



Mental health among students at Aalborg University

*A co-creation case study with students
enrolled in higher educations*



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ABSTRACT

This thesis investigates how co-creation can use emotional user journey mapping to support the design process and the creation of a (new) service. Thereto, the thesis also aims at contributing to an extended understanding of the service design discipline and its value when co-creating new solutions across different mindsets of both expert designers and regular users. The thesis draws conclusions from a design case, in which the design process explores the challenges of mentally vulnerable students enrolled at Aalborg University. The case results in a report highlighting both the insights and the opportunity spaces on how to develop and improve support services available to (mentally vulnerable) students.

The design case employs the four phases of the Double Diamond methodology and is structured around activities that ensure a co-creative approach. The research suggests alternative methods, such as conversation cards to extensively involve participants in a co-creative service design project. The approach reveals the importance of the cards, especially in relation to a sensitive topic such as mental health, where the cards provide a common ground, a tangibility, and a foundation for dynamic and honest discussions. Orchestrating and facilitating a workshop containing the card element clearly stressed the importance of the role of a service designer, as there was a need for having an overview and progression of the workshop. Furthermore, the research shows that everyone involved in the design process is to be understood as an expert – the participants as the experts of the theme, and the designers as the experts of supporting others in designing and developing the process.

The thesis reveals that relations between participants in a service design project that are characterized by trust, sensitivity, and empathy are beneficial for a co-creative research process, as they ensure engagement and contribute to mobilizing participants' reflections,

making them think and act in ways that are more beneficial for them. These relations can be fostered by building safe, open, and informal design environments by the means of warm-up exercises, ice-breakers, etc. Thus, the thesis expands the understanding of service design as not only being a way to design services but shows that the design process in itself is valuable, as it contains a transformative power. Based on the research, the thesis reflects and concludes the design case and offers a solution proposal as well as a foundation for future research.

Keywords: *Service design, co-creation, mental health, conversation cards.*

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This project represents the final chapter of the Master in Service Systems Design at Aalborg University. The process of writing the thesis has at times been challenging but above all instructive and rewarding.

The assignment is based on mental vulnerability among students, which we personally find extremely interesting and highly valuable in this current time. The focus on mentally vulnerable students has had our personal interests, as we have experienced both success stories and challenges during our study time, both among ourselves and among friends and peers. The academic approach to the topic that the project has required has also given us insights into the opportunities and challenges that lie within this sensitive topic.

Throughout the project, we have engaged with several inspiring young people, who have struggled/are struggling with mental challenges in relation to their studies. Their willingness to open up, share, and contribute to our thesis has been both admirable and extremely helpful for our project. Thank you for your feedback, your valuable insights, and your personal stories – we feel grateful that you wanted to participate in the making of this thesis.

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1 INTRODUCTION

1.1 INTRODUCTION & MOTIVATION

Mental health issues such as anxiety, depression, and stress are becoming more prevalent among Danish students (Koushede & V. Rasmussen, 2020). The negative increase and the current figures are proof of a resounding failure or non-existing effort to solve a problem that keeps on growing. Ever since we started on the Master of Service Systems Design we have developed a strong wish to use service design in a purposeful and meaningful way. We aim to design, develop and improve services that make a difference in people's lives. With a co-creative approach, we aim to include valuable stakeholders such as professionals and students, to collaboratively reach a solution that hopefully has a positive impact on the lives of mentally vulnerable students. The co-creative approach as well as an explanation of user involvement will be elaborated in the literature review (chapter 2).

To touch the surface of the topic of mental health and well-being in the context of the university and to investigate whether or not this was the right direction for us, we attended a workshop on students' well-being hosted by Aalborg University in February through Zoom. Throughout the two-hour workshop with both students and student counselors, we discovered that like the rest of the Danish students, Aalborg University is also experiencing declining well-being among its students. It was clear that feelings of stress, depression, anxiety, and pressure of high expectations, were not unfamiliar to the students. Through separate Zoom rooms, we had some nice discussions and conversations around well-being, which exploited the potential of working with mental health among students. Shortly after the workshop, we then decided to focus on the students at Aalborg University and picked it as an anchor and direction for our thesis. With our thesis, we do not only wish to innovate new possible ways of improving mental health at universities, but we also wish to contribute to an extended understanding of the service design discipline as a

multidisciplinary field as well as highlight the importance of service designers' broad skill-set and profound toolbox.

In addition, from our perspective, we have as well experienced being challenged on our mental well-being during our studies and seen peers go through stress, anxiety, and depression, which has not only affected their study time but also their overall life quality such as their social life outside of the university. In our perspective life in the twenties can be rough, with multiple hard decisions that need to be taken. *"Where to study?, What to study?, Where to live?, How to get a job?, A partner?, and succeed with life?"* could be a couple of examples on the relevant aspects occurring at this age. These are challenging decisions, and from our personal experience, we can say that we are expected to take them, stick to them, do well with them and be a well-functioning human being at the same time, but what if we fail? Then it can lead to frustration, hopelessness, low-self worth, misbehavior, anxiety, and a lot of other symptoms of bad mental health. If we can do just a tiny bit to support other people in the same situation by taking a focus on university students during a difficult and challenging period of life, then we have succeeded in making a difference through service design.

With this in mind, we dedicate our thesis project to current and coming students how are mentally vulnerable in higher educations. With this project, we aim to investigate mental health challenges, uncover pain points, ideate possible solutions, and develop a support system that meets the needs for a healthier and easier way through the educational system.

1.2 LEARNING OBJECTIVES

OFFICIAL LEARNING OBJECTIVES

The official learning objectives (Aalborg University, 2021) are the following:

Knowledge

Students who complete the module will obtain the following qualifications:

- Must have **knowledge** about the possibilities to apply appropriate methodological approaches to specific study areas.
- Must have **knowledge** about design theories and methods that focus on the design of advanced and complex product-service systems.

Skills

Students who complete the module will obtain the following qualifications:

- Must be able to work independently, identify major problem areas (**analysis**), and adequately address problems and opportunities (**synthesis**).
- Must demonstrate the capability of **analyzing, designing, and representing** innovative solutions.
- Must demonstrate the ability to **evaluate** and address (**synthesis**) major organizational and business issues emerging in the design of a product-service system.

Competences

Students who complete the module will obtain the following qualifications:

- Must be able to master design and development work in situations that are complex, unpredictable, and require new solutions (**synthesis**).
- Must be able to independently initiate and implement discipline-specific and interdisciplinary cooperation and assume professional responsibility (**synthesis**).
- Must have the capability to independently take responsibility for own professional development and specialization (**synthesis**).

(Aalborg University, 2021).

PERSONAL LEARNING OBJECTIVES

With this thesis, we aim to gain and develop the following personal goals:

- Gain experience in co-creation with stakeholders and users.
- Work with different stakeholders and gain experience in communication and planning while doing it.
- Enhance academic writing through the thesis project.
- Practice and develop strong visual skills in Figma (visualizations, wireframes, etc).
- Gain experience in concept validation and testing.
- Create a project that is valuable and up to date, scalable and that can be used to make a difference for university students.

1.3 READING GUIDE

CHAPTER 2: LITERATURE REVIEW

Chapter 2 presents the theoretical foundation of the thesis, which will lead to the academic research question. The two main focus areas of this chapter are the definition and a perspective on service design together with a focus on the design thinking processes. In addition, it explores the role of designers in the context where the users are also designers. Furthermore, the chapter investigates co-design as a collaborative method and looks into user journeys as a well-known design tool. Lastly, the academic research question is presented, explaining the core of the thesis that aims to fill the missing gaps around the topic as well as within the literature.

CHAPTER 3: PROJECT CONTEXT

Chapter 3 presents the topic of mental health - which is the chosen subject of the design case conducted to explore the research question. Firstly, a general introduction and description of mental health will be presented along with the factors that can affect it and which consequences- bad and good mental health can have. Secondly, the chapter will explore mental health and stress among students and present the challenges that they have. The chapter will be concluded with a presentation of the initial problem statement that is addressed within the design process of the design case: *"How might we collaboratively design a (new) service that improves and supports the mental health among students at Aalborg University?"*.

CHAPTER 4: METHODOLOGY

Chapter 4 presents the methodology applied to explore the problem statement of the design case. Firstly, the chapter presents the Double Diamond methodology and its new edition - an extended version referred to as the Framework For Innovation. The new version of the Double Diamond provides a framework to structure the overall design process and successfully reach an answer to the problem statement. Through the work with the design case and the phases of 'Discover', 'Define', 'Develop', and 'Deliver', the most emphasis will be put on the 'Develop' phase, as the thesis investigates not only the problem statement but also an academic research question, which is tested out by a design experiment conducted in this specific phase. Lastly, the chapter is ended with a brief criticism of the Double Diamond methodology as well as a motivation for continuously applying it to innovative design processes, where especially the extended version of the framework clearly has its justification.

CHAPTER 5: DESIGN CASE

Chapter 5 presents the process of the design case in which the academic research question is explored. The chapter is structured into the four phases of the Double Diamond methodology - Discover, Define, Develop and Deliver. The phases are covering all the methods, tools, and activities conducted throughout the design process. Lastly, the chapter presents the outcome of the design case.

CHAPTER 6: DISCUSSION & REFLECTION

This chapter presents a discussion and a reflection on the academic research question based on the key findings and learnings from the design case. The chapter draws a red thread back to the literature review, where it is discussed and reflected upon how co-creation can use emotional user journey mapping to support the design process. Lastly, the chapter discusses to which extent the official- as well as personal learning objectives of the thesis, have been met.

CHAPTER 7: CONCLUSION

This chapter presents a conclusion on the research question of the thesis, as well as sums up the overall process of conducting the thesis. Furthermore, this part is ended with concluding lines on the topic and its potential for future implementation at Aalborg University.

LITERATURE REVIEW

LITERATURE REVIEW

This chapter presents the theoretical foundation of the thesis and presents the research question in which the thesis aims at contributing to future service design research. Firstly, a definition of service design as a practice along with the different roles of service designers are presented. In addition to that, there will be taken a look into different characteristics of design thinking. Secondly, the chapter describes and discusses the various levels of user involvement in a design process together with investigating different methods and how these are involved. Further, it explores co-creation as a method to gain an insight into the benefits as well as possible disadvantages. The chapter is wrapped up by exploring user journey maps. All this is concluded with the academic research question.

The chapter is divided into the following subchapters:

- 2.1** Service Design
- 2.2** User involvement in Service Design
- 2.3** User journeys
- 2.4** Research focus

2.1 SERVICE DESIGN

Service design is an interdisciplinary and evolving approach that combines different tools and methods from various disciplines, and since it is a new way of thinking there is no common and clear definition to cover the practice yet (Stickdorn & Schneider, 2011). In mid-2016 Stickdorn, Lawrence and Schneider asked 150 service designers to share their definitions and vote for the best description (Stickdorn, et al., 2018.) As a result, this is the most popular definition was chosen:

“Service design helps organizations see their services from a customer perspective. It is an approach to designing services that balance the needs of the customer with the needs of the business, aiming to create seamless and quality service experiences. Service design is rooted in design thinking and brings a creative, human-centered process to service improvement and designing new services. Through collaborative methods that engage both customers and service delivery teams, service design helps organizations gain a true, end-to-end understanding of their services, enabling holistic and meaningful improvements.”

- crowdsourced by Megan Erin Miller.

Service design is not only used for creating value for end-users but it is approaching the entire value ecosystem (Stickdorn & Schneider, 2011). It improves the quality, experience, and interaction between service providers and customers by planning, organizing people, infrastructure, communication, and components of a service (Aalborg University, 2021). Service design is not only useful to create new services but also to improve existing ones. *“Design is about making things good (and then better) and right (and fantastic) for the people who use and encounter them.”* - Matt Beale, from the Carnegie School of Design (n.a., 2021).

The term “service design” was first used by Lynn Shostack back in the early 1980s, she was a marketing professional in the bank industry and she considered service design to be an approach,

that covered marketing and management. She was the one who introduced the service blueprint (n.a., 2021). It started as a professional tool to design, manage and allow companies to process interactions with other processes. Later on, in 1991, Prof. Dr. Michael Erlhoff (of Kohn International School of Design – KSID) proposed that service design should be considered a design discipline and he then started a network of people that could be involved in the discipline (ibid.).

DESIGN THINKING VS SERVICE DESIGN THINKING

Just as with service design, there are numerous definitions of design thinking and no clear one. IDEO describes the design thinking mindset as a way of solving and addressing complex problems and big questions, through creativity and in a user-centered way. It is an idea, mindset, strategy, method, and way of seeing the world. Tim Brown, executive chair of IDEO describes design thinking as:

“Design thinking is a human-centered approach to innovation that draws from the designer’s toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success.”

- (IDEO, nd.)

Design thinking can be applied to a wide variety of fields, the most obvious in the field of product and service innovation. This human-centered approach consists of 5 steps: Empathise, Define, Ideate, Prototype, and Test (IDEO, n.d.) and allows for constant iterations between the phases. This five-stage design thinking model is proposed by the Hasso-Plattner Institute of Design at Stanford (d.school). Which is the leading university when it comes to teaching design thinking (Dam & Siang, 2021).

1. **Empathize** - Gaining an empathic understanding of the problem that needs to be solved. Empathy is crucial to a human-centered design process because it allows the designers to look past their assumptions and gain insights into the users and their needs.
2. **Define** - Collecting and clustering the information created and gathered during the empathize stage, to analyze and define the core problem.
3. **Ideate** - Looking for solutions by asking: *"How might we"* questions and generate ideas.
4. **Prototype** - Making the ideas tangible. The solutions from the ideation stage are now implemented within the prototypes, and, one by one, they are investigated and either accepted, improved, and re-examined or rejected on the basis of the users' experiences.
5. **Test** - The final stage of the model is to test the best solutions identified during the prototyping phase (ibid.)

Even though the 5-stage process presents design thinking as a linear process, in which one stage leads to the next with a logical conclusion. However, in practice, the process is carried out more flexibly and is not always following a specific order, they can occur in a parallel and repeated process (ibid.).

As mentioned in the service design part of this chapter, it is a practical approach to improve and create offerings made by organizations and service providers. Service design has much in common with many other approaches like design thinking, user experience design, and experience design to name a few, but there are some principles that make service design stand out.

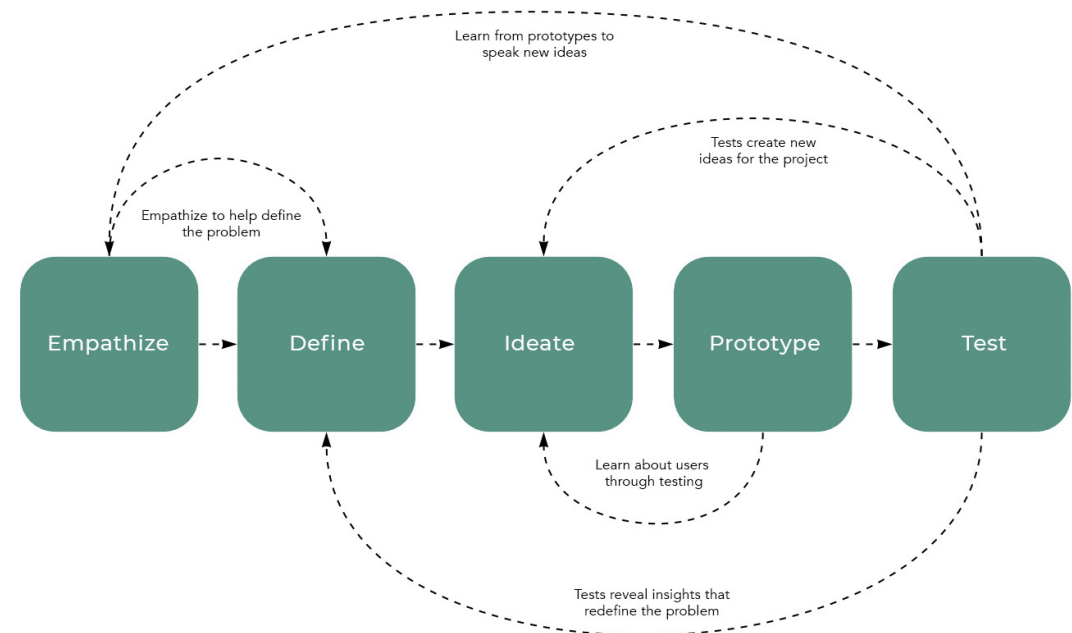


Figure 1: Design Thinking, A non-linear process (Dam & Siang, 2021).

According to Stickdorn, Hormess, Lawrence & Schneider's book '*This is service design doing*', from 2017, service design is following these principles:

1. **Human-centered** - Services should be experienced through the eyes of the customer. Consider the experience of all people affected by the service.
2. **Collaborative** - All stakeholders should be actively included in the service design process.
3. **Iterative** - service design is an exploratory, adaptive, and experimental approach, iterating towards implementation.
4. **Sequential** - The service should be visualized and orchestrated as a sequence of interrelated actions.
5. **Real** - Needs should be investigated and researched in reality, ideas should be prototyped in reality, and intangible values evidenced as physical or digital reality.
6. **Holistic** - Services should sustainably address the needs of all stakeholders throughout the entire service and across the business.

These principles are re-examined from the principles presented in the book from 2011 '*This is Service Design Thinking*', which has been widely quoted. The original definition was: user-centered, co-creative, sequencing, evidencing, and holistic. According to Stickdorn, Hormess, Lawrence & Schneider these principles needed to change since service design is in constant evolution (Stickdorn, et al., 2018).

"Since service design is a human-centered, collaborative, interdisciplinary, interactive approach which uses research, prototyping, and a set of easily understood activities and visualization tools to create and orchestrate experiences that meet the needs of the business, the users, and other stakeholders"

- Stickdorn, Hormess, Lawrence & Schneider (2018).

When comparing the two, it is clear that there are more similarities than differences between them. Both approaches are truly user-centered and are putting a strong empathy on empathizing with the user needs. Furthermore, they are both a good fit to handle complex issues and have a very similar design process - Empathize, Define, Ideate, Prototype, and Test. The biggest difference between the two approaches is that service design is mostly practiced by designers, whereas design thinking is also practiced by non-designers as a mindset and a way of thinking. Thereby, a design thinking mindset is used to support the service design approach.

THE DIFFERENT ROLES OF SERVICE DESIGNERS

The origin of service design can be found by looking back to industrial design in 1929, where the aim was to improve people's living standards. Traditionally consumers were not included when producing and designing new products and services but the logic has changed from a product-centric perspective to a perspective that focuses more on the value-creating process (Morelli & De Götzen, 2016).

Vargo and Lusch developed the service-dominant logic, to contribute to the understanding of value co-creation with users.

The traditional goods and product-dominated logic found value in the exchange of goods, supply, and demand, where it was focusing more on how the process and benefits of exchange can create value (Vargo & Lusch, 2004).

According to Vargo and Lusch, the value of a product or a service is created with the help of users in co-creation, and when the services are taken into use (ibid.).

The shift of focusing more on the interaction between users and the service itself changed the paradigm that framed the activities and the traditional role of expert designers (Morelli & D. Götzen, 2016). To create valuable experiences, service designers must work with both backstage activities, business processes, frontstage, and how to implement these processes. Furthermore, service designers must collaborate and tackle different stakeholders at the same time (Stickdorn, et al., 2018).

To sum up, everything that has been stated so far, in the design thinking mindset and the service design principles, there are different phases with different tasks and jobs that need to be covered, this shows how many different hats and roles a service designer has. Service designers are both researchers, facilitators, experts, programmers, UX & UI designers, as well as designers for many different elements such as blueprints, user journeys, and much more. Furthermore, service designers need to be able to communicate with different stakeholders and be able to visualize elements in order to create a common language.

In the next section of this chapter, we will investigate the different levels of user involvement in relation to service design.

2.2 USER INVOLVEMENT IN SERVICE DESIGN

DEFINING THE TERMS

When considering the relevance of user involvement in service design, it is crucial to first define what user involvement means. Keitsch explains the term user as *“a person who interacts directly with a product or service”* (2014). This is seen as one of the most common explanations, as users can imply quite different interpretations (ibid.). Thereto, we distinguish between primary and secondary users. The primary user describes someone who interacts directly with a system, product, or service and is in direct contact with the interfaces and touchpoints of the specific service (Tenhue, 2016).

The primary user is, as the term proclaims, also the user being most affected by the service, and the person whose wants and needs should primarily be taken into account when designing it (ibid.). The secondary user does not directly interact with the service system, but is still somehow affected by the service and should therefore also be taken into consideration when designing the service (Keitsch, 2014). Involvement means to participate mentally or physically through engagement and action (ibid.). These definitions of user involvement state the importance of involving the users in a design process, as it is highly important to get influenced by the insights of potential end-users before launching a finished product or service.

DIFFERENT TYPES OF USER INVOLVEMENT

User involvement is a widely known term and is increasingly gaining recognition among user-researchers in the design fields (Keitsch, 2014). One of the key principles of service design is the human-centered approach,

meaning that the services should be experienced through the eyes of the customer/user - both the primary user, but also by all the people affected somehow by the service (Stickdorn et al., 2017). The importance of the human-centered approach supports the need for user involvement in a design process. User involvement is making sure that people's voices are heard and thereby they can actively ideate, shape, and improve services by participating and contributing to a design process (The Advocacy Project, 2021). User involvement might sound easy but the real question is "*How do we design with users?*". The answer is not easy, nor collectively defined, as user involvement can take place at many different phases of a design process as well as be founded in different levels covering both co-creation, co-design, and participatory design (Keitsch, 2014). However, these three examples are not the only ways of collaboratively working together with users in a design process, in our thesis we have chosen co-creation as the collaborative method to narrow down and scope the direction of our thesis.

