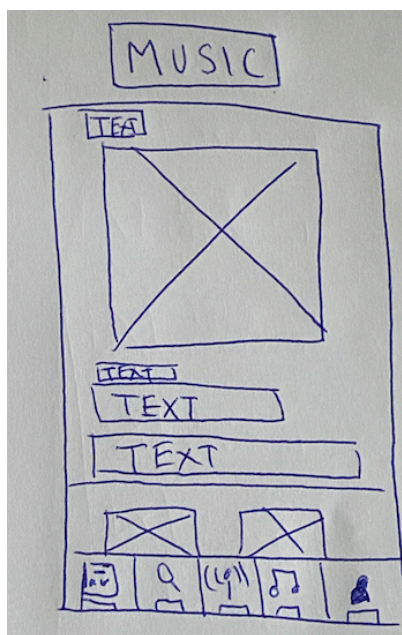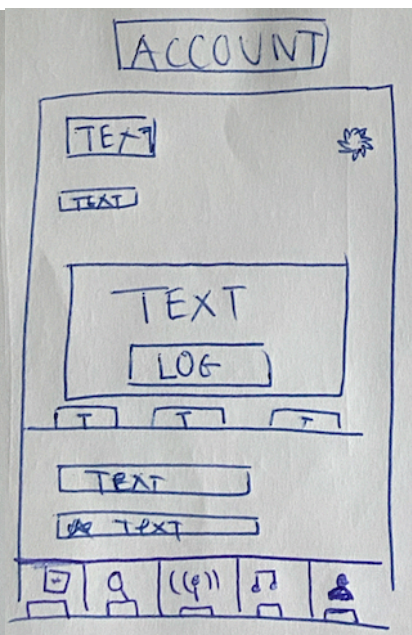tertainment subscription service that offers original and exclusive podcasts ad-free, an extensive collection of audiobooks in both short and long audio formats, and via RSS feeds where everyone is provided access wherever (Podimo, 2022).

Podimo supports storytellers by sharing its subscription revenue directly with content creators on the platform, exclusive or the open RSS, based on the content members listen to each month. Podimo offers custom curation, tools to find and identify podcasts, in-app video content, and an intuitive design for listeners of both open-access and exclusive content. As a full-service production house, Podimo has partnerships with Disney, iHeartMedia, Paramount Network, and many more. Podimo brands themselves as being exclusive with content that is not available elsewhere. Podimo is known in Denmark, Norway, Germany, Spain, the Netherlands, Finland, and Latin America. Podimo is available on iOS, and Android- as well as the web player at podimo.com (Podimo, 2022).
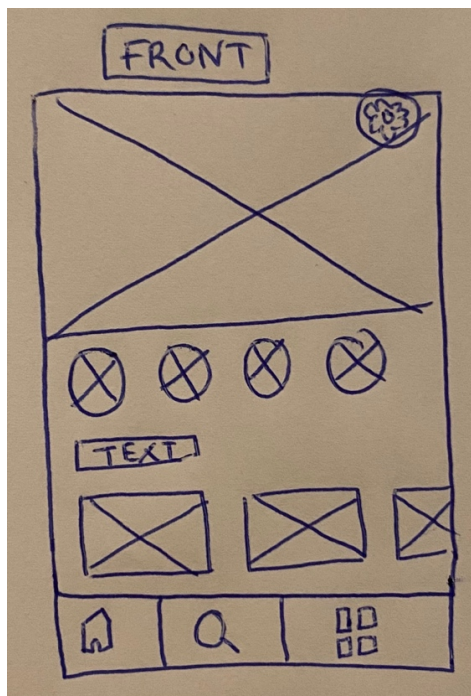
Figure 13 – Podimo front

Again, to understand how the application appears and functions, it is necessary for me to do a page layout. Podimo has three main pages through the global navigation menu. Figure 13 displays the front page of Podimo, which displays video previews of a handful of different podcasts, sections of popular podcasts, and the big picture of a recommended podcast (figure 13). On the front page, underneath the first big, recommended podcast, it is possible to click on the small round boxes and see the video preview clip about some of the podcasts, like an Instagram story. Figure 14 showcases the second widget on the global navigation menu, the search function, where it is possible to search, and the different categories are also displayed (figure 14). The last widget in the navigation menu is the library, where one can see own playlist and downloads, what has been listened to, new episodes for the individual, and recommendations for the individual (figure 15).

Figure 14 – Podimo Search

Figure 15 – Podimo Library

4. **Problem statement**

Following the research of relevant literature, empirical research, and entering into the first process and phase of the double diamond, I have gained insight into the research field, the tendencies and lacks thereof, within the literature, of what there has been written about the podc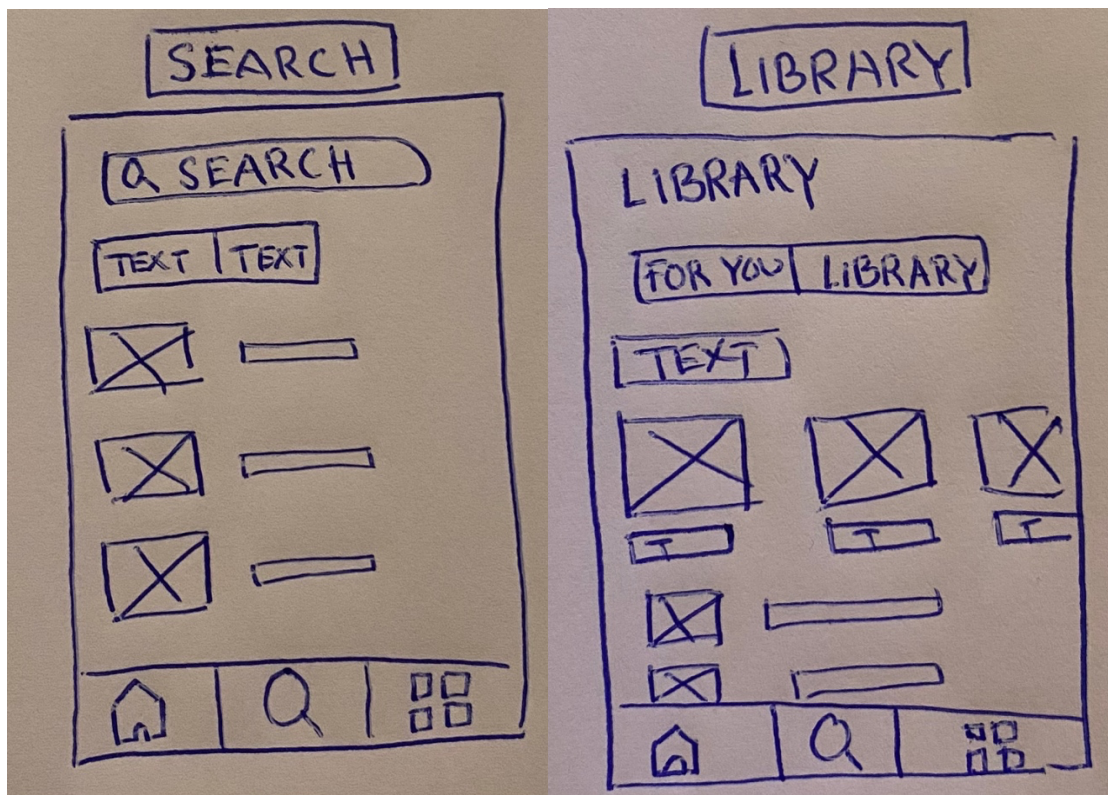asts growth, podcast users' consumption and behavior, and the podcast development from radio to podcast, and now made it possible to enter into the *define* phase and the converging phase, where it is possible to specify the problem area.
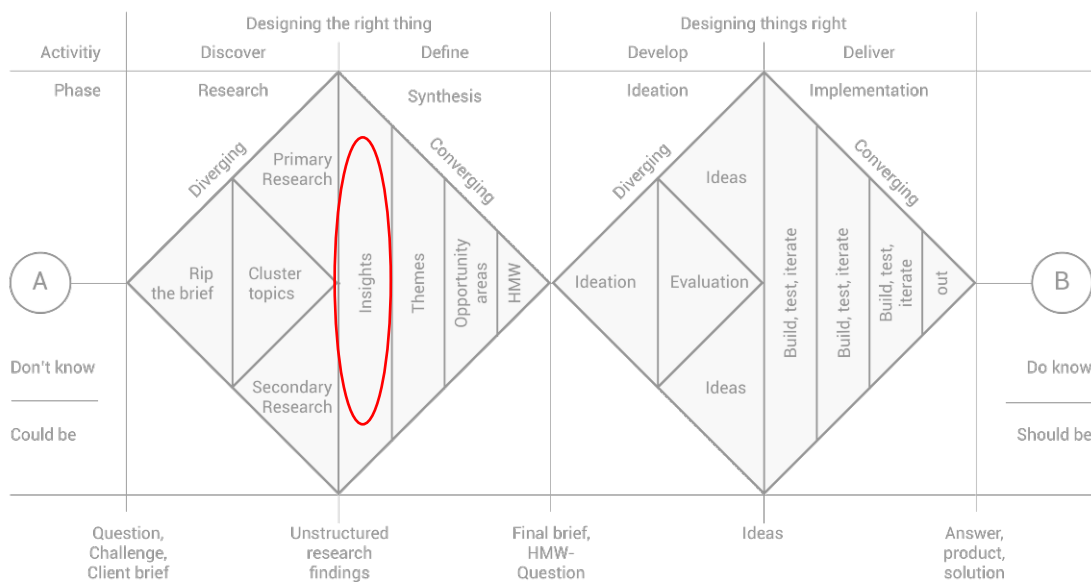
Figure 16- How to apply design thinking – Double Diamond (Nessler, D, 2016)

Here, it became clear that the area of investigating people's routines and practices around listening to podcasts is minimal but is done. With this insight, I will enter the first process of the define phase, where which is the convergent part of the problem space, as it allows ideas and research that have been done to be narrowed down to a clear definition of the problem (British Design Council, 2022). This definition will help guide the process of this thesis further into the next phase. This allows diving into a specific research field to understand a particular group of target user experience processes (before, under, and after) of listening to podcasts. As previously written in the empirical data research, the age group 18-34 is the target group that listens to podcasts the most and uses mainly Spotify. Where DRLYD is the app used throughout the whole

Danish population but used the least by the age group 18-34, it can be argued that there is not much engagement from this specific target group. Therefore, I have chosen this particular target group to look at the user experience process on DRLYD, to learn about the individual's motivation and behavior on the application and for listening to podcasts, and how it is possible to design better on DRLYD, to in the end create better engagement. Supporting the previously written studies of the relevance of gathering and including data from a different demographic perspective, as the results from the studies of Heshmat et al. (2018), Li et al. (2020); Chang-Olmsted & Wang (2022); Craig et al. (2021); are based on a North American audience and some of them being quantitative rather than qualitative. Based on this, it could contribute to in-depth knowledge and understanding of Danish people's use of audio media, specifically the younger generation. One of the studies also mentioned that media usage is multidimensional and should be measured from different aspects and examined in various settings (Chang-Olmsted & Wang, 2022, p. 698). It could be interesting to focus specifically on a different take on gathering insight into users, their behavior, and the interaction with podcasts, in this case, through an app. Using a design solution, such as mapping the interaction, and determining the engagement and motivation in target groups' podcast usage on an app, may help increase listenership and maintain loyalty. Here, I see the opportunity to examine, in more detail, how the target group's engagement is on podcast applications and how an IT-based experience design can accommodate the essential factors and support design solutions from users' experience.

Based on this knowledge and research, the following problem statement has been formulated:

> *How can it-based experience design create a more improved and engaging experience for the age group of 18-34 on DRLYD and meet the barriers they experience on DRLYD?*

5. **Theory of Science**

In the following section, I will be at the define phase, where I will elaborate on the thesis's thematical approach of the way of thinking. The chosen approach of Philosophy of Science also called the theory of science, is the combination of two different Philosophies, hermeneutics, and phenomenology. This is elaborated and correlated to the approach and way of thinking of this research. This approach will influence the project's investigation and interpretation of the collected data. Continuing in the path of the Double Diamond, this section will help define and guide the thesis in the correct direction. Researching and settling on the scientific approach will establish a pre-reflective insight.
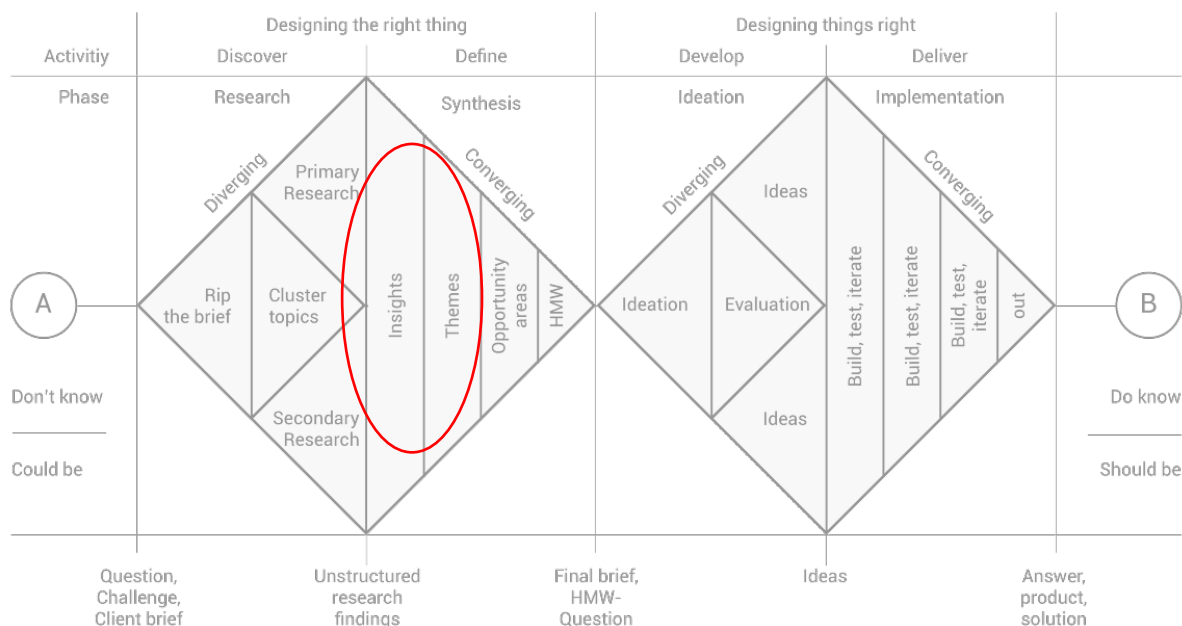
Figure 17 - How to apply design thinking – Double Diamond (Nessler, D, 2016)

5.1 Hermeneutic Phenomenological Research

As stated, the Philosophies are different approaches but have commonalities in their philosophical goal, and therefore become a relevant perspectival approach to interpreting human experience. Phenomenology focuses on describing and making sense of reality and experiences "objectively" (Brinkman & Kvale, 2015), and hermeneutics focuses on the interpretive aspect, where our recognition of reality in an interpretive process and our preconceptions (i.e., perceptions of the world) (Rosfort, 2019).

Phenomenology originated from the philosopher Edmund Husserl around 1900 and was further developed by Martin Heidegger, Jean-Paul Sartre, and Maurice Merleau-Ponty. In a qualitative research study, Phenomenology is an approach to understanding social phenomena from the participants' perspective and their understanding of the world (Bryman, 2016). Reality is what people perceive it to be, and the purpose of science is not only to be absorbed with the objective phenomena but the focus on how the phenomena appear to the individual. Alfred Schutz states, *"(…) social reality has a specific meaning and relevance structure for the beings living, acting and thinking within it. By series of common-sense constructs, they have pre-selected and pre-interpreted this world which they experience and the reality of their daily lives. It is these thought objects of theirs that determine their behavior by motivating it* (Schutz, 1962, p. 59). The objective phenomenon that appears to the individual can be experienced in a myriad of different ways, based on how the phenomenon appears, under which circumstances the phenomenon appears, and for which individual with which preconceptions the phenomenon appears (Brinkman & Tangaard, 2020b). Social reality has a meaning for humans; therefore, humans' actions become meaningful and relevant. Humans act based on this, meaning that they attribute to their acts and the acts of others (Bryman, 2016, p. 27). The phenomenological approach throughout the thesis is expressed through the research method, for example, with interviews, where we want to understand a phenomenon from the participants' perspective, including their perspectives and descriptions (Brinkman & Kvale, 2015, p. 49). The phenomenological method describes human experiences as wholly and precisely as possible without explaining, analyzing, and considering the origin or cause of a given experience. This phenomenology approach is therefore relevant for the approach of this thesis by interpreting their actions and the social world from their point of view, as I wish to understand and investigate the individual participant's experience and motives with podcasts.

In the analysis, I want to interpret the phenomena that appear in the interviews, which is the purpose of additionally using a hermeneutic approach to the research. Hermeneutics is centered around how people interpret the reality they find themselves in, and it is based on the idea that all people have a pre-understanding of reality. This understanding is based on knowledge, experiences, and the environment, and when interacting with other people, interpretations of these are based on this understanding (Brinkmann & Tanggaard, 2015, p. 37). Therefore, verbal, or physical action is a subconscious and conscious interpretation since we analyze everything

around us. This means that we humans understand the world based on preunderstandings (Polat et. al, 2022, pp. 11; Brinkmann & Tanggaard, 2015, p. 37). When you acquire new information, you interpret through your pre-understanding and then add the knowledge you have gained through this interpretation to your understanding, which you then take with you to future interpretations. This means that a circle or a spiral is formed, also known as the hermeneutic circle, where a preunderstanding and one's interpretation constantly move each other forward. From a hermeneutic point of view, the interpretation of meaning is the central theme in connection with specifying the kinds of meaning that are, and in the end, reaching a valid and general/common understanding meaning of a text or an experience (Brinkman & Kvale, 2015, p. 80). Human beings are self-interpreting, historical beings whose means of understanding are determined by tradition and history. Every text gets its meaning from a context. The knowledge of what people do or say and their actions and attitudes always depend on a background or context of other meanings, assumptions, values, and practices (Gadamer, 2007). In this case, being a qualitative study where interviews are used, it is relevant to use a hermeneutics approach, as when discussing the understanding and interpretation of the experience of listening to podcasts. Moreover, in order to analyze and understand experiences for humans, we must understand how the participant experiences the experience. As elaborated earlier, phenomenology is the study of phenomena, describing how particular phenomena are experienced from the experiencer's perspective (Brinkmann & Tanggaard, 2015, p. 31). Concerning this study, using both scientific theories is relevant, as the purpose is to understand the experience of listening to podcasts from the participants of the user survey. This entails the need for a preunderstanding of the experience. Scientific theories help frame the focus areas by understanding the previous experiences to create understanding and interpret the experience. The hermeneutic phenomenology approach of interviewing the users after using DRLYD allowed them to express the phenomena, being their experience and knowledge, without interference from me other than guiding them in giving detailed descriptions of their experiences. Using the design process Double Diamond and Day in the Life as a structural framework and a visualization of the participants' experiences helps to create a pre-reflective insight into their experiences.

5.2 Abductive design approach

The process of design thinking is about creating meaning and coherence in the chaos of information and science. When creating a design, an abductive meaning creation is used, as a result of all the relevant information that contributes to determining the creation of the design (Kolko, 2010). This thesis's purpose is to create a concept that will improve the experience on DRLYD and create engagement for the target group, where design thinking is used to a large extent in connection with solving problems in information technology (Dorst, 2011). There are other approaches, such as inductive and deductive, where the abductive approach differs because the goal is to create the best-qualified bids on design ideas that will solve the problem. The result, being the concept, is therefore not strictly based on collected data but on qualified choices and opt-outs based on the synthesis of data (Kolko, 2010; Dorst, 2011). This can be seen in section 8, where the process of interpreting the collected data, ideating ideas for the problems, and narrowing the ideas to the best-qualified ones. Regarding the abductive approach and the creation of a design, Dorst (2011) divides design factors into three, what, how, and value. *What* refers to the specific product, object, or service being designed, *how* referring to the working principles that must provide the design, while *value* is the intended value that the design must create. Based on these factors, Dorst has created two distinct versions of abduction, namely abduction-1 and abduction-2. In abduction 1, associated with problem-solving, the designer knows about the value that needs to be created and the how by the principles that will help achieve the value desired. In abduction 2, the designer only knows the value that is wished to achieve, and the purpose is to figure out 'what' to create with no known 'working principles.'
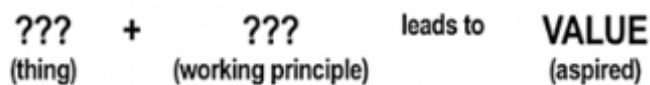
Figure 18 - Abduction 2 (Dorst, 2011).

As a designer, this creates a blank canvas where I must create my working principles and service (Dorst, 2011). This research will use abduction 2, as there are no working principles for me to reach the value, and I must, to answer the problem statement and meet the value, define my

methodological working principles. The only unknown factor is *what* - being the design itself. These working principles, being the method, will be described in section 7.