APPLYING USER INVOLVEMENT

Within service design, designers often possess a design thinking mindset regardless of the specific framework from which their design process erupts. Through the design thinking mindset, the service design practice encounters multiple phases of conducting valuable and efficient user involvement. As previously mentioned, it is a dynamic field with broad and fuzzy limitations, that allow the practice to be everchanging and innovative. This means that there are no rules in regards to when and where to apply user involvement in a design process. However, the design thinking approach entails more explicit user involvement in the Emphasize, Prototype, and Test phase, where the selected topic or area is investigated together with potential users and is tried and tested in the end for a valid solution that accommodates the user's needs.

Finally, user involvement is stated as highly important in a human-centered design field as service design. Without the users, succeeding in useful, valuable, and long-lasting solutions seem close to impossible.

2.2.1 CO-CREATION

Modern society is changing both fast and profoundly due to both higher and more demands of experiences and services (Manzini, Collina & Evans, 2004). The change entails a more complex design process, which requires a collaborative process. This means that multiple actors, such as the customers, users, stakeholders, and partners are involved in the service co-creation to reach a solution that is both useful and meaningful, not only to the designers but also to the end-users (ibid.). Over the last six decades, designers have been moving increasingly closer to their end-users, in an attempt to design products and services that the users actually need - through user-centered design processes (Sanders & Stappers, 2008).

As a term, "co-creation" means that some people are together in co-creating, but what it precisely entails is not agreed upon. On the contrary, the academic literature is emphasizing the fact that co-creation is an ambiguous term with a broad range of understandings and meanings (Verschuere, Brandsen, & Pestoff, 2012). A major reason why it is not clear how co-creation should be defined is that it has spread to a variety of contexts where it is used to describe different forms for collaboration between different stakeholders on different issues. The concept was introduced by Kambil, Ginsberg & Bloch (1996), but it only became widespread after Prahalad & Ramaswamy (2000) used it to focus on how many companies care too little about the importance and value that the company's products and services have for their customers.

Prahalad & Ramaswamy (2004) defined co-creation as *“the joint creation of value by the company and the customer; allowing the customer to co-construct the service experience to suit their context”*.

In other words, co-creation is stated to be a form of collaborative innovation, where ideas are created, shared, and improved together. As mentioned co-creation is a very broad term, with no official definition among researchers and practitioners. Often the term is used synonymously along with co-design (Sanders & Stappers, 2008). However, some characterization is made to distinguish the two terms

from one another. Co-creation is defined as the overall collaboration between two or more actors in a design process of adding more perspectives and value to the final solution as well as to the overall process (ibid.). Within the marketing and management disciplines, the importance of co-creation is clearly stated. From the shift of the goods-dominant logic to the service-dominant logic, the role of the user is heightened to be something more than just a passive receiver of a service, product, or concept. In the service-dominant logic, the user is acknowledged as a co-creator of the service (Vargo & Lusch, 2004).

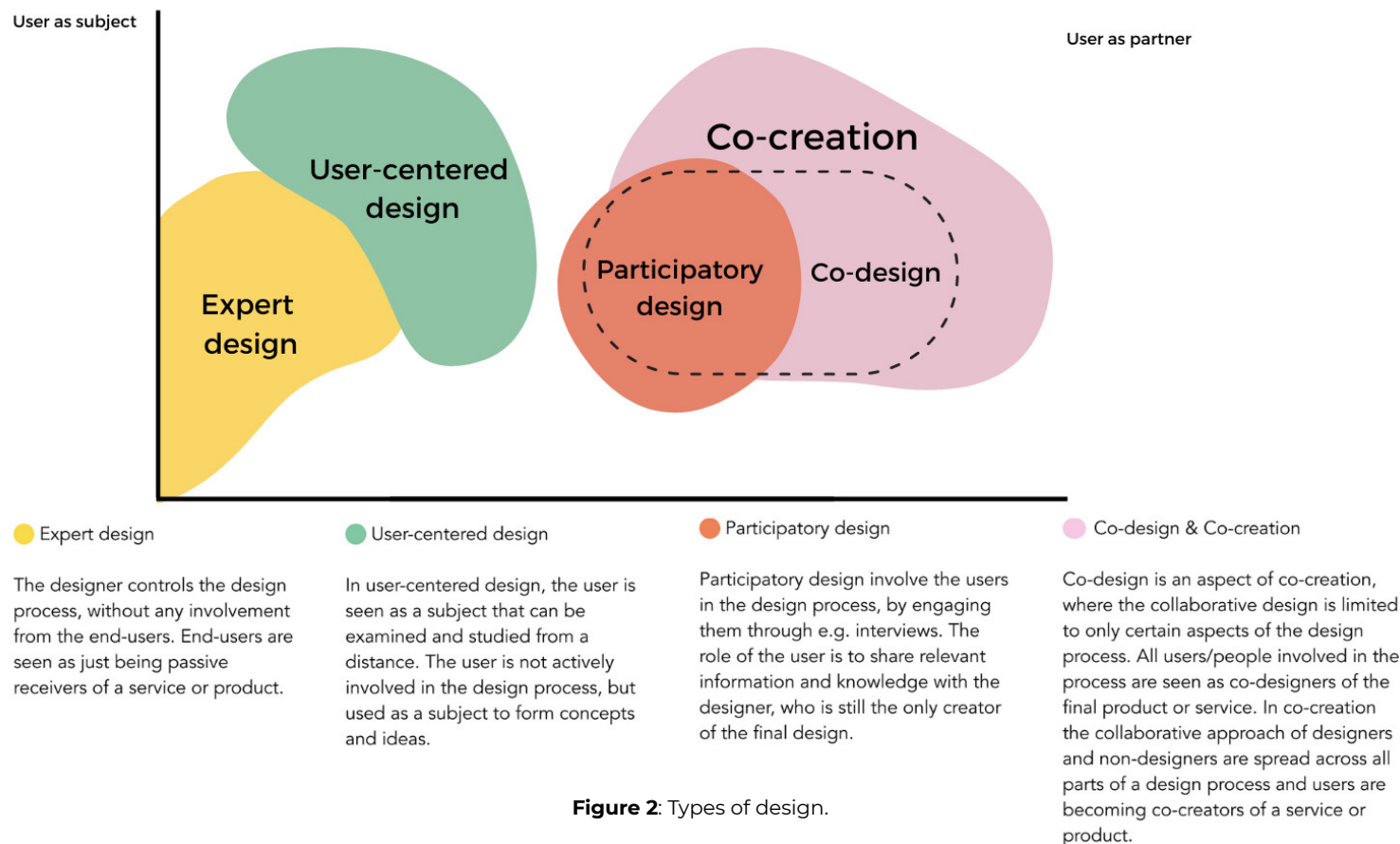


Figure 2: Types of design.

(Vargo & Lusch, 2004; Jørgensen, Lindegaard & Rosenqvist; Sanders & Stappers 2008).

Furthermore, the value is no longer determined only by the producers, but instead, the value is defined by and co-created along with the users, partners, or expert stakeholders and is seen as an evolving factor determined also by the value in use (Vargo & Lusch, 2004).

CRITICISM OF CO-CREATION

Co-creation is considered a popular form of collaboration and therefore it is often presented uncritically, not taking problems and challenges related to it into account. There is a tendency for co-creation to be described as some kind of “magic concept” that can solve any problem (Voorberg et al., 2014). A closer look at the research shows, however, that co-creation is not easy and unproblematic. It can be both challenging and problematic to bring different parties together for collaboration just as it can be both challenging and problematic to make the collaboration a success (ibid.). Nevertheless, co-creation is valuable to gain user insights and feedback in the design process and thus achieve a successful solution that is relevant to the end-users. Therefore co-creation will still be performed regardless of the existing criticism.

2.3 WHY DO WE NEED DESIGNERS?

Ezio Manzini, a lead thinker within service design states that: “*In a changing world everyone designs*” (Manzini, 2015). Manzini distinguishes between two types of design – expert design (carried out by specifically qualified designers) and diffuse design (carried out by everyday people without any peculiar design skills). However, expert designers are still highlighted as being real designers.

Tim Brown points out that designers should be seen as T-shaped persons, bringing not only horizontal skills such as a creative mind and a want for changing things but most importantly they bring a deep vertical professional expertise that clearly contributes to the outcome of a design process (Brown, 2008).

Additionally, they also bring a certain capacity and disposition for collaboration across disciplines and, as already mentioned, a professional skill-set that comprises both design methods and tools (ibid.). Even though everyone designs, designers still bring valuable assets into play as they are seen as problem solvers, that make large projects easier, solutions more effective and make collaboration among stakeholders run more smoothly (Manzini, 2015).

In the SAP user experience community (the leading online community in the business software industry) Lee Hyun (2018) points out 7 aspects of why expert designers still have their justification in a world where everyone designs.

Designers can...

1. **Understand** the basics of human psychology - how people perceive and interact with their surroundings, and how that can influence the design.
2. **Decide** based on proven design- and UX methods (e.g. research to usability analysis).
3. **Involve** stakeholders like product managers, developers, designers, and end-users to collect feedback and insights to take into consideration the appropriate design steps.
4. **Fail & try** as they do not believe in designing the perfect product on the first try, but learn from failing early and often.

5. **Listen** - They collect insights and feedback to iterate as necessary to create the best product, service, or experience, possible.
6. **Map users' needs** by spending time with the end-user to identify root causes and turning points.
7. **Constantly reinvent themselves.** They are always learning and are never satisfied with their current skill-set.

(ibid.).

Designers have their justification in a design process due to their professional skill-set. Even though it seems like everyone can carry out diffuse design, expert designers are needed in order to structure, develop and progress a successful design process. Expert designers are also capable of bringing the right users and stakeholders into play at the right time of the process, where users' impartial views and insights would make a valuable difference in the final outcome.

2.4 USER JOURNEY MAPS

This section presents one of the most fundamental methods used by designers to gain insights about people's experience and interaction with a service in the terms of a journey, described and visualized step-by-step (Bjørner, 2015, p. 184).

From the user perspective, the process (journey) is mapped out, describing what is happening at each stage of the interaction, what touchpoints are involved, and what obstacles and barriers they may encounter (Service Design Tools, n.d.). User journeys are relevant to use when wanting to gain more detailed information about the user experience and can provide insights and clues to where there are

weak points and room for improvement (Bjørner, 2015, p. 184).

While user journey maps can be shaped and formed in many ways, they are commonly represented as a timeline of all touchpoints between a user and a service in a logical and chronological way. It can either be based on collected research and data from users or it can be mapped out together with the user (ibid.). It is important to map out the different activities, touchpoints, and people that the user has been interacting with, but it is equally important to map out the challenges, barriers, wishes, and emotional highs and lows (ibid.).

The journey map is often integrated with additional layers representing the level of positive/negative emotions experienced throughout the service interaction (Service Design Tools, n.d.).

EMOTIONAL USER JOURNEY

The emotional user journey is an extension of the usual user journey map by including and analyzing the emotional highs and lows of a user by associating an indication of the emotional status of the user at each stage of the experience (Emotional Journey, 2021). The aim is to capture how the perception of a user changes throughout their service experience (ibid.).

Jeannie Walters, a customer experience designer, writer, speaker, and founder of 360Connex, brought out in a MyUser podcast, about user journeys, that "*emotion is a vital component of human decision-making*". Therefore, the emotional aspect is crucial as the experience is what drives users' stories later as the highs and lows of emotions will be what stays with the customers (MyCustomer, 2021). The emotion can be represented by a curve floating from moments of frustration to delight, or by adding icons and pictograms to the specific steps of the journey (ibid.). To sum up, journey maps can be often integrated with several different layers and other elements.

One of these additional layers could be a representation of emotions experienced throughout the service interaction as it was previously explored that emotions are vital components of the human decision-making process and through that, it is possible to gain an insight into the perception of users and their reality.

2.5 RESEARCH FOCUS

The following section summarises key insights and crucial points from the literature review that guided us towards the research question.

By taking a closer look into what service design is, it was understood that it is a design practice that is fairly new and is still constantly evolving and changing. When looking at different definitions proposed earlier it is possible to state that the key in service design discipline is to connect the links between the users and the service provider. Nevertheless, we became aware that besides that there are many other important layers to service design as Stickdorn et al. (2018) brought out. The definition proposed by them highlighted aspects such as collaboration, interaction, and design thinking.

That led us to explore more about design thinking where we understood that the human-centered approach is the main keyword and it is often implemented and used in the 5-stage process. When comparing service design and design thinking it is possible to draw a clear conclusion that there are a lot of similarities between them. There is a clear focus on understanding the user needs and putting the user in the center of the design. The difference lies in the fact that a design thinking mindset is used to support the holistic service design approach. Hence, we took a look into the literature about different user involvement types to gain an overview of different possibilities of involving users in the design process.

Through the previous chapters, we empathized that involving users can take place at many different phases of a design process as well as it is found in many different cooperative levels. Having that background knowledge, co-creation was picked as a method for further research to discover the possibilities that it offers for user involvement in service design, which focuses on user journey mapping.

It was learned that co-creation describes different forms of collaboration between stakeholders on different issues where ideas are created, shared, and improved together. Another important aspect of it is a collaboration between two or more actors and the users in the design process. However, this made us investigate the role and the importance of the designer in the context where everybody designs and where users take over the role as a designer.

We recognized that, even though everyone creates, designers still bring valuable assets into play as problem solvers. According to Manzini designers have skills to make large projects easier, solutions more effective and make collaboration among stakeholders run more smoothly.

This recognition induced us to investigate different tools designers could bring to the co-creation. Hence, we looked into user journey mapping as it is a fundamental tool that helps to gain insights into people's experiences. Understanding that the emotional aspect is imperative and influences the decisions of a user, the emotional user journey was researched further. It was learned that the emotional highs and lows of a user are added as an extension to a regular user journey.

Given this overview and background, we aim to conduct design experiments with users by co-creating emotional user journeys to support the design process.

Thus, a research question was created as follows:

2.5.1 RESEARCH QUESTION

*“ How can co-creation use
emotional user journey mapping
to support the design process and
creation of a (new) service? ”*

3 PROJECT CONTEXT

PROJECT CONTEXT

To explore the academic research question, a design case has been conducted. This chapter presents and gives an introduction to the topic of mental health, which is the chosen subject of the design case. Furthermore, the chapter is presenting data and knowledge about mental health, along with looking into the mental health and challenges among (university) students.

The chapter will be concluded with a presentation of the initial problem statement that is addressed to start the design process.

The chapter is divided into the following subchapters:

- 3.1** Mental health
- 3.2** Mental among students
- 3.3** Problem statement
- 3.4** Clarification of concepts

3.1 MENTAL HEALTH

Mental health is an integral and essential component of health. The WHO (World Health Organisation) constitution states that: *“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”* - (WHO, nd.) On WHO’s website, it empathizes that it is important to mention that this definition is that mental health is more than just the absence of mental disorders or disabilities (ibid.). WHO also defines mental health to be the state of well-being in which an individual realizes how they can cope with the normal stresses of life, can work productively, and is able to make a contribution to his or her community.

“Mental health is fundamental to our collective and individual ability as humans to think, emote, interact with each other, earn a living, and enjoy life. On this basis, the promotion, protection, and restoration of mental health can be regarded as a vital concern of individuals, communities, and societies throughout the world.”

- (WHO, 2018)

Mental health is seen as an umbrella term with lots of diseases and symptoms that fall under that category (Network Rail, 2015). To create an overview of what mental health covers, of both physical, mental, and behavioral symptoms figure 3 aims at presenting mental health as an unclear size, that consists of different feelings, symptoms, and severities, that go across different diagnoses within mental health (ibid.). There are different factors to determine the level of mental health such as multiple social, psychological, and biological factors. There are specific psychological and personality factors that can make people extra vulnerable and exposed to mental health problems (ibid.), but in reality, everyone has some risk of developing a mental health disorder, no matter their age, sex, income, or ethnicity (Legg & Felman, 2020).

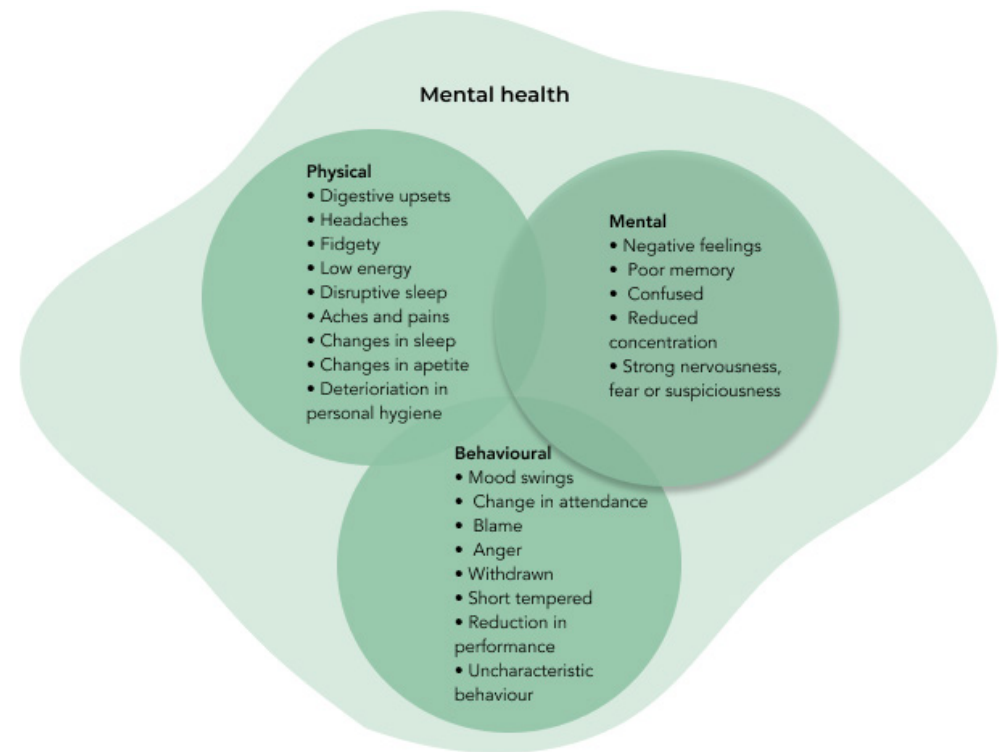


Figure 3: Mental health (Network Rail, 2015).

Bad mental health is often associated with rapid social change, stressful work conditions, gender discrimination, social exclusion, unhealthy lifestyle, physical ill-health, and human rights violations. Conditions such as stress, depression, and anxiety can all affect mental health and disrupt and affect a person’s routine, daily life, relationships, work, or school (ibid.).

On the contrary, positive mental health allows people to realize their full potential, cope with the stresses of life, work productively, maintain responsibilities, and make meaningful contributions to their communities (MentalHealth.gov., nd.). Good mental health has a positive effect on a person's life quality, overall health, and how well an individual would perform in a job or education. There are several ways to maintain positive mental health such as: connecting with others, getting physically active, helping others, support, getting enough sleep, developing coping skills, and getting professional help if needed (ibid.).

As mentioned mental health is a state of complete physical, mental and social well-being, and can be affected both negatively and positively. Having either good or bad mental well-being can affect your daily life, studies, and work.

In the next section, it will be further explored what kind of mental challenges students are struggling with.

3.2 MENTAL HEALTH AMONG STUDENTS

After understanding the complexity of mental health, it was decided to explore the topic further by understanding how it affects young adults, in particular students enrolled at higher educations.

Various scholars point out that especially university students are affected by mental health issues, which is a growing public health concern (Eisenberg et al., 2007, p. 534 cited in Petersen & Madsen, 2017). Young people are especially affected because they struggle with the difficulties of e.g. managing depression in a different way than other age groups because they find themselves at a crossroad in

life, where questions of identity, education, sexuality, family formation, and friendship present themselves in an exceptionally pressing manner (ibid.). At the same time as dealing with a lot of personal matters and identity creating decisions, the students also meet high expectations at university. It creates high demands which the students take on their shoulders. Half of the Danish university students find it difficult to be satisfied with anything less than two digits on the Danish 12-scale grade sheet. They also find it hard to take time off, and some are reluctant to take part in-class discussions, in fear of appearing stupid (Rossander & Rasmussen, 2020). This shows that university students are a vulnerable group as they are in a transitional period of their life, where both professional and personal matters can affect their mental health strongly. Danish research shows that more than one-third (32 %) of Danish students have dealt with stress during their first semester of education (ibid.). Furthermore, stress, anxiety and depression are also becoming more prevalent among Danish students. *"It is time to put mental health on the curriculum,"* says Vibeke Jenny Koushede and Mikkel Vedby Rasmussen, professors at the University of Copenhagen (2020). The study environment in a Covid-19 pandemic has been challenging, and can for sure take some of the guilt of the rising bad mental health among students, but not all. It is a far greater challenge to ensure that the study environment that is created in the wake of the Covid-19 crisis provides less stress and better mental health for the Danish students (Koushede & V. Rasmussen, 2020). In this chapter, we aim to gain an overview of the mental health situation among Danish students, and from here narrow down our scope to focus on a specific student group.

At the beginning of 2019, Denmark's evaluation Institute (EVA) made a study where students got questions about how stressed they were, and what factors could be the trigger for this (EVA, 2019). The study was carried out because unions were getting more inquiries than ever before from students that felt stressed and mentally unwell. The study showed that after half a year into the newly started education, every third student already felt very stressed. The feeling of stress

among students was not the only challenge uncovered in the study (ibid.). That such a large proportion of students feel stressed is also a problem for the institutions because students who feel stressed are often experiencing a declining motivation to study, which increased the risk of dropping out (ibid.). EVA has also asked students what this feeling of stress is triggered by, here the answers were: academic requirements, time pressure, and personal circumstances (Ibid.). A study with almost 600 students from the Danish Association of Masters and PhDs in 2018 showed that 72% suffer from sleeping problems, while 71% struggles with stress symptoms like memory and concentration difficulties (Uniavisen, 2018). The survey also showed that 9 out of 10 students at the University have been stressed during the last semester.

In international surveys, Denmark is often highlighted as one of the happiest countries in the world, measured by life satisfaction (Koushede & V. Rasmussen, 2020). Unfortunately, that is far from the whole picture, as we in Denmark are experiencing mental health as an increasing public health problem (ibid.). Mental health problems comprise a significant proportion of the causes of overall sickness leave in Denmark. Included in this is a growing proportion of young people who are ending up never being about to enter the job market because of mental health problems (Summer, 2017). No part of the population goes free, not even the privileged young people who study higher educations at the country's universities. In fact, the young people - including the students, are actually a particularly vulnerable group (ibid.). Results from the National Health Profile recent survey from 2017, show that the bad mental health among young people (16-24 years old) has increased from 12 to 18 % in just seven years (ibid.). This shows a particular unhealthy increase among young people, who in theory should be living their best life.

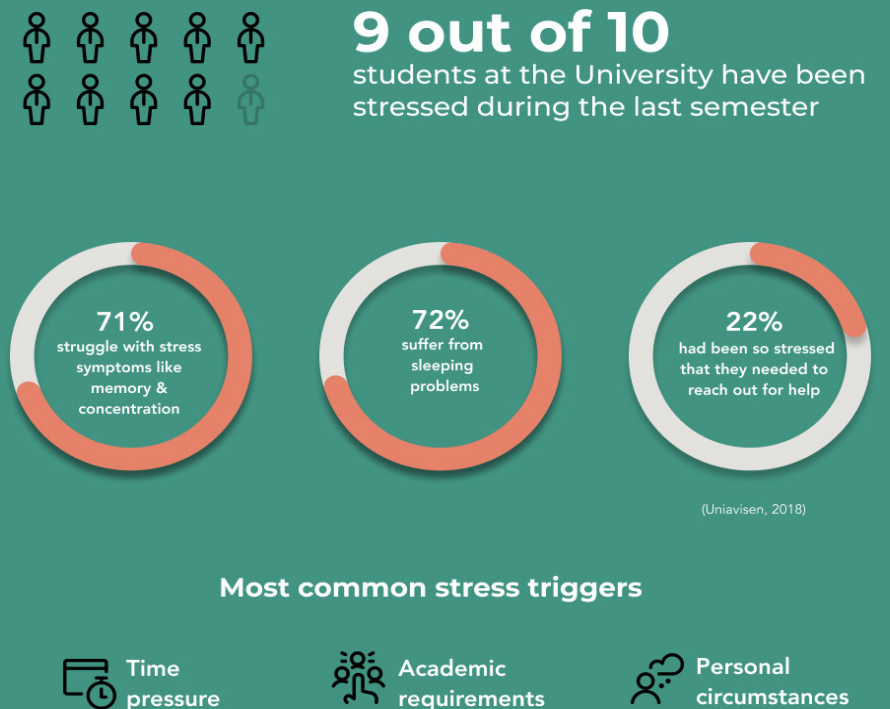


Figure 4: Infographic over mental health facts.

With this in mind, the thesis will emphasize and delimit the scope to revolve students in Denmark at higher educations at bachelor and/or master level. More precisely, this thesis will explore and investigate how we can design a service that could improve the mental health among students at Aalborg University. With this anchoring to Aalborg University, the thesis and proposed solution will emanate from here and hopefully be applicable to other universities.

3.3 PROBLEM STATEMENT

“
*How might we collaboratively
design a (new) service that improves
and supports the mental health
among students at Aalborg
University?*”

3.4 INTRODUCTION TO KEY CONCEPTS

This part is intended to clarify the meaning of the ambiguous terms and concepts that the project contains.

Aalborg university - Danish public university with campuses in Aalborg, Esbjerg, and Copenhagen. With a main focus on the campus in Copenhagen. Hereafter abbreviated as AAU.

Student - a person who is studying at a university or other place of higher education.

Mental health - emotional, psychological, and social well-being. It refers to cognitive, behavioral, and emotional well-being. It is all about how people think, feel, and behave.

Well-being - a fundamental pillar of the overall health of an individual, enabling them to successfully overcome difficulties and achieve what they need from life.

Collaboratively - the process of two or more people, entities, or organizations working together to complete a task or achieve a goal.

4 METHODOLOGY

METHODOLOGY

This chapter presents the methodologies used to explore and answer the problem statement and the academic research question. Firstly, the chapter presents the Double Diamond, which provides the overall framework and structure for the thesis. When working with the Double Diamond methodology, the design thinking mindset is applied throughout the entire design process. Secondly, the chapter presents an overview of how the project is managed together with a presentation of the overall process plan. The chapter will conclude with a description of the limitations experienced due to Covid-19 and a critical reflection upon the methods used.

The chapter is divided into the following subchapters:

- 4.1** Double Diamond
- 4.2** Project management
- 4.3** Overall process plan
- 4.4** Limitations due to Covid-19
- 4.5** Criticism of the methods used

4.1 DOUBLE DIAMOND

The Double Diamond framework will be used to structure the overall design process of our thesis and answer our proposed problem statement. The Double Diamond model was developed by the British Design Council back in 2004 and has ever since been widely used as a problem-solving tool to tackle complex problems within many different sectors worldwide - often applied within service design (Design Council, 2021). The framework consists of two diamonds and is a clear and comprehensive visual representation of a design process (ibid.).

The first diamond being the problem diamond and the second diamond being the solution diamond, where there is an alternate shift between a divergent and convergent mindset - always putting the people (users, customers, etc.) first. This approach allows designers to reach significant and long-lasting solutions (Teknologisk Institut, 2021). The Double Diamond process model consists of 4 phases which will be elaborated below.

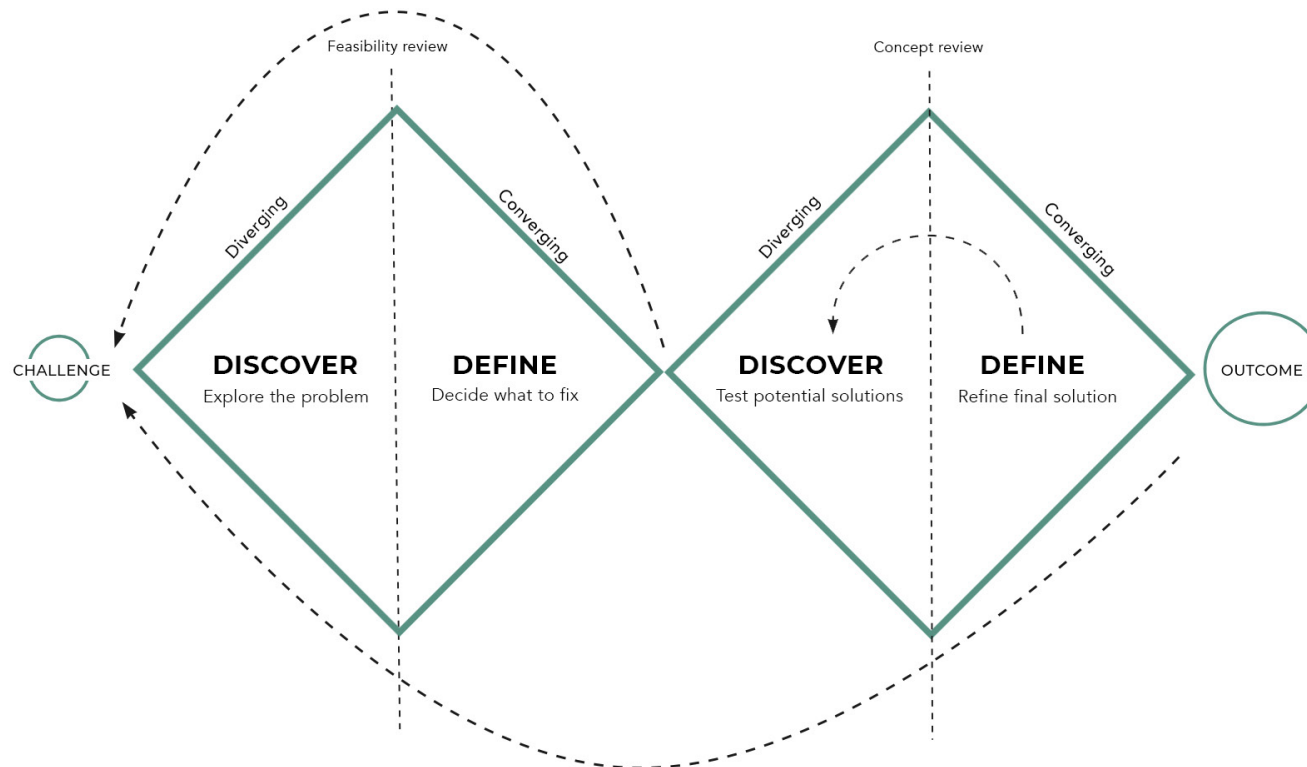


Figure 5: Double Diamond process model (Design Council, 2021).

Discover

The first 'Discover' phase is about examining the subject. By applying divergent thinking everything there is to know about the chosen area/subject will be investigated. In other words, this could be called the research phase, in which designers talk to people and conduct desk- and field research. Through investigating and exploring the topic in-depth, it will be possible to understand, identify and map out the problem, as well as scoping the further process.

Tools & methods: *Desk research, Survey, In-depth interviews.*

Define

In the second phase of 'Define,' the most important insights from the previous discover phase are extracted. By clustering and synthesizing the insights, it's possible to delimit and scope the problem area and take on the challenge which would result in the most beneficial solution.

Tools & methods: *Empathy map, Stakeholders map, Relation map, Research wall.*

Develop

The third phase is called the 'Develop' phase. Here ideas will be developed based on the knowledge gathered from the Discover phase and the more narrow/specific scope that was defined in the second phase. Again, there is going to be shifted from the convergent mindset into a divergent mindset to try to get as much breadth of the ideas as possible, before moving into the final phase of the Double Diamond.

Tools & methods: *Brainstorming, Mind mapping, Retroperspective sailboat, S.C.A.M.P.E.R, Conversation cards, Journey mapping, Co-creation.*

Deliver

In the last phase of 'Deliver' the purpose is to tie the knot and summarise all insights and knowledge into a final deliverable. In this process, the ones that will not work will be rejected and the concepts/ideas that work will be improved and finalized. This process is done to complete the concept, product, or service for final production, launch, or to hand over for further development (Teknologisk Institut, 2021).

Tools & methods: *Concept descriptions, Mock-ups, User journeys, Service blueprint, Motivation Matrix.*

Within the 4 phases of the Double Diamond, multiple service design tools and methods are used in order to transition from one phase to another. The tools and methods used will continuously be explained throughout the report, when they appear.

CRITICISM OF DOUBLE DIAMOND

Even though the Double Diamond is widely known and highly used all around the world, especially within service design, the process model still suffers from some criticism. As mentioned above, the framework of the Double Diamond is categorized to be beneficial to structure and execute a design process, but the critics point out that the model is too simplified and linear to carry out an iterative and dynamic design process (Drew, 2019). To counter this criticism, the British Design Council evolved the Double Diamond model into what is now referred to as the Framework For Innovation (Design Council, 2021). It is basically an extension of the Double Diamond, which now clearly emphasizes the fact that design is anything but a linear process.

The Framework For Innovation proves to be valuable when the invisible design process needs to be explained to non-designers, CEOs, and companies as a means of showcasing the process and the need and importance of investing both time and money in the project (ibid.). The Framework For Innovation also outlines 4 core principles, for designers to follow, when implementing a successful design process.

1. **User-Centered Design:** “be people-centered”
2. **Visual Thinking:** “communicate visually”
3. **Co-creation:** “collaborate and co-create”
4. **Agile/Lean Startup:** “iterate, iterate, iterate” (ibid.).

With the new version of the process model, we feel confident in using the new and extended Double Diamond as the framework for our thesis. The visualization of the model might be simple, but the actual design process of working with it is anything but simple. Through continuous iterations and collaborative user involvement, we believe that the Framework For Innovation can work as a great overview and provide understandability to our complex project and process.

4.2 PROJECT MANAGEMENT

As mentioned, the Double Diamond framework is used to structure and organize the project, but in order to keep track of the process and the different tasks in the thesis, we used different tools available. To keep track of the different tasks, we used a Trello board. Here the different sections were divided into backlog, to do, doing, done, and blocked.

This gave us an overview of who was doing which tasks and what still needed to be done. The Trello board was very helpful for us, especially to ensure that no tasks were forgotten in the process.

Since we were not able to meet much physically during the thesis project due to Covid-19, we wanted to find different ways of creating the same environment and flow that there normally is in a design process, with post-its and notes and the possibility to work together, for this we used Miro and Figma. In Miro, we had our brainstorming and ideation sessions and collected all our findings, and Figma was used to collaboratively make the visualizations. For our communication, Slack, Messenger, and MS Teams were used.

To make sure that the responsibility was divided equally between us, and to make sure we stayed on track, we took turns being the project manager for two weeks at a time. The project manager was in charge of creating the daily agendas, scheduling meetings, sending emails, updating the calendar, and having the overview. This provided a good structure and overview of the project.

4.3 OVERALL PROCESS PLAN

Figure 6 shows the overall research process of the thesis. More precisely it visualizes how the chosen methodology of the Double Diamond controls and structures the overall design process with its four phases of Discover, Define, Develop and Deliver. The thesis is not only reaching a final solution to the problem statement on:

“How to collaboratively design a (new) service that improves and supports the mental health among students at Aalborg University”.

Additionally, the thesis is also contributing to the service design discipline by exploring the academic research question in which it is explored *"How co-creation can use emotional user journey mapping to support the design process and creation of a (new) service"*. The whole project aims at improving the lives of mentally vulnerable students at AAU.

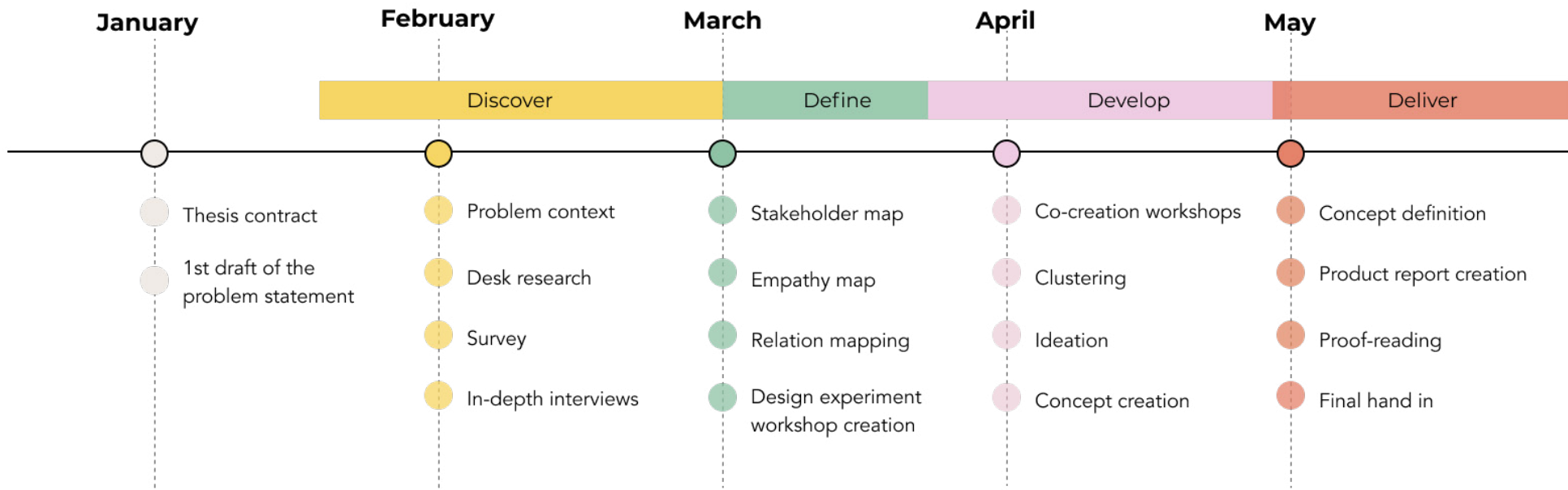


Figure 6: Thesis process plan.

4.4 LIMITATIONS DUE TO COVID-19

The worldwide outbreak of Covid-19 changed multiple things in society and everyday life, including how social interactions and engagement were carried out. This meant that AAU was shut down and that we had to modify how we planned to work on our thesis project, both in relation to each other but most importantly, also how we engaged with various stakeholders.

With positive and hopeful minds we wanted to explore how co-creation can use emotional user journey mapping to support the design process and creation of a new service through physical workshops. However, these needed to be rescheduled into online workshops, due to the Covid-19 restrictions and to be precautious of ourselves and the participants. Unfortunately, this meant that the co-creational aspect was lacking a bit since we needed to make sure that everyone took turns talking, and therefore there were not created room for a natural conversation and discussion to unfold in the same way, as we would imagine it to have been in real life in a physical setting. The limitations of Covid-19 also made it impossible for us to visit the campus, meet with student counselors and other possible stakeholders, observe the visibility and advertising of the support services available at Aalborg University, and interview students at the campus. However, we tried to find a way around that by sending out an online survey and interviewing students and one student counselor through MS Teams.

Thus, our research and thesis would probably have benefitted from physical interactions, especially in relation to the co-creative workshop setting. We still believe that we managed to create a way around the restrictions, and we also felt curious to explore new ways to work remotely using online tools such as Miro, Figma, MS Teams, Google Drive, etc., that we now feel completely confident in using in our future careers as service designers. However, we still believe that this project would benefit from further research as it has a lot of potential for making a positive impact on students' general well-being.

5 DESIGN CASE

DESIGN CASE

This chapter covers the process of the chosen design chase, which has the aim to explore the academic research question of the thesis. As presented in the chapter about the project context, the design case aims to contribute to students' well-being and mental health. The structure of this chapter is defined by the four phases of the Double Diamond methodology, also presented in the methodology chapter. The phases Discover, Define, Develop and Deliver are covering the activities conducted in the design process. Throughout the design process, there will be reflected on the different phases and methods used. Lastly, the outcome of the design case will be presented.

The academic research question aims to *explore how co-creation can use user journey mapping to support the design process and creation of (new) service*. To investigate the academic research question the activities in the Define phase were highly important.

The chapter is divided into the following subchapters:

- 5.1** Discover
- 5.2** Define
- 5.3** Develop
- 5.4** Deliver

DISCOVER

The first phase of the Double Diamond 'Discover' allowed us to deeper examine and understand the chosen subject and initial problem statement. This provided us with a foundation of knowledge, in which we could understand, and identify the problems occurring within our problem scope. The phase started off with conducting desk research to detect what the universities in Denmark are offering and doing for students' wellbeing, hereunder also what activities Aalborg University is offering. Furthermore, the desk research was conducted to discover which other support services are available outside the institutions. To support the desk research, an expert interview, and a survey was conducted. In addition, the Discover phase also taught us new exciting ways to support our co-creation process, in which we explored the use and value of conversation cards. Lastly, the chapter is finalized with a conclusion and reflection on the phase.

The chapter is divided into the following subchapters:

- 5.1.1** Desk research
- 5.1.2** Field research
- 5.1.3** Reflection on the Discover phase
- 5.1.4** Conclusion on the Discover phase



5.1.1 DESK RESEARCH

The desk research constitutes the initial part of our Discover phase. It is an important part to gain preliminary information on the subject based on secondary research. Desk research, often also referred to as secondary research, describes the collection, synthesis, and summary of already existing research (Stickdorn, et al., 2018). As suggested by Stickdorn et al. we have used various sources of already existing research, such as websites, reports, books, and whitepapers in our desk research. The outcome of the first round of desk research was synthesized and summarized and presented in the project context chapter (chapter 3). The knowledge gained in the first round of desk research provided a starting point and gave us a guideline for the design process. The second round of desk research will be presented below and has the aim to explore and collect comprehensive knowledge on the subject of mental health among students, the different support offerings that there are in Denmark from both institutions and others. Finally, the desk research will later in this chapter be compared to our field research - a survey and in-depth interviews with both students and professionals, in order to get a full picture of the challenges that mentally vulnerable students experience.