6. Theory

This theoretical section will present the following theories applied to this thesis. As a start, I looked at what previous studies (see section 2) have implemented as a theoretical basis for their investigation of podcasts. I became acquainted with these studies and their theoretical bases, such as *appreciative learning*, *user and gratification, self-determination theory,* and *Giddens 'structuration theory.* In my case, I wish to understand the term *experience* to understand how the user experience is on the medium and how the media is seen, and the audience. Therefore, approaching this thesis with a different theoretical basis than previous studies, as I believe it can contribute to a nuanced, complex, and contemporary perspective to my investigation and future studies. In reference to the Double Diamond, I am still in the defining phase, where I am in the process of converging. The theoretical section will function where new insights and themes will be discovered, lay the foundation of this thesis, and open up opportunities to handle the empirical data.
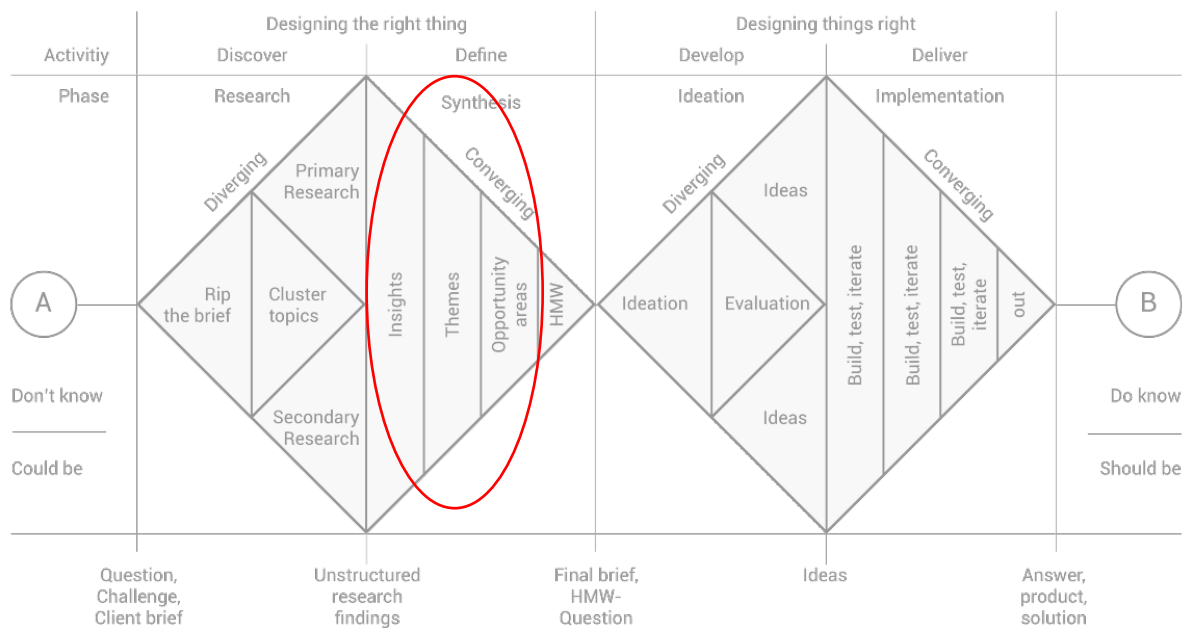
Figure 19 - How to apply design thinking – Double Diamond (Nessler, D, 2016)

I will start with defining what an experience is, as the intention is to create a user survey of the audience's interaction and experience with DRLYD. Understanding how the medium is part of their everyday life and routines and aim to explain which sub-elements play a role in shaping the experience. Therefore, using theories met throughout the masters, for example, Christian

Jantzen's and Jensen's take on experiences, I wish to have a general theoretical understanding of an experience, which can contribute to an overall understanding of this thesis's findings and answer the problem statement.

When talking about experiences, they can have different meanings. For example, definitions from Cambridge dictionary defines it as:

1. *The way that something happens and how it makes you feel*
2. *(The process of getting) knowledge or skill from doing, seeing, or feeling things*

<div align="right">(Cambridge Dictionary, Experience, n.d)</div>

An experience can either be something based on knowledge, practice, skills from previous experiences, and observation that follows the person through other practices in life, or it can be how situations can bring emotional feelings up and create experiences. Therefore, it is also relevant to include David Kolb's theory on Experiential Learning (1984), as this will be a relevant perspective on the outcome of the user survey and the influence of their experience. In relevance to understanding the experience and the desire to optimize the experience on DRLYD, a definition of *user-centered design* will be necessary to understand the user and how to optimize services and design regarding the users. Here, Shannon Ford's (2000) framework will also be used to understand user experiences, the connection between product design and experiences, and how to design for one. For a more practical approach to design better, I will use Hassenzahl's take on the *motor*, *do*, and be *goals* to determine what and how the current application engages users and meets their needs, and if not, what, and how I can improve that. With these theoretical approaches as the basis of this study, I intend to improve the current experience and, in the end, create better engagement and sale of experience through the service DRLYD.

6.1. What are experiences?

Experiences are constant, conscious, and unconscious, some more memorable than others, and can ultimately help to influence a person's life. The possibility to experience here and now and to convert what is experienced into experience, insights, stories, and memories is central to experience design and experience economy but also to human existence. According to Jens F. Jensen (2013), experiences are sensory-based influences we humans get through interacting with

surroundings, such as with a product, services, people, events, and cultural institutions. In the end, they leave emotional impressions and meaningful experiences. The occurrence of an experience is, therefore, inevitable, whether they are planned or not. The quality and the value of an experience rely on how both the physical and social aspects of the situation influence the experiencers' actions and perceptions. An experience depends on and is influenced by different inner states, such as predispositions, motivation, expectations, service characteristics, and the context in which the interaction takes place (Jensen, 2013). In other words, an experience emerges from the intertwined works of predispositions, motivation, emotion, and so on, in dialogue with the world (Hassenzahl, 2010, p.10). Therefore, this state of mind may also differ from one person to the next and for one moment to the next (Jantzen, 2013, p. 146). The users' desires, wishes, and expectations are the source of the experience, and products are produced to create these opportunities for experiences. An experience occurs when we can relate to the product, and the product can realize and challenge dreams and expectations. Thus, individuals are motivated by specific experiences, which causes them to seek specific stimuli. This motivation is due to individuals' expectations and self-understandings; therefore, experiences are user-driven, as individuals are motivated by specific experiences.

In the book, *Experience Design* by Christian Jantzen, Mikael Vetner & Julie Bouchet (2011), it is described how to organize services that give opportunities for users to experience something exciting and relevant, based on what internally happens when we experience: i.e., that the experience changes, surprises, and transforms. Experiences change as they intensify, affect our senses, and evoke emotions that cause us to act differently than we had expected. Experiences can surprise us, as they can challenge our expectations and conceptions of the experience. It forms wonder and consideration of the situation, influencing our self-image and assumptions about others and the world. Ultimately, experiences can transform as they create a more profound understanding and new expectations and perceptions (Jantzen et al. 2012, p. 41). Experiences are experience-based, as the experiences leave an impression on the memory and can be instrumental in the formation of new routines and self-understanding.

When an individual is exposed to experience-creating stimuli, changes occur on both an emotional and physiological level. If the individual is exposed to the same phenomenon, it cannot remain a sensory surprise (and experience) after it has already created wonder and habitual transformation. The more times one experiences the same phenomenon, a habitual

adaptation will occur, which downplays the engaged experience value (Pine & Gilmore, 2019). However, if the same phenomenon appears in a completely new context, the experiential value of the phenomenon can be renewed and regain its experiential potential (Pine & Gilmore, 2019; Jantzen, Vetner & Bouchet, 2011).

6.1.1. What kind of experience?

Concerning this, it is relevant to correlate David Kolb's theory on Experiential Learning (1984). As mentioned in the introduction to the theoretical section (see section 6.1), experiences can be defined in two ways and can influence how the experience on the application is experienced. Whether the experience on the platform is influenced or a result of previous experiences. What is interesting to use from this theoretical approach is how Kolb applies the word experiential learning – or, more specifically, how it is relevant in my user survey. Kolb expresses the importance of the process of learning in human adaptions. Learning is inevitable and takes place in all kinds of situations and environments (Illeris, 2012, p. 284).

Furthermore, the origins of "experiential" stem and emphasize experience's role in learning. The theory aims to suggest a holistic, integrative perspective on learning through experience, perception, cognition, and behavior (Kolb, 2015). Here, experience plays a central role in the learning process. In this experience-based approach, learning will be achieved through experiences and engagement, which often requires engaging people to learn through 'learning by doing' and 'hands-on' experiences, which create reflection and relations. The characteristic of experiential learning is that ideas and thoughts are never complete or fixed, meaning that ideas and thoughts are formed and re-formed through and by experience, as experience always intervenes. Learning must be seen as a process in which experience always plays a role. Therefore, learning is always a progressive process and is constantly modified based on previous experiences (Illeris, 2012, p. 289). In addition, Kolb expresses the importance of the learning process, where learning as an individual and personal process is based on the physical and social surroundings and the individual's subjective experiences and cognitions (Illeris, 2012, s. 294). The learning process is influenced by the interplay between individual and personal expectations and experience, and learning is the process of knowledge created through the transformation of experience (Kolb, 2015, p. 63-82). Kolb's take on experiential learning will help me understand

whether the basis of the participant's experience relies on previous built experiences on other applications and how this might influence their current experience on DRLYD.

6.1.2. What is User Experience?

When explaining what an experience is and how it can be understood, I must incorporate the aspect of the user/participant in relation to the term experience. Kolb expresses the importance of the learning process, where learning and experience are subjective processes based on individuals' subjective perceptions. Therefore, it is essential to understand and elaborate on the users when creating an experience and design that is centered around the user's experience, which is also called *user-centered design (UCD)*. Additionally, in correlation to the design approach and Sanders Map of Design Research (see section 7.1.2), using participants as my experts in this thesis and using their observations, feedback, and complete insight will establish a basis for the concept design and ensure that the design created will meet their needs. Therefore, it is appropriate to include *user-centered design (UCD),* as the purpose is to understand the user's experience with the given service and, by that, focus on how to optimize the service to the user's wishes, needs, preferences, and limitation (Jensen, 2013). Asking questions to the users about their interaction with the service, tasks, targets, and feedback will contribute to the design and development processes. In order for me to use user-centered design in practice and design something that can be defined as 'user-centered,' I must meet the international organization for Standardization's (ISO) six criteria for UCD (Jensen, 2013):

1. The design is based upon an explicit understanding of users, tasks, and environments.
2. Users are involved throughout design and development.
3. The design is driven and refined by user-centered evaluation.
4. The process is iterative.
5. The design addresses the whole user experience.
6. The design team includes multidisciplinary skills and perspectives.

In this thesis, the approach of including the users is by having the participants use the selected service to understand, their use of the service, their tasks, and environments, and after that, interviewed for their feedback on their experience. In the end, the interview will take part in

participatory design processes where I, as the designer, will include the users and their knowledge, as an active and essential part, with me of the decision-making process (Sanders, 2008).

6.1.3. How to User Design?

Forlizzi and Ford (2000), with their User Experience Framework, dive into a similar field, stating that when designing an experience, one must consider that when designing situations for users to interact with, we cannot predict how the outcome of the experience will be, as interaction can be affected by multiple other factors that are beyond the creator's control when designing. Factors such as cultural backgrounds, prior experiences, and emotional states can cause different subjective interpretations in the experiencing moment, and therefore an experience is never complete or fixed.

Forlizzi & Ford have gathered existing theories of experiences, and gathered them to three ways to talk about experiences:

- Experiences are a constant stream that happens during moments of consciousness.
- Having an experience with a beginning and an end changes the users and, at times, the context.
- Experiences as a story, where stories are the vehicles that we use to condense and remember experiences and communicate them in various situations to certain audiences.

(Forlizzi & Ford, 2000, p. 420).

Forlizzi & Ford states that an experience consists of smaller experiences, where these experiences relate to the context, user, and product. Therefore, as mentioned above, when I design an experience, I can only design situations with which the users can interact. Ultimately, I cannot predict how the experience will turn out.
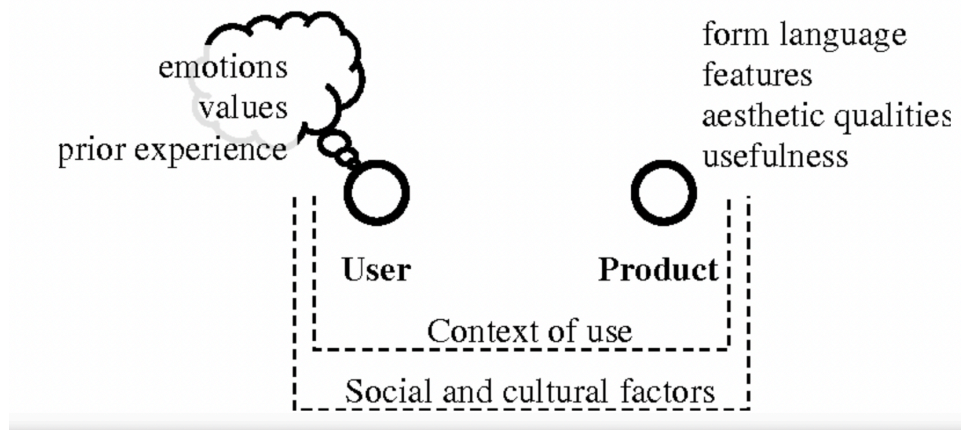
Figure 20 - Influences on experience (Forlizzi & Ford, 2000)

Consequently, when trying to understand what influences experiences and, in the end, creating an experience, one must consider these components of user-product interaction and what surrounds it (Forlizzi & Ford, 2000, p. 420). Following, Forlizzi & Ford defines it as users, product, and context of use:

- *Users* represent how people influence the experience. Users bring to the moment all of their prior experiences, as well as their emotions and feelings, values, and cognitive models for hearing, seeing, touching, and interpreting.
- *Products* represent how artifacts influence the experience. Each product tells a story of use through its form, language, features, aesthetic qualities, and accessibility.
- Social, cultural, and organizational behavior patterns shape the context of use. In each situation, designers need to understand the users, products, contexts, and nature of interactions that may happen.

(Forlizzi & Ford, 2000, p. 420)

The purpose of the theory is to go beyond previous work on improving qualities of experiences and has therefore created the *initial framework of experience* to understand how to embody new qualities of experience beyond the usual. Experiences demand qualities of the person experiencing. As mentioned before, factors such as cultural backgrounds, prior experiences, and emotional states, impact what qualities of experience the user takes away from the interaction with the experience. The framework and its tools allow us to understand the types of user-product interactions, how they relate to the way experiences are discussed, and what kind of experience needs to be designed (Forlizzi & Ford, 2000, p. 422).
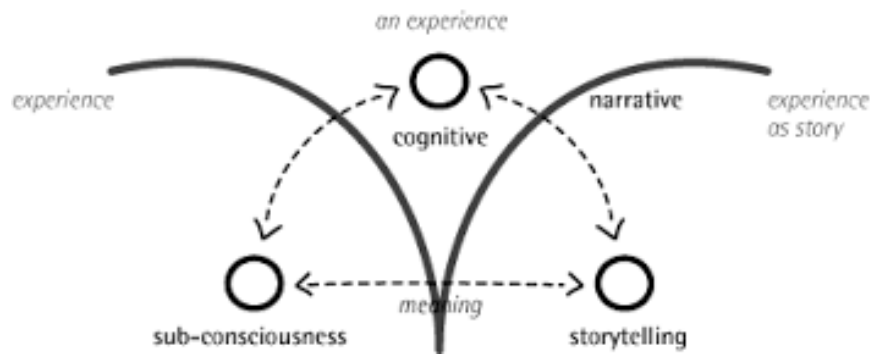
Figure 21 - An initial framework of experience as it relates to interaction design (Forlizzi & Ford, 2000)

In relation to this thesis, user, product, and context of use will be elaborated on in the analysis of the empirical data. The user survey is based on the abovementioned components of user-product interaction to understand user experience and how I, with this data, can design better. The participants in the study will come with their own previous experiences and cognitive and emotional baggage, which will influence their experience on the DRLYD. DRLYD, the product of use, likewise will influence the overall experience based on features, aesthetic qualities, and accessibility. This experience will take part in a context of use for the participant that will influence the experience. This will be elaborated in-depth in the analysis.

Furthermore, the framework consists of four components: *sub-consciousness, cognition, narrative,* and *storytelling.* Each of these components is useful, in terms of me, as a designer, to understand and think about what kinds of experiences are created in the particular design and service.

Sub-consciousness: a sub-consciousness experience refers to fluent experiences in daily life. An example of this can be the common routines in everyday life – morning routines and riding a bike. These experiences are often experiences you only need to learn once and do not compete with a person's attention and thinking process.

Cognition: When having a cognition experience refers to experiences that require attention and thought of what we are doing. This could, for example, also include when interacting with a new product and environment, as it is unfamiliar and requires attention and cognitive effort.

Narrative: The *narrative* refers to experiences that the users formalize, and these are experiences that force users to think about what they are doing and experiencing. Examples of a narrative of use are products or services with features and affordances.

Storytelling: Each experience is interpreted and based on users' prior experiences, current emotional state, and context, making the stories of the experiences unique and subjective. It entails users bestowing meaning on situations, creating life stories, and stories of product use.

(Forlizzi & Ford, 2000, p. 421)

Based on this framework, it will allow me to understand the users, and how to create a design that offers a good and memorable narrative that future users will engage with and pass on to others. In relation to the methodological approach of Day-in-the-Life, these theoretical and methodological frameworks will allow users to be involved in the design process and allow me to collect and understand the participant's subjective user experiences, understanding which of the four components the participant experiences, knowing the pros and cons of it, and then constructing their narratives and experience to then create a product and new experiences that carries a more personal and social value.

6.1.4. How to design better

When creating an experience, it is relevant to discuss what properties an experience should consist of to design the best experience. Using Marc Hassenzahl's (2010) three-level goal model, which defines three properties/concepts that an experience consists of, *do, be,* and *motor goals*, where the model relates the participants self to the world through activity (Hassenzahl, 2010, p. 11). Hassenzahl states that traditionally Human-Computer Interaction (HCI) is only concerned with the *do-goals,* being the "what" and the "how" in terms of interaction with technology, where he argues of another level of goals, on top of *do-* and *motor-goals*, the so-called *be-goal* being just as essential as the other two. Hassenzahl presents a three-level hierarchy of goals, the
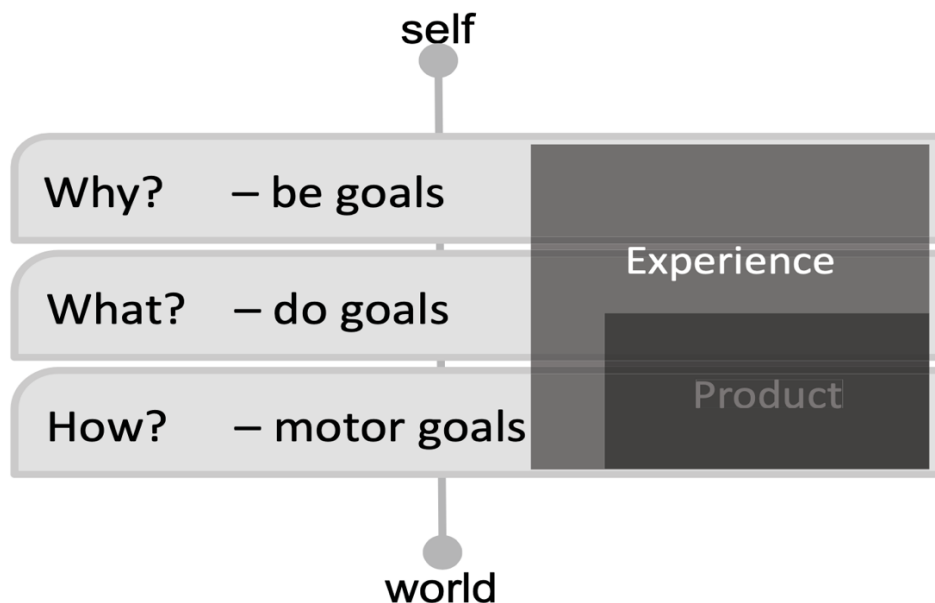
do-, motor-, and be- goals (see figure 22).

Figure 22 - A three-level hierarchy of goals (Hassenzahl, 2010)

Do-goals, placed in the middle, cover the users' practical needs and concrete outcomes, and thus the functional aspect, for example, making a phone call, i.e., the *what* of an action (Hassenzahl, 2010, p. 12) At the lowest in the hierarchy, there is the *motor goal, which* is the exact action the participants take, whether it is pressing the call button on the phone or closing a door, where this will be the *how* of a task or action. At last, the *be-goal,* placed at the top of the hierarchy, points to the users' mental needs (Hassenzahl & Roto, 2007, p. 10). As mentioned earlier, user experience differs from the traditional perspective of usability, as it only focuses on *do-*and *motor-*goals, but on the other hand actually should focus on *be-goals.*

Be-goals are about the *why* and motivate action and provide it with meaning. An example of this could be the reason and feelings behind listening to podcasts. The goals are not contingent on technology; however, many goals would not exist without and are, therefore, "born out of a general technology" (Hassenzahl, 2010, p. 12). It is relevant to consider these properties to understand the user's perception of how the service is experienced in terms of, for example, the *do-goals,* whether the service is easy to use, predictable and manageable, and the *be-goals,* how the originality and the design of the service in relation to the user's needs. Where qualities can be particularly relevant to focus on, the service is in competition with several other services with the same *do-*goals (Hassenzahl & Roto, 2007, s. 11). The necessity for *be-*goals is important due

to users are inclined to attach emotionally to a service. Therefore, services often need to meet several needs – both the practical (do-goals) and mental (be-goals) needs. Therefore, services should often be designed with a balance between these two qualities so that the service fulfills both the user's do-goals and be-goals (Hassenzahl & Roto, 2007, p. 11). This theoretical perspective is relevant to understanding and creating more engagement on the digital platform DRLYD. With the help of data from the design criteria, this model will help me understand what kind of *do* and *be* goal needs to be designed for the experience to fulfill the user's needs.

6.2. The relevance of the theories together

In this project, the aim is not only to investigate but also to understand the experience of listening to podcasts (Jantzen, 2013), whether the act of listening to podcasts is an experience or an act of underlying experience and expectations (Kolb, 1984). Understanding how I, as a designer, can design better for the user, I need *user-centered design* and must meet the six criteria for UCD when designing for the users. I do not want our users to change their behavior to adapt, but the product must meet and adapt to the user's wishes, needs, behavior, and limitations (Jensen, 2013). Forzilli and Ford's (2000) User Experience framework allows me, with the help of UCD, to understand the user-product interaction through empirical data and will make it possible for me to design an experience based on the user's previous experiences and insights.

These theories together support each other in a way that each step and theory allow me to get a deeper insight and perspective into understanding an experience and the participant's experiences, the individual user, and how to approach the empirical data to design better. Based on the theoretical foundation, I am equipped to move on to the method of how to approach collecting and analyzing data.