AALBORG UNIVERSITY

Aalborg University was founded in Aalborg in 1974. In 1995 AAU merged with the engineering college in Esbjerg, and in 2005 another department of the university was established in Copenhagen, resulting in a multi-campus of now 3 departments located in three different cities of Denmark. Since the university emerged it has been known for its problem-based and project-oriented approach, as well as its broad cooperation with both the business sector and public authorities (Wikipedia.org, 2021).

Since September 2019, we have all been enrolled at AAU's master program of Service Systems Design, and that is also a reason why we chose to anchor our project to AAU. First of all, this provided easier

access to students and stakeholders, which is considered highly important in such a delicate topic as mental health. Secondly, the whole topic was inspired by our own as well as our peer's experiences and therefore we aspire to translate these into the project. Therefore, the whole thesis has an emphasis on the AAU students and systems.

SUPPORT SERVICES OFFERED BY AAU

AAU offers a wide range of helpful support to students who experience either physical or mental difficulties in relation to their studies. The offers targeted well-being of the students are available at AAU's website under a specific menu point that then opens up a whole section about the topic and the different offers (Studiemiljoe. aau.dk, n.d.).

The services presented and offered from the AAU website consists of:

1. **Study- and well-being counseling** - Can help students balance their studies and deal with both professional and personal challenges.
2. **Student priests (Only Aalborg based)** - Offers conversations with students at Aalborg University in relation to personal, social, academic, or existential/religious problems. They are available regardless of faith and the conversations can also deal with other aspects than religion.
3. **The University Clinic (Only Aalborg based)** - Offers free psychological help to young people over the age of 18 regarding, for example, existential problems, identity or life crises, grief reactions, anxiety, depression, etc.

4. **AAU Coaching Center (Only Aalborg based)** - A group of students in the master's program in Psychology at Aalborg University has established a free offer of coaching, called AAU Coaching Center. The individual coaching courses are handled by students in the last part of the psychology study. The coaching is based on the individual students' premises and can be used by everyone who needs help with personal development goals, private as well as study-related goals.
5. **Social Pedagogical Support (SPS)** - Is an offer for students who have a mental or physical disability, so that they can complete the education on equal terms as the rest of their peers. The support is individually targeted and it is only offered within the aspects that are concerned with students' studies.
6. **AAU student app** - The app can help students get an overview of classes, their calendar, get updated on news and events, and then it has a specific part targeted the students' well-being called 'Feel Good'. Here students can prioritize tasks, create personal goals and learn about time management to better structure their study time.

Within AAU and the university's support services, the study and well-being counseling are the biggest. Here two student counselors are hired in what they call the 'shared service', which covers all of the Copenhagen campus. Under the two student counselors, there are 8-10 de-central student counselors that are hired directly by specific faculties and the individual educations. They deal with study-specific problems, personal problems, Insecurity, and Social issues and challenges (Agger & Kloster, 2020). In 2019 the study counselors at AAU got 5500 inquiries from students (ibid.). The de-central student counselors do not report back to the counselors at the shared service, but they are educated and supervised through yearly events hosted by the shared service student counseling (Krohn, 2021).

Except for the 6 different support services that AAU offers across their 3 campuses, they also offer different student unions that cover all sorts of different mutual interests, sports, and hobbies. However, out of 100 unions (counted 16th of February 2021), only 2 have a description that suggests a similarity to the AAU support services and a connection to mental health (Studiemiljoe.aau.dk/studentorganisationer, n.d.).

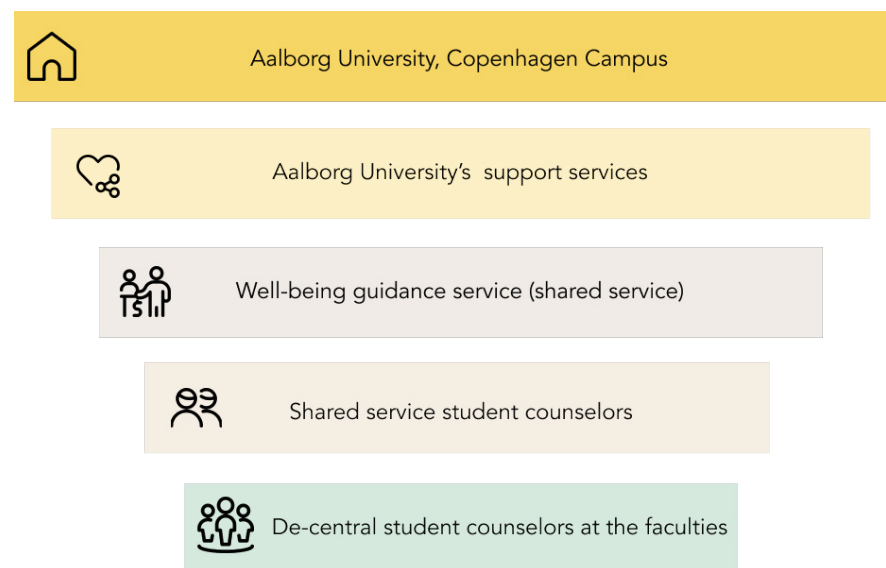


Figure 7: Student counseling system at AAU.

However, even though AAU tries to provide a good selection of offers for their students, research shows that there is still a big problem involving students' mental health, with plenty of room for improvement. In a new study from 2020, done by The Engineers' Association IDA, 43% of the students at AAU answer that they have felt an increased degree of loneliness, and when it comes to increased stress, the proportion is up to 46% (Ingeniørforeningen IDA, 2021). Moreover, the study showed that students need physical interaction both academically and socially to get better mental health. Moreover, studies from AAU have shown that the high level of stress has made every ninth person seek medical attention, and almost every fifth has felt socially isolated as a result of stress (TV2 Nord, 2017). The cause of stress can be found both in the education and exam situations in general, but also in the students' own high expectations of delivering top performance and comparing with each other (ibid.)

Nevertheless, the comprehensive descriptions of the support services at AAU provide a thorough guide for the concerned student to follow and therefore is the assessment that AAU offers a broad selection of valuable services for students suffering from mental health issues or other problems related to that. From an AAU presentation about mental health, they state that they are experiencing that students have a hard time reaching out when they are stressed. It can take many resources from the student to ask for help, so even if AAU has support services, they are aware that it can be difficult for a student to ask for help or even learn about what support services are offered (Agger & Kloster, 2020). Furthermore, the presentation states that AAU wants to collaborate with students to improve the study environment.

Having these facts in mind combined with the knowledge about the already existing offers, was an indicator for us to further research how visible these support services really are, and what else could be done to help the students of AAU.

WHAT ARE OTHER UNIVERSITIES IN DENMARK OFFERING?

In order to understand the context better, as well as to gain an overview of the different services and opportunities, the offerings of other universities in Denmark were explored. Hence, the top 3 universities that 'The student' (2020) brought out in their website were selected based on the data from 'Times Higher Education World University Rankings 2021' where universities around the world are ranked by carefully calibrated performance indicators such as: teaching, research, knowledge transfer and international outlook (World University Rankings, 2021). The following universities were looked closer into:

- Aarhus University
- University of Copenhagen
- Technical University in Denmark

Key findings of what the selected universities provide regarding mental health to the students compared to AAU are presented in table 1. As a conclusion, it is possible to see that all the universities offer student counseling. When comparing the service offerings it can be concluded that Aarhus University has a wide range of offerings compared to the rest of the selected universities. They have publicly available materials that support the well-being of their students, as well as, they have dedicated a website for their students where they guide them with educational content and direct the help seekers to the right sources. Nevertheless, when adding AAU as a comparison to the table it is clear to see that there are a lot of different services, information, and external partners that the university is referring to. It could be concluded that AAU provides the most materials and information on guidance and tips regarding studying and other help compared to the other 3 universities that were explored.

Having an understanding that AAU has quite a lot of service offerings around mental health support compared to the other 'Top 3 universities in Denmark', helped us to establish the next steps in our research and investigate further to establish an understanding that the students at AAU are aware of the different services and options. As well as, gain insights from different experts at AAU on how often these services are used by students to understand the impact of these.

Universities Services	University of Copenhagen (KU)	Technical University in Denmark (DTU)	Aarhus University (AU)	Aalborg University (AAU)
Student Counselling Service	+	+	+	+
Website dedicated for mental health support	-	-	+	+
Guidance and tips regarding studying and other help	<ul style="list-style-type: none"> • Student Priest 	-	<ul style="list-style-type: none"> • AU Studypedia • AU helpline • Danish Center of mindfulness (talks, retreats, private sessions, etc) 	<ul style="list-style-type: none"> • Coaching center • Student Priests • SPS • AAU App • Website • Tutors
Notes	KU has an independent magazine where different mental health topics are discussed and tips are shared.	DTU puts a lot of emphasis on developing the physical study environment.	AU website offers suggestions to students and links to different mindfulness practices and external providers where students could get help from.	AAU provides an overview of all their different services with descriptions of what each service entails. Besides internal services, they promote Headspace, The social emergency room, and the public study counseling.

Table 1: Overview of universities offerings.

PUBLIC SUPPORT SERVICES FOR MENTAL HEALTH

Besides the offers from universities, doctors, and psychologists, there are also other initiatives and unions offered to help, support, and guide students and young individuals to improve their mental health and wellbeing.

Related to universities there is the Student Counselling Service, which offers free social and psychological aid to students who are attending further and higher educations with everything from psychological issues to more practical concerns about SU, or illness (Studenterrådgivning, n.d). They are offering workshops, group courses about stress, tips, and online therapy. Furthermore, they are also working together with universities by offering to contribute with skill development of the counseling staff and activities for students, including workshops and presentations on healthy study habits, stress, and well-being (ibid.).

There are also several social unions that are offering communities and support for young and vulnerable individuals. Some of them are SIND Ungdom, Headspace, and Ventilen, who are all guiding and supporting mentally vulnerable young people. The aim is to prevent and alleviate loneliness and mental illness among young people (SIND Ungdom, n.d.; Headspace, n.d & Ventilen, n.d.). Other suggestions that have been formed to support people dealing with loneliness is the hashtag #dueraldrigalene (you are never alone), which also has been used to form several Facebook groups (Facebook, 2021), and other digital offers like podcasts and e-books that are addressing difficult topics like mental health (Lassen & Haubek, 2021).

The offerings above are only a few of all the opportunities that are offered for young people in Denmark. We chose these specific ones, to show that there are different types of offerings.

MAP OF SUPPORT SERVICES

In order to get a better overview and to understand the different support services available for students, we decided to map them out (figure 8).

The map shows the services presented in the section above. The overlap between AAU and other support services is representing the services that AAU is referring their students to, but is not offered by AAU themselves.

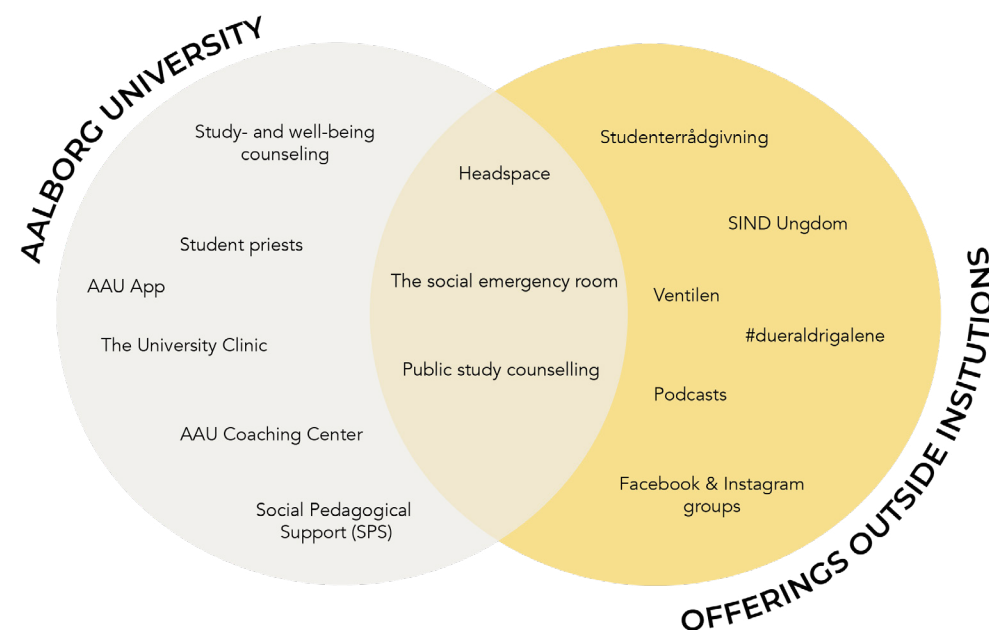


Figure 8: Map of support services.

POSSIBLE WAYS TO TACKLE MENTAL HEALTH

With an aim to understand the key areas that can lead to a well-balanced mental health, desk research on possible ways of tackling mental health was conducted.

When taking a look into overall recommendations it is possible to see that the most common ways to improve mental health and take care of one's well-being are quite simple. Most of the sources bring out areas like: exercising and having an active lifestyle, eating well-balanced food, sharing your feelings with close ones, etc. Nevertheless, when taking a closer look into specific cases from students in higher education it is possible to point out some elements and key findings that could be considered. For example, students brought out in the University Post that some of the things that helped them to tackle their mental health issues during the studies were: therapy, psychologist, mindfulness classes, group therapy at Studenterrådgivningen, yoga, and medicine (Balslev, 2017).

"I started in cognitive group therapy at the Psychiatric Center Copenhagen about three years ago. It has been a great help because I was given some tools to deal with my anxiety."

- Sarah (KU student).

"At that time I had anxiety and then I also got depression on top of that. But I came up with a course that was pretty good where there were mindfulness, yoga, and psychoeducation."

- Louise (KU student).

(Balslev, 2017).

WHAT CAN UNIVERSITIES DO?

Knowing that many universities in Denmark offer different solutions to their students it was decided to explore the context more by looking into recommendations on what universities can offer and do to support the students.

Danmarks Evalueringsinstitut (2018) brought out in their research that some of the key initiatives and recommendations are identifying and helping the students in the program, offering summer schools, introductory courses, guidance, counseling, and mentoring programs (EVA, 2018). What's more, universities should consider whether the offers and efforts they have are sufficiently targeted and investigate if these reach the actual students in need (ibid.). Research shows that often the offers are run by volunteers and are therefore mainly used by the strong and surplus students meaning that it does not reach the students that need it the most and are at a high risk of dropping out (ibid.).

5.1.2 FIELD RESEARCH

This chapter presents the field research conducted in the Discover phase. Field research is defined as a qualitative method of data collection that aims to understand, observe and interact with people within the target group (QuestionPro, 2021). It encompasses a diverse range of research methods such as interviews, observations, and surveys (ibid.). For this specific field research, both in-depth interviews and a survey has been conducted in order to collect a broad range of insights for the following clustering, when moving on to the Define phase.

SURVEY

To support the desk research, an online survey was prepared to gather our own collection of real-life data. Data collection is an important part of gathering information in order to answer the research question and keep the design process going (Bjørner, 2015, p. 57). Since the survey is online and is not happening physically, it can result in deeper reflections from the participants, since they are given the opportunity to consider and reflect upon their answers before replying.

Before preparing the questions for the survey, we defined which answers we wanted to have covered and what the goal with the survey was:

- We wanted to investigate how many students are feeling **pressured on their mental health**, and **in what way** are they feeling pressured?
- Is there a **difference** in the way that students feel stressed?
- How **accessible/difficult** is it to find the needed help? - and what kind of help would they need, if any?

The survey started with the following question: *"Did you study or are you studying in Denmark?"*. Since we are focusing on the well-being of students in Denmark, it was important for us to sort out participants that were not relevant for this survey in the beginning.

The beginning of the survey was to gather general information about the participants, then moving on to learning more about the students' well-being and mental health by asking more personal questions. The questions revolved around if they have ever felt mentally vulnerable and how, what kind of help they got or needed during this period of time, and if this help was sufficiently visible and easy to find.

We wanted to explore how the students were experiencing the process of feeling mentally vulnerable and if there was room for improvement in the system. The last part of the survey was investigating how informed students are about the offerings that universities have. Before sending out the survey, we did a pilot test with three participants, in order to make sure the questions and flow made sense for the participants.

RECRUITING PARTICIPANTS

The survey was posted on different relevant Facebook groups with students or former students, furthermore, the survey was posted on different AAU Facebook groups since we want to investigate what the students know about the offerings at AAU and if they are experiencing any mental challenges. Besides posting the survey on Facebook, we also decided to share it on LinkedIn.

Since it was especially important that we were targeting students and former students at a higher educational level, a disclaimer was written.

The survey and the Facebook post can be found in appendix 1.

KEY FINDINGS FROM THE SURVEY

This chapter demonstrates the clustered key insights from the survey that was posted on the 18th of February and was online until the 25th of February and got a total of **52 replies**.

Survey participants overview

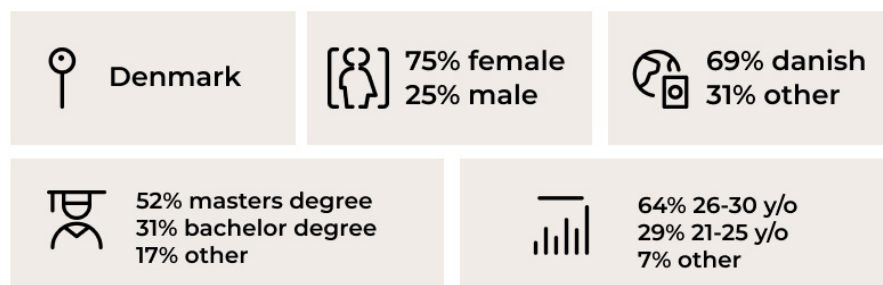


Figure 9: Survey participants overview.

86% of the participants said that they have felt mentally challenged multiple, or a couple of times, during their studies. Where 50% of them experienced challenges already before Covid-19 lockdowns. The most common mental challenge that was brought out was stress (80% of the participants said that they experienced it during their studies). When taking a closer look into the mental challenges it was possible to see that most of the participants' mental challenges are combined by several things- where the most common combination was stress together with anxiety (22%).

While looking into the patterns of students looking for help and knowing their options and possibilities, then most participants brought out that they found help through close people, 71% selected that they got support from friends and 61% selected family.

Only 17% of the participants sought help from the health sector such as a private psychologist. Nevertheless, it was possible to define a clear pattern that the participants have looked for help and support from several places.

When it comes to the help that the participants were needing, 67% of the students brought out that they would have liked to have received support from (e.g. with like-minded people like friends, fellow students, family) and 17% of them said that they would like to receive help from professionals.

When it comes to the patterns of AAU students who have felt stressed several or more times (in total 20 people) then 25% of them do not know at all where to search for help with their mental challenges. The overall survey points out that it is common knowledge that help is there, but 65% of the total survey participants had limited knowledge on where to look for help. One participant stated *"I know there is help, but I don't know who to contact"*. In addition, 75% of the respondents who study at AAU did not know what the offerings of the university were for mental support and only a few respondents knew that AAU offers student counseling.

To sum up, everything that has been stated so far, students tend to mostly turn to their close people for help and do not have much awareness around where to look for professional help. As well as, many of the students do not even know what services AAU offers and they do not know where to turn with their problems with stress, anxiety, and depression.

Presented below are the key findings from the survey:

- Mental health struggles and stress during the studies are something that **more than half of the students** (participants) have experienced during their studies.
- Most participants **seek help from their close circle** (friends and family), only a few of them use the opportunities that the health sector offers.
- More than half of the participants were **not sure where to find help** related to their mental health struggles.
- AAU students who answered the survey are **not fully aware of the possible help that the university offers**.
- **67%** of the students brought out that the help that they would have liked to have was **support** from (e.g. with like-minded people like friends, fellow students, family).

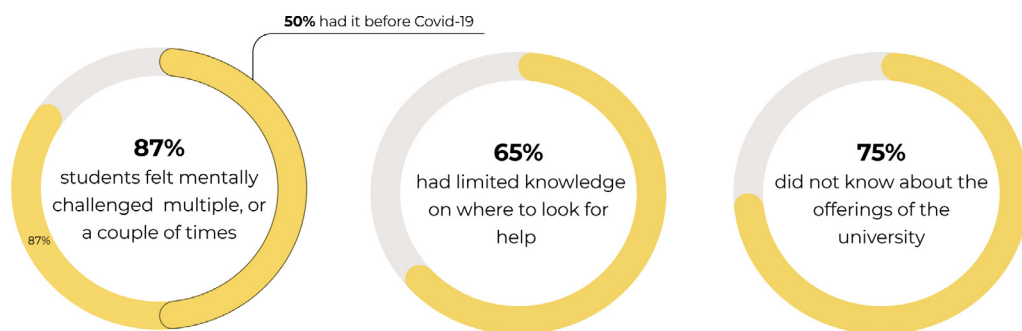


Figure 10: Survey key insights.

REFLECTION ON SURVEY

Due to the sensitivity of the topic, it was made clear that the replies in the survey were completely anonymous, therefore the replies are also considered to be very honest.