7. Method

In the following section, I will elaborate on the methods used in connection to this research. I am still in the *define* phase of the Double Diamond, where methods are researched to find the right opportunities, and then used as approaches for my take on creative problem solving. The use of interviews, think-out loud, surveys, and Day-in-the-Life, in relation to the concept design development and solution. Each method used will be explained in its own sections to illustrate how they are used in the project, and the empirical evidence collected based on these methods will also be presented and treated.
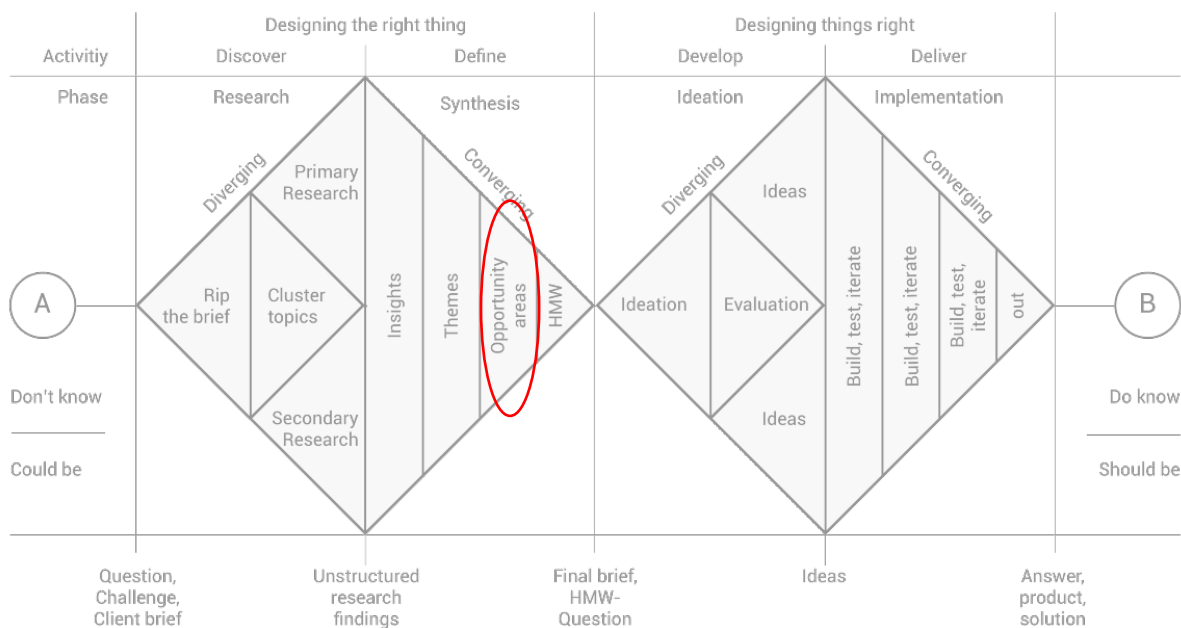
Figure 23 - How to apply design thinking – Double Diamond (Nessler, D, 2016)

7.1. Design Process

The design process is a reflection of the actions and choices taken, as well as it reflects the approach of the thesis. Over time, several works of literature have given their take on how different design processes are set up (Sanders, 2006, Kumar, 2009; British Design Council, 2022). The abovementioned models fundamentally work with the same principles of working in a circular, iterative process by adapting the models to own research design. This thesis will make use of Double Diamond by Dan Nessler, but originally created by the U.K Design Council (The British Design Council, 2022), as a framework to showcase the iterative, divergent, and

convergent approaches of the thesis and Sanders (2008) design approach for the visualization of the process of designing.

7.1.1. Double Diamond

First and foremost, I will elaborate on the method used to frame and structure the thesis. I will describe the model, and illustrate how I have used, adapted, and applied it for the sake of this project.
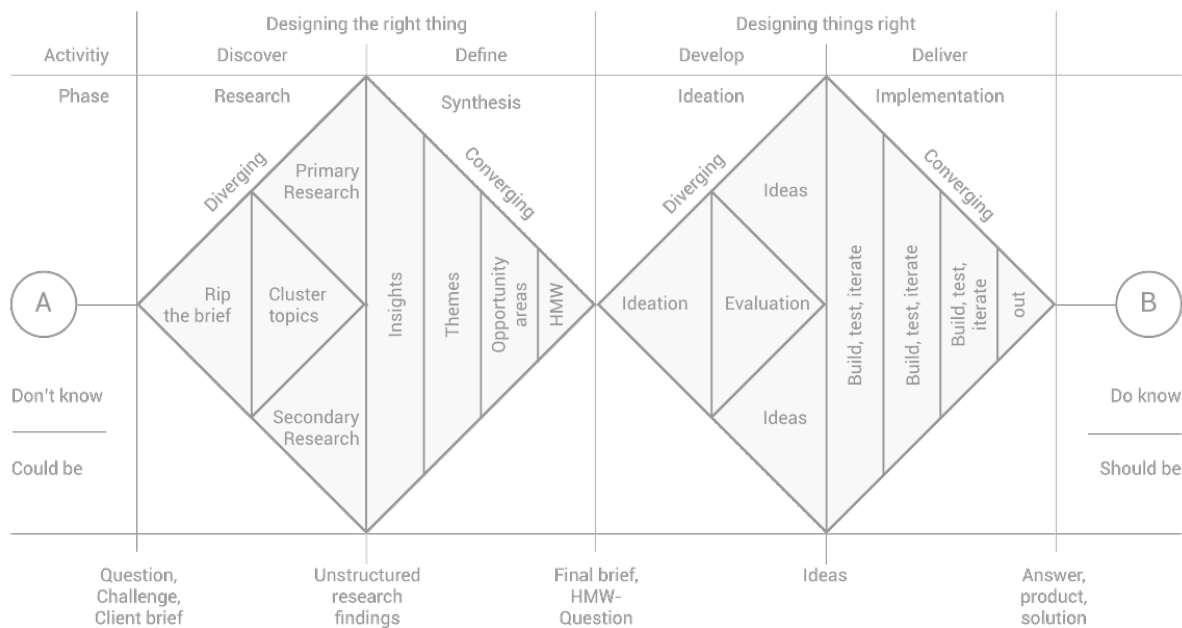
Figure 23 - How to apply design thinking – Double Diamond (Nessler, D, 2016).

The model Double Diamond, a framework for innovation and design, is originally developed by the British Design Council (2005). In the process of designing, whether it is graphical, architectural, industrial, or software design, the process of the double diamond of design captures the important phases of creating (Sharp et al., 2019). The double diamond creates a visualization of the process of designing, step by step, until the final contemporary concept design (figure 23). The model consists of four phases that consist of a problem and solution diamond, where divergent and convergent work is constant when researching and designing:

1. **Discover**, gather knowledge, and find out everything I can about the subject. By researching, exploring, and understanding to identify and map the extent and nature of the field,

2. **Define**, extract the most important insights from the *discover phase*, and find and precise the problem that needs solving within the chosen area.

3. **Develop** ideas based on the knowledge gathered from phase one and the specific question/focus area from phase two.

4. **Deliver**, evaluate, test, and get feedback on the most feasible ideas and results to finalize the concept, product, or service for final production and launch.

As the model illustrates, the design process begins at the *discover* phase, where I gathered insight and knowledge on the problem field. In this case, the literature review was the initial method to open up the discovery of the problem field, with the help of researching and exploring the area of podcasting, usage, and motives, and gathering knowledge to gain an understanding of what has been studied, the outcome, and possible lacks thereof—based on literature research and the obtained knowledge, delineating and defining the specific problem and research area. Additionally, the use of the *discover* phase will also take part in some of the methodological section and analysis, specifically section (7.3 & 7.6), as carrying interviews with the participants of DRLYD, observation at the interview of the participants using the application, will help gather an understanding of the participant's comprehension, knowledge, and daily life, and to establish an empirical foundation for my design process. Starting with this approach helped form an overview and specify how to approach the research. In the defining phase, theoretical, methodological, and philosophical analysis is explored to find relevant and suitable matches for this thesis. Additionally, analyzing the collected data through the applied methods helps narrow and clarify themes and patterns and creates the basis of the design criteria. This leads to the *develop* phase, where various potential solutions meet the design criteria by generating ideas and sketching visualizations of the current concepts. This is drawn from previously collected empirical data (interview & observation), including processing the knowledge and data gathered in phases one and two. In the *develop* phase, the idea for the concept will be discussed and finalized and can be tested. This includes selecting, concretizing, and defining the best solution. The fourth, and last phase, is the *deliver* phase, where this phase forms the basis for testing by the participants, evaluation, and further development of the selected ideas (Plattner et al., 2011, 6; Design Council, 2005).

7.1.2. Design Approach

This thesis will use Liz Sanders's (2008) 'Map of Design Research' (figure 25), as it functions as a guideline for the designer and reader to visualize where I, as a designer, am in the design process. The map visualizes the process undergoing this thesis but also helps to recognize and give insight into the experience, show new directions for exploration, and how I will, in the end, reach the concept design (Sanders, 2008).
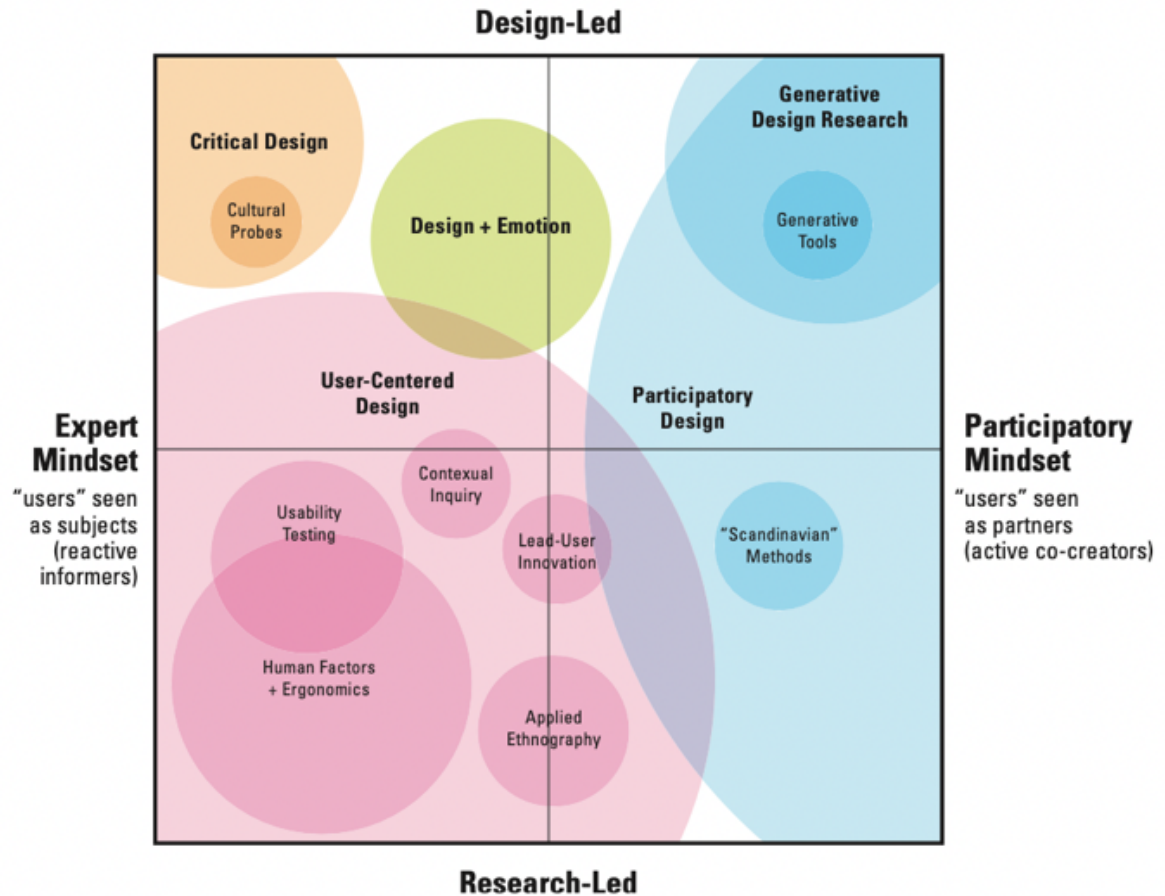
▶ Figure 2. Map of Design Research — Research Types

Figure 25 - Map of Design Research — Research Types. Retrieved:

The research map is divided into two dimensions, the vertical and horizontal lines, each of which defines a design approach. The vertical line is defined as a *Design-/Research-led* approach and the horizontal line as an *Expert/Participatory mindset* approach. The approach of the design and how it becomes is seen at the top and bottom of the model. It is possible to have either a *research-led* approach, where a validated basis is prepared based on the collection of data, analyses, and interpretations, or a *design-led* approach, which is determined by design (Sanders,

2008). Additionally, two opposing mindsets to design research are evident in the practice of design research, *expert* and *participatory mindset,* placed at the left and right side of the model. The left side, *expert mindset,* as the title indicates, refers to researchers designing for people. The designers consider themselves experts, and the people are seen as users and subjects. The right side, the *participatory mindset,* refers to researchers designing with people. People are seen as experts and co-creators in the design process. The design approach in this thesis will primarily be on the right side of the model under a *participatory mindset*. This thesis will use participants, seen as *experts,* in this case, to test the DR LYD application for a week, and their observations, answers, and complete insight will establish the basis for the concept design. However, it is not unlikely that I will shift to an *expert mindset* at some point in section 11, as I acknowledge that I am the expert in my field compared to my test participants, and, in the end, as an expert, I will have the final decision. Including participatory design will help me ensure that the design is created to meet their needs. In this thesis, for example, I am mainly under *user-centered and participatory design fields* (Sanders & Stappers, 2012).

The Day-in-the-Life model

The Day-in-the-Life, shortened to DITL, is a contextual design experience model created to help collect, incorporate, and use data. The model aims to show the overall structure of the participant's day. This contains how the activities fit into time throughout the day, supported by technology (Holtzblatt & Beyer, 2017, p. 149). By collecting a retro perspective account of the past several days of the users, and a thorough interview of listening to the insight of the participant's life and experiences. For example, where do they listen to podcasts? Home, work, walk, car? How long do they usually listen to podcasts? Making the participant elaborate on a specific day and discussing what happened at each point of the day and how the technology enabled or supported the experience.

Additionally, having the participants demonstrate the application and recreate the actions on the application while discussing will give a retro perspective account and give real instances of target activity. These observations and descriptions captured in the interaction will feed the DITL model. Eliciting DITL information and creating the model of the different participants will, in the end, help create an overview and pattern of how the target activity fits into the participants' daily life. The model represents how people do an activity while moving through their places in

the world. Therefore, the model has a core structure composed of the places relevant to the target task, as seen below. The model below is used to capture the notes for the DITL (Holtzblatt & Beyer, 2017, p. 153-154).
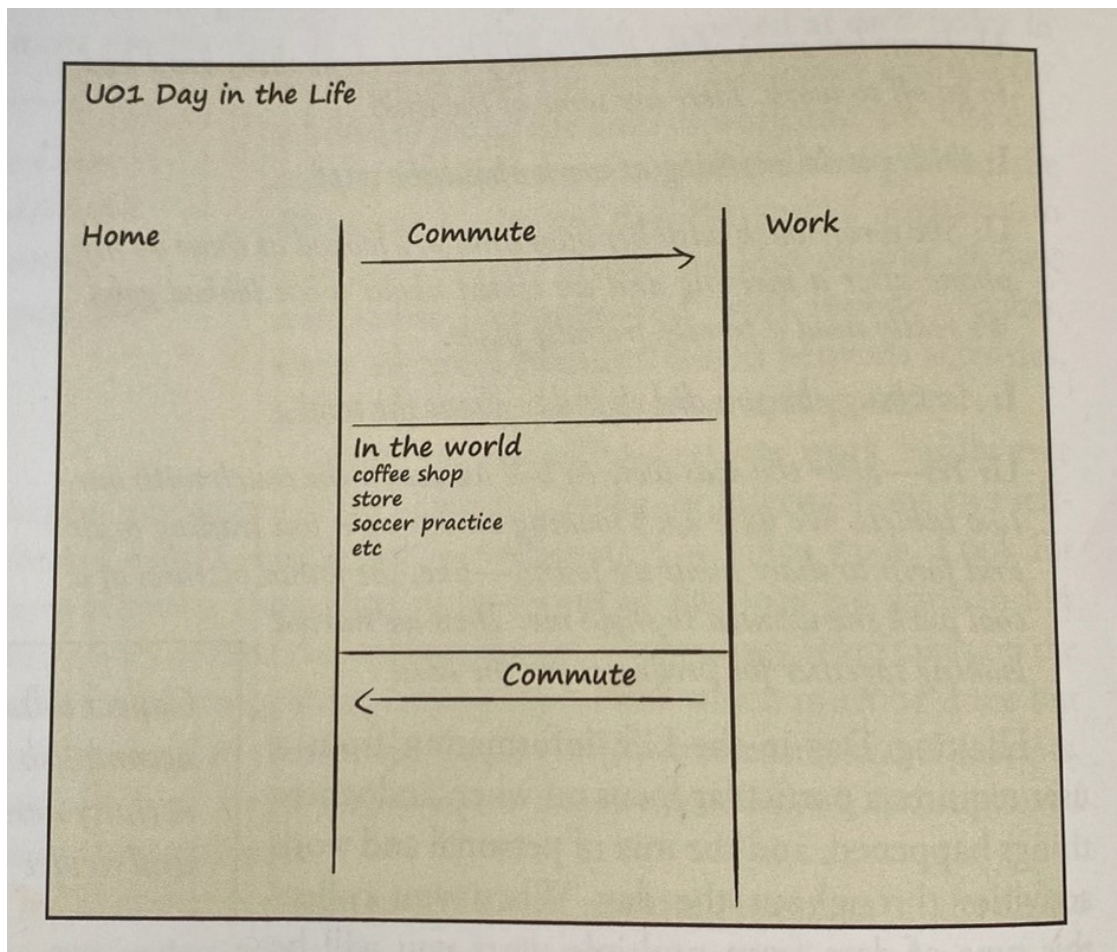
Figure 26 – Day In the Life Model (Holtzblatt & Beyer, 2017, p. 155)

As data from the participants emerge, new locations and information may need to be added throughout the session. The models, information, and locations of the participants may vary from each participant but, in the end, will be organized in the consolidation process. One of the aims of the collected information of the participants is to look at moments of connection with others and how information is shared. In the model, data from every instance of the technology usage and every act related to the target activity must be included. If the participants use DRLYD at fitness or a café, I will write it down. For each of these instances, the participants use DR LYD and podcast; I need to capture where the participant was, what they were doing, what content

they accessed, how much of their attention was required, and so on. All this information and stories will be necessary for the conciliated model (Holtzblatt & Beyer, 2017, p. 155). The consolidating model of DITL will be a graphical rendering showing how the technology is used. As I wish to understand the participant's use of podcast listening on DRLYD, this model will help visualize and highlight a collective insight into the participant's week of usage. The model will visually capture the participants' world and actions across time and place. The model has layers of structure and graphical layout to create a framework for understanding the practice and users' life experience and allows the reader to take in the life practice in one coherent picture. Additionally, the model will cooperate with the previously created condensation of meaning. Creating the graphical framework for the DITL model will be based on the condensation of the meaning of the interviews. Both method applications focus on the text's natural meaning expressed by the participants, identifying key contexts that might be relevant within the larger context. This will help create a framework and categorize individual interviews and models' meanings, context, and themes. Having the data transcribed and going through condensation of meaning beforehand, the interview data is already small and focused, ready to be placed in the model. As with the affinity diagram of the condensation of meaning, when working with the collected data, some data and categories might group together, some might create the possibility of subgroups, some might be irrelevant in the end, and finally, the key data will be collected. From that point, it is possible to interpret the key observation of what the data tells. Is it insightful? Is it new and unknown? Does it tell something about a unique aspect of the activity? Will this drive design thinking? Additionally, the purpose of creating the model is both to give an insight into the participant's experiences with podcast and DRLYD and also gives the possibility of designing a concept that can engage future researcher in using the data in ideation.

7.2. Qualitative method

This section will account for the methodological approaches of the thesis, including the methodological tools, techniques, and processes used in my study to obtain knowledge and insight into the problem area. This consist of qualitative methods, such as a description of the test and interviews with the participants. Qualitative research and methods explore everyday social life and complex problems. Through qualitative techniques, data can be described, interpreted, and results can be delivered (Olsen & Pedersen, 2018). Often, qualitative research emphasizes words rather than quantifications in the collection and analysis of data (Bryman, 2016). In this

thesis, this qualitative method aims to gain relevant insight into the test participants' experience with podcasting and the use of the application DRLYD, significantly to gain knowledge about the processes that take place in the action of listening before, under, and after the interaction has proceeded. The thesis will use the methodological approach of Steinar Kvale and Svend Brinkmann's (2009) perspectives on interview, transcription, and meaning condensation. Additionally, the use of Jakob Nielsen's approach to the user survey.

7.3. Semi-structured Research Interview & Think-out-loud method
7.3.1. Interview

The purpose of the contextual interviews is to uncover general points with the interaction and experience with the application, as well as to gain insight into how the activity played out, and why, when they listen to podcasts, how long it lasted, how much attention is given to the task, if this effects their experience, if the test users share the similar experience, or if their experience is different, and if so how (Holtzblatt & Beyer, 2017, p. 152). The data gathered from the interviews will be set into perspective with the qualitative data and the design approach, as their observations will help establish the basis for the concept design. According to Sanders (2008), I will be in a participatory mindset with a research-led focus. I will involve the participants of the user survey to gain the best insight into desired themes, aiming to get closer to a design solution. According to Kvale & Brinkmann (2015), the conversation between the interviewer and the person interviewed, in which a form of knowledge is created, is defined as qualitative research (Kvale & Brinkmann, 2015). The purpose is to understand themes from the living world from the subjects' perspectives. I have four participants, and therefore four interviews, which present their individual insights on how they experienced the application. The interview seeks nuanced explanations of various aspects of the participant's opinion. It is about getting the participants to describe exactly what they feel and experience and how they act. Where each of these interviews will have a valuable perspective and knowledge, the interview will have a thematical approach, as the purpose of the interview is to gather knowledge within that area. Therefore, I will analyze the interviews primarily regarding the answers and interaction elaborated. I chose to use a semi-structured research interview, as it allows for gathering information about the participants' lifeworld to interpret the described phenomena (Poulsen, 2016). It is close to an everyday conversation but feels like a professional interview, where it is neither an open everyday

conversation nor a closed questionnaire (Kvale & Brinkmann, 2015, p. 49). At the same time, the method allows the possibility of mediation of the question order and form, which creates the possibility for the interviewer and the interviewed person to follow up on specific questions and answers (Kvale & Brinkmann, 2015). The main focus will be on how users experience podcasts, the application, and what kind of experience this creates. However, keep in mind that unforeseen points of view about problems or experience elements can be uncovered. This will be accomplished in accordance with a pre-arranged interview guide, with a focus on specific topics and room for wonders there might be (Brinkman & Tangaard, 2020a). The purpose of the interview guide is to support my role as an interviewer, as it helps me to navigate the interview while allowing the interviewee to navigate with the help of the answers and questions she might have.