The survey was posted on Facebook and LinkedIn groups, and shared through our private profiles. We consider the participants to be in the right target group for our survey and not too biased, since the survey was posted in relevant groups, such as AAU groups. It would have been really interesting to approach students directly at AAU, since that is our focus and to make sure to get most replies from AAU students, but with a delicate topic like mental well-being, it also has its perks doing it very anonymously and online. We are aware that it still can be a taboo and out of people's comfort zone to discuss the topic and answer the questions personally instead of anonymously online.

Moreover, we did not expect so many people to participate within such a short period of time. It was unexpected that so many interacted with our post, this proved both the interest and importance of the topic, it seemed like students (and former students) considered it part of their duty to contribute to a better student environment.

As a last reflection, we analyzed the data with a critical mindset and with an assumption that the students who feel like this topic speaks to them were more likely to answer the questionnaire and the students who never had problems with their mental health did not answer at all. Therefore, we are aware that this survey is just a guiding point to get some kind of an overview and context on the topic and does not fully reflect the exact situation. Thus, we treat it as a guiding point and use key findings to structure our in-depth interview questions.

The survey provided detailed information about some of the difficulties that students experience. The survey provided us with the

needed and requested data, which was used to further elaborate and prepare our in-depth interviews which will be described in the next section of this chapter.

IN-DEPTH INTERVIEWS

There are different types of interview methods, but for this thesis, we chose to use in-depth interviews, which are especially suited when trying to clarify complex and sensitive topics such as mental health and well-being (Bjørner, 2015, p. 70). In-depth interviews can provide detailed information and thereby give the opportunity to explore the topic in depth. Additionally, it allows the interviewer to be flexible when administering the interview, by asking for clarifications and explanations (ibid.). According to Thomas Bjørner, it is important to consider what the knowledge from the in-depth interviews is going to be used for, this can help clarify which participants are relevant to consider to include (Bjørner, 2015, p. 71). Furthermore, in-depth interviews often have the purpose to ask people with partial knowledge, in this case, we have interviewed both students and AAU study counselors in order to gain insights from different perspectives when it comes to mental health among students at higher educations.

In order to find participants for the in-depth interviews, we reached out to the ones who entered their email in our survey, contacted student counselors, and reached out to our network. As a preparation, two interview guides were created, one for students and one for professionals such as student counselors (figure 11), these worked as a guideline for the interview. The interview guide was made simple and had room for elaborations and clarifications.

The aim was to have an open, curious, and equal conversation throughout the interview, where the natural flow was followed and conversation rather than following the interview guide one-to-one.

If the conversation went in the wrong direction, the guide was a help to get the interview back on track. The questions were open and focusing on the emotions.

Name	Participant 1	Participant 2	Participant 3	Participant 4
Age	28	26	22	24
Occupation	KU student	AAU student	AAU student counsellor	AAU student
Gender	Male	Male	Male	Female

Persona
 Anti-persona

Table 2: In-depth interview participants overview.

In total, 4 in-depth interviews were conducted, divided between 3 students and 1 student counselor. It was chosen to have students that had experienced bad mental health during their studies, but also one student that never experienced any issues with stress and who also has been very structured and motivated to study. The interviewed anti-persona student was chosen in order to develop an understanding of possible differences and to get another perspective.

Some in-depth interviews were conducted face to face, and some had to be conducted online due to the current lockdown in Copenhagen in February 2021. With consent from the participants, the interviews were recorded, and can be found in appendix 2.

Being a mentally vulnerable student

- How are you mentally vulnerable?
- Describe how it affects your studies?
- What are the challenges you are facing?
- What help are you getting (in and outside of the university)?
- What has helped you the most in relation to your mental health?
- What help/service is lacking in the school system?

Quote

General information

Name	Age	Occupation

Searching for help

Dealing with it on their own

Mental challenges

Process

Working with mentally vulnerable students

- How are the students mentally challenged?
- What are the challenges they are facing?
- Describe how it often affects their studies?
- What help are you offering?
- What is the most valuable help in your opinion?
- Are there lacking any help/service in the school system?

Quote

General information

Name	Age

Occupation (job, student etc.)

Mental challenges that you face at work

Which process do they go through?

Figure 11: Interview template for both student and study counselors.

SENSITIVITY

Each interview started with a casual chat to loosen up and create a calm and safe environment. Since mental health is a sensitive topic, it was empathized that if there was anything that the participant found too personal or wouldn't feel comfortable answering, the interview would move on with a different question. Additionally, the names of the participants are kept anonymously throughout the report, as delicate matters, personal stories, etc. were shared during these intimate settings of the interviews. However, all participants' names and identities are known to us, but kept fictional or anonymous in this report with respect to both the sensitivity of the topic, personal matters and GDPR regulations.

KEY FINDINGS

As the people that we interviewed were from very diverse and different backgrounds the key conclusions are not defined based on the clear patterns rather than the whole context and areas where it was possible to see similarities.

It is possible to define a clear problem area from two different perspectives. From the student's side, there is no clear overview on the offerings regarding mental health, there is a lack of support and directions from the university (AAU). From the student counselor's perspective, it is possible to state that the system is very decentralized and there is no real structure for helping students with their mental health issues. Putting these findings together helped us to tie the ends and conclude that the problem on the high level is lack of structure, visibility, clear procedures, and systems from the side of the university. From the students' perspective, there is an information gap and a lack of support as students at times felt thrown around in the system and lost when they tried to look for help.

OTHER KEY INSIGHTS FROM STUDENTS PERSPECTIVES:

- **Mental challenges that are serious seem to start quite early on** and interviewees brought out that they were aware of these before they started university.
- **Mental health challenges affect (highly) the productivity and structure**, meaning that interviewees brought out that it is harder to focus and structure one's life. Many might see it as a sign of laziness while it could be rather seen as a symptom. *"I really want to do it, I just can't"* - Participant 1.
- Depending on the upbringing, the mindset, and many other things vulnerable **students are coping with their problems differently**. Some try to handle it on their own, others reach out and are keener on looking for help.
- **The system is very complex** and there is a lot of waiting and back and forth when it comes to getting help from the doctor or student counselors. For example, student counselors transfer more serious cases to other external organizations, where they have referred once again to the next place. *"The system is super complicated"* - Participant 1.
- Being part of something bigger, having close people, their support, and having something to look forward to, can help to cope with different mental challenges, but **it can be difficult to ask for help**, even from close people.
- It is important to have that **extra support and guidance** from close people and someone who either guides or leads the path. During mental challenges, it is very difficult to take the very easy and obvious steps, like making a phone call to a doctor, etc. *"Friends - are the ones that kept me alive"* - Participant 2.

After conducting an anti-persona interview, it was possible to also see how it clearly contrasted other interviews, as there was a very clear difference on the up-bringing, the mental support, and other aspects connected with feeling safe and accepted.

Nevertheless, even though there is not enough 'data' to back the assumptions, it could be a working hypothesis that mental health and

struggles are strongly affected by a lot of different experiences in the past that start to shape the self-image and confidence that later on makes some people more vulnerable to mental challenges than others.

KEY INSIGHTS AND RECOMMENDATIONS FROM THE ANTI-PERSONA AND COUNSELOR INTERVIEW:

- "It is important to find out **what works for you**, and then it is also easier to help yourself"- Participant 3.
- It would be useful to know the symptoms of stress, depression, etc. Seems like many do not know how these challenges manifest and sometimes it is hard to even be aware that 'you' are e.g. stressed.
- It is important to create a structure to have an overview of things that are happening. **"I'm not overall a structured person, but I live in my calendar. I use it for all aspects of my life. I kinda use it as a diary"**- Participant 4.

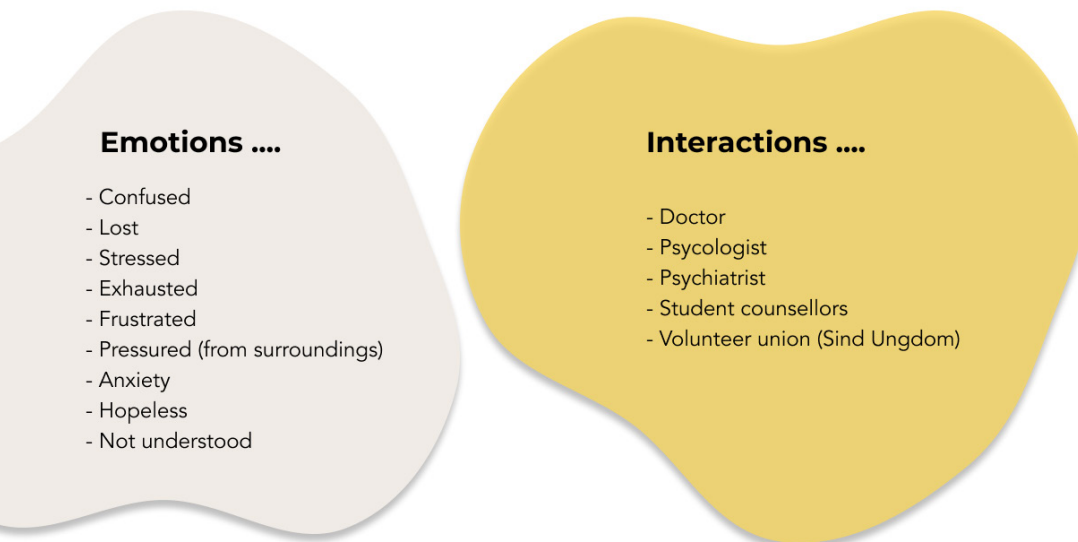


Figure 12 Insights of in-depth interviews.

Quotes ...

“ I am interested in personality types, so I know exactly what works for me in different situations. ”
-Participant 4 (Anti-persona)

“ I find myself not on the same level as my peers, I need to work twice as hard as others. ”
-Participant 2

“ The system is super complicated. ”
-Participant 4 (Anti-persona)

“ If I would have not had a friend who referred me then I would have not gone to a student counsellor. ”
-Participant 2

“ It's a system-heavy process to go through. ”
-Participant 1

“ A lot of students are not even contacting us but my conjecture is that they are figuring it out on their own or with help from fellow students, friend & family. ”
-Participant 3

“ Staying with people and being social is crucial, lot of issues come from isolation. The big reason why I graduated is because of friends. I used university problems to connect with them. ”
- Participant 2

REFLECTION ON INTERVIEWS

To conclude the in-depth interviews, a couple of reflections could be brought out that caught our attention during the process. Firstly, it is important to bring out that most of the participants in the in-depth interviews and in the survey were people from our own network. In the ideal scenario, we would have aimed at interacting with more students at the AAU campus in Copenhagen to get a more realistic and broader overview. That goes especially for the survey that was conducted, as well as it would have been interesting to conduct in-depth interviews with some of the students physically at the campus. Nevertheless, we believe that the online survey considered an important aspect of the sensitive topic and gave comfort to the participants by giving them complete anonymity when answering the questions.

Another important reflection that caught our attention during the process was that some cases can be more extreme and deeply rooted in different life stages like childhood. Therefore, we also decided to turn the picture around and have an anti-persona interview that would give us a different and fresh perspective as some cases with depression and anxiety are very extreme. That helped us not to get too caught up in the individual problems and added a new layer to the problem. In addition, the anti-persona inspired us to be more solution-oriented where the in-depth interviews with students who were mentally challenged were more directed on understanding their problems and needs.

When it comes to the method that was selected for the in-depth interviews, it could be brought out that keeping these semi-structured allowed us to have room for follow-up questions and gave us the freedom to keep the whole interview in a conversational form. That made it feel more fluent and it really worked as it created a very comfortable and safe atmosphere that was crucial for us because of the sensitivity of the topic.

All in all, it helped us to reach our goal and all the participants shared comfortably very personal stories without holding themselves back.

On that note, as the last reflection, we would have liked to have more diversity as there are a lot of stakeholders and actors who are very important in our context. It would have been ideal to have an opportunity to interview people with higher positions at AAU regarding assisting students in their everyday problems to gain a different perspective on the topic. Nevertheless, due to the complicated situation that we are facing in our society and lack of time, it was not possible for us during this process.

To sum up, everything that has been stated so far, we gained valuable insights from the entire interview process and are aware of the limitations and possible opportunities that could be utilized and implemented in the future. It was most certainly a valuable learning process for us as design researchers professionally and personally.

5.1.3 EXPLORING CONVERSATION CARDS

Since co-creation and journey mapping is the research focus of this thesis, we wanted to explore the topic to investigate how we could create a design experiment within the design process, with elements from co-creation and journey mapping. After looking into different projects and research, we were led to conversation cards, which we already from the beginning found really interesting and saw as having a big potential for our design experiment.

It was clear that we still needed to investigate how conversation cards and journey mapping could be done combined and collaboratively with the user so it would become a co-creation session (Brange, 2018), and to gain further knowledge about existing conversation cards.

This section of the thesis will therefore aim at exploring the topic of conversation cards deeper, to gain more knowledge about the topic, and to investigate how it can support the co-creational approach in a design process and later on in a design experiment.

Physical cards are popular design tools, as they can make a design process more tangible and thereby less abstract (Wölfel & Merritt, 2013). The cards can provide structure and overview to an otherwise complex process and work as a form of communication of both the design team and participants (ibid.). Apart from the well-known and highly used card-sorting method, where users sort out cards by prioritizing and organizing pre-made cards into categories (Olsen-Landis, 2017), conversation cards are also considered a beneficial method to acquire users' insights, reasonings, and emotions in a design process. Conversation cards are a broad method used within several disciplines such as psychology, in education, within health care, and design processes to name a few (Muller, 2017; Shaw, 2018; Davies, 2020).

The purpose of conversation cards is to foster a conversation and is especially valuable when dealing with delicate or difficult topics (Davies, 2020; Psykiatrifonden, nd.). The cards provide a tangibility and an anchor in which the conversation can unfold and dive into the desired topics and emotions. However, the cards themselves are not what is important.

"They are a catalyst for conversations, a tool to lower barriers, but they are just one piece on one path to the overall puzzle of authenticity, reflection, and depth" (Davies, 2020).

The conversation cards work as a great support to the conversation, to evoke vulnerability, and to go deeper into reasons and emotions. When used well, conversation cards can thrive from the following advantages:

- Can warm-up conversations and prepare participants to go deeper as well as get the conversation flowing in the wanted direction.
- Can help exclude awkwardness between participant and interviewer. The cards take the blame for personal, awkward, or silly questions.
- Can create the right foundation and 'room' for sharing, where we might otherwise be silent.
- Can establish natural reciprocity, where one is speaking, and the other one listens carefully to collect valuable insights, expand one's horizon and gain an empathic understanding of the participant.
- Can help gamify the process and thereby be a help in creating a conversational momentum, where the participant is fully present and able to think less and answer more authentic and honestly as the conversation unfolds and dive deeper.

(Davies, 2020).

Through the use of conversation cards, the interviewer or design team will have easier access to the participant's mind and emotions.

This research led us to explore more about physical conversation cards as these are 'popular' design tools that can make the design process more tangible. As mentioned earlier, conversation cards are used in many different fields, thus, we looked into the differences of the cards used in design and psychology.

DESIGN VS. PSYCHOLOGY CARDS

To narrow down the scope, design cards together with psychology conversation cards used by psychologists are looked into to understand the following aspects:

- The main difference of the cards used in these two practices together with advantages and disadvantages.
- Inspiration - what can we learn from their cards through examples.

Design cards are a low-fidelity, tangible, and approachable way to introduce information and sources of inspiration as part of the design process (Lucero, et al, 2016). These function as props that encourage and support design moves in a manner visible to all participants (ibid.). The usage of the cards is very flexible- design cards can support different phases of a design process, from initial ideation through ongoing concept development towards the evaluation of design concepts, and can be used with different sets of rules (ibid.).

Whereas **psychology cards** are most commonly used to facilitate open dialogue and quite often the cards are used as a conversation tool that provides structure to therapy sessions and helps therapists and clients engage in meaningful discussions (Muller Ph.D., 2017). Quite often conversation cards in psychology are designed to support the counselor in facilitating difficult discussions and assist clients (ibid.).

In conclusion, it is possible to say that the main difference in the purpose of these cards is that the design cards are often used with the purpose of introducing information, insights, etc., to support the design process meanwhile the psychology cards are designed for therapists and are often used to facilitate emotional conversation and used as a tool so that the patients can express themselves in difficult situations.

As well, design cards are more process-based meanwhile psychology cards are also often used to create structure during therapy.

DESIGN VS. PSYCHOLOGY CARDS

Design cards

- Approachable way to introduce information.
- Used as a prop that encourage and supports the design process.
- Cards can contain insights, pictures, drawings, features, keywords, descriptions, etc. based on the specific need.
- Often these cards act as prompts to suggest new interpretations of a problem and induce considering a different perspective.
- These cards usually have a strong visual outlook.

Psychology cards

- Cards are used to facilitate more open dialogue.
- Cards are used as a conversation tool that provides structure to therapy sessions and helps therapists and clients engage in meaningful discussions.

Figure 14: Characteristics of design and psychology conversation cards.

INSPIRATION: DIFFERENT CONVERSATION CARD EXAMPLES

In order to gain deeper insights into the conversation cards, preliminary research was conducted to gain an overview of what kind of different cards under these two categories already exist. All the different cards were collected and mapped out to understand the context and existing products. What's more, it is important to mention that the research was mostly focused only on those that were dedicated to the topic of mental health.

Therefore, 3 examples from both disciplines are looked into to gain an understanding of the specific advantages and disadvantages.

PSYCHOLOGY CARDS

“Talking About Wellbeing” Fink psychology cards



(Finkcards, 2021)

- Created by Helen Sanderson PhD
- 48 questions in 5 categories
- Helps to understand the concept of wellbeing
- Helps to identify ways in which wellbeing can be maintained and improved

“The River cards”



(Story & Therapy, 2016)

- 60 river cards to evoke wide range of feelings
- The set facilitates and encourages therapeutic work on various processes in life created for therapists, psychologists etc.
- Process includes different phases: 'the beginning', 'the flow' and 'the end'
- Observations and interventions should be facilitated
- Includes supplementary follow-up tables, for recording the clients' usage and choices of cards in the different settings of treatment.

Developing moments - by Rikke Yde Tordrup

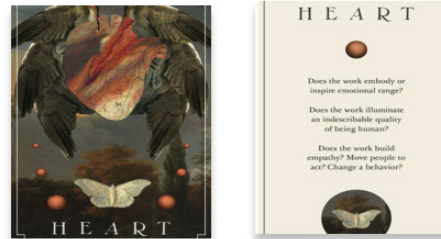


Gyldendals Bogklub, 2020)

- Created by a licensed psychologist and specialist in clinical child psychology.
- Contains 19 conversation cards about attachment and development, which can be used in well-being conversations with parents or for reflection in the staff group or in a study context.

DESIGN CARDS

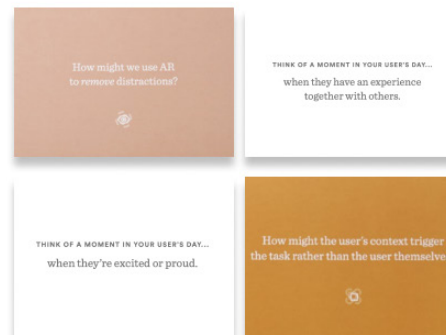
“Lifeline Cards” by IDEO



(IDEO, 2018)

- A tool that creates a shared vocabulary for your team to use in critiques
- Contains a set of seven key words: Beauty, Brains, Bravery, Destiny, Heart, Magic, Mastery
- Helps to create a shared language in the multidisciplinary teams to solve problems and give feedback as rigorous critique is essential.

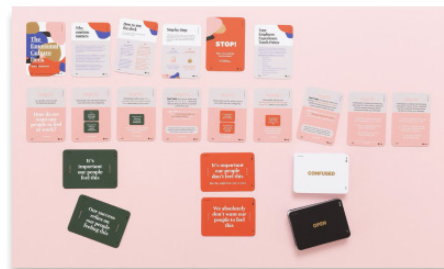
Human-Centered DESIGN PROMPTS for Emerging Technologies



(Hyer, Herrmann & Kelly, 2017)

- Cards created as part of a collaboration between Google Play and IDEO in 2017
- These cards shift the approach from technical specs to human behavior.
- 20 cards in total in 4 categories
- Process: starts with the scenario side, then when flipping the card over it is used to brainstorm
- Each card starts with a human scenario and need
- Each prompt is designed to generate a number of possible answers, grounded in human desires for each given technology.

The Emotional Culture Deck



(Riders and Elephants, 2021)

- Helps to flip a conversation
- It's a simple card game toolkit that helps leaders uncover what truly motivates their people, and map desired team culture too design the culture at work.
- Helps to develop empathy, connections, and trust between the participants

Based on the research done it is possible to conclude several different pros and cons about both card types. To give a better overview, key findings are presented in the following table 3.

	Design cards	Psychology cards
Advantages	<ul style="list-style-type: none"> • Clear guidelines: commonly design cards come with clear and specific instructions on how to use them in a specific situation. • Specific and targeted to certain situations: most cards are designed for process based and for specific situations (for example for brainstorming). • Playfulness: design cards have commonly a very playful outlook that makes them very appealing and fun to work with. As well as, it is possible to see how the wording is more playful at times leaving room for interpretation and creativity. 	<ul style="list-style-type: none"> • Expressing through visuals: some of the cards are quite abstract and contain only pictures allowing the patient to express themselves fully through a completely different medium. • Broad scope: psychology cards are quite often targeted to address certain problems like stress, body image, emotions, depression, etc, and are built around these themes. The use of the cards is very broad and generic and good for a universal use. • Helps to facilitate deeper conversations: psychology cards are mainly designed to identify feelings, build emotional intimacy, resolve conflicts, etc.
Disadvantages	<ul style="list-style-type: none"> • Narrow scope and defined process: design cards tend to be specific to the purpose that these are designed for and commonly design cards have a specific process that is recommended to follow for the maximum result. • Getting familiar with the cards: as design cards are process-based and can be quite complex, the participants must get familiar with the cards themselves to use them most efficiently. If not done correctly then the whole outcome can suffer significantly. 	<ul style="list-style-type: none"> • De-coding the answers needs extra attention: Cards that are quite abstract require a trained professional to be present in order to be able to spot the signals and patterns of the patient. Trained professionals are able to ask the right questions and therefore when used in another discipline there is a possibility that the key insights will not come out as clear. • Supplementary follow-up: quite often the process of using psychology cards requires supplementary follow-up tables, for recording the clients' usage and choices of cards in the different settings of treatment. • Understanding the context: using the set of psychology cards would often require understanding first the main problem and issue of the patient in order to use the 'right' deck of cards that are relevant for the client.

Table 3: Design & psychology cards, advantages and disadvantages.

5.1.4 CONCLUSION ON DISCOVER

Through the Discover phase, a range of service design tools was applied to learn more about mental health among students, as well as explore the existing resources and services available in the study system to detect potential gaps and room for improvement. The foundation of knowledge was formed in combination with desk research, survey answers, and insights from the in-depth interviews. This knowledge enabled us with a common understanding of our topic, as well as allowed us to build empathy and understanding of our user segment. This all led to expectant and positive feelings for our further process. However, we also discovered that doing a project evolving a sensitive topic as mental health can cause emotional situations when engaging with participants. By realizing this we learned that it would be beneficial to have some kind of emotional guidelines e.g. as conversation cards, to ensure that focus stays on the explored topic as well as function as a helpful support when trying to emphasize and put words on difficult emotions. With this in mind, it would certainly be relevant to investigate how to use conversation cards in a co-creative setting of mapping out optimal user journeys for reaching the most trustful and honest solution.

Moving into the next phase of Define, we are now equipped with a deeper foundation of knowledge as well as aware of possible aspects to further explore. The Discover phase most certainly provided us with clear gaps and weak points in the existing support services, these findings covered:

- Counselors are not always seen as professionals, as they have no real expertise within the field and they are viewed as like-minded as student counselors are peers from different faculties.
- The support system is confusing and complex, not only to the students but also to the people working within it, fx the counselors.

- The support services are almost invisible, as the majority of 75% of the students (respondents from our survey) didn't know any support services offered at AAU.
- Mental health is seen as taboo, as it is not something the students talk about in daily life.
- The needs of the students are both very similar but also individual.

These are some of the key aspects that our discover phase brought us, that we want to investigate further and keep in mind when ideating, developing, and co-creating a solution.

When investigating which conversational cards are already available and how they have been used so far, it was clear to us that we would need to create our own set of cards, since the already existing cards are used either in the discovery phase of a design process or to map a user journey. As mentioned there is not a specific rule set on how to use cards, and there were not any examples on how to use conversation cards to support the testing phase of a design process. Therefore, we want to create our own Frankenstein cards, by combining elements from the traditional ways in psychology and design of using conversation cards. To create a set of cards that can be used to validate a potential solution or direction in the testing phase of a design process. A card deck that can be used for describing emotion, facilitating the conversation, support the mapping of an emotional user journey but also support the design process. The exploration and creation of our card deck will be explored and developed through the next phases of the design case.

By using conversation cards in an emotional journey mapping, we examine the needs and emotions of potential users and use them to create a long-lasting solution that hopefully can improve and support the mental health among students at AAU.

5.2 DEFINE

DEFINE

The second phase of the Double Diamond 'Define' allowed us to cluster, synthesize and analyze the findings and insights gathered through the Discover phase. This was done through various clustering methods and tools such as creating a research wall, clustering the conducted interviews in an empathy map, bringing clarity of the complex problem field, by creating both a stakeholders map and a relation map. All these tools provided a common understanding of our user segment as well as defined the further direction for our project. Based on the primary insights gained through the different activities, the problem statement was refined to be both more concrete and serve as an obvious bridge into the Develop phase.

The chapter is divided into the following subchapters:

- 5.2.1** User segment
- 5.2.2** Empathy map
- 5.2.3** Stakeholders
- 5.2.4** Relation mapping
- 5.2.5** Research wall
- 5.2.6** Conclusion on Define

5.2.1 USER SEGMENT

In order to be able to offer a service that fits all students and moreover offer a service that can help with prevention and make the study an overall positive experience, the target group has been kept broad.

The focus is on all enrolled students at Aalborg University (at all the campuses) in both bachelor and master level.

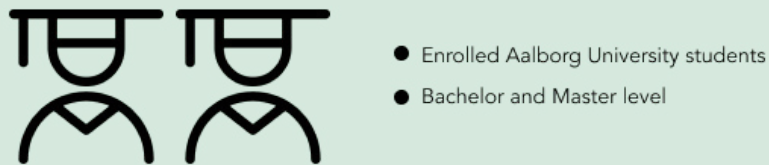


Figure 15: User segment.

5.2.2 EMPATHY MAP

An empathy map is a visualization that expresses what we know about a specific user or user segment. In this case, it consists of multiple users in the segment of mentally challenged students. The empathy map showcases the knowledge about the users in order to facilitate decision-making and build a mutual understanding of user needs (Gibbons, 2018). The empathy map is traditionally divided into 4 quadrants (Think & Feel, See, Say & Do, and Hear) visualizing the user type in the middle (ibid.). To get the full potential of the empathy map the pains and gains were added underneath to summarize the

findings and insights captured from interviews and surveys that were now clustered in it to present the users as whole and dynamic persons (Barber, 2020).

The empathy mapping process is valuable in clustering and categorizing the knowledge of the user segment into one place, where sensemaking of qualitative research, survey answers, and interview transcripts is viewed as one of the most important aspects of the empathy map (Gibbons, 2018). As their name implies - it can assist us in developing empathy for our end-users. When used alongside other mapping methods and combined with gathered data the empathy map can:

- Remove biases and align the team on a shared understanding of the user/users.
- Discover weak points in the research.
- Discover user needs that the user might not yet be aware of.
- Understand what drives users' behavior.
- Guide us towards meaningful innovation and useful solutions.

(Barber, 2020; Gibbons, 2018).

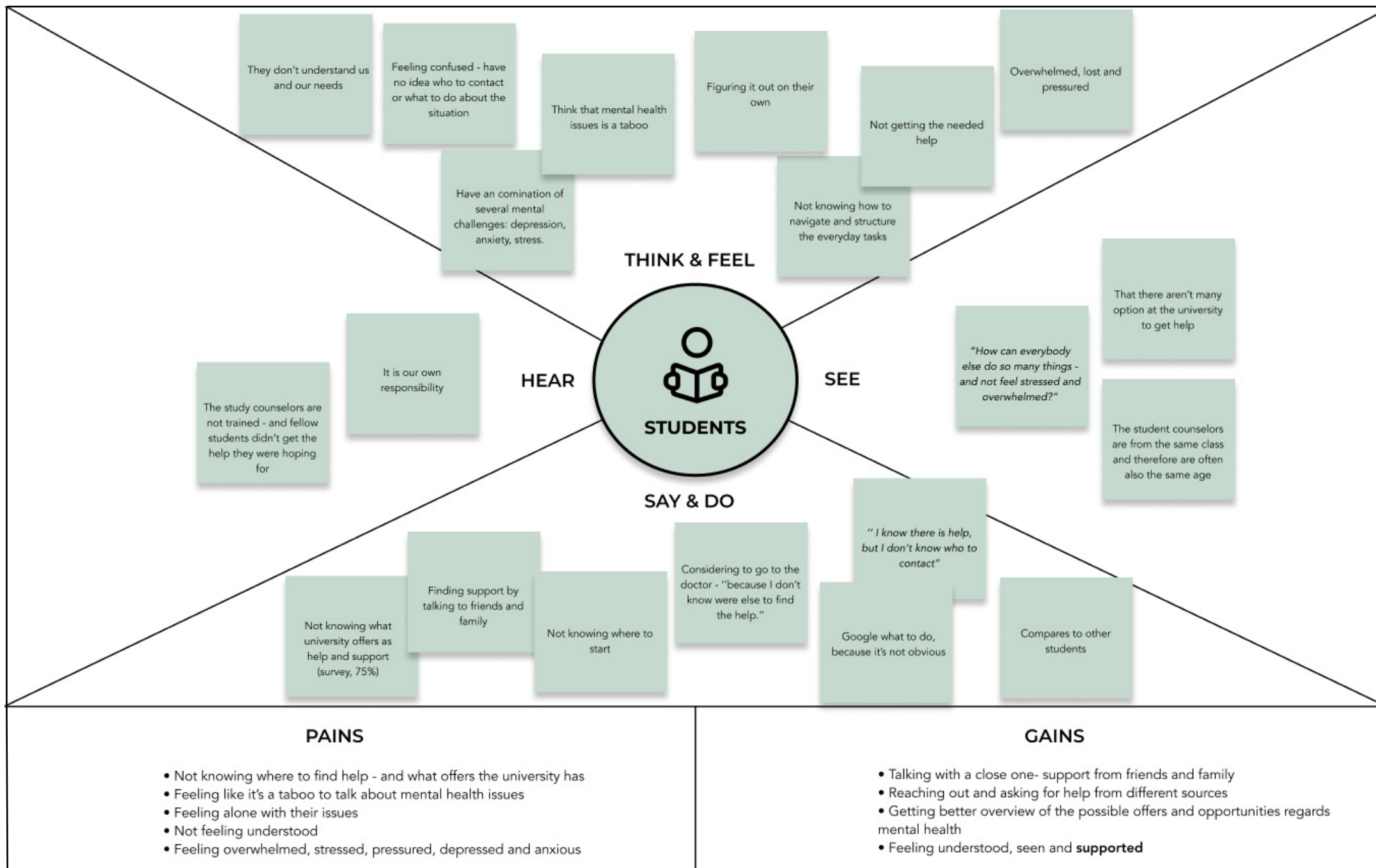


Figure 16: Empathy map.

The data presented in the Empathy map is based on the key insights collected during the in-depth interviews and the survey. Through our empathy mapping we discovered that **the pains** of the students are:

- Not knowing where to find help - and what offers the university has.
- Feeling like it is a taboo to talk about mental health issues.
- Feeling alone with their issues.
- Not feeling understood.
- Feeling overwhelmed, stressed, pressured, depressed and anxious.

The pains taught us that our future solution should focus on breaking down the tabooed aspect of mental health, be visible to the students, and be a support service that is usable and easy to navigate, as the students at this point are already pressured from the increased symptoms of bad mental health.

The gains uncovered from the empathy map covers the users' successes, wants, needs, and goals, and these were formulated as the following:

- Talking with a close friend or relative - support from friends and family.
- Reaching out and asking for help from different sources.
- Getting a better overview of the possible offers and opportunities regarding mental health.
- Feeling understood, seen, and supported.
- Feeling confident and mentally stable enough to complete the studies.

The findings from the empathy map will work as a shared understanding of our user segment - the mentally challenged students, and help us in emphasizing with them when moving on to ideate, develop and deliver a relevant and usable solution for the users.

5.2.3 STAKEHOLDERS

In the conducted desk - and field research, we focused on exploring the support services available for students in higher educations in Denmark. These findings have been visualized in a stakeholder map, which is a well-known tool within service design (Stickdorn & Schneider, 2011). A stakeholder map is a representation of all stakeholders that can influence a project, and the aim of a stakeholders map is to clarify the roles and relationships. It can be used to reflect on the different positions, and define how to involve and deal with each of them (Service Design Tools, 2021).

The stakeholder map showcases the support that students can find through AAU, but also the other support services that are available which students might interact with (figure 17).

As mentioned the stakeholder map is based on the conducted research findings and gives an overview of the offerings from stakeholders connected to formal support given by AAU but also over the informal stakeholders that are not related to AAU and which are providing a different kind of support. The informal stakeholders, especially family and friends, were very important to our participants in both the interviews and in the survey.

The stakeholder map helped us identify and get an overview of the various stakeholders related to students. Furthermore, the map and the insights from the interview with the study counselor made us realize that we needed to understand the different relations and connections between the stakeholders, thereby this map was an important preliminary knowledge that led us to look into the relations between the stakeholders.

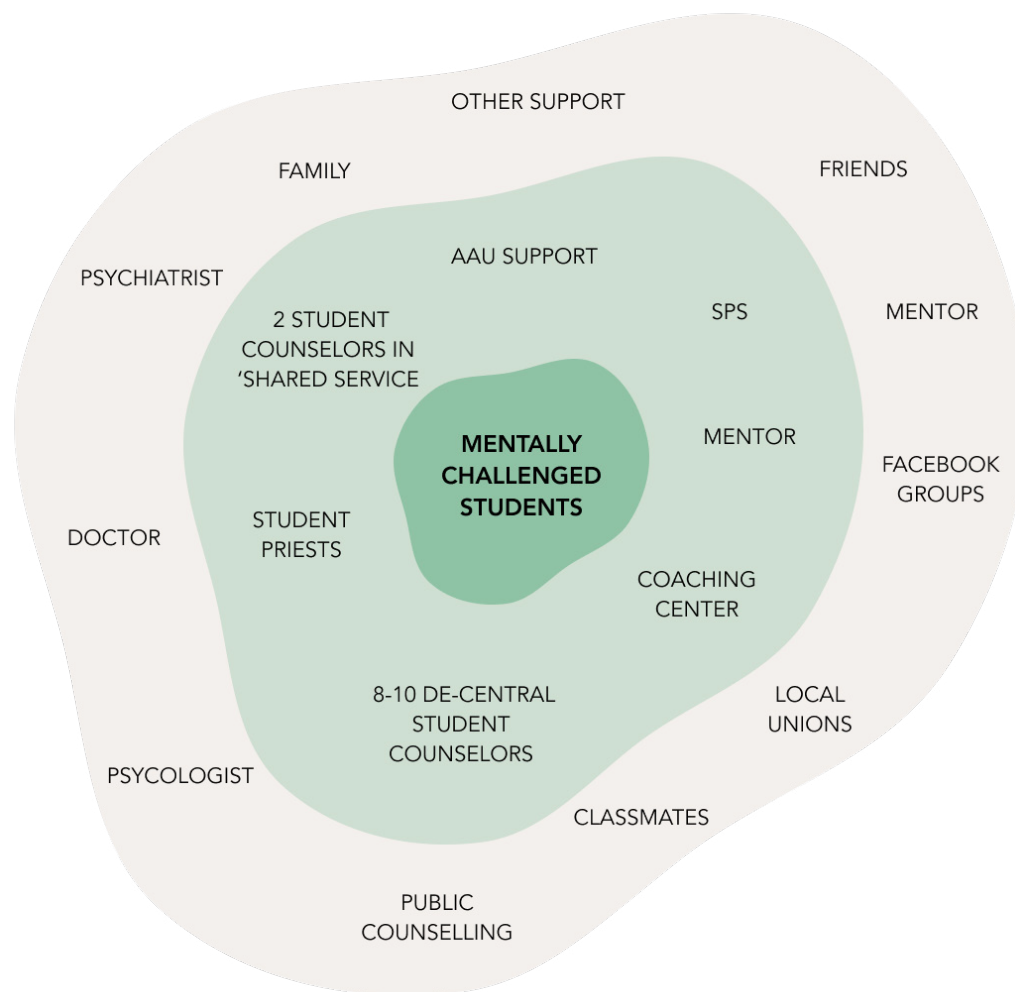


Figure 17: Stakeholder map.



Figure 18: Relation mapping.

5.2.4 RELATION MAPPING

To understand the relations of different stakeholders and to get a holistic picture of the system, it was decided to use relation mapping as a method. Through this, it is possible to get a view on the social relations in a specific context (Aguirre-Ulloa & Paulsen, 2017) as well as capture additional layers of information and enable honest disclosure on complex topics that allow covering ground by approaching the research from multiple angles (Barua and Dowd, 2017). Besides that, relation mapping helps to translate inferred meaning into clear and specific answers (ibid.).

As there are a number of different actors involved, key stakeholders from the stakeholder map were added to the relation map. To showcase the influence of the actors involved, 3 different colors were used to give an indication of where the value is gained in each relationship and how the flow of communication works. These three categories are the following: positive, negative, and a mix of both. As a result, it was possible to uncover the nature of these interactions and define patterns that helped us to understand the context where the students are put into.

In addition, it is important to bring out that even though the relations map is based on the research that was conducted previously, it represents the average experience and the relations can be different from student to student. Therefore, it is important to keep in mind that the colors of the relations can vary a lot based on individual experiences.

KEY CONCLUSIONS FROM THE RELATION MAPPING:

- **The support system is very decentralized** - the help cannot be found in one place and there are no strong connections between different stakeholders.
- **Positive flows are connected with the friends and family**, social relationships and mentorships. The most positive flows are connected with stakeholders that are not from the university.
- Most connections that have both a positive and negative flow are within the healthcare sector like doctors, psychologists as they are very complex, **take a lot of time and resources**.
- The health sector stakeholders like doctors are the most connected ones and it is possible to see that it is the only system that is strongly connected.

By visualizing the flows and interactions between the students and the different stakeholders, we became aware of how disconnected and decentralized the current support is. Therefore, the whole activity opened us up for new conversations and led us to important insights. Nevertheless, one of the key reflections regarding the process would be that the relation mapping would most certainly be very valuable also in a form of a co-creation with the students to even gain deeper insights.

5.2.5 RESEARCH WALL

Approaching the final part of the Define phase, two main steps were taken - a research and clustering wall, to combine all the gathered insights from both the Discover and Define phase of the Double Diamond, and the research and inspiration explored at the beginning of the thesis. Creating a research wall can be the key to debrief and analysis of the research outcomes (Service Design Tools, 2021). Creating the research wall, also called synthesis wall, is usually done by the team writing down all the relevant notes from the research and process so far on post-it notes, and add them all to a wall in order to start identifying clusters, relevant themes, and insights that can support the design process further (ibid.). The research wall can contain any kind of collected data such as e.g. quotes, photos, post-its, and visualizations.

The research gathered during our Discover phase provided the needed information to create the empathy map, stakeholder map, and the mapping over the stakeholders. The wall is thereby a collection of all the important and relevant information, keywords, insights, visuals, and decisions that we took so far in the process and divided into different clusters that emerged along the process. A bigger version of the research wall can be found in appendix 4. The research wall was divided into desk research and field research and clustered together into the different themes of research (figure 19). By creating a research wall it enabled us to see everything together, show patterns, and moreover highlight what the most important insights were and what pain points to be aware of when creating a solution for the end-users.

The wall gives us a starting point for the ideation in the next phase, and could always be used for us to get an overview of the collected data and to help us stay on the right track, keeping the insights in mind.

Research wall

// Define

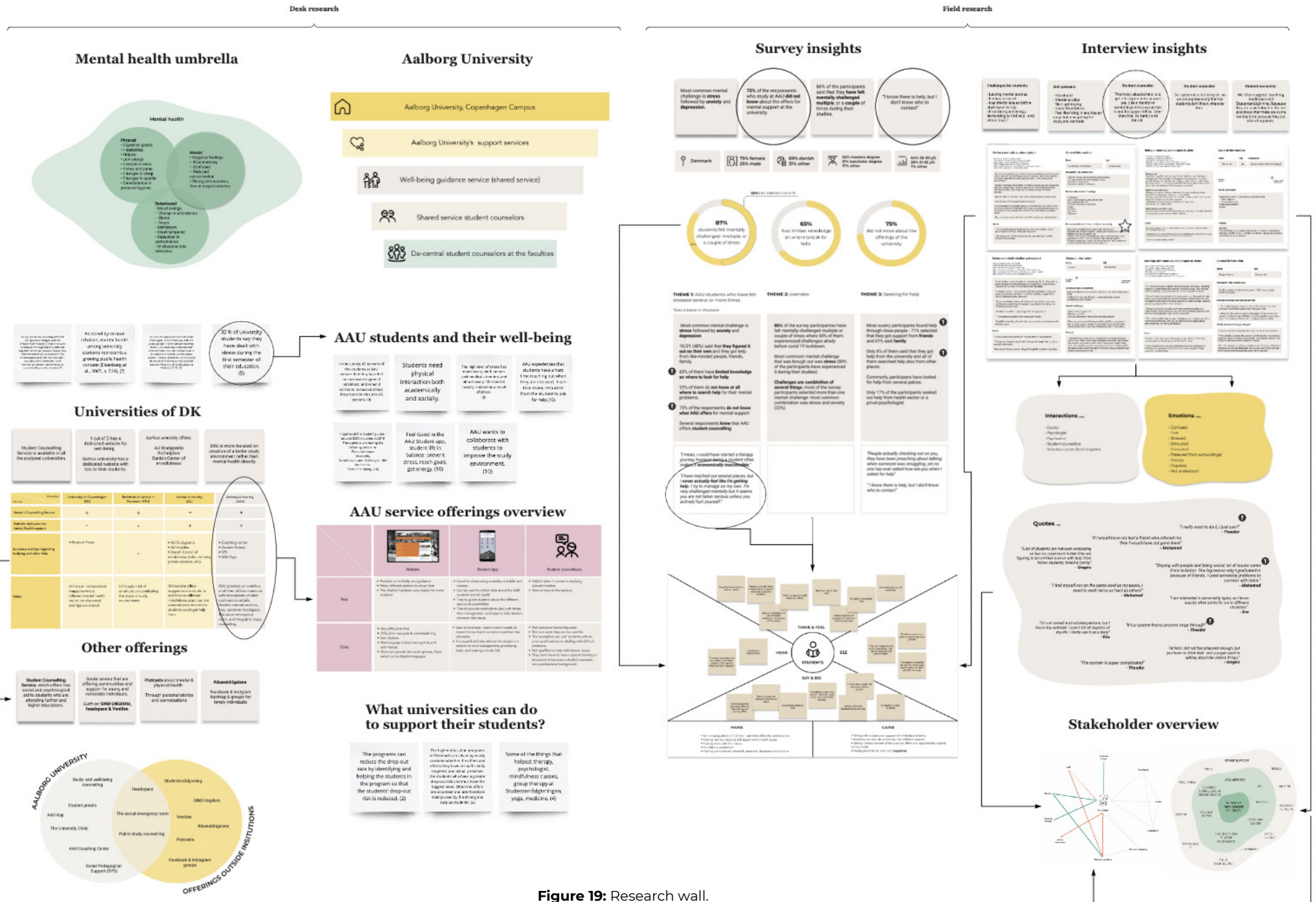


Figure 19: Research wall.