7.3.2. Presentation of the user survey

Before the user survey can be launched, there must be reflected and consider different factors that might be relevant to or influence the user survey. First and foremost, what the purpose of the user survey is? What do I wish to establish? As the previous section (see sections 2, 3 & 4) discovered that a certain target group did not use DRLYD as much compared to other free audio streaming services, I knew this would form the basis of this thesis. How can I improve the experience on DRLYD for that specific target group and create more engagement? Therefore, finding participants to participate in the user survey. According to Sanders (2008), I am under a research-lead/participatory mindset, where I see these participants as informants and experts, through the interview will help me get the best insight and information into the desired area with the aim of getting closer to a design solution.

According to Jakob Nielsen (2000), when testing, in my case, a qualitative user survey of an application and its usability, five people, is the right amount of test participants to find most of the usability problems as I would have found using more. This is because when you test more and more, there will be fewer insights to uncover in the end. The same issues will most likely continue to be mentioned by adding more participants. Therefore, I initially started with five participants, which became four under the user survey period. The criteria for selecting the participants for the user survey were that they should be podcast listeners, have experiences with podcast applications, and be in the age range of 18-34. As I am in the specific age range, and

most of my acquaintances are in the same age range, I used the convenience sampling method and asked around to find interested participants. Even though I know the participants beforehand, I have no prior knowledge of their specific use or preferences on podcast applications other than they listen to podcasts. Gender did not matter. However, I tried to make it as equal as possible. Initially started with two males and three females. However, one of the male participants withdrew from the survey.

H – Female, age 26, Copenhagen, Unemployed
C – Female, age 26, Copenhagen, student.
S – Male, age 27, Aalborg, Student
M – Female, age 31, Hjørring, Maternity leave
M – Male, 28, Copenhagen, Employed (withdrawn from the survey)

Figure 27 – Participants of the user survey

Each participant was given the same task and description of the task. The task entails that the participant should use the application for one week. How they use the app is entirely up to the individual participant. It was up to the participant how much they would like to use the application, what they wanted to listen to, and how long they listened. The only request was mainly to use the specific application for that week and to get familiarized with the application and what it offers in terms of content, functionality, and visualization. I wished to follow up on the participants throughout the week to see how the user survey was going. However, many of the participants expressed a hectic week. I, therefore, came to the conclusion of sending a survey out where the participant could find time to update on their current experience. After the week of testing the application, the participants were given one week off to collect their thoughts and then continue the user survey process by collecting the data through individual interviews. As the participants were placed in different parts of Denmark, the interview was done online via Zoom and Messenger, where the interviews were recorded. The participants were tasked with having their phone and the application displayed and using it throughout the interview to showcase their points and examples. These examples will be included in the transcript of the individual interviews. The interview started with a description of the purpose of this interview and an elaboration of the problem statement to better understand the direction of the interview.

7.3.3.   Presentation of the interview guide

The interview questions and guide are reflected upon and produced based on the problem statement and theoretical and methodological choices. To understand the experience of the current application and how to create a better experience for the users, create questions reflecting upon the criteria of UCD. Understanding the individual user, their use of podcasts in their daily life, why they listen, what they like, and what has been a hurdle? This will reflect the user's needs and, in the end, how to design better. Also, with the design method – day-in-the-life, to understand how podcast influences their life, what their daily routines look like with podcast, when they listen and why.

For example, question 2 allows the participant to elaborate on their day and week with podcasts. The participants can elaborate on where they mostly listen to podcasts, how often they do, and so on (see figure 26). The User Experience Framework elaborates on the user, product, and context of use, where these components supported the creation of the interview questions - their prior experiences, values, feelings about podcast listening and applications, how the experience was on the current app, concerning language, features, aesthetics, accessibility, and how and when the application was used. All these questions that the theories and methods established were structured into an interview guide. This Is, for example, seen in questions 7, 12, and 13, which lies up to the participant to elaborate on user experience and usability.

I structured the interview guide following an introduction, then specific introductory and clarifying questions, which allows the possibility to follow up on the question. I started the interview by introducing what the interview was about and how it would be and describing the problem statement to understand it better. In connection to the previous statement of specific introductory questions, I started by asking how they generally have experienced the whole week of using the app. This could help disclose how they felt and if they met challenges, allowing me as an interviewer to dive deeper with follow-up questions. Afterward, asking open questions that were simple and easy to understand so that the interviewee could disclose topics out on their own experiences and attitudes. In that connection, I seek to avoid misleading and prejudiced questions, as I wish not to influence their presumptions and stands (Kvale & Brinkmann, 2015). As an interviewer, I must be prepared and open to new and unpredictable phenomena rather than working with premade categories and interpretation schemes. At the same time, I must be able to derive the meaning of the interviewee's statements (Kvale & Brinkmann, 2015, p. 52).

Additionally, the interviewer plays an essential role in the research interview, as the purpose is to gather usable data. The interviewer must be well-informed and prepared to listen, follow up, and ask relevant questions actively. The interview guide, as seen below in figure 3, entails various questions, each of which contributes to knowledge about the research field and allows for further elaborated questions and answers.

1.	Can you tell me how your experience has been after a week of using DRLYD
2.	Can you, in detail, walk me through a day or week in your life with DRLYD?

	a.	Did you see a pattern when listening to podcasts?

		i. Where were you? (Environment?)
		ii. How many days?
		iii. What were you doing? (Activity?)
		iv. What did you listen to?
		v. What mood were you often in? – boredom, curiosity, relaxation, etc.
		vi. How long do you listen? (a bit at a time or a whole episode and why?)

3.	Do you use a computer or phone? If both - which did you prefer?
4.	When you enter the app, do you know what you want to listen to?

	a.	How long does it take for you to find something?

5.	Have you used the application before? And do you know other who has used the application before?
6.	Did you experience certain motivation for listening more during the week? Motivation from a podcast, just intrigued by the app or something else?
7.	Does the application offer what you need?
8.	Are there any things that prevent you from using the app the way you would like?
9.	Do you prefer other applications?

	a.	If yes, why?

10.	Did you feel like you achieved/learned something from listening throughout the week?
11.	How do you discover new podcasts in general?

	a.	Do you experience good inspiration to discover new podcasts?

12.	How was the application in terms of usage?

	a.	How was it to navigate?

		i. Is it easy to use?

	b.	Attractive and appealing visually?

		i. What did you like?
		ii. What didn't you like?

	c.	Content satisfaction?

		i. Did you miss something?
		ii. What did you like?

13.	In the end, what are the best and worst experiences with DRLYD? (Can be specific as well as general).
14.	What kind of experience is it for you to listen to podcasts?
15.	How would you have a podcast application? What would it entail?
16.	Would you continue to listen to podcasts at DRLYD?

Figure 28 – Questions for interview (see appendix 18)

7.3.4. Think out loud method

In combination with the interviews, I have chosen to supplement it with the think-out-loud method by Kjærgaard, Gravengaard, Hjuler & Dindler (2018) to investigate if other users share the same experiences, or if they are different, and if so, how. With this approach, there are some specific focus points I want to gain perspective on, where I want to guide users in thinking aloud in connection with exposure to these focus points. Concerning the theory of science, the approach uses the fundamental perspective of phenomenology about the primacy of the life world and hermeneutics' focus on the process of interpretation as an analytical tool. Therefore, I will be open to other perspectives and, potentially, completely different focal points. This applies in connection with think-aloud tests, particularly in the interview, where markedly different perspectives can be exposed. Kjærgaard et al. (2018) describe three paradigms within the thinking-out-loud method, each of which differs from one another. Paradigm 1 approaches the objective study of cognitive processes, paradigm 2 investigates usability, and paradigm 3 creates effective strategic communication with the help of understanding attitudes, interpretations, and experiences. The current paradigm for my study is a mix of paradigms 2 and 3, the study of usability, which is characterized by gaining insight into how users interact with a given product or service, typically to improve it, and paradigm three, where it is interesting to look at people's attitudes, interpretations, feelings, experiences, understandings and general sense-making (Kjærgaard et al., 2018, p. 99). I wish for the participants in the user survey to use the application for a week to, on their terms, get to know the application and its features. Afterward, during the interview, the participants will elaborate on their experiences, feelings, and understanding of the app. Using these two paradigms, as a facilitator, I can ask the participants in-depth questions regarding the application and their attitudes (see section 7.3.5). In contrast, the participants interact with the medium. The created research questions for the participants allude to detailed descriptions and questions about the user experience while using the application. So, the participant continuously expresses their experiences and thoughts in connection with the interaction. The research question is better answered by this method, as it gives a better opportunity to express their experiences and feelings about the application (Kjærgaard et al., 2018). As stated in section 7.3.3, I wish to use participants aged 18-34 who are already familiar with the podcast world and have used podcast applications before.

The participants will, as stated in the previous section, in the start of the interview be informed and introduced to the method of approach in the interview, as it is important to make clear for the participants what the purpose of the interview is and what they need to pay attention to. In this case, I wish the participants to be thorough in terms of being as descriptive, interactive, and reflective as possible. When the participants in the interview use the method, I guide the participants in think aloud about specific questions while they showcase their examples. This could, for example, be with the question, "how was the application in terms of usage?". This user survey focuses on getting the participants to express their experiences on DRLYD while navigating through some of the features. The participants explain and demonstrate what they dislike, what confused them, and what specific features do, compared to other applications, to make the impression and explanation more in-depth and more accessible for them to comprehend. I chose to document the think-out-loud test by screen and audio.

As the participant was scattered through different parts of Denmark, the interviews were done through Zoom and Messenger, where the participant showed me their points by showcasing their screen to me. This allowed me to understand which thoughts are expressed in the interaction. However, since it is online, I have chosen to write down the observations in the transcription, intertwining interview and observation of each interview. Consequently, the think-out-loud will not be shown per se in the analysis but will contribute to an overall understanding and analysis of the user's experience. The screen and sound recordings are transcribed (Appendix 1,2,3 & 4) and then coded and meaning condensed (See section 7.4.2 and appendix 9).

7.4. **Transcription and condensation of meaning**
7.4.1. Transcription

According to Brinkmann & Tanggard (2020), when doing interviews, there are advantages of recording interviews with the purpose of transcribing the interview later on. This creates the possibility of recollecting what has been stated, creating a clear overview that can later help in the condensation of meaning and analysis and give more accessible access to the data. As previously mentioned, the interview will entail questions regarding their experience with the application. It will be supported by the method of Day-in-the-Life and think-out-loud, so I will have certain guidelines prepared when transcribing how and what details I want to include.

7.4.2. Meaning of condensation

As previously mentioned, the thesis will use condensation of meaning to analyze the collected qualitative data from several interviews. The purpose of condensation of meaning is to systemize the collected data through categorization, coding, and analysis to reach saturated and collected material. The process contains different statements and identifies overall themes and meanings through an interpretation and analysis of the empirical data (Kvale & Brinkmann, 2009). An analytical categorization occurs in connection with coding and categorization, as the observed data is assigned interpreted categories that go beyond the descriptive data of the informants' own words (Gibbs, 2018). The coding was thus the first essential part of the data analysis, which got me on from the *Discover* phase to the *Define* phase. In other words, condensation of meaning is a form of summary and outline of the main points of the empirical data and finding meaning in interviewers' statements. Condensation of meaning is a commonly used technique for data processing within phenomenology and hermeneutics, as the focus for the people interviewed to elaborate and describe and interpret (Brinkmann & Tanggaard, 2020). The method will help me to gain insight into common and recurring motifs to see how the participants experience and talk about the given phenomenon.

7.5. **Design tools**
7.5.1. How Might We (HMW)

In the analysis, specifically in Ideation, I will start with the *How Might We/I (HMW)* method. The method is a methodologically iterative approach that motivates a more reflective approach to design challenges. In my case, the method will be used based on the created design criteria, which will be reshaped into design challenges by posing the criteria/challenges through the

HMW method (Dam & Siang, 2017). It will help me, as a designer, explore possible solutions for the problems. Each word – How – Might – W indicates an approach, where *how* indicates the openness to various possible solutions. *Might* presuppose that all ideas should be explored*, and we,* or I in this situation, indicate how I can produce as many solutions as possible to the problem (Siemon, Becker & Robra-Bissantz, 2018).

7.5.2. Prototyping

There are two aspects to the design process. There is the conceptual aspect, where the focus is how on the overall idea of the product, what the product will do, and how it will behave, and then the concrete aspect, where all the small details of the design, of the features, graphics, menu types, is elaborated. These two aspects are intertwined to prototype ideas. For the product to be evaluated by the users, there must be a prototype. A prototype is a manifestation of a product design (Holtzblatt & Beyer, 2017, p 422). A prototype will allow stakeholders to interact and explore the manifested prototype, where the prototype usually emphasizes one set of the product's characteristics. The manifestation of prototypes can be anything from paper-based storyboards to physical mockups to complex pieces of software. The purpose and relevance of a prototype are to help discuss and evaluate the concept idea, which encourages reflection from both stakeholders and the designers, as it supports designers in choosing between possible alternatives. All from testing the feasibility of an idea to clarify vague requirements or to check that the design idea is compatible with the rest of the concept development (Garret, 2011).

5.2.1.1 Sketching
In this thesis, I will use sketching to demonstrate the concepts and ideas on the platform DRLYD. A sketched demonstration of how the concept idea will look and clarification of how the prototype will support the design criteria based on the user's feedback. Sketching can be used to explore design ideas which can lead toward the final contemporary concept (Preece et al., 2002). The prototype will show the intended functions and buttons, their positioning, labeling, and the overall shape of the product device. As I have chosen to sketch the prototype and its features, it becomes a low-fidelity form of prototyping.

5.2.1.2 Low fidelity prototyping

As stated above, I have chosen the method of sketching the prototypes of the concept ideas. The sketches are drawings on paper of how the application will look with the implementation of the statements created based on the design criteria. Low-fidelity prototyping, such as sketching, does not visually represent the contemporary final product or provide the ascribed functionality. Using this simple and quick approach allows for the possibility of exploring alternative designs and ideas and fits the early stage of conceptual design. The low-fidelity prototyping will be supported by storyboarding, which offers more details and scenarios based on the participants' feedback, allowing stakeholders to be more involved in the prototype (Preece et al., 2002).

8. Analysis
8.1. Analysis of the empirical data

In this section of the thesis, I will be near the end of the *define phase. I* will acquire, handle and categorize the data and knowledge gathered about the users, their experiences from the interviews, and the design situation. The red circles will reflect the stage of this process where the insights and themes created from the insight will help me move forward into the ideation process in the *develop phase.*
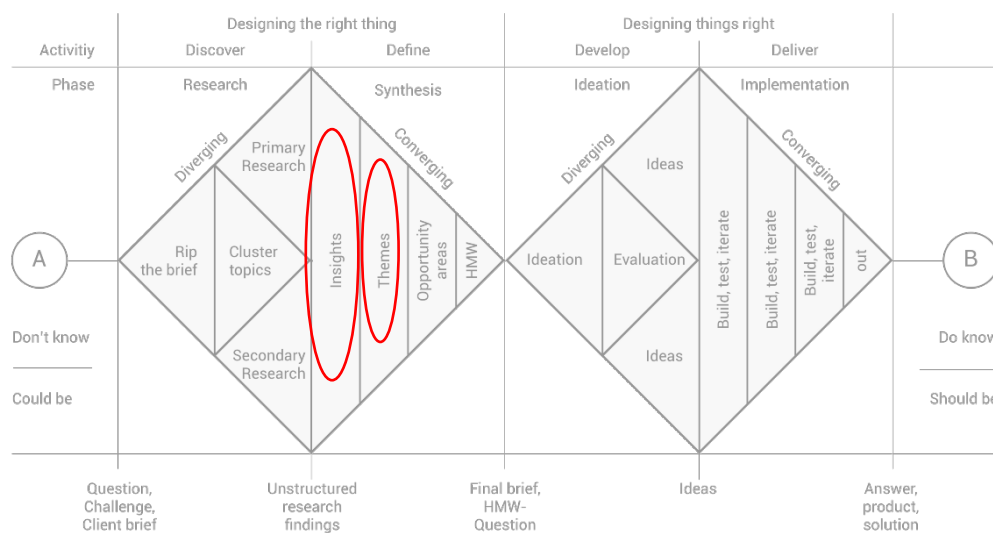

Figure 29- How to apply design thinking – Double Diamond (Nessler, D, 2016)

This consist of an analysis of the empirical data that, in the end, will contribute to defining the design criteria. At first, a description of the essential insights from the participants by using a semi-structured interview and using the method 'think-out-loud.' The insights and observations will highlight the current design's strengths and weaknesses. This knowledge collectively provides new knowledge into how DRLYD can give a more meaningful, continually engaging experience. As the designer, this will also allow me to gather relevant data according to the *user-centered design* and the six criteria for optimizing the user experience. I will again be in the participatory mindset with a research-led focus, where data is condensed by what the users state. Their involvement and insights will help us get closer to a design solution. The complete answers

of each of the participants can be seen in appendix 1,2,3 & 4, and the condensation of meaning can be seen in appendix 9.

8.1.1. Process

The process of analyzing the data and creating the design criteria began with the open data coding process, where I let the data's content determine which codes need to be generated (Gibbs, 2018). This approach complies with the chosen theory of science, where phenomenology is about making sense of reality and experiences, in this case, from the perspective of each individual participating in the interview. Therefore, allowing the participants to elaborate and unfold the interview and, in the end, let the content of the data determine which codes are generated. As this thesis aims to come to a contemporary concept and design, the selected data must still be relevant and assist in the solution.

The process of generating codes started with reading all the interviews and, after that going through the interview guide to get an overview of which questions were answered—creating a visual map on Miro to organize all statements to each question from each individual. Each participant has their color and initials (figure 30).

Figure 30 – Order of participants by color and initials (see appendix 9)

The purpose of writing each question and answer down from each of the individual participants is to, first of all, form a general overview of the interviews and answers and select and place quotes and codes based on the relevance of the interview questions and overall research question, and then begin the condensation of the meaning process (Kolko, 2011).

The statements relevant to this thesis and research will be condensed, which, as mentioned in the previous section, is to reduce larger text segments to units of meaning (Tanggaard & Brinkmann, 2015). Therefore, the statements will be reformulated to the essence of the meaning (see figure 31).

Figure 31 – Preview of condensation of meaning (see appendix 9)

As stated, each participant has their color, turquoise, purple, yellow, and blue (see figure 31), and besides the collected statements to the given question is the condensation of meaning, which may have its own color, to showcase whether the statement has an important point, challenges or critic or share a similar experience with another participant (See figure 32).

Figure 32 – Color codes (see appendix 9)

Subsequently, the condensation of the meaning of the statements gave an outlook on what condensation pointed towards the same experiences, themes, problems, and so on. Based on the condensation of the meaning of the statements, an additional process of an analytical categorization of the condensed statements happens in terms of comparison across the different categories. When coding and creating condensation of the meaning of the data, I could enter the next step of the design process into the define phase of taking the clarified themes and patterns and creating the basis for the design criteria.

Figure 33 – Total condensation of meaning (see appendix 9)

8.1.2. Interpretation of empirical data

Throughout the interviews, I have noticed several different perspectives of the experiences on DRLYD. In this section, I will elaborate on the different perspectives, as it has given me insight into the advantages and disadvantages of DRLYD current design as an experienced medium. As previously mentioned, the questions asked are focused on the usage of the application and the experience that follows (see section 7.3.3). An essential part of listening to podcasts is the experience before, under and after. The process of using the app before finding and listening to a podcast is necessary to understand to create the right design and experience. The selected and demonstrated statements, and being the objects of the analysis, are the points that stand out as significant, in their and my perspective, and will be used to create experiences.

8.1.3. Essential insights
8.1.4. Use of Podcast Applications in Everyday Life

As previously mentioned (see section 4), the purpose of this thesis is to understand the motives of listening to podcasts and how I can improve engagement on DRLYD, and do this, I must understand the before, during, and after the session of using the application and listening to podcasts. As my participants (P) express, they use podcast applications, and DRLYD, in various ways and periods. The participants use podcast applications when transporting (walking, biking, bus, and metro), relaxing, cooking, or doing a hobby/activity. Three out of four participants listen to podcasts approximately three times a week, mostly in small chunks throughout the day. They express that listening to podcasts fills the gaps in everyday life and gives the opportunity to accumulate knowledge while doing an activity. The participants express that applications functionality and design influence finding podcasts and creating inspiration for discovering new podcasts.

8.1.5. The Value of Simple Design

One of the most reoccurring insights from three of the four interviews is the positive value of a simple design and its impact when it comes to leaving an impression and forming an experience. The participants are common users of multiple podcast applications, and their impression of DRLYD is compared to their previous experiences. The following statement can be seen in appendix 1,2,3 & 4:

P2	
	Men jeg udforskede også, og var under deres forskellige kategorier. I starten skulle jeg **lige lære deres forside at kende**, men jeg synes egentlig at den er ret god, og synes det var fedt at udforske (Appendix 2, ll. 32-33)
	Jeg synes at det er **let at navigere,** jeg synes at man finder det man skal bruge, og hvis ikke, så er det stadig nemt at søge efter det (Appendix 2, ll. 149-150)
	Så jeg synes faktisk, tror jeg **sammenligningsmæssigt er det ret overskueligt (**Appendix 2, ll. 161)
	Jeg elsker kasserne og kategorierne, jeg synes virkelig det er et l**ækkert design som giver en overskuelighed for øjnene. (**Appendix 2, ll. 170)

> **Og så, elsker jeg også bare deres eget design de har. F**or eksempel Genstarts eget design, og alle dem der hedder orientering. Føler har lavet meget pangfarvet forsiden, med enkelt design, nogle bokse og ringe   (Appendix 2, ll. 181-183)

Participant 2 expresses that the application is easy to navigate, and it is easy to find what you need to find either by looking or searching. It is made manageable and foreseeable by implementing simple categories and boxes that are nice and easy on the eyes. P2 also likes that some of the specific simple designs on the podcast. Participant 4 also expresses a similar experience:

P4

> Så synes jeg **DR er flottest og mest inspirerende** end podimo (…) (Appendix 4, ll. 157)

> **Det at den er lys og behagelig for øjnene,** og **billederne er podcast er ret gode** og brugt tid på at få dem lavet. De er **inspirerende**. Ved godt man ikke må dømme en bog for omslaget, men det gør lidt. At det ser spændende ud, og hvad er det mon (Appendix 4, ll. 162-164)

Participant 4 also expresses that DRLYD has a simple, beautiful, and pleasant design, which inspires P4, as the design of the pictures are good and inspires and lures to investigate further. These two participants found the simple design, including the color, graphical pictures, and navigation, appealing and contributed to the final experience.