5.2.6 CONCLUSION ON DEFINE

In the Define phase, we analyzed, synthesized, and clustered the research insights with common methods and tools used in service design. Starting the Define phase with clustering and categorizing the insights from our interviews and survey into an empathy map, in order to gain an understanding of the users' needs, and get a shared understanding. The empathy map showed us that our future solution should: break down the taboo, be visible for the students, supportive, and easy to navigate. Moreover, a stakeholder map along with relation mapping was carried out, in order to cluster and analyze the relations between the involved stakeholders. We learned that the relations and interactions are more disconnected and decentralized than we suspected and that family and friends are a strong and important part of students' support systems.

Most importantly, we learned throughout the design process so far, that it is both a highly individual and complex topic, meaning that there is no single solution that would fit all student needs at once.

The insights from the different activities carried out in this phase, enabled us to re-define our problem statement to be more concrete and thereby gave us a scope that prepared us to continue our process into the next phase of the Double Diamond, the Develop phase.

5.3 DEVELOP

DEVELOP

In the third phase of the Double Diamond, the 'Develop' phase, we focused on the problem statement: *"How to collaboratively design a (new) service that improves and supports the mental health among students at Aalborg University."* In this phase we applied different design-thinking principles such as emphasizing with the users and having a collaborative approach. Based on this problem statement we conducted a round of ideation to gather and develop ideas for a possible solution. The ideation session was based on the clustered key insights from our previous phases, which led us to create a card deck with a scenario, to support the emotional user journeys when co-creating and developing possible solutions to improve the support system for mentally vulnerable students.

The chapter is divided into the following subchapters:

- 5.3.1** Card creation
- 5.3.2** The design experiment
- 5.3.3** Reflection on the design experiment
- 5.3.4** Ideation
- 5.3.5** Research wall
- 5.3.6** Conclusion on Develop

5.3.1 CARD CREATION

In order to support our design experiment we kicked off the process by creating our own card deck, that would help us choose the specific direction, test, and support the creation of the final solution. As our conclusion from our previous research was that there is a clear difference in the conversation cards from the design and psychology disciplines we aimed to combine elements from both and use them as inspiration for our own set.

In order to kick-start the creation of our own card deck, an ideation and brainstorming session was established and carried out that focused on what to include in the cards.

IDEATION

The idea of combining emotional user journey mapping with reflection cards emerged in the discover phase and came from discussing how to structure and carry out a co-creation session in a sensitive way since mental health is a sensitive topic. As described in the conclusion of the discover chapter, we were looking for a tool to function as a guideline and to open up for honest and vulnerable conversation in order to reach a meaningful solution that would make a difference for the students. As well as, we had a personal interest in conversation cards and therefore found this to be a very suitable tool to help us to test out the possible solutions on a user journey.

The aim of combining the user journey with conversation cards in the design experiment was following:

- Creation of a design experiment that has specialized conversation and reflection cards that help us to create an optimal emotional user journey from the beginning till the end of the education.

- Emphasizing with the participants and getting a deeper understanding of their needs.
- Finding the most valuable solution for students.
- Validating the solution and the direction of the final concept.

As mentioned before, inspiration was drawn from the previous research where design and psychology conversation cards were analyzed in-depth to understand what elements could benefit our design experiment the most. Based on that knowledge, as well as the needs that the workshop needed to fulfill, 4 sets of cards were created: ice breaker, reflection, emotion, and option cards.

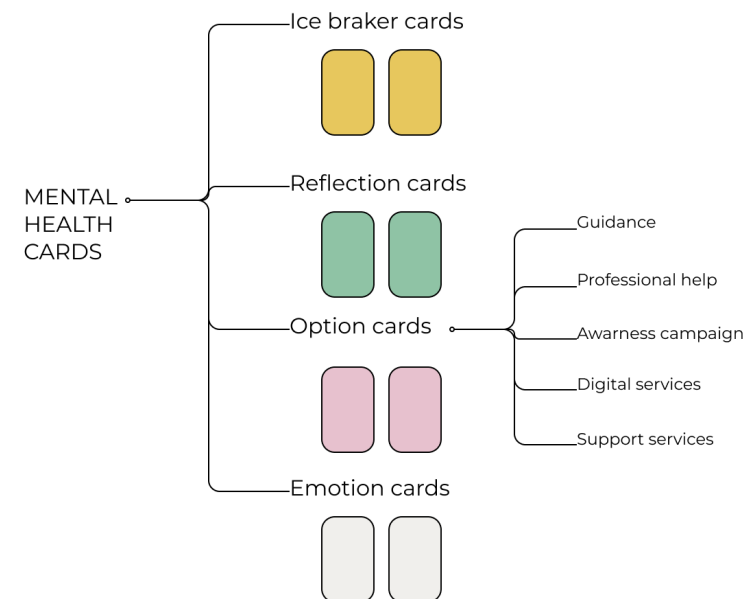


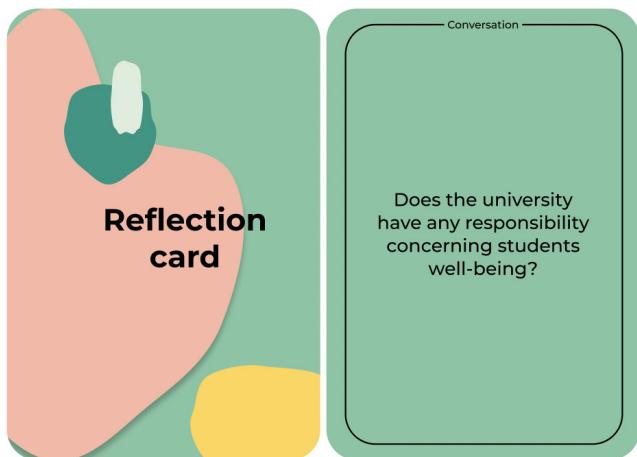
Figure 20: Structure of the conversation cards.

Hereafter, our process was a constant iteration where the design and the questions of the cards were constantly adjusted to make sure that we got the most beneficial result out of the workshop. As a final result we ended up with the following cards (The full card set is available in appendix 5):



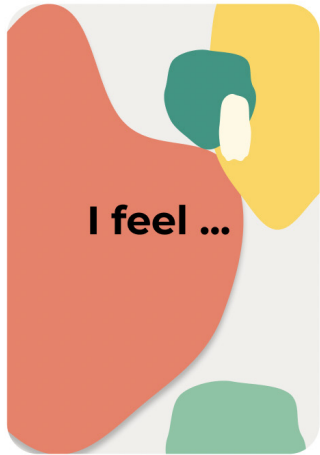
10 ICE BREAKER CARDS

These were created with an intention to open the workshop with discussions where the participants can learn more about each other and answer some fundamental questions that help them to relate to each other more.



10 REFLECTION CARDS

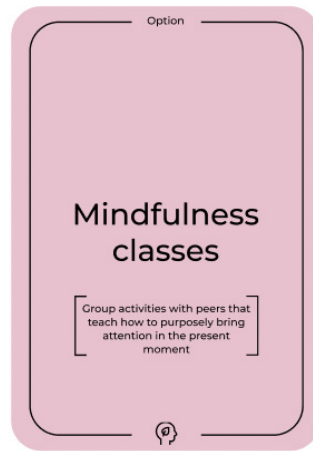
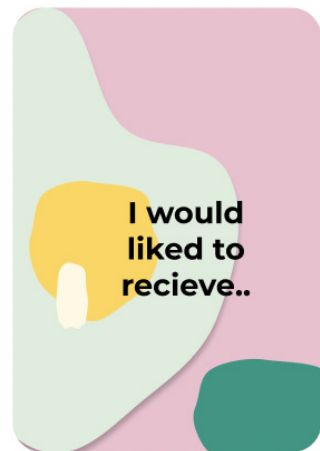
Reflection cards were created with the intention to open up the discussion around the topic of mental health and the role of the university in it. As well, reflection cards were created to support the journey mapping process and to have guiding questions for the participants during the co-creation workshop.



20 EMOTION CARDS:

10 positive & 10 negative

Emotion cards were created to support the process of an emotional journey mapping and make it easy for the participants to express the feelings throughout the process. In this set, we also created empty cards that the participants could fill in themselves.



15 OPTION CARDS

In order to support the process of mapping out the possible solutions and to understand the service offerings that the participants would like to receive, option cards were created. To make the usage of these cards easy and fast we created 5 categories: professional help, guidance, awareness, digital services, and support services. Each category included specific options with descriptions, but the participants also had the opportunity to fill out their own cards. All options were created based on the desk- and field research and selected through a brainstorming process.

5.3.2 THE DESIGN EXPERIMENT

To explore the research question: “*How can (online?) co-creation use emotional user journey mapping to support the design process and creation of a (new) service?*” - a design experiment was created. The design experiment consisted of two online co-creation workshops in which the research question was explored, reflected upon, and afterwards concluded.

When looking into literature it is possible to define that the different ‘design’ experiments take various forms, have various purposes, and generate various knowledge; depending on how, when, and why they are integrated with a design research study (Bang & Eriksen, 2014). It is argued that design experiments play a core role both in conducting the research, in theory construction, and in knowledge generation which shows that the experiments can play various roles depending on the stage where they are used (ibid.). Bang & Eriksen (2014) identify in their paper three different roles and tentative characteristics of design experiments: **1)** As initiators framing a research program, **2)** As ways to reflect on and mature the research program serving as vehicles for theory construction and knowledge generation and finally **3)** As a ‘designerly’ approach to the written knowledge dissemination and clarification of research contributions. Nevertheless, it is stated by the authors that this by no means is a complete characterization since it is dynamic (ibid.).

Our design experiment was mainly characterized as a way to reflect on and mature the research question by gaining more knowledge. To successfully conduct two online workshop sessions, a great amount of time was spent on thorough preparation. An overview of the workshop divided into ‘before’, ‘during’ and ‘after’ presents all our learnings, preparation, and reflections conducted both from the literature and from the experience of orchestrating two online workshop sessions.

PROCESS OF THE DESIGN EXPERIMENT

Conducting the workshops online required knowledge, tools, and guidance on how to successfully manage the process, therefore the book *The Definitive Guide to Facilitating Remote Workshops* was used both for inspiration and as a guiding tool.

Before

The 3 T's - Teams, Tools & Techniques.

How **the team** is organized is important to the workshop and the overall flow (Tippin, Kalbach & Chin, 2018). Consider e.g. the size of the team, the familiarity among the team members, and get a head start by informing them and preparing them for the workshop and the potential outcome that you wish to have.

Another important aspect is the **tools**. One could argue that tools play an even bigger role in remote setups, as these need to be communicated very clearly, especially if they are not already familiar to the team. The most important aspect is to keep it simple and practice the setup in advance to detect possible fail points before the actual workshop.

The same goes for **techniques**, as you cannot rely on techniques that worked great in a physical setting will automatically work just as great online, often the opposite is the case (ibid.). Review all activities intended for the online workshop, and rehearse the process to check if they provide the needed outcome.

One final T can be added, to sum up, the overall ‘before’-process, and this will be **test**. Testing it and re-testing it, proved to be the most accurate and valuable step in order to shape and adjust an online workshop with meaningful, understandable, and desired outputs. Before the actual workshop session, we also provided all participants with an email invitation providing them with information, preparation requirements, and an agenda of the workshop. This was

done to make the participants feel as prepared and ready for the workshop as possible.

During

During the workshop, it is important to first create a common ground by introducing the topic, the agenda and present the wanted output both from facilitators' and participants' perspectives. To avoid any technical setbacks we first introduced the tools by sharing our screen and guiding the participants through the activities and boards prepared for the purpose in Miro.

Helpful advice and guidance provided to us by professional service designers, working with facilitation, made us aware that warm-up exercises, inclusivity, and a curious and explorative mindset would be valuable to apply. This was something we emphasized throughout the two workshop sessions with great success, as we could see how it engaged also the more introverted participants (ibid.). Both workshop sessions had a duration of approx. 2 hours, to leave some room for potential breaks if the participants felt the need for that. Figure 21 above shows the flow of the two workshop sessions.

Introduction	Warm-up session	User journey - Round 1	User journey - Round 2	Wrap up session
<p>//Time: 10 min</p> <p>//Pre-conditions Reminder email + invitation sent to participants in advance. All participants invited to Teams through their AAU emails. Miro board prepared. Presentation prepared. Facilitation roles divided among ourselves. Miro link ready for participants. Agenda prepared. Rehearsal of the flow and facilitation.</p> <p>//Flow of the events Welcome Practicalities Agenda presented Introduction to us and the project Introduction of participants</p> <p>//Post-conditions Knowledge about the flow and timing of introduction.</p>	<p>//Time: 15 min</p> <p>//Pre-conditions Physical pen and paper ready to sketch Ice-breaker cards created Reflection cards created Note document ready to fill out Video recording tested Scenario was written and ready</p> <p>//Flow of the events Draw each other through Teams without looking at the paper. Ice-breaker session (each one round to answer the question). Reflection session (each one round to answer the question). Close your eyes and picture the scenario.</p> <p>//Post-conditions Knowledge about the flow and timing of warm-up session. Does the activities work as intended.</p>	<p>//Time: 20 min</p> <p>//Pre-conditions Introduction to the activity Explanation of the cards and usage Guidelines on how to fill it out</p> <p>//Flow of the events Participants start working on the user journey together. Observation and note-taking of the participants engagement. Time announcement: 5 min left! Checking the flow: Do you need more time?</p> <p>//Post-conditions The first step of the user journey is filled out. Feedback and notes are gathered. Does the activities work as intended.</p>	<p>//Time: 40 min</p> <p>//Pre-conditions Introduction to the activity Explanation of the new cards and usage</p> <p>//Flow of the events Participants start working on the user journey together. Observation and note-taking of the participants engagement. Using reflection cards to follow-up on their thoughts and choices. Shared prioritizing of the choices. Checking if they all agree: Are you satisfied with the journey? Is anything missing?</p> <p>//Post-conditions The last step of the user journey is filled out. Feedback and notes are gathered. Does the activities work as intended. Prioritized list of choices and options.</p>	<p>//Time: 15 min</p> <p>//Pre-conditions All participants done with filling out the journey</p> <p>//Flow of the events Question time Open brief feedback discussion. Evaluation google survey sent by email.</p> <p>//Post-conditions Check the google survey responses. Adjustments made depending on the feedback.</p>

Figure 21: Flow of the workshops.

After

No particular 'after'-process is stated in the literature, however, we wanted to validate and measure the effectiveness of the workshops from the participant's viewpoint, and therefore we created an evaluation survey that was sent out to all participants immediately after finishing the workshop. Their feedback was valuable in order for us to validate the process, the usage of the card decks as well as us as facilitators, and the overall experience of joining a remote workshop using online tools and methods.

We used the book's condensed guidelines as a checklist for ourselves when starting off the design experiment. By doing so we could ensure that we kept in mind the important aspects of creating and hosting a remote workshop with the very best foundations.

Meaningful space *(create boundaries and communicate the rules)*

- Define where content is to be added
- Consider how artifacts might move from one activity to the next
- Use timeboxing to create a useful sense of urgency

Opening & Closing *(kick-off each activity and bring them to a close)*

- Write a concise brief for each method
- Ask for clarifying questions before you begin
- Include time to reflect before the next exercise begins

Inputs & Outputs *(connect one activity to the next)*

- Identify what's required to start and end each activity
- Consider how much content will be generated
- Include smaller bridging activities to tidy up data for the next step

Flow *(create an arc of experiences, from beginning to middle to end)*

- Prepare and practice beforehand so you can be present during the event
- Take ownership. Each group relies on you to guide them through the material
- Be flexible. The unexpected happens. Enlist help, improvise and stay positive

Be remote-ready *(prepare to execute methods remotely)*

- Know the tools and test each method until confident
- Get help running sessions so you can focus on facilitation, not troubleshooting
- Share photos of any physical artifacts as the workshop progresses

(Tippin, Kalbach & Chin, 2018).

WORKSHOP SNAPSHOT

TEAM CONFIGURATION

All remote

TOTAL DURATION

2 hours per session

METHODS USED

Emotional User Journey mapping,
Conversation Cards

TOOLS INVOLVED

- Teams
- Miro
- Email

NUMBER OF PARTICIPANTS

6 persons divided into 2
sessions

THE GOAL OF THE WORKSHOP

The goal of the workshop was to emphasize with the participants, by getting a profound understanding of their needs and wants for a service that can support and improve students' mental health and well-being of AAU.

This is done by co-creating an optimal emotional user journey, to define a direction and validation for the ideal solution for the students at AAU to help us further in the development of a service. The aim of the workshop was, hence the research question, to create a co-creative atmosphere in which all participants would feel empowered to participate and help us in shaping the new support service system for coming and future students, who feel mentally vulnerable at some point during their studies. By the use of a professional set of elements e.g. the card decks, which was designed with special emphasis on the visual layout, as well as on the open dialogues we hoped to initiate with the conversation cards. In addition, the overall goal of the workshop was to move closer to a valuable and meaningful solution, by inviting the students into our process and accommodate co-creation which plays an essential part in shaping the best possible solution that would be meaningful and current for the ones affected.

Below the elements from the workshop and the process are presented. Hereafter, the outcome and reflection of the workshop will be explained and reflected upon. The described elements can also be found in appendix 6.

RECRUITING PARTICIPANTS

The participants recruited for the workshop were all AAU students, recruited through Facebook groups. It was no requirement that the participants should have felt mentally vulnerable at any point, but it would be preferable if they have had any prior experiences in dealing with mental health issues either from themselves, friends, or peers.

To create an intimate atmosphere at the workshop, participants were divided into two different workshop sessions. That was done to keep the number of people low to create space and room for everyone to feel safe and confident enough to participate and discuss in plenary.

Participant	P1	P2	P3
Study	Service Design year 2	Service Design year 2	Service Design year 2
	P4	P5	P6
	Service Design year 1	Service Design year 1	Service Design year 1

Table 4: Overview of the participants recruited.

ELEMENTS

For the co-creation workshop, several elements were prepared, an overview of them and their purpose can be found below.



Figure 22: Workshop elements.

THE JOURNEY

To keep it simple, the user journey consisted of only three layers, a timeline, an option line, and an emotional line, in which the participants needed to map out their preferred options and emotions for an optimal emotional user journey. The user journey was pre-made in Miro as preparation and to function as the overall frame of the workshop (figure 23).

THE CARDS

The card decks played a big role in the workshop. Doing a co-creation workshop in a remote setting required us to have a strong emphasis on the interaction and engagement among the participants, to make sure we kept a co-creational approach. The cards managed to create a somewhat 'tangible' element that created a connectedness between participants. The cards brought out a feeling of sitting around a table

in a physical workshop and discussing, moving, and placing the cards accordingly. The cards did not only provide a strong element of co-creation, but they also helped provide valuable insights and feedback on the participants' thoughts and choices for the optimal user journey. A full overview of all cards can be found in appendix 5.

EVALUATION SURVEY

The evaluation survey was created to measure the success of the workshop, as well as used to provide feedback and validation for ourselves as facilitators, the workshop, and the outcome. By evaluating the workshop session, we had a chance to optimize and improve the next session and thereby get the best possible result. The evaluation survey was sent to the participants right after the workshop and contained only a few questions. The evaluation survey can be found in appendix 6.