P3

> Og min oplevelse med selve app'en har faktisk også været rigtig god. Den har været meget Intuitiv (Appendix 3, ll. 16-17)

> Altså, sådan ren visuelt, så podimo noget pænere bygget op. Altså noget pænere billeder, og noget bedre at navigere sig rundt i. Hvor at DR app er mere. **Der er ikke gjort meget ud af det visuelt, pæn eller noget. Meget simpel bygget op, og tilbyder ikke ekstra det der skal være.** Det er også fordi man ikke rigtig stiller høje krav til selve app'en, så længe det fungerer (…) (Appendix 3, ll. 111-113)

Participant 3 supports the previous statement of the simple design. However, it also mentions that the simple design is "too" simple and does not go above and beyond to offer extra of what

should be there. The history of the operator (DR) has created certain foregone expectations for the application DRLYD, and therefore not having high demands on the app itself, as long as it works. P4 does not feel like DRLYD has outdone itself with the visual and aesthetic appearance; therefore, the participant has bestowed meaning to the product of use.

P1
Det virker mere naturligt på Podimo, hvorimod DR virker mere opstillet. Man må ikke lige sige mere fordi det er jo DR eller gå ud over nogle grænser – føler jeg. Hvorimod podimo der kan de bare sige hvad de vil, fyre nogle jokes af, og jeg føler bare der er en god stemning. (Appendix 1, ll. 170-173) Så synes jeg også bare layoutet er mere lækkert at bruge hvis jeg skal være ærlig og gå ind i designet, sammenlignet med DR (Appendix 1, ll. 137-138).

On a similar note, participant 4 also expresses certain foregone expectations for the application, where P4 feels that the application needs to go beyond some limits to meet the needs. Also, when it comes to the design and layout, P4 shares the same attitude as P3, of other applications having a better and visually prettier design and layout.
All in all, the simple design does help create a meaningful experience for some of the participants, and others do see and acknowledge the design. However, the need to separate from the typical transparency and expectations associated with DRLYD in correlation with the simple design can further help create a more meaningful and inviting experience. As seen, the participants do like how the visual design currently is displayed on DR. Therefore; the concept design must carry on and embrace the same theme on the platform but still have a feeling that they are in a different, less static, and predictable, platform that it is otherwise known to be. Participant 1 and 3 states that the app is associated with being afraid of transcending barriers and being predictable to their image. Therefore the design criteria must entail an upgrade to the simple look but still embrace it.

8.1.6. The Lack of Control, Features, and Transparency

Another popular reoccurring insight, which creates negative emotions, is the lack of control, features, and transparency. Even though the application has functioned well for some participants, there are still various examples of DRLYD appearing non-transparent for users. This is in terms of being unable to fully use the application like other audio streaming services without obstacles and wondering how to download, save and see recommendations. The lack of transparency is described as negative, meaningless experiences characterized by a lack of commitment to interact with the application fully. Participant 2 emphasizes that one of the missing and unclear functionalities is in terms of navigation and history of what has been listened to:

P2
Tilgengældt, så tænkte jeg på, som jeg sagde tidligere, **så kan man ikke se på DRLYD hvad jeg har lyttet til tidligere**. Så det kan være en af de ting **navigationsmæssigt**. (…) (Appendix 2, ll. 161-163) Kan se på **'min side' at jeg skal logge ind**. Det vidste jeg ikke. Har jeg nogensinde haft et login tænker jeg lige på. Det er fordi man selvfølgelig ikke betaler for DRLYD, og det er jo fedt. På Podimo har man sin egen min side, fordi man logger ind og betaler for det. Så har man jo sin egen bruger, og **det behøver man jo ikke for man betaler ikke**. Men jeg synes, jeg ved ikke om det er en **for irriterende konkret ting, men jeg synes bør være muligt at følge hvad man har lyttet til selvom man ikke har en profil**. (Appendix 2, ll. 194-199). Hvis man virkelig godt kunne tænke sig at blive inspireret, og man finde noget nyt. Man leder og leder, og man går ind i nye kategorier man ikke plejer at gå ind i, og man bare bliver irriteret fordi man ikke finder det man vil. Ikke sjov, eller spændende og ikke er det man leder efter (…) Så lytter man 10 min af noget, og så 10 min af noget andet fordi man leder, og man finder bare ikke det man leder efter. (Appendix 2, ll. 216-219)

Participant 2 expresses with examples of how DRLYD creates navigation obstacles, as the application has unnecessary clicks and still lacks some, which complicates the experience. The participants wish to see what has been listened to previously for the sake of this interview and have only during the interview discovered that they must have an account. This creates a barrier to fully experiencing the potential of the application, leaving the participant feeling irritated, as the application is free and can be used without an account. Additionally, participant 2 mentions that the app does not use algorithmic recommendations, which leads to wasting time on the application and, in the end, a lack of inspiration to find something suitable for the current mood and desires.

Participant 4 shared a similar experience of missing some clicks in the experience:

P4	
	Ja, og jeg bruger mest appen 'Podcast'- Apples egen, og synes bare det er smart det med man kan downloade og have et bibliotek hvor de ligger i, og det bruger jeg ret meget. De ligger der og **når man blive inspireret af noget af** det der er derude, så gemmer jeg det. For eksempel, hvis jeg har travlt og er ude og gå, så kan jeg bare gå derind **og tryk på hvilken som helst af dem jeg har gemt og gerne vil høre. Det synes jeg lidt jeg mangler her, og om man kan det skal jeg ikke kunne sige og jeg bare ikke har fundet ud af det. Måske hvis man logger ind?** (Appendix 4, ll. 17-22)
	Altså, det eneste er den gerne vil have jeg skal logge ind før jeg kan downloade. Og jeg har ikke en burger (Appendix 4, ll. 138-139)
	(…) **også fordi jeg ikke helt hvad det involverer at logge ind**. Måske er det min generation, det med at være påpasselig med at lave brugere og logge ind. Jeg har ikke lyst til at lave en bruger for at logge ind, selvom det måske er det som skal til før jeg kan downloade og får mere ud af det (Appendix 4, ll. 143-145)
	(…) Jeg kan jo lytte uden at logge ind (Appendix 4, ll. 152)

Similarly, the participant is missing the option to save and download podcasts to listen to later on, as the person wishes to have a folder with all the saved or downloaded podcast that has inspired and is easy to pick up when on the road and need something to listen to. The possibility to log in with an account did just occur for the participant during the interview, which created skepticism and uncertainty for the application and experience, as the participant can still listen to podcasts without logging in and having an account. The participant does not know what it entails when logging in, which creates this uncertainty, although it may be what it takes to get more out of the application. However, participant 1 expresses other missing features that have made the experience less enjoyable compared to other applications:

P1	
	Men jeg personligt har jeg det svært med at lytte til noget jeg ikke kan se (Appendix 1, ll. 28-29)
	(…) Jamen den dårlige ting vil jo være **de ikke har den her video funktion,** og det er ikke fordi jeg kræver så meget. Bare en video i hjørnet, hvor man kan se imens de taler. Det synes jeg er lidt dårligt at de ikke har det (…) (Appendix 1, ll. 179-181)
	(…) Så vil jeg ikke have så meget tekst. (…) **Som fx på DR, ligner det faktisk ikke en podcast, men mere en artikel**. Jeg vil ikke have så meget tekst. For mig er det bare billederne som skal gøre noget, og det er dem man skal trykke på. Så synes jeg titlen på podcasten sige meget mere om podcasten. Så man ved hvad man går ind til. Så vil jeg gerne have nogle gode billeder, som forside. Som er taget specifikt til podcasten. På DR kan det være de har brugt et billede af en person eller andet, som allerede havde i forvejen og bare designet om. Hvorimod Podimo har taget et specifikt billede til podcasten (Appendix 1, ll. 193-202).

Participant 1 expresses the need for more advanced features for the participant to use the application regularly. It features such as video-feature of the podcast, where it is possible to see the podcast's creators while talking, as this is a feature that DRLYD competitor Podimo uses to some degree. Additionally, the participant states another factor that plays a role in the overall

experience for this participant: the application's visual appearance. The application and the podcasts are compared to articles with too much text, not the visual elements and pictures, which need to be the main focus. The participants have clarified that the application is incohesive and untransparent for users to navigate and feel comfortable. This has created the feeling of losing control and being uninspired to continue the experience. Therefore, the design must be more transparent and give the user more control by implementing features and changes that can provide that.

8.1.7. The Lack of Diversity of Content, Inclusivity, and Exclusivity

Some participants also mention the lack of diversity of content, inclusivity, and exclusivity, and they go towards other applications to fulfill their needs. Participant 2 expresses that the application does not invite to explore other than what DR is known for, news, knowledge of societal matters, and politics.

P2	
	Jeg synes ikke den udforsker eller jeg synes ikke den indbyder op til, nu kaldte jeg det lidt fjollet og ballade eller Sådan noget "easy" i noget tidligere. Men alt Sådan noget hygge noget eller noget der er sjovt, det der hvor man bare gerne vil have et let grin. Det er sådan der jeg ikke får derinde. Jeg ved godt de har det derinde, altså de har sikkert nærmest alt, og det ligger der sikkert et sted (…). Nej den så jeg synes ikke lige det indbyder til at lytte videre. (Appendix 2, ll. 109-114)
	Tror måske særligt, at **DRLYD har mange podcast der orienterer sig mod man lærer noget nyt.** Om det så **er politiks eller særlige emner**(…) (Appendix 2, ll. 51-52).
	Jamen, altså jeg tror jeg foretrækker dem til forskellige ting. Altså jeg kan sige med sikkerhed jeg ikke kommer til at slette den. Men jeg tror DRLYD kommer til at blive min radio. **Jeg kunne også tænke mig at bruge den til de der nyhedsopdatering, men det det er både en radio ting og en podcast ting.** Men jeg tror Podimo bliver det sted, som jeg har sagt før, det sted jeg vil lytte til alle de her hyggeting som jeg nævnte før. Og det tror jeg faktisk fordi det har noget at gøre med hvad der er på

> deres intro/forside, fordi. Tror ikke det er fordi jeg klikker på nyheder eller, men jeg
> synes der er rigtig meget af det på DRLYD (…) (Appendix 2, ll. 127-133).

The participant expresses, as mentioned above, that the application does not differ from what it was previously known for, which affects the overall experience for some participants as the application does not offer all of the "moods" and content that suits different periods of the day. Participant 2 mentions that many podcasts are oriented towards learning new things, either politics or specific societal topics, especially on the front page, compared to other applications. This has created a feeling that the app can only be used for a specific purpose; in P1's case, radio and podcasts oriented on news updates.

Participant 4 also shares a similar experience:

P4
(…) Det eneste de ikke kan gøre for, er at de ikke har adgang til Podimo, og mørkeland ikke ligger der. **Det er jeg vild med. De eksklusive, eller private, så alle kan ikke komme på dr.** Den er jo ikke lavet af DR, så den kan ikke komme på. Faktisk udelukkende derfor jeg ikke kommer til at bruge appen, og hvis jeg skal være ærlig, vil jeg faktisk helst gerne bruge DR, men også af en politisk/etisk årsag, synes man skal støtte DR, så meget som muligt (Appendix 4, ll. 172-177)
Det er nok Podimo, og der ligger alle apps derinde. Men derefter kommer apples egen app, og den er så også gratis. Den er jeg også glad for. Der ligger mange, men der er også flere og flere der går væk fra Apple For eksempel Stephanie Fiskers 'anden til venstre', den findes ikke Apple, men på Podimo. Det sker med flere og flere (…) (Appendix 4, ll. 112-115)

However, P4 expresses that it is generally preferred to use DRLYD. Still, the exclusivity of other applications appeals more as more popular podcasts and podcasters begin to cooperate with exclusive audio streaming services rather than DRLYD and Apple Podcast. Even though DRLYD is an application that visually is better and has good content, according to P4, still prefers to pay for the exclusive app.

Altså, sådan ren visuelt, så Podimo noget pænere bygget op. Altså noget pænere billeder, og noget bedre at navigere sig rundt i. Hvor at DR-app er mere. **Der er ikke gjort meget ud af det visuelt, pæn eller noget. Meget simpel bygget op, og tilbyder ikke ekstra det der skal vær**e (…). (Appendix 3, ll. 111-113).

Det er også **fordi man ikke rigtig stiller høje krav til selve app'en**, så længe det fungerer. (Appendix 3, ll. 145)

Participant 3 agrees at some point that Podimo is visually and navigational prettier and more manageable. DRLYD is more straightforward and does not offer anything beyond that, which creates low expectations for the experience and application.

P1

Altså især med Podimo, **de reklamerer også meget på de sociale medier**. Og har fundet ud af dem som er på Podimo oftest er kendt et andet sted fra – Instagram og tv. Jeg ved ikke… **Det er attraktivt**. **Man har mere lyst til at lytte på det.** Man følger dem alligevel på en anden måde, så hvorfor ikke følge dem her også. Så ja. Så når jeg fx åbner Podimo app'en, så ved jeg godt hvad jeg vil lytte til. Et eksempel er Hav&Kamal fordi de er kendte på DR. Og så på DR Facebook får man sådan nogle småklips af det (Appendix 1, ll. 110-115)
Ja, men kun ved Podimo. Jeg forsatte faktisk efterfølgende med at lytte til podcast på Podimo (…). Men ja, jeg er blevet meget mere motiveret til at lytte til podcast. Men hvis jeg skulle vælge hvilken platform jeg skulle lytte til, så er det Podimo. Hvis jeg skulle lytte til podcast igennem DR, så ville jeg ikke længere lytte til podcast (Appendix 1, ll. 161-165)

Participant 1 expresses the abovementioned statements of other applications' exclusivity and advertisement, which in the end, has created a preference for the application graphically and content-wise. P1 would not continue to listen to podcasts on DRLYD if that was the only choice.

Ultimately, the design should include more diverse content for the user, whether it is new content creation or a new way of displaying the content they already have produced. The design should also focus on the user and make the experience on the app more personalized, as participant 2 states that the app does not embrace easy and fun listening.

8.2. **Summary of analysis of the empirical data for design criteria**

In connection with the analysis of interviews and think out loud method, I have collected several insights on the advantages and disadvantages of DRLYD and insight on how to create a more meaningful and engaging experience. Podcasts are used in large extensions in everyday contexts and act as a natural mediator to create experiences in everyday life. The participators express that the best experiences on DRLYD are when they wish to find podcasts surrounding knowledge and societal subjects, though missing every other genre besides those. Therefore, it finds the necessity to reach out the different platforms, such as Podimo, which offers all podcasts in the app, to fulfill the need of the specific wish and mood. However, the statements show the potential to create better and more inviting conditions for the application to discover relevant podcasts. As seen, there is a lack of meaningful and inviting visual inspiration, additionally with the lack of features to withhold users and discover the app properly, as one of the reasons is being exposed to meaningless recommendations. To continue the free experience on the app, the participants and users must create an account to add features and continue their journey, and this creates problems in the long haul. The current application has too many clicks, offers less user control, and has no algorithm to create specific demands for the users, which can create meaningful and enjoyable results and content for the user. To create a greater engaging experience on DRLYD, where users will want to return back to, the visual elements and the features need to be better designed and correlated to give the users better control over the experience. One of the main problems throughout the interviews is the need for more control, being exposed to pointless and disruptive content, and not being able to save content. As one of the participants states, implementing a greater degree of media converging elements and a redesign can most likely make users stay on the application instead of meeting the competitors' needs.

9. Design Criteria

Based on the analysis of the empirical data, I am at the final step before entering into the next phase, where I can conclude the work within the first diamond in my design process model, which gives me the possibility to start the new divergent phase, the *develop phase* and the *ideation* process.
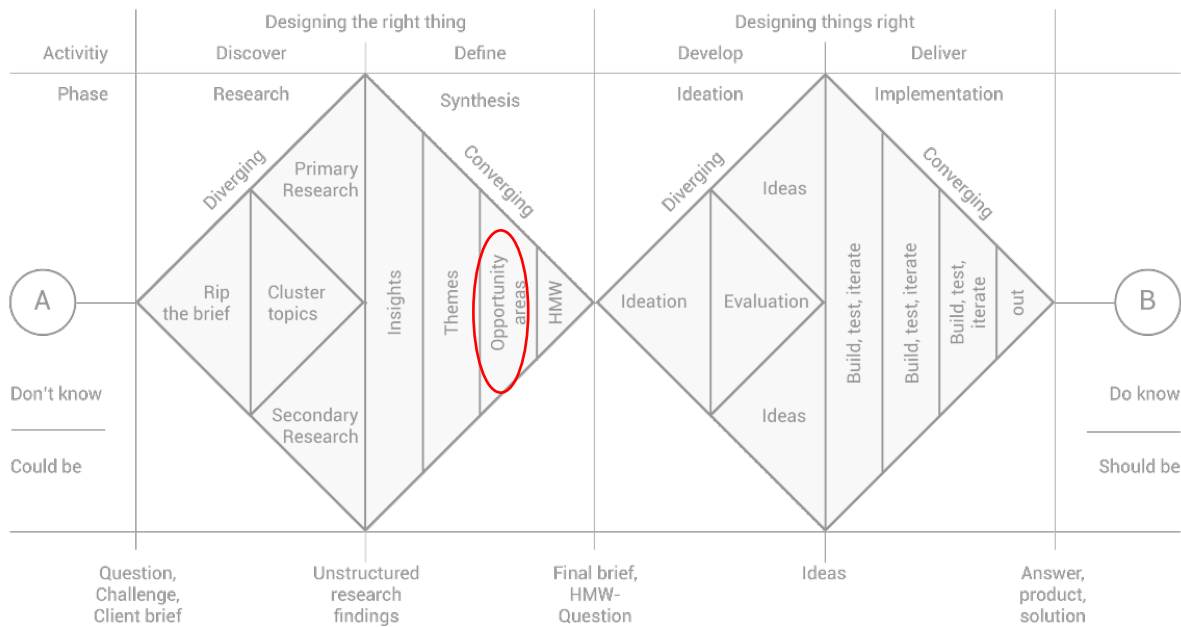
Figure 34 - How to apply design thinking – Double Diamond (Nessler, D, 2016)

Now, I can precisely *define* which design criteria (DC) that in the end, can create more meaningful and engaging experiences on DRLYD, with a particular focus on how, with the help of the HMW method, can launch a brainstorm that will be further developed in the next section (see section 9 & 10). The empirical data has created an insight into what the users want from the streaming services, creating the requirements and the design criteria. A requirement is something the product must do, or it can be qualities that the product must have, gathered throughout the information given in the empirical data (Benyon, 2019). These requirements are created by the user. However, the requirements should be prioritized after necessities, as there are not unlimited resources. The MoSCoW rules method help prioritize the requirements, also being the design criteria. It is classified as such:

- **M**ust have – fundamental requirements without which the system will be unworkable and useless, effectively the minimum usable subset.
- **S**hould have – would be essential if more time were available, but the system will be useful and usable without them
- **C**ould have – of lesser importance, therefore can more easily be left out the current development
- **W**ant to have but **W**on't have this time around – can wait until a later development

Benyon, 2016, pp.148-149

The MoSCoW method is essential for developing design criteria, as the must-have requirements determine the minimum viable product.

Throughout the empirical data, specifically at the end of each essential insight (see section 8.1.3), summarized insights have been created, the needs of the participants, and the criteria from the data. These summarized data and requirement/design criteria are as follows based on the MoSCoW rules:

1. The concept must converge with the target group's interests (Must have).
2. The concept must be more interactive and give more control and insight to the user (Must have)
3. The concept must be more transparent regarding features (Must have)
4. The concept must be accessible in every environment (Should have)
5. The concept must upgrade the simple design (Want to have but Wont')

The first concept is a must-have, based on the purpose of this thesis, which is to create a better experience and application for the specific age group; every idea and concept (s) must relate to this. This requirement establishes the foundation for the other design criteria. After that, the participants express the need for more advanced features to continue becoming regular users, which might give the user more control and insight. The participants have made it clear that the application is missing control and being uninspired to continue the experience, and it, in the end, becomes an incohesive and untransparent experience for the user; therefore, this becomes a must-have rule. The participants also express that they usually use the application on the go. Consequently, the design criteria consist of trying to create a design that is accessible in

every environment. However, this is not a crucial criterion, as this has not been the most important factor for the user, and therefore becomes Should have if time is available to create a design that incorporates both criteria. The last design criterion becomes a Want to have but Won't, as almost all participants express that they like the simple design of DRLYD and that they would not change it. However, it becomes static, does not stand out, and does not differ from its usual reputation as a news outlet.

Regarding *user-centered design*, the design criteria also reflect upon the six criteria of ISO before I can optimize the user experience (see section 6.1.3). The DC must reflect upon an understanding of the users and their environment. They must be involved in evaluating the current application and giving ideas on how to improve the design. The DC reflects upon the whole user experience, and I, as a designer, must include different perspectives in the design process and DC. The method of collecting the data has given the possibility for the users to participate in the process of improving and designing the application through feedback.

As the design criteria are based on the empirical data, being the users' interpretations, some of the design criteria are an extension of one another, as they have arisen from the same observation. Additionally, it must be said that the elaborated design criteria might not be equally represented in the final contemporary concept, but all are included as best as possible.

10. Theoretical discussion of the experience

In this section, I will perspective the empirical data on the theoretical approaches for this thesis to understand the experience. In reference to the Double Diamond, it will reflect upon the support and explore the possibilities of the design ideas.
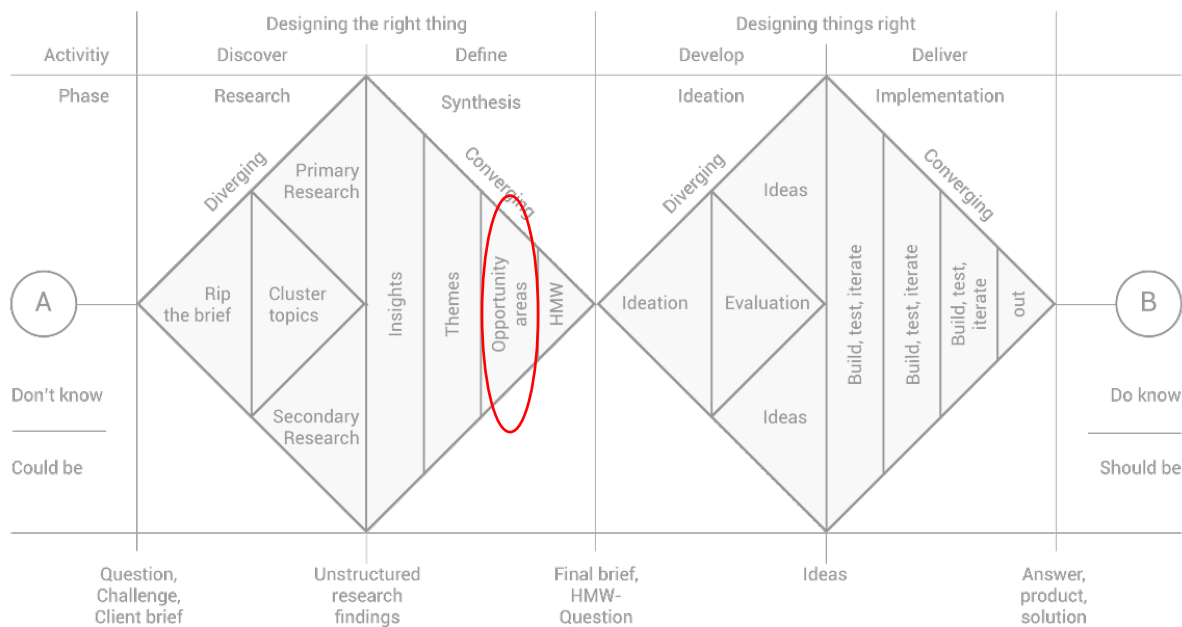
Figure 35 - How to apply design thinking – Double Diamond (Nessler, D, 2016)

Through a theoretical discussion, I will see how improving the application can fulfill different potentials later in the concept. This means that I will take a divergent approach to help examine further. I will look at the previous experience in relation to the theoretical approach and how implementing the changes will meet various potentials and qualities of the concept. I will not perform a systematic review but discuss the possibilities and limitations. From section *7.6*, it is possible to examine what kind of user-product interaction has been seen and what the experiences have to offer at the current state.

Incorporating the *user experience framework (UEF)* and the components of *sub-consciousness, narrative, cognition, and storytelling experience,* and the shifts between these components, will help to understand the types of user-product interaction and how they relate to the user's way of talking about the experience, what experiences I design for, and how the concept will be relevant

concerning this. I, as a designer, must consider all four components in the user-product interaction, understand the subjective experience, and synthesize them into a formalized narrative in the form of a product, I can create and deliver an improved and engaging experience through the application.

As DRLYD is an application that the participants of the user survey have not used before, the application's experience starts as a *cognition* experience, where the users encounter interactions and a system different from their previously used application. Participant 2 explains the *cognition* experience of getting to know the interface and then explains that the application is easy to navigate, manageable, and foreseeable (see section 8.1.5).

However, participant 3 mentions that the simple design is "too" simple in the end and does not go above and beyond to offer extra of what should be there, and therefore quickly migrates the experiences from *cognition* to a *sub-conscious* experience, where the experience becomes an experience, the participants only need to learn and understand once, and after that do not compete with the participant's attention and thinking process. This can be a good thing, as the shift means that the product is easily learned and effortlessly used, as intended. Consequently, this can also mean the opposite, where the product becomes too easy to use, and the app's feature and content becomes irrelevant and unnecessary for the whole experience. This is what DITL showcases, and seen in the user experience, as the participants elaborate (see appendix 2 & 4) that they use the application when walking and transporting and the need for features to support this environment (see appendix 6 & 8). The possibilities, such as transparency and accessibility, to save and see the saved podcasts and to have more suitable recommendations for the users.

It can be discussed whether podcast listening, in general, is a *sub-conscious* and a *narrative* experience, also referring to Kolb's perspective of Experiential learning, where experiences are repeated and becomes a general automatic practice of listening and using the application, and in the end, solidified in our perceptions. Throughout the empirical data, the application is often compared to other audio streaming competitors (Spotify and Podimo), where the participants move from the *sub-conscious* and *narrative* experience to a *storytelling* experience. The participants communicate the schematized experience, and that adds levels of meaning. The personalized schematized experience is communicated in a relevant way for the purpose of the interview. The participant expressed the need for features to make the usage easier and more engaging, as the application currently offers a bland experience and quickly moves from a

cognition experience to a *sub-conscious* experience. According to Kolb, learning and experiences often require learning by doing, which creates reflection and relation (Kolb, 1984). Learning and experience are always progressive and never fixed; therefore, a new experience is based on previous experiences and will be constantly modified. As the app currently goes quickly from *cognition* experience to *sub-conscious* experience, the experience becomes an experience that does not challenge or engage the users to continually reach out for the application to fulfill their needs (see section 9) and therefore does not become a relevant experience to "save." Supporting this is, as mentioned before when looking at the Day-in-the-Life model and seeing how their everyday life and how the context of the use of the product (and generally others) appears, the participant's behavioral patterns of use the application are when they are on the go (walking, metro, running). When they listen, they listen with full attention. When understanding the interaction's nature, the DRLYD must consider adapting their features, aesthetic qualities, and accessibility accordingly and creating more cognition experiences. And to continue the discussion of what kind of experience podcast listening is, especially on DRLYD, the users demonstrate the need for features that show the need for an experience rather than letting the application be as it is and allowing the experience becomes an irrelevant experience with fewer expectations. Therefore, this consideration can help form and re-form the current experience and create a more engaging and interactive DRLYD.

11. Ideation

In this section, I am entering into the first step of the *develop phase,* being the *ideation*. The previous sections (see sections 8, 9 & 10) have led the design process further by exploring the empirical data and the user's needs, which has led to the requirements for the design criteria and a theoretical perspective on the empirical data. This has created the possibility for entering the next phase of taking the created design criteria, which also reflects upon the current problem areas of the application, and produces solutions. This step will entail an ideation process, where I will explore several solutions using methodological approaches to ensure I do not get stuck on just one solution and am open to new possibilities. It helps to find alternative solutions through several iterative processes. As stated, being in the develop phase of my design process model, where the concept will go through several iterations to explore different possibilities by looking divergently at the process. Thereafter, this will lead to a contemporary final concept.
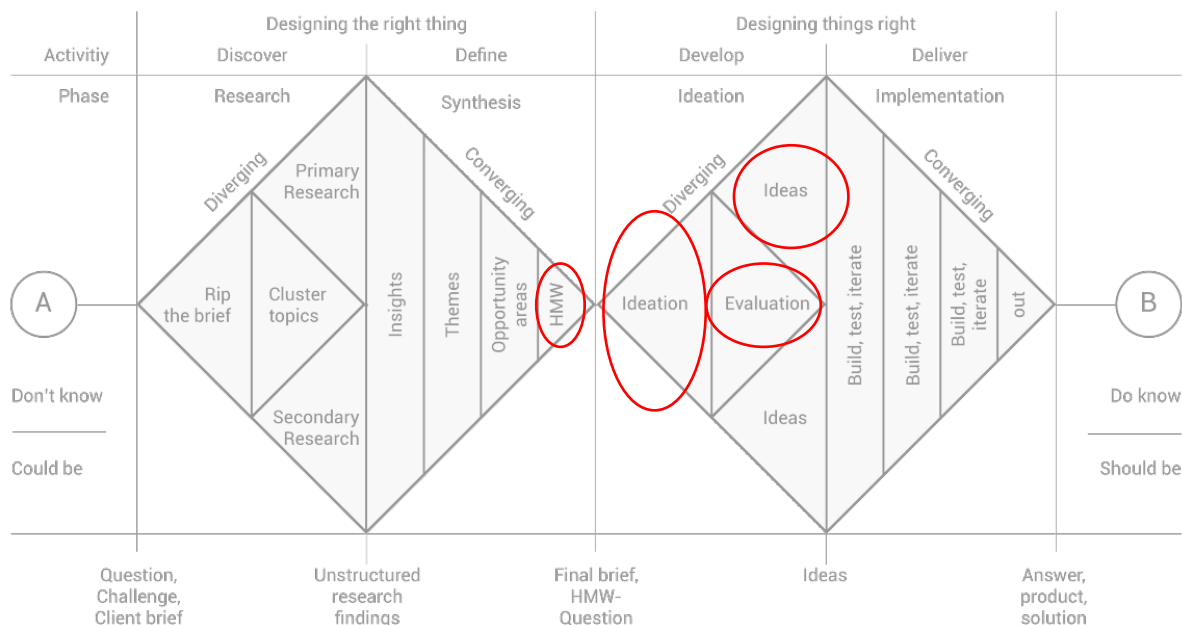

Figure 36 - How to apply design thinking – Double Diamond (Nessler, D, 2016)

In section 11.1.1, I will use *How Might We/I* (HMW) to generate ideas, leading to sketching to examine the concepts. After that, a contribution discussion to revise the concept and its limitations and opportunities.

11.1 Design method

In this section, I will elaborate on the method of processing and generating ideas for the concept. The proposed concept must, as much as possible, meet all the design criteria. With the goal and purpose of creating new ideas and solutions, it is important to go beyond existing habitual thinking and ways of doing things (Dalsgaard, 2017). A considerable number of relevant and helpful tools can be used to generate ideas, such as brainstorming, 10 plus 10, mind mapping, and 5W+H, which all are suited for developing proposals for new solutions (Greenberg et al., 2012; Lasswell, 1948; Siemon et al. 2018). However, I have chosen How Might We/I (HMW/HMI), as I wish to incorporate the design criteria into each of the questions asked in the HMI and then brainstorm the generated ideas. Prototypes can take many forms, such as hand-drawn sketches or graphic illustrations. As seen in section 7.16, I have chosen low-fidelity prototyping through sketching by hand, which will be showcased in section 11.1.1.

11.1.1 How Might We (HMW)

I will use the How Might We/I method for the first phase of the ideation process. Based on the design criteria, I will draw up "How can I" questions in this phase, with the aim of creating design challenges to which I can find solutions too throughout the ideation process. Currently, I am in the stage of developing ideas and evaluating them to come up with concepts for the design. With the inspiration of Siemon et al. 2018 *How Might I* approach, I have chosen to use their HMW with a different take. Where Siemon et al. use the iterative process of three phases (wide, narrow and optimal question), where I find one phase is as efficient in this case. The iterative process will continue within the phase, which includes brainwriting, semantic reduction, and selected ideas. When formulating the ideas, I should be neither general nor detailed. The iterative process is the first step within the phase, and I will begin with a few restrictions and broad interpretation scope. In this step, the ideas will be narrowed down and re-formulated based on the ideas where the last step is the selected idea of the HMI (Siemon et al., 2018). As I am on my own in this process of HMW, I will start with creating at least two complimentary ideas to each of the design criteria challenges, which began a diverging process where I, as a designer, can explore different solutions. After this, a converging process starts, where in my second iteration, I combine the other solutions to the various challenges into a summarized concept that can be explored further. This way, I ensure that all my requirements are represented in the contemporary final concept. I started the ideation process by answering each of the HMI questions in MIRO, as

when it came to combining the ideas and concepts, it could better see what each HMI represented (figure 37 & appendix 10).
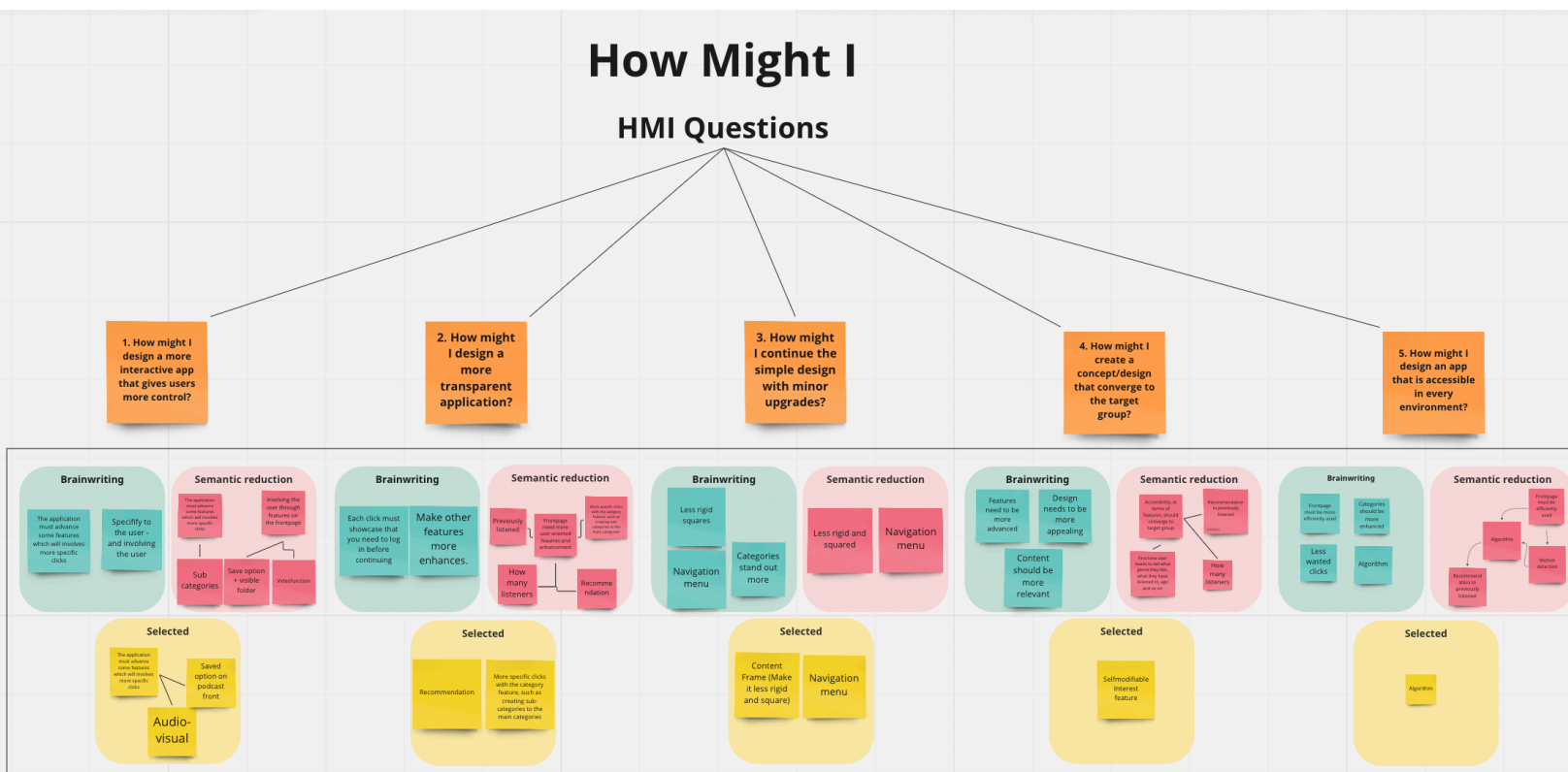
Figure 37 – Visual of How Might We/I board

As seen in the figure (appendix 10), I started the process with a HMI question, where I underneath created complimentary ideas. The HMI began the brainstorming process, which allowed me to come up with different ideas for the challenge (figure 37). For every ideation to the HMI, I drew on previously collected knowledge from theory, method, and collection of empirical data, where the design criteria and the HMW questions are created based on the user's statements and the theoretical approaches of understanding and making user experience (see section 6.1.2 and 6.1.3). Furthermore, I also used the condensation of meanings from the interviews to complement the ideas of HMI questions.

After all the HMI questions had been filled with ideas, I looked at the individual ideas and the possibilities for connecting these to one or more concepts that can solve the problem

formulation. Through this process, it became apparent that many of the HMI questions lead to some of the same ideas and solutions, as written in sections 8 & 7.3, as many of the design criteria are extensions of one another. Jakob Nielsen (1994) also states that when doing a user survey and including five people, in my case four, there will be enough insight to work with, and the most important thing is that they should be as representative as possible of the intended users of the system (Nielsen, 1994). However, the possibility of observing the same thing multiple times is there, which creates the opportunity that the design criteria are an extension of one another. Some of the HMI questions more or less came to the same ideas and solutions, for example, HMI question 2 and 4 (see figure 38 & 39 and see appendix 10)
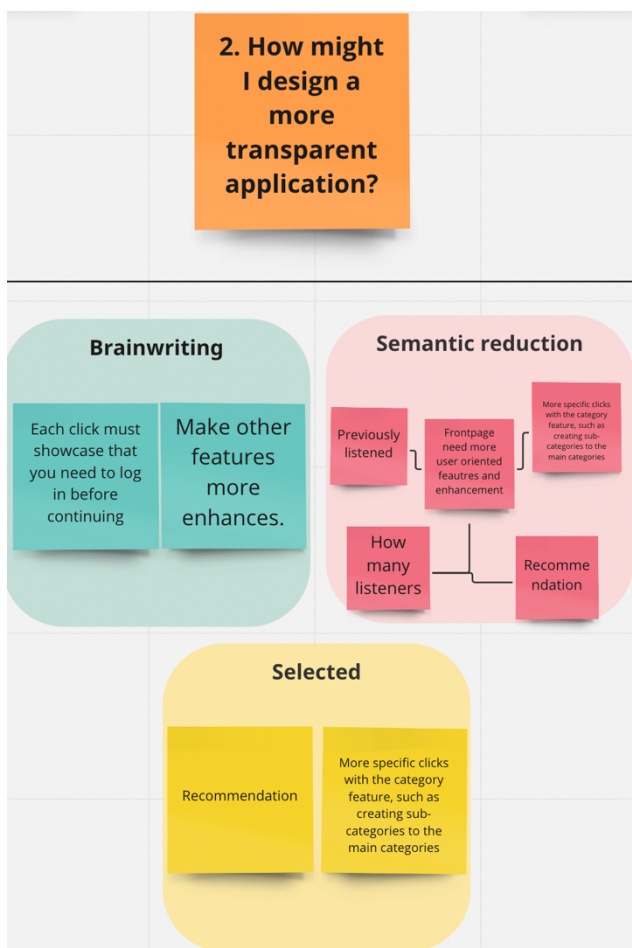

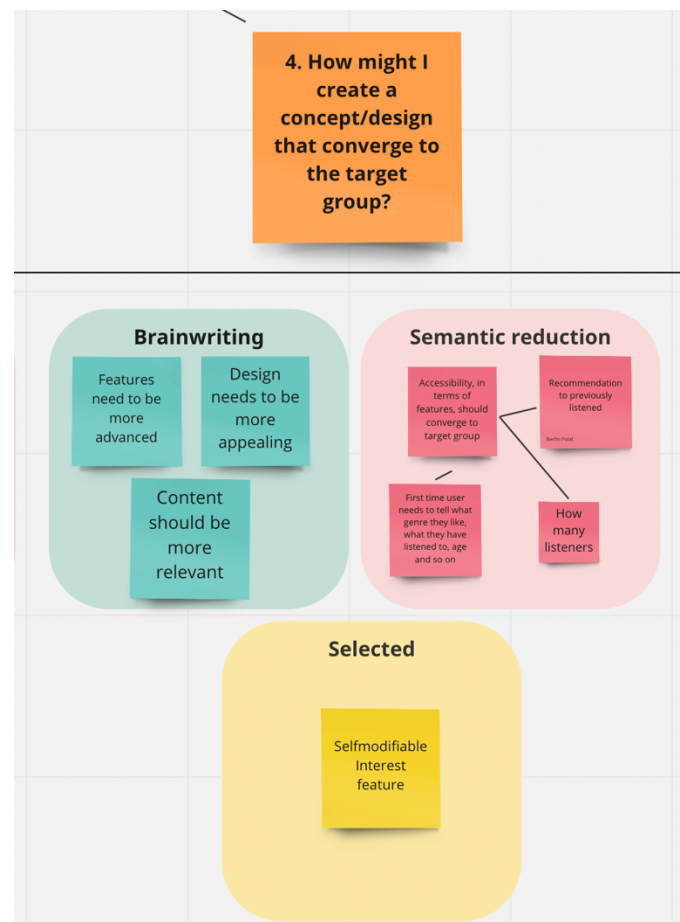*Figure 38 – How Might I Question 2*

Figure 39 - How Might I Question 4

Ultimately, I came up with two concepts, both of which more or less embrace all the design criteria. In this process, all ideas have been discussed based on theory and analyzed in relation to their relevance in terms of the design criteria and how these could be incorporated into concepts (see section 11.1.1.3).
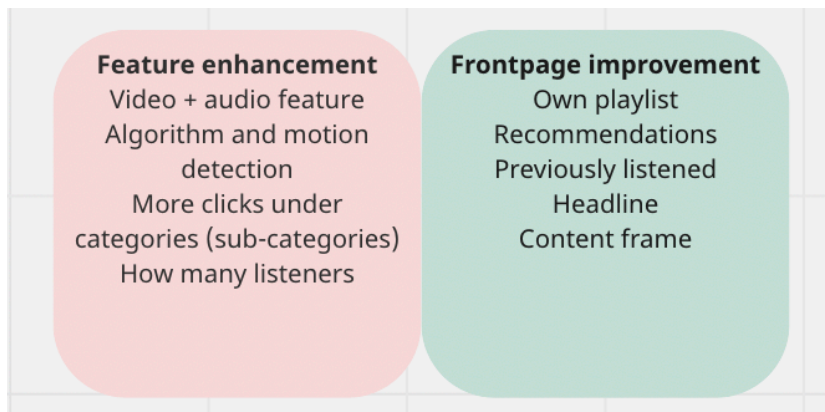

Feature enhancement
Video + audio feature
Algorithm and motion detection
More clicks under categories (sub-categories)
How many listeners

Frontpage improvement
Own playlist
Recommendations
Previously listened
Headline
Content frame

Figure 40 – All ideas

11.1.1.1. Concepts

The concepts are based on a collection of ideas from several HMI questions that have created two collected concepts: *feature enhancement* and *frontpage improvement*. The ideas throughout the different HMI questions reflect how to improve the experience and application, and similar idea approaches for concepts were gathered. The concepts will be elaborated, also in terms of design criteria, sketched and put into perspective regarding a theoretical discussion. Additionally, all sketched design ideas can also be seen in appendix 18.

11.1.2. Concept 1

The first concept is inspired by the idea from HMI question 1: *involving the user through features on the front page.* I will improve the experience by implementing and enhancing features on the application front page, which also complies with the design criteria. Even though the idea of HMI 1 inspires the concept, the concept also pulls ideas from other HMI questions and ideas that supported the question and, in the end, created this concept. Different ideas through the HMI questions have inspired how to improve features on the front page of the

application to give users more control and transparency. However, again with the help of MoScoW, I have prioritized the ideas in relation to the requirements and necessities, and ideas such as 'How many listeners, 'previously listened to', and the 'content frame' became less important to include regarding influencing the overall experience. Therefore, continuing with the ideas such as; "*audiovisual preview feature,*" "*Algorithm and motion,*" "*category feature,*" "*self-modifiable interest feature*". Furthermore, I have ideated how this could be implemented and how it might create more engagement for the target group. As stated, the concept is built by involving the user through features on the front page. The users commented on the missing visible features, transparency, and in the end, control of the app regarding their navigation. Implementing and upgrading some of these interferences will allow the users to be a part of the app and get more content-related podcasts.

11.1.1.1.1 Digital sketched wireframe

One of these design ideas, which was actually given by participant 1, was the video function. Taking this idea, elevating it by adding something visual to the audio file in an attempt to help the user to immerse themselves in the situation that the audio file is based on (Raagaard, K. T, 2010). The audiovisual feature will function as a preview and a trailer for the podcast for users to see and listen to on the front page. Implementing audiovisual elements can help create a more consistent and inviting experience, as audiovisual stimulation will give a preview of the podcast and its content. With no audiovisual preview to focus on, users are left to investigate, click back and forth, and choose what they want to listen to, and the experience can vary.
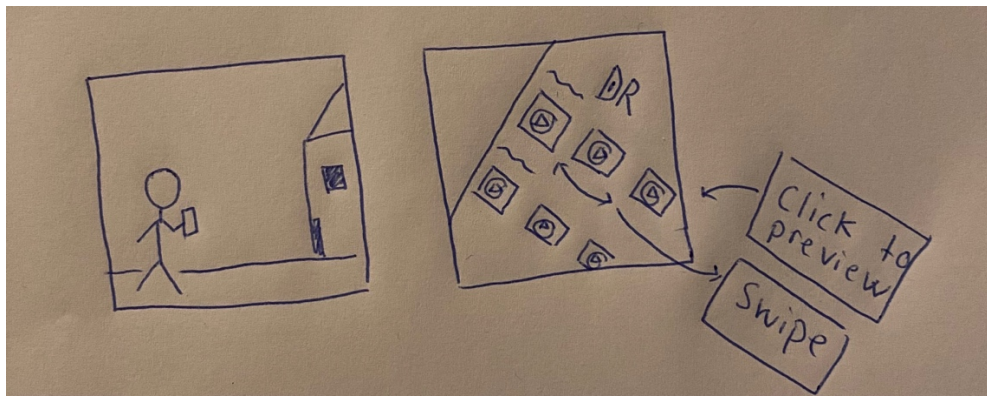
Figure 41 – Audiovisual preview

Figure 41 showcases the audiovisual feature of the possibility to preview each podcast or episode before actually clicking to start the podcast or episode to hear or read more about it. The concept must converge with the interests of the target group, and as the user survey is based on the target group, their observation and interest should be involved in the concept. Participant 1 mentions their preference for other audio streaming services, as they offer more interactive features, such as video functions on some podcast episodes. Taking this statement and interest and trying to refine and incorporate it into an idea and concept will create more engagement for the target group. When on the go, having the possibility to listen to a preview instead of clicking and reading about the podcast makes the feature and app more accessible to different contexts of use (Forlizzi & Ford, 2000).

On to a whole new feature, the incorporation of a feature that handles first-time users of the application by collecting knowledge of the user's listening habits, their age, what genres they prefer, what they previously have listened to by DR, when they usually listen, and the possibility to login or create an account from the start rather than being unintentionally hidden later on (see figure 42)
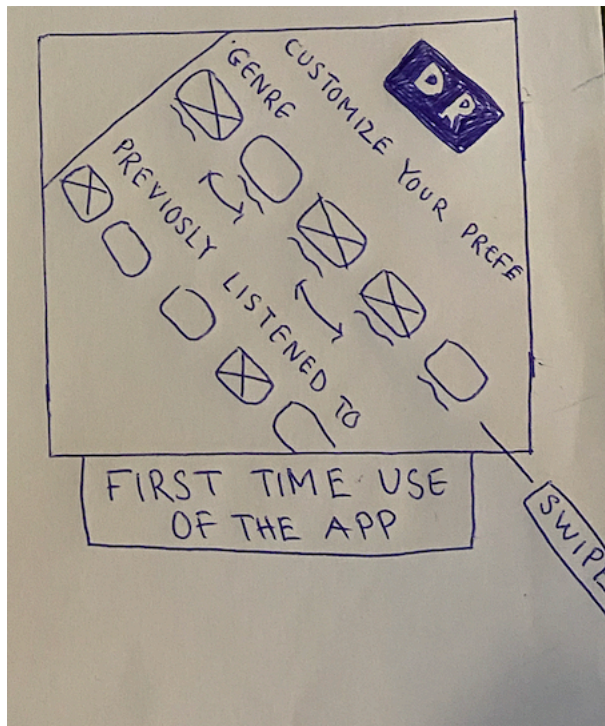
Figure 42 - Self-modifiable interest feature

These collected data will be helpful information about the user in terms of personalizing the displayed content for the user and making the experience more pleasant and intriguing to the individual personal preferences. This idea is based on the fact that the user can control which content is recommended and can adjust this at any time based on specific preferences. In this way, this idea addresses the problem of being exposed to irrelevant and unengaging content. With this concept, the user has complete control over what the recommended content is based on, which can always be adjusted.

Another design idea, further development of the previous idea, is to incorporate an algorithm and motion tracker. This idea is generated by participant 2 statements wishing the app to calibrate to each user regarding recommendation and categorization. The app should use an algorithm and motion tracker to create and showcase the right content for the user. The app, throughout its usage, will slowly know more of the user's listening preferences during each use and can then

accommodate and produce relevant content. Participant 2 states that feeling lost often occurs when trying to find something that seems interesting. Being between being curious and wanting to find the perfect suitable podcast, and often feeling overwhelmed and lost in all the possibilities. Figure 43 displays how the algorithm + motion detector is incorporated with the other design idea.
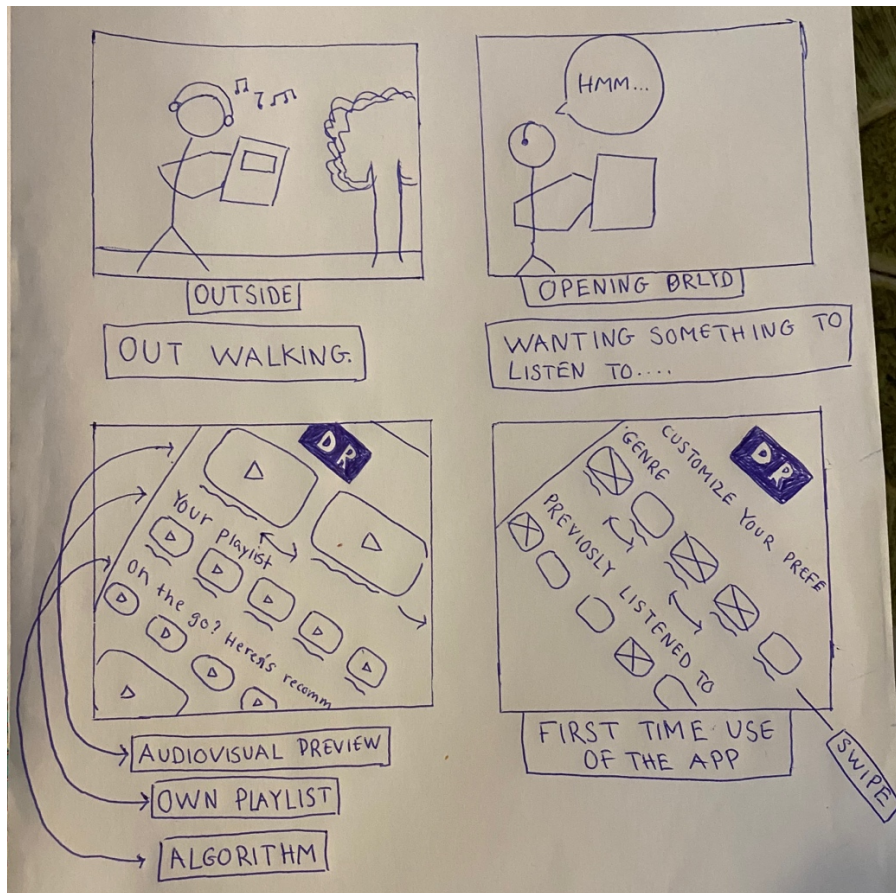
Figure 43- Storyboard of all features together – audiovisual preview, own playlist, personalized recommendation and algorithm

The implemented idea, seen in figure 43, demonstrates the motion tracker when the individual, for example, is on the go and there then is created a personalized playlist for the individual based on both the motion tracker and what the user likes on the go, based on previous practices. This correlates with the design criteria of creating a concept accessible in every environment and gives more control and insight to the user. Participant 4 also comments that often when listening to podcasts, it becomes a supporting activity to the main activity, so when reaching out for a podcast application finding a podcast needs to be done quickly and painlessly. Therefore the application needs to support the different contexts of use, and consequently, a personalized

algorithm can significantly help. The last feature supports the idea of giving the concept more transparency and creating precise and exploring clicks for the users.

Figure 44 - sub categories to main category

This refinement of their current categorization feature, as DRLYD does not offer sub-categorizes within the main category. Therefore, all podcasts within that category 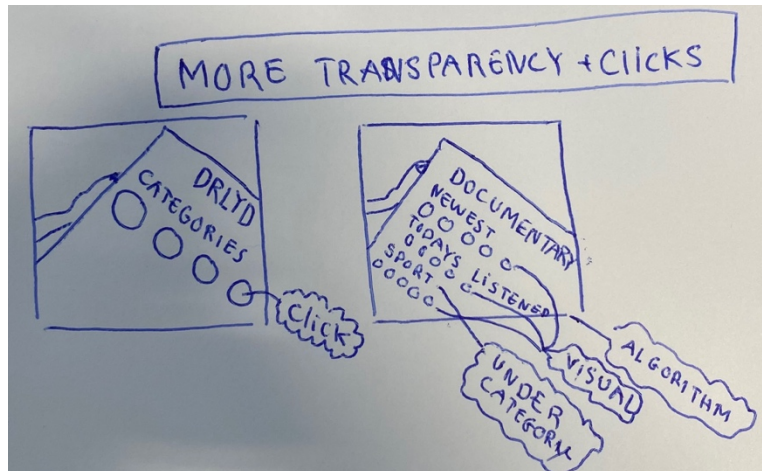are displayed as a list (section 3.4 – figure 9) when entering a category. The refined feature is seen in figure 44, where clicking on a category will lead to a new page where different sub-categories to the main category are displayed. Possible sub-categories, for example, the main category sports, such as 'Newest, trending, VM, biking, and sports stars. Currently, the current categorization can make the experience less transparent, as it becomes confusing and overwhelming to find a relevant and interesting podcast, to respond to.

11.1.1.2   Concept 2
In continuance of the first concept, the sketching process of concept two began. Concept two is an extension and correlation to concept one, where this concept is built on the overall idea of 'making the front page more user-oriented'. This idea is based on the design criteria and HMW question of how to design a more transparent application. Some of the participants (1 and 2) explain that the front page influences the experience. The design solutions to this HMI and ideas are based on the participant's insights and my design input, which the users also influence. Ideas include 'different headline, categories, saved folders, and 'recommendations'. As seen, the idea within this concept is correlated to concepts one's focus on features, where this concept will mainly focus on how the front page is displayed and visualized.

1.1. Digital sketched wireframe

The front page is the first page the user is greeted with; therefore, the display must be relevant, intriguing, and smooth to use and navigate the first-hand experience for the user.

Currently, the navigation menu bar is placed at the bottom of the page (see section 3.4 – figure 5), fades into a grey-and-white background, and becomes almost invisible to users. For example, participants 2 and 4 commented on one of the features on the menu bar that was not discovered until during the interview, as the possibility to save is displayed when clicking into the individual program and the download button when clicking further into the individual episode shown in the program (see section 3.4 – figure 7). The feature was the possibility to save and download podcasts, which folders are saved within the feature 'min side' placed at last on the navigation bar at the bottom (section 3.4 – figure 12). Refining the navigation menu bar, placing it on top of the page, and removing and replacing some of the content widgets, will make it more visible and transparent for the user and create the possibility for the user to investigate different features of the application.
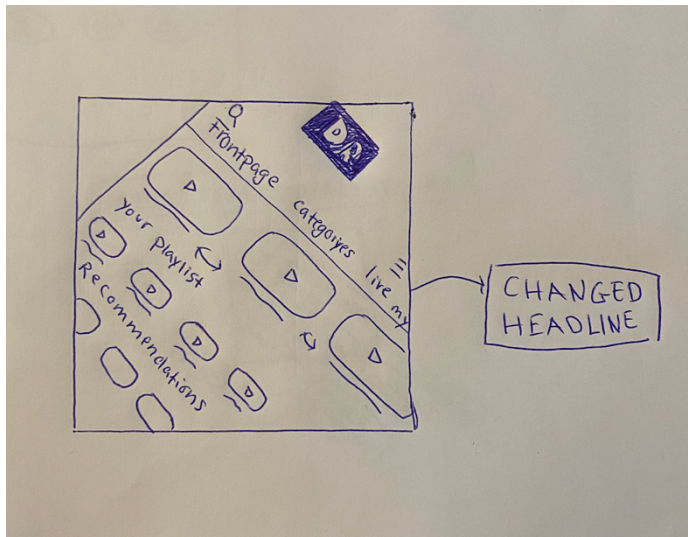

Figure 45 – change headline

It may create a more harmonious visual experience for the user and detach from the current aesthetical look. In continuance of the feedback from the participant and the specific feedback on transparency of the feature to see the saved playlist and the downloaded podcast, they are all placed under the feature 'My page' (min side) in the navigation menu bar.

This creates unnecessary and unmotivating clicks for the user to see something that should inspire them to continue to use and listen to podcasts. The idea is to choose to have a personalized playlist or saved podcast on the front page, so when the user is on the go or at home, they can look through their personalized playlist suitable to the specific activity on the front page, which can be accessed without going clicking on to the feature on the navigation menu-bar (see figure 45)—incorporation of this, also having to save feature on the podcast, without having to click into the individual podcast program or episode (see section 3.4 – figure 7). Therefore having a clickable icon beside the title of the program or episode on the specific page where the program or episode is displayed without actually clicking into the episode (see figure 46)

Figure 46 – save

Seeing both the front page and the navigation content widget is possible. Features elaborated in the previous concept will also be incorporated into this concept. Accordingly, the incorporation of an algorithm to create recommendations based on the user's listening preferences, practices, and locations (see figure 46). This should be included on the front page, also elaborated in the previous concept, as this will make the front page more whole and harmonious.

11.1.1.3   Exploration and evaluation of the design ideas for the final concept

This following section will function as a half evaluation, in terms of the next phase of the Double Diamond, as the concept and ideas will not be tested out in this thesis, and therefore the uncertainty of the result of the concept in the real world.
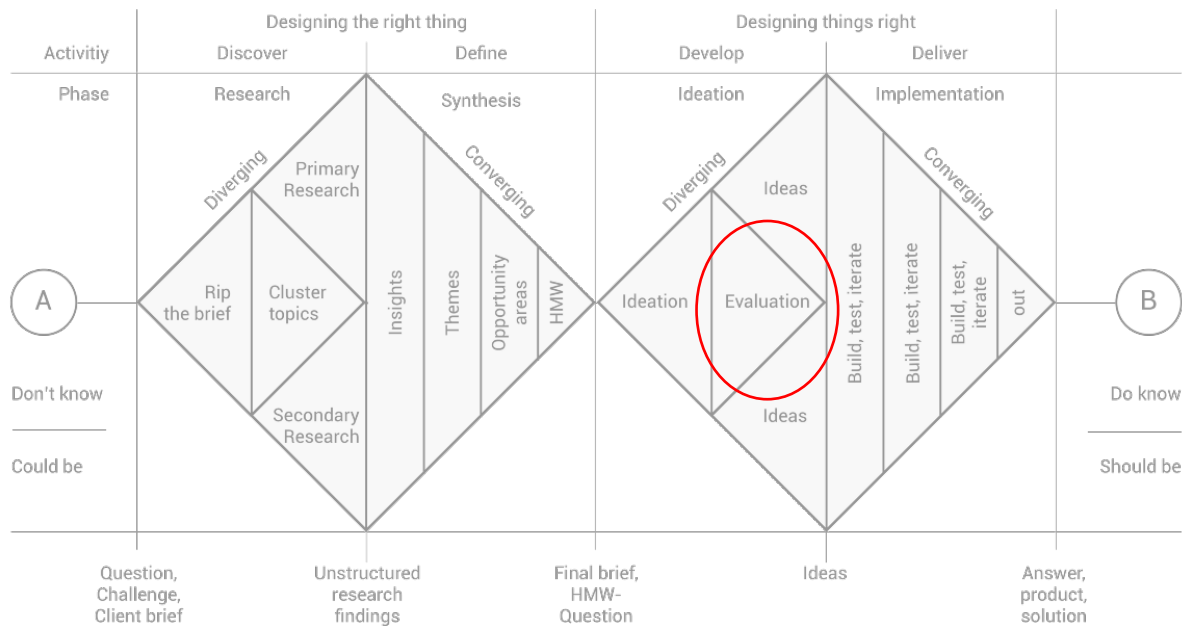
Figure 47- How to apply design thinking – Double Diamond (Nessler, D, 2016)

After the exploration of the two different but similar concepts, I concluded that both concepts contain several opportunities as well as challenges. To explore how I best can embrace the possibilities and meet the challenges of each concept, I must explore the concepts and evaluate them with support to the methodological and theoretical approaches. As elaborated in concept two, the concept is an extension and correlation to concept one. After accounting for concept two, it became apparent that the concepts should be combined into one. Both concepts involved improving the front page but with different approaches and did correlate with some of the features and improvements. The potentials from each of the concepts, by combining the other elements from each of them, results in the final contemporary concept.

Overall, I have taken the main elements from each concept: features of *audiovisual preview, algorithm, and self-modified interest,* and visual changes and implementations such as *headline, playlist & categories,* and combined them. This has created the opportunity to meet many design criteria and cam significantly impact the user's experience later.

Incorporating the audiovisual preview feature makes it possible to motivate the participants to continue their experience on the application. The feature was included to create an interaction that gives the user more control and insight into what podcasts the application has to offer. In relation to Hassenzahl and focusing on *be-goals,* creating this feature will motivate users to take more action. It will encourage users to continue investigating the application, podcasts, and its content and creating a continuance experience (Hassenzahl, 2010). Other streaming services have incorporated a similar feature, such as Netflix, and Podimo to some degree, where it is possible to get a glimpse of the movie, show, or podcast before actually choosing, which in the end, creates a more insightful experience for the users. The added visual effect incorporates other senses, such as seeing and hearing, before listening to a podcast. It allows the user to immerse themselves in the offered podcasts and make the decisions on what to listen to more effortlessly for the users. The senses are a premise for the experience on DRLYD, and I am dealing with an auditory experience on the application. However, in this concept idea, I will focus on the sense of both hearing and seeing, as the use of an audiovisual experience creates a memorable and sensory experience (Paananen et al., 2021). Sound and video will help this process by creating an immersive experience, which allows them to indulge in another time or space by having the possibility to preview the podcasts on the frontpage before actually clicking and listening (Kortbek & Grønbæk, 2008). This idea fulfills the design criteria of involving the users through features and incorporating the participants' feedback, as seen in the condensation of meaning, on creating an application that is sufficient for their needs in an app. This will also create a more *cognition* experience by giving the application more attention and thought by exploring, listening, and seeing what kind of podcast there is to offer, instead of stopping, clicking, and reading. It then becomes more harmonious and fluent for the user to interact with the product and requires a new form of cognitive effort and attention for the user (Forlizzi & Ford, 2000). Participant 1 states that having the opportunity to watch the podcasters talk makes the listening process more comfortable and pleasant while, for example folding clothes, where it is possible to look at the podcasters while they speak. Featuring this design in the app can further motivate them to engage and interact with the concept to find something to listen to without falling through all the options.

In correlation to this, the concept embracing the idea of using an algorithm and personalized self-modifiable interest feature to create personalized-oriented content and an authentic experience is

an approach that also will support the user's journey on the application. Through the condensation of meaning, participant 2 emphasized the need for more user-targeted content for the days of feeling lost and uninspired and currently, in general, seeing a lot of news content. Participant 1 empathized that it was difficult to find something likable and therefore did not continue their journey on the application. This is a general problem where finding worthwhile podcasts can be difficult for listeners since podcasts are published in large numbers (Tsagkias et al., 2010).

And again, other streaming services have already incorporated such approaches to their application, such as Podimo, an application that most participants use and compare DRLYD with. Other applications having integrated advanced features, such as algorithm and self-modifiable interest feature, showcases the use of *be-goals* as the consideration of showcasing personalized content for the users and considering the user's mental needs. Considering users' mental needs by creating a feature that, to some degree, considers the reason and feelings behind listening to podcasts by displaying content suitable for the individual needs will make DRLYD a better platform (Hassenzahl, 2010). However, the use of algorithms often measures correlation and not causation, meaning that applications such as Podimo, Netflix, or DRLYD, if they choose to use an algorithm, cannot know the specific shared qualities each individual is attracted to in terms of podcasts. Just because liking the news update podcast series Genstart and Tiden (DRLYD, 2022), it does not know what shared qualities attract me to either. So, I could be interested in podcast series about news updates, but I could just like them both for entirely unrelated reasons. An algorithm can only see data and draw links between them, not what is in between, as it works in a way where it can only see data and draws connections between them and cannot understand what the links imply. Therefore, with the incorporation of the algorithm and the created recommendations, and with the use of the modifiable interest feature, it will create transparency that will accommodate more enjoyable experiences on DRLYD. By exposing the users entirely to more specific and meaningful content, based on user control, and not only algorithm, as users are more often satisfied when they are given control over what kind of recommendation appears on their behalf, creating more accuracy (Konstan, 2012). The design idea for the concept will, in the end, be intended to offer sufficiently stimulating, pleasurable experiences for the users to return to the experience concept by having ample opportunity to submit specific user requests, which result in the discovery of podcast that currently meets the

requests based on self-selected similarity and genre criteria, as opposed to only getting recommended content, based on previous listening habits. In this way, this concept also allows for better transparency, as also being one of the design criteria, as you can see at any time what the recommendations are based on.

The concept of incorporating visual display changes to the front page is also something the participants emphasized. The participants stated that they liked the simplicity of the product's visual appearance and that it was calming for the eyes to navigate the application. However, as the participant also stated, this visual display did not stand out from what DR is known for and therefore becomes predictable visually, as there is too much text and thus looks more like an article rather than a podcast. The wireframes (see section 3.4) showcase the many textboxes on one page. Removing some descriptive text and focusing on the visual display instead –for example, adding an audiovisual feature to some podcasts- will make the experience less rigid and harsh and more organic and calmer. Currently, when the participant elaborates on their experience, it is based on *storytelling*, where the experience is interpreted and based on users' prior experiences and use of context. DR is associated with being a public service, and therefore the users have to bestow meaning on the application's visual appearances and its content (Forlizzi & Ford, 2000). And in general, people judge mobile interfaces by the visual appearance, and therefore changing the front page a bit and implementing and improving some of their already existing features on the front page, such as adding personalized saved playlists and expanding the category section with sub-categories will come in favor for the users. As participant 4 comments on, the need to have the downloads and playlist visible, as seen in the Day-in-the-Life, is that the participant is usually using the product in different contexts and environments, where the product should be accessible and easy to use. However, the possibility of having a playlist on the front page should be an optional choice.

Focusing on adding and improving the features and qualities and competing with other services, such as Podimo, that offer the same *do-goals* (cover the users' practical needs) and other *be*-goals. DRLYD must on focus on *be*-goals, such as the audiovisual, algorithm, self-modifiable interest, playlist, and categories feature to meet the user's needs – being both practical and mental needs goals (Hassenzahl & Roto, 2007, s. 11). The participants practical and mental needs are relevant and important to the growth of the concept, as the participants are the expert in

this case. Their insights will establish the basis for the design (Sanders, 2008). The features also comply with the design criteria of creating a concept that involves more interactivity and transparency and gives users more control and insight. In the end, it will allow the experience to accommodate and create accessibility to several types of scenarios and environments.

Most importantly, the concept must converge with the target group's interests (see sections 3.4 & 9). The contemporary final concept is based mainly on a participatory mindset, where the participant's expertise and experience have been the foundation of this concept. It is also based on their enjoyment of discovering new podcasts that suit their taste. Based on the feedback, the concepts will accommodate a greater connection between *user-centered design* and, in that way, accommodate more meaningful and engaging experiences at DRLYD.

12. Contribution

In the following section, I will discuss the thesis approach, including a reflection on other research perspectives of podcast growth and the potential of the established contemporary conceptual designs. In terms of the Double Diamond, this will be an extension of the previous section (see section 11.1.1.3), which will be a perspectival evaluation of current design solutions. Additionally, I will discuss the potentials of the established design in perspective to the selected theories and how I could have approached the thesis with other theories, which could have been relevant to incorporate. Here I find myself in the *research-lead* as I examine the outside world and the possibilities for the concept (Sanders, 2008).
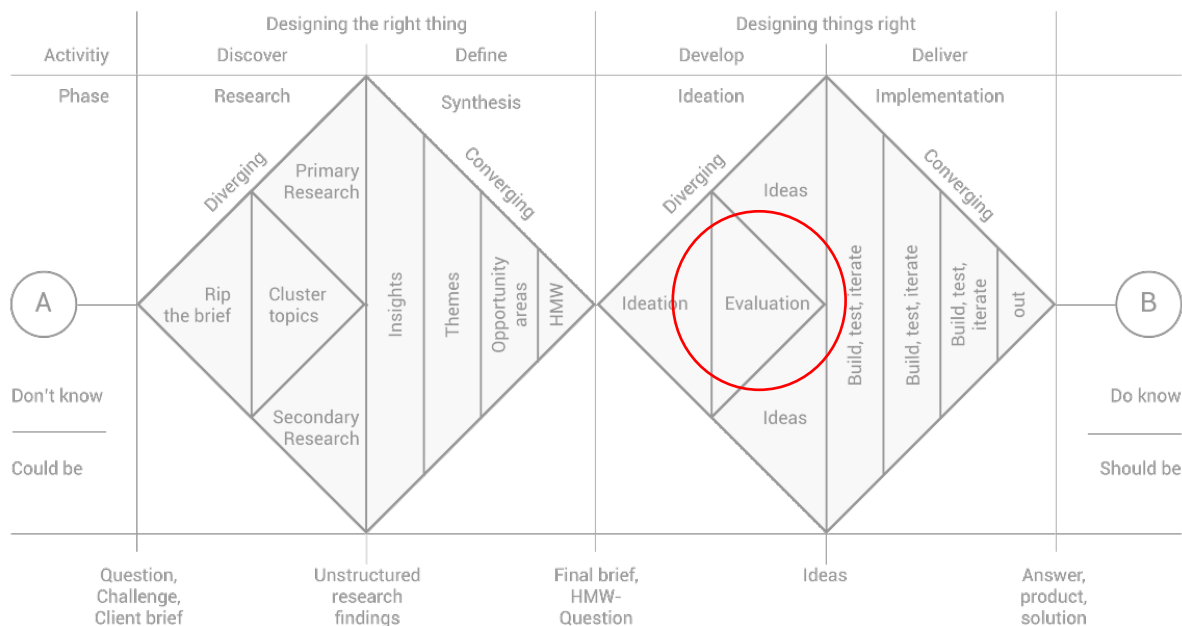
Figure 48 - How to apply design thinking – Double Diamond (Nessler, D, 2016)

As accounted for in the literature review (see section 3), the podcast industry has grown rapidly over the few years. Streaming services have begun creating a business model out of a membership agreement that enables new ways to get listeners and creates exclusivity by distributing exclusive podcasters to the services that are not displayed on other streaming services (Sullivan, 2019; Taneja et al., 2012, Heeremans, 2018; Herbert et al. 2019). And concerning experience economy, digital experience technologies and on-demand services have made it easier to organize and create experiences through different streaming media, thus making media services a part of a more considerable media converging context (Sullivan,2019; Pine &

Gilmore, 2019). A media service such as podcasts, and its consumption, can instigate a self-reflectivity regarding one's identity, which one continuously has the opportunity to shape and give expression to in one's consumption and personalization of the content on one's profile (Llinares et al. 2018; Prey, 2018). Digital experiences-based technologies, such as Apple Podcast, Spotify, and Podimo, have embraced a more convenient form of media engagement, where vast libraries and wide-ranging playlists are created for all moods and activities. The same form of categorization is currently displayed on DRLYD, with content categorized based on overall descriptive categories. As emphasized in the analysis, this thesis's conceptual designs accommodate this tendency, but also with an improved touch, in terms of personalization of current categorization. While streaming services offer possibilities and ways of experiencing content that overlap in various ways, one of the conceptual designs also accommodates this. The opportunity to preview the podcast through an audiovisual display of the podcast. Currently, other streaming services, such as Podimo, offer a handful of trailers/short videos to some podcasts as a preview. A handful of podcast shows has attached video to the episodes as an extra media convergence for podcast streaming as well.

Therefore, it becomes relevant to discuss the challenges that DRLYD currently encounters compared to other streaming services. In the section 'Essential Insight' (see section. 8.1.3), it became apparent what the participant of the user survey experienced for good and bad and how they compared their experience on DRLYD with Podimo, unknowingly, as this is their main current application of use to listen to podcasts. One of the main challenges DRLYD faces, and where it might become a challenge to change too, is, first and foremost, that DR is a Danish public-service radio and television broadcasting company. The company's framework is politically and legislatively regulated, while the company itself and the priorities within these frameworks are made by the media's own management. As the state funds DR and DRLYD, an unknown bureaucracy is involved, making it challenging to change the infrastructure without knowing if it is possible. Subsequently, the participant emphasizes the need for tangible graphical user interface changes but also substantial untangible changes, such as what content and content creators are offered, that will create even more engagement on the application and add to the whole experience.

It is important to note that podcast platforms, like Podimo, which is the compared platform by the participants, act based on a different commercial approach than the other commercial players

in the podcast market (Kammer & Sejersen, 2022). As previously stated, a central part of Podimo's value proposition is the app, where the selection of their own and others' podcasts is curated and personalized to the individual podcast user and their preferences. Additionally, the podcast platforms' business model is different in that they place the main emphasis on a growth strategy rather than revenue sources. The long-term focus is thus on growth in the number of users and on building an extensive (Kammer & Sejersen, 2022).

Going back to the content and content creators, this form of capital flow also means applying a strategic approach to their business plan and growth. An example of this is that Podimo works with a strategy where they invest in the industry's most desirable content creators, like the employment of the radio host Mads Steffensen. Steffensen initially hosted the podcast program 'Mads og Monopolet' on DR, where he afterward joined Podimo and made the identical program 'Mads og A-holdet' as a podcast program at Podimo. This becomes one of DRLYD and this thesis's main challenges to change or improve, as this becomes intangible for me to investigate and change. Additionally, the participant comments on another relatable intangible factor of having to create an account to enable many of its features, such as getting notifications and downloading podcasts. Participant 2 and 4 finds this troubling, as it is an application free to use and listen to, as it is a public service. However, after elaborating on how one of DRLYD's competitor's commercial approaches is and how their implementation of growth strategy is, it becomes relevant to discuss the necessity of changing DRLYD's commercial approach in the future, as this also becomes one of their challenges. The user's needs, wishes, and expectations are the source of experiences. Therefore, my design considerations in the thesis concept design make it possible for the users to interact with platforms and its content by indicating their preferences. This personalized front page allows the participants to fulfill their needs and application that becomes more personalized and transparent. They are also based on the participant's needs, both practical (do-goals) and mental (be-goals), to accomplish a more successful experience (Hassenzahl, 2010). Such goals, and implementation, that Podimo already possess and achieves successfully might be why more listeners are on other platforms besides DRLYD as Podimo is the main compared application in the interviews, as it is a platform that has incorporated personalized features and interactive elements, which in the end has influenced them in a way that this becomes the frame of reference when experiencing new similar platforms.

Therefore, concerning the MoSCoW method, the conceptual designs become necessary for the next steps of DRLYD's future (Benyon, 2019). It is, again, distinguishing between what is nice to have and what needs to have in terms of how to survive in the market with other similar platforms. Adding features that create a value proposition in the app, where implementing and improving features to make the experience personalized to the individual podcast user and their preferences, and make the graphical interface more coherent, becomes a must-have for DRLYD to survive on the market. Furthermore, because the concept design of the thesis reflects the users' needs and the current market, they will be able to relate to the experience in the design solutions, as an interaction between people and products which gives rise to experiences, and it realizes the expectations that might have been. However, I cannot design the experience itself, as it relies on the own users' individual experiences. I can, however, by forming the concept design, create a design that reflects the needs of the users and design a situation that people can interact with (Forlizzi & Ford, 2000). These new features and functions can create an interesting and relevant form of interaction for the user when interacting the first couple of times. As with any other first times experience, the experience is new and must therefore break with expectations and habits. In this user-product-context interaction, the users unintentionally compare the recent experience with previous experiences (Folizzi & Ford, 2000; Kolb, 1984). Implementing these must-have changes will, more or less, place DRLYD on an equal footing with its competitor, as implementing these changes on the app can affect the user experience as experiences will happen through engagement and reflection and always be a progressive process based on the previous experiences (Kolb, 1984).

With the little discussion of DR challenges, including principles of experiencing content on streaming services, such as media convergence, alternative categorization, audiovisual elements, and personalization through algorithms that other media services have implemented to their current design, it becomes relevant to discuss if it is possible to take another theoretical approach to support this thesis. Throughout the different interviews, the participants answered the question of whether they felt motivated to listen to podcasts on DRLYD (see section 7.3.3). Three out of four answered that they were not motivated to continue their journey on DRLYD after the week of using the application (see appendix 1,2,3 & 4). When the purpose of this thesis is to see if it is possible to create engagement from a specific target group, it could have been relevant and

supportive to include motivation theory, for instance, the Reversal theory by Michael Apter, which proposes the people's needs and desires direct behavior, as people cycle through different states of emotions. Therefore, motivation and experiences go hand in hand, and the theory can offer a perspective on human functioning that is more holistic than other theories. The theory allows for a more inclusive and precise understanding of what users want, feel and do. The holistic nature of the theory emerges in its explicit link between what people want (motivation), feel (emotional experience), and do (behavior). The relationship between these three aspects is arguably the most important in *user-centered* design, and the theory provides designers with a more inclusive and integrated understanding of the user (Apter, 1989). Though the theoretical approach will be a relevant build on the current theories, there were no problems in using the current theories alone.

The proposed conceptual designs and redesigns will put the application on equal footing with other services by including the user's feedback in the design consideration. DRLYD will embrace a more meaningful experience, specifically for the desired target group, with the use of media convergence (in the form of audiovisual previews), transparency in the form of personal categorization, recommendations, visible playlist on the front page, and discovery of content (algorithm and self-modifiable interest). Providing users with a positive experience may create engagement and more productive use (Garret, 2010). As said, it not only puts DR on equal footing with other features, but it also offers more extended features, such as the possibility to view their own created playlist on the frontpage but also in terms of the audiovisual preview, as this is a feature offered only at some extend on Podimo. In this way, the conceptual thesis designs meet the design criteria and the contemporary media convergence will likely increase in the future (Herbert et al., 2019). In this thesis, I used interviews and observations for the empirical data to create a better user experience based on their feedback. Here, I could have further validated the data, and the created concept, by constructing a digital prototype that the participant of the user survey could test and evaluate. However, in the end, the proposed design concept has not been developed further into a prototype nor tested by the user, and therefore how the outcome of the design concept will be unknown. Whether the design concept can create more engagement, fulfill the target practical and mental needs, and be equal with the other podcast streaming services, is unknown, as it, in the end, relies on uncontrollable factors, such as cultural backgrounds, prior experiences, emotional states, which causes subjective interpretations in the

experiencing moment, and therefore an experience never becomes complete or fixed (Forlizzi & Ford, 2000).

13. Conclusion

This thesis intended to answer the following problem statement:

How can it-based experience design create a more improved and engaging experience for the age group of 18-34 on DRLYD and meet the barriers they experience on DRLYD?

This section will be the last part of the *develop phase,* evaluation, where I will conclude this thesis and its process of it.
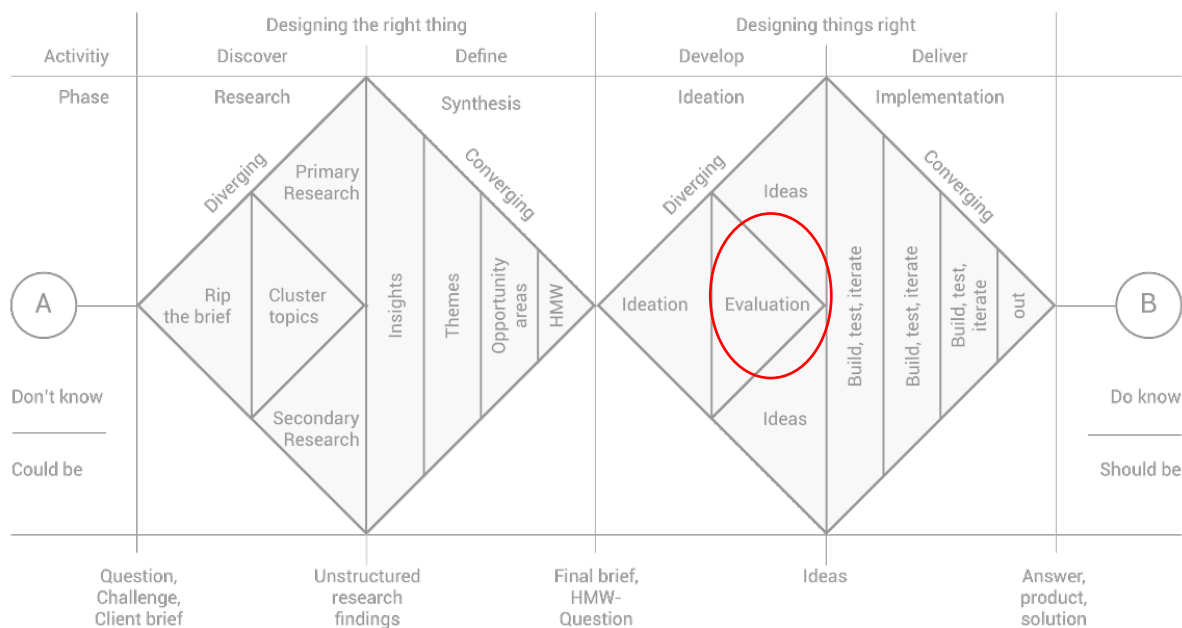

Figure 49 - How to apply design thinking – Double Diamond (Nessler, D, 2016)

The process of this thesis, how I came to the problem, and how I came to the current concept started with the initial literature review and empirical research in the Discover phase, which was the start of the design process—investigating through existing research on the emergence of podcasting, the rapid growth of podcasting, and the user motives for listening. It became apparent that there was a lack of use of DRLYD by the age-group 18-34 (Sejersen & Kammer, 2021). Therefore, it became essential to investigate how an experience (re)design would be able to accommodate a more meaningful and engaging experience for the individual user within that age group. The phenomenological hermeneutics approach throughout the thesis is expressed through the research method, for example, with the user survey, the collected interviews with the

think-out-loud method, where I wished to understand and interpret the experience on the app from the perspective of the participants, including their perspectives and descriptions, which together helped to expand the design process (Brinkman & Tanggaard, 2020b). This demonstrates an abductive approach, where I have created methodological working principles for me to continue the process of answering the problem statement.

With the help of the research method, the analysis is created. It is based on the collected data and the use of theoretical insights contributing to narrowing down the defined phase of the design process, which resulted in the design criteria for the current experience concepts. Consequently, consisting 1) must converge with the target group's interest, 2) must be more interactive and give more control and insight to the user, and embrace 3) more transparency regarding features. The concept should 4) be accessible in every environment, 5) continue the simple design with some upgrades.

The concept was physically sketched as prototypes in the Develop phase, where the concept embraces the current growth of the podcast industry, the media converging trend, and principles to create the experience offers. The concept design focuses on the application's front page, where designs such as the interactive feature of audiovisual podcast preview, personalized recommendations through an algorithm, different headlines, self-modifiable interest feature, and a saved folder. The concept reflects upon these criteria, which also reflects upon and meets ISO six criteria (see section 6.1.2) for UCD (Jensen, 2013). Currently, the concept meets some of the ISO criteria, which is an understanding of the users, task, and environment, and where the design involves the users and addresses the whole user experience, which is done by taking their feedback and ideas and incorporating it into the concept. The concepts reflect the podcast's development and the converging media trend. Implementing the concept will potentially help turn around the app's value proposition and reverse the current structure of using the app and discovering podcasts, where the concept will give a better form of user control over the displayed content and their playlists. The concept will display content targeted to the specific user and content they might not know, making the app less news-oriented, as it is known for. The established concepts will create a more inviting and personalized podcast experience for the individual user. This will also place DRLYD on equal footing with other well-established podcast streaming services and, in that way, accommodate more meaningful and engaging

experiences and will be able to function as conceptual experience supplements to the current design. However, the question is now, how can this be investigated and verified?

13.1 Future Works

This thesis has yet to reach the next phase of the Double Diamond, the *Deliver* phase, where the prototype is built, tested, and again iterated.

Therefore, the outcome of this design concept is unknown, as the concept is not prototyped digitally nor tested or evaluated by the participants. There is no knowledge about whether my interpretation of their feedback and ideas from the interviews is appropriate and fulfills their needs (see section 9) and whether it creates a good user experience for them.
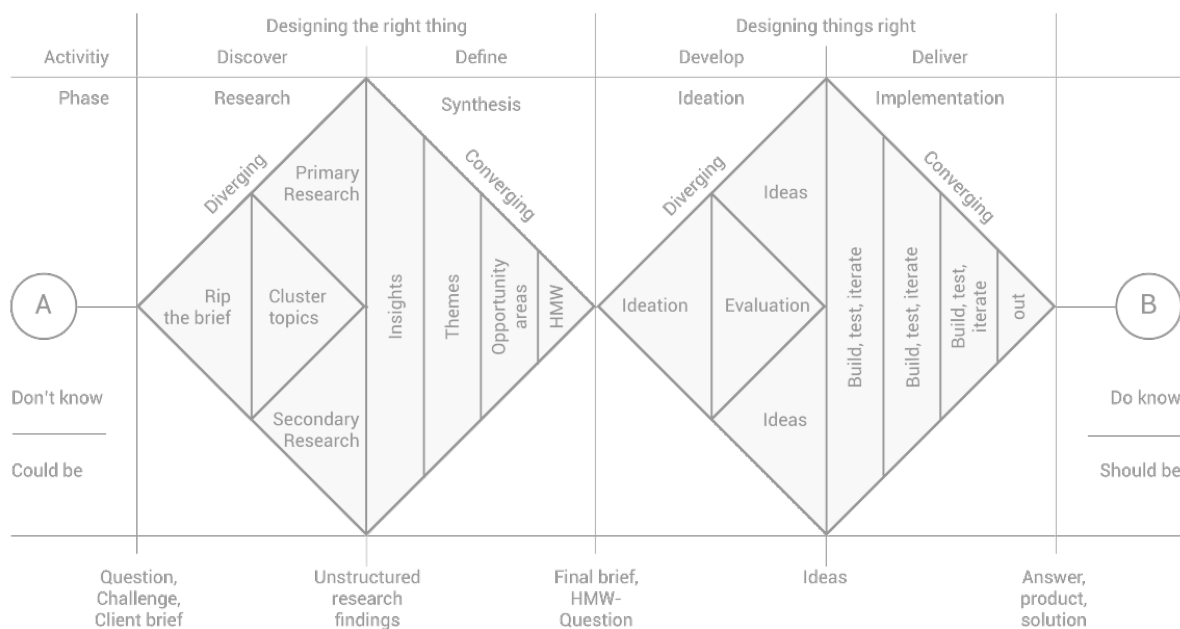
Figure 50 - How to apply design thinking – Double Diamond (Nessler, D, 2016)

This leaves this thesis concept open for change, and the next step is to create a prototype.

In order to understand the users' opinions about the created concept design and how it can be improved, it is relevant to test my prototype with the users. This will also fulfill the last criteria of ISO of the design being refined by a user-centered evaluation and, therefore, become a more iterative process. For this, the ideas within the concept should be prototyped into a digital artifact that is ideal for investigating how an improved front page looks to the users, what they think about the new features, and the refined ones available. Their evaluation starts an iterative

process and will move this design into a *design-led participatory design* since the following tests will include the experts, the targeted age group, who will become the primary users of our concept. Their perspective will help me understand what idea's function need to be refined or removed and make the concept more suitable for users' needs.

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