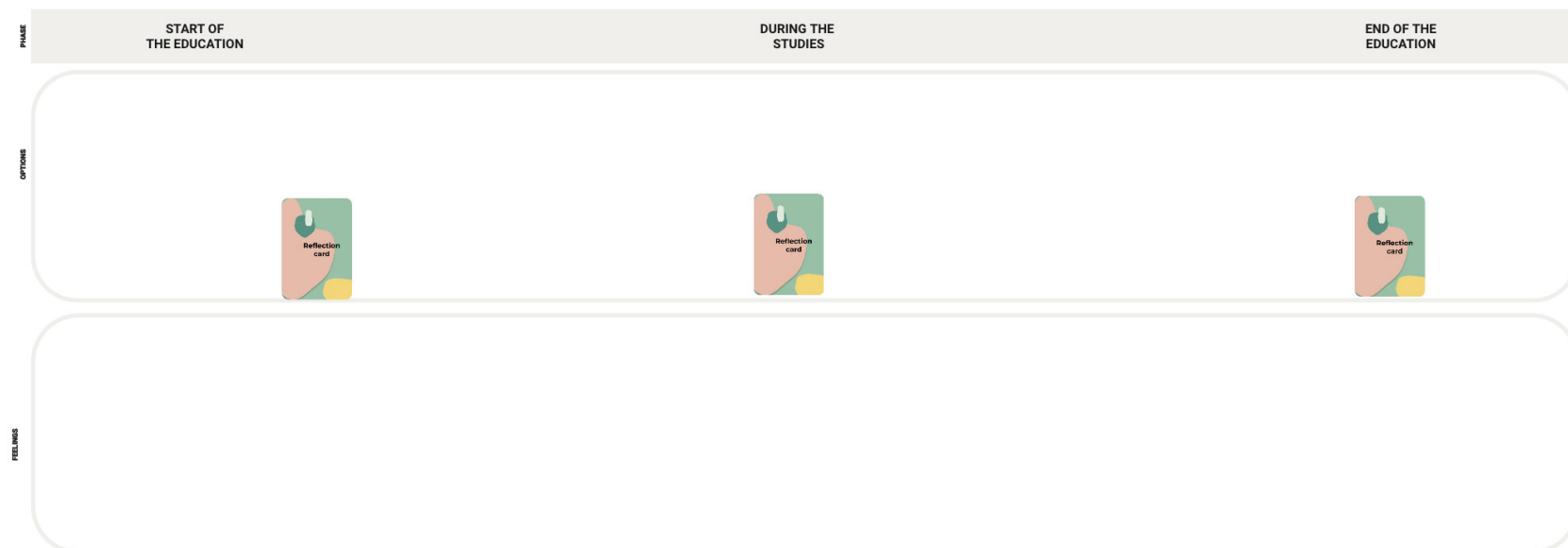


Figure 23: The user journey template.

PROCESS

The process of the workshop included several steps: introduction together with a warm-up exercise, a discussion, and a journey mapping together with reflections. The whole workshop lasted 2 hours and was divided between 3 facilitators. In order to give an in-depth overview of the process, each step is described closer in the following chapter.

The workshop began with a small introduction so that the participants got a clear vision of how the workshop was going to be structured. Before starting the actual workshop the participants were presented to each other and went through different warm-up activities such as an energizer, ice breaker cards, and reflection cards. The activities were meant for creating a safe space, breaking down barriers, and getting the conversation flowing.

The reflection cards initiated the participants to reflect and discuss whether the university has any responsibility concerning students' well-being. This was done in order to get them involved in the topic and gather valuable insights.

Hereafter, the participants were asked to close their eyes and picture a time when they or someone they know felt mentally challenged. When the participants have thought about this, they were asked to think about how the university could support them in this case throughout their studies. After that, they were then asked to work together to co-create an optimal user journey of all suitable options they would like to be offered throughout a study period. To support the process and the participants, the reflection cards were presented throughout the journey mapping. These allowed them to have an open discussion and supported as well as progressed the process.

After mapping out the timeline, the participants were asked to present and discuss the choices made. Hereafter, the emotions were added to support the chosen options and to easier express how they

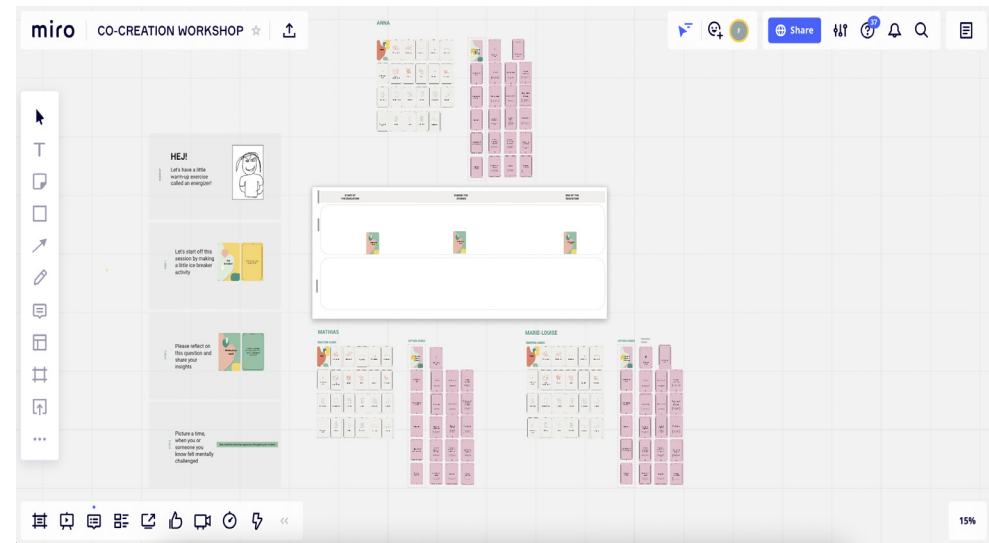


Figure 24: Workshop set-up.

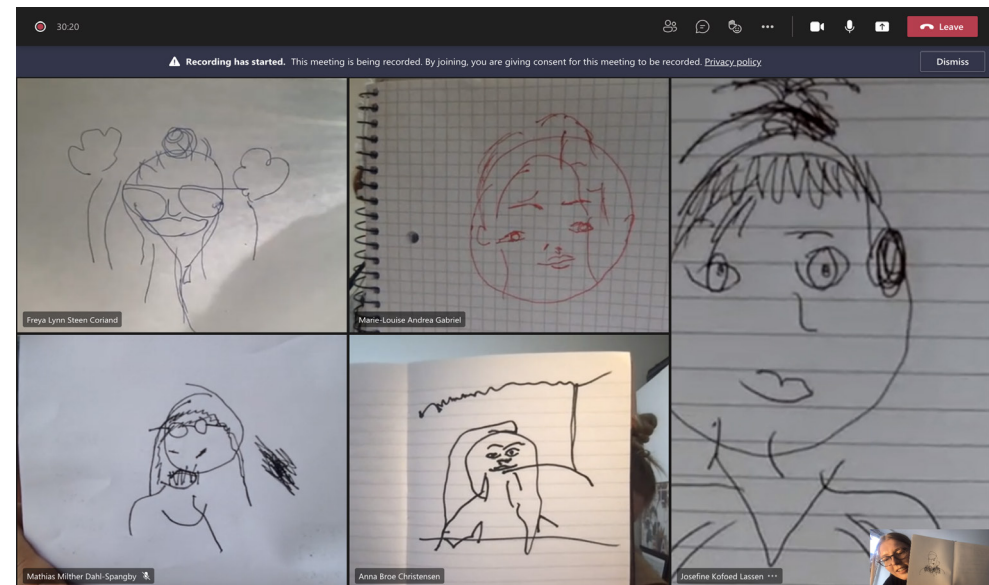


Figure 25: Warm-up activity.

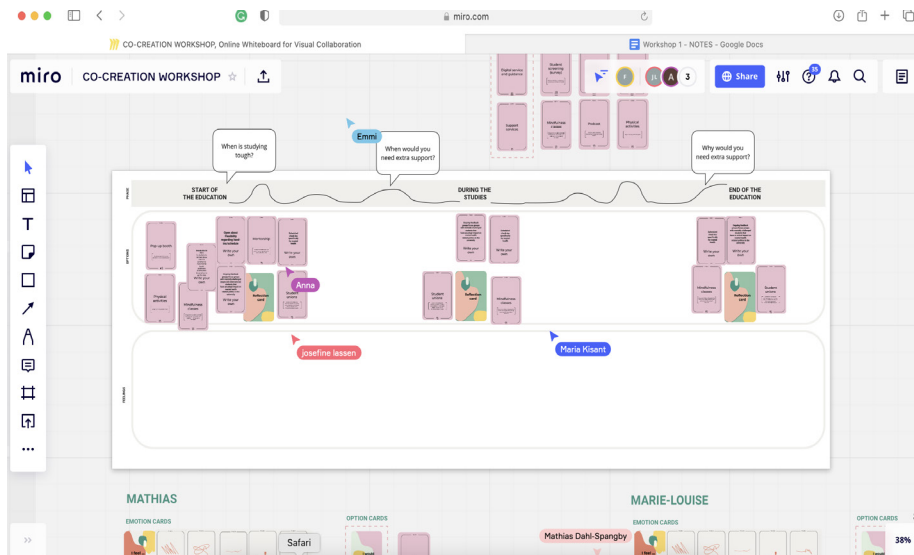


Figure 26: Participants mapping out the journey.

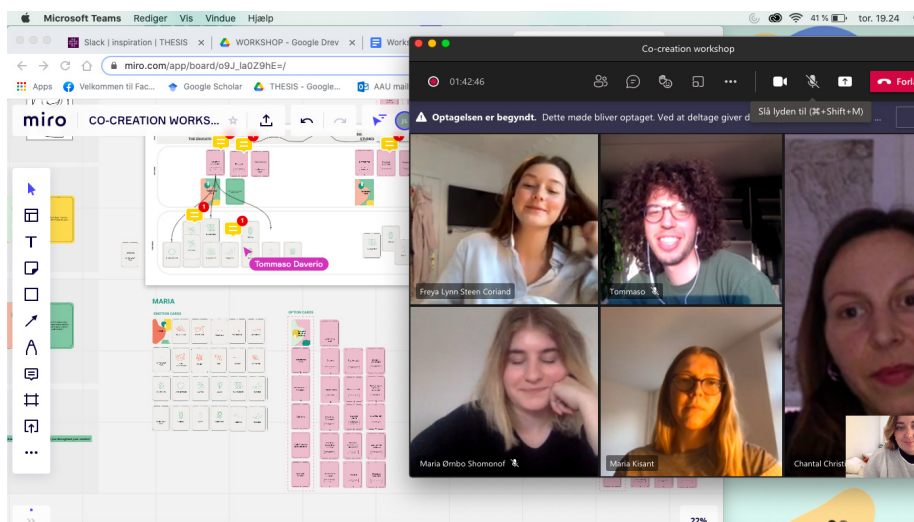


Figure 27: Participants discussing the user journey.

would optimally be feeling when using options like these. Once the journey was completed, the participants were asked follow-up and reflective questions to see if there was anything missing and to gain an understanding whether they were satisfied with the outcome or not. The recorded process can be found in appendix 7.

THE OUTCOME OF THE DESIGN EXPERIMENT

This part presents the key findings, insights, and outcomes gathered through the two workshop sessions. The findings are synthesized and clustered together in one optimal user journey, which can be found in figure 28 when the journey mapping is described.

The responsibility of the university

"Does the university have any responsibility concerning students' well-being?" was an introductory question that all participants were asked at the beginning of the workshop to open up a discussion and get them to reflect upon the topic.

All 6 participants agreed that the university has some kind of responsibility concerning student's well-being. However, it was discussed that it is a two-way street, where students themselves also carry a big responsibility in how they maintain their mental health and well-being. A participant stated: *"When I started I wouldn't think about the uni as having a responsibility - but of course they do. If they want the school to be a good place to study, it's important to create the best environment and do the best for their students, so that everybody gets the best experience studying"* (Appendix 7).

The comment emphasizes the fact that a question like this has multiple perspectives and nuances. Overall it was highlighted that the university definitely should offer a variety of support services, as it should also be in their best interest that their students complete

their study successfully in the best possible mental state. Another insight that was highlighted was that the university is a governmental institution, which profits on the number of students who graduate, which is another reason for them to make sure to offer a healthy foundation and a sufficient support system for the mentally vulnerable students. These insights and conversations provided by the two workshops clearly stated the demand for a support system, which students would highly appreciate, as well as, expect.

The journey mapping

As the goal of the workshop was to gain insights on what kind of service offers students would like to receive, we combined the key

findings of the two workshops together as one journey on figure 28. Based on that we could identify 3 most common themes: getting guidance, having an impact and support services offered at the university that were emphasized and discussed through the cards.

Firstly, the main theme is **guidance**. It was brought out by both workshop groups and emphasized multiple times throughout the journey. It was mentioned that being connected with the students from the previous years and having somebody to ask all the questions is very important and helps to set expectations and feel less nervous and anxious. Additionally, student unions and other organizations were brought out as important options when it comes to practical

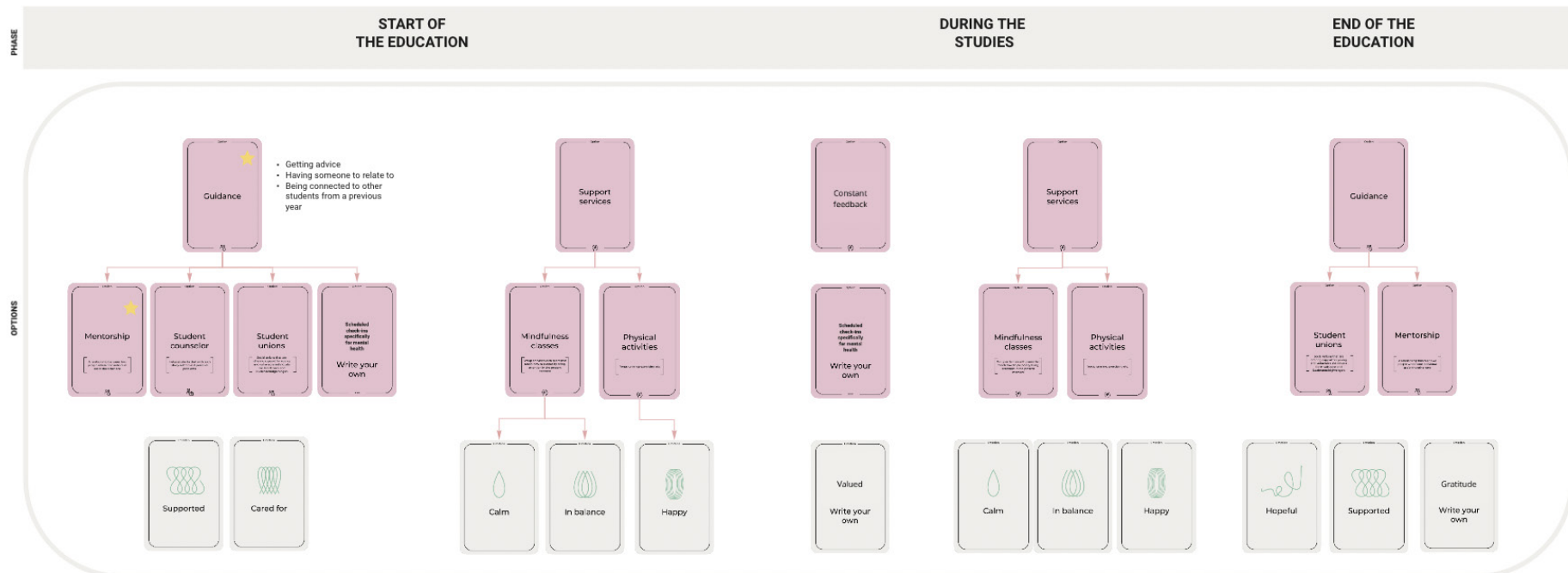


Figure 28: Combined ideal support system.

help such as SU and general well-being and study environment. Later on in the journey, guidance was brought out as an important part before graduation. Having a mentor would be helpful when it comes to looking for jobs and getting professional help. That would help to reduce stress when it comes to the pre-graduation period and could be volunteer-based to promote open communication and networking among students.

Secondly, another clear theme is **having an impact** at the university, being engaged and heard was heavily mentioned by workshop group 1. For them, a common theme was to have ongoing feedback sessions with the university where they can voice their opinions, collaborate, and influence their own well-being at the university. This could be done by scheduled check-ins where the students/study groups could hand in ongoing feedback to continuously optimize the study environment concerning students' well-being. This is highly connected with a feeling of being valued and taken care of.

For the third theme, it was commonly agreed that it would be beneficial to have **support services** and activities like mindfulness and different 'sport' classes. Nevertheless, it is important to mention that this was seen as an additional theme that comes afterwards when the main needs are already fulfilled. Adding on to the activities, participants mentioned the importance of these classes being well-organized in a reasonable time schedule. Along with this, the option of getting ECTS points for a mindfulness class was also discussed.

Besides that, through the process we gathered other important key insights, that are the following:

- Students are missing awareness around the offers that AAU provides. There is big insecurity in knowing the offers that actually already exist and how to find them.

- AAU emails that are sent to the students appear cold and uninspiring. *"These don't have an impact - they don't spark anything in me."*
- An easy and accessible support system that guides the user. As an example, a participant brought out a good case practice where she experiences the AI chatbot guiding her to the right site instead of using navigation.
- Student counselors should be easily accessible (nice to have someone to talk to, asking for advice).
- Creation of more awareness of the student unions, tell students what they can actually help them with.
- AAU activity clubs - fx Facebook groups where students can organize themselves based on interests.

In conclusion, it is clear that the service needs to be a combination of several elements together as different students have different needs and expectations. Moreover, it was very clear that there currently is a lack of awareness since students do not know much, or even anything, about the available services. It was brought out that the service offerings should be communicated in a simple and easy way so that these are accessible and clear to find. Options as, on-campus communication such as flyers, pop-up booth, as well as a website, was mentioned. A good case that was brought out was the chatbot that directs the help seeker to the right place in an easy and efficient way. Additionally, students expect consistency in the offerings and expect these to be available throughout the education.

5.3.3 REFLECTION ON THE DESIGN EXPERIMENT

The design experiment in this thesis consists of two parts, the creation of the workshop, and the actual workshop with participants. Below a reflection on the creation of the workshop will be given, along with a reflection on the actual process, hence, what we as service designers learned from this process and which learnings we will take with us for future workshops.

CREATION OF THE WORKSHOP

Creating the workshop proved to be anything but a simple and straightforward process. It was an iterative development of constantly taking a step back and adjusting in order to move forward. We discovered that creating a workshop was really much about learning by doing. At first, we created a well-planned, structured, and organized workshop on paper, but then when testing it out, we learned that important gaps, activities, and explanations were lacking. These findings felt like huge setbacks at first but proved to be our most valuable learning. It was a matter of trial and error until we finally got the whole flow working, and an acceptance of reaching a 'working' solution and skipping the aim of reaching the 'perfect one', as workshops can always be changed, adapted, and refined.

Looking back, it also got us to reflect on the order of how we created the elements. In the beginning, we put a lot of emphasis on creating the 'perfect' elements e.g. the cards, the presentation, the visual layout in Miro, etc. Somehow, we lost the focus of the goal and the process, which actually turned out to be the most important one for our design experiment. Not having the right process and flow of the workshop, would have given us a pointless outcome. Luckily we

discovered along the way that we needed to have full emphasis on first creating the right flow and being sure of our outcome, and then adjust all workshop elements accordingly. By flipping the process around, we worked towards a successful design experiment in the best possible way.

Through the two workshops, we learned that not only were the cards an interesting and valuable tool at this point of our process, it would also have been beneficial to use cards as part of the Discover phase when interviewing participants. This would have been a fun and engaging way for the participants to map their current journey, and at the same time, it would have encouraged us to apply a much more curious and explorative mindset, which is a trait that service designers always should be striving to maintain. Despite the cards' possibility of being an effective tool in the discover phase, they most certainly also were in this phase of developing our design experiment as they proved to be an important part of the solution to our research question. By using the cards in a co-creative setting we managed, together with our valuable participants, to use emotional user journey mapping to support a design process in the development towards creating a new service.

REFLECTION ON THE PROCESS

The two workshops conducted, involved a group of six service design students. The first workshop consisted of three students from the 2nd semester, who voluntarily signed up to participate through our Facebook invitation, which was posted in a Service Design group. The second workshop consisted of three peers from the 4th semester, who were asked to join our workshop. This differentiation in the motivation for participating was reflected in the way that they tackled and approached the workshop. The first group was much more engaged in the process, whereas the second group was more

reluctant to engage and needed more support and guidance during the workshop.

The energizer and warm-up exercise proved to be very valuable in order to create a safe space with a relaxed atmosphere, and all participants found it both fun and engaging. It can be concluded that the creation of a safe space was key in the workshop, especially when working with a sensitive topic such as mental health. All participants were very open and willing to share personal stories throughout the workshop. We as facilitators chose to take part in some of the activities in the workshop, and also shared personal stories and examples. Both so that the participants didn't feel it overwhelming with three facilitators, but also to create the space of being able to share.

"Your facilitation was really nice and you made me feel like I can say whatever I think."

- Anonymous answer from the feedback survey.

The icebreaker cards, after the warm-up exercise, were meant for starting a discussion and to slowly dive into the topic of the actual workshop, but the questions on the icebreaker cards turned out to be too difficult to answer, even after adjusting them based on feedback from the first workshop. However, the next step of the workshop where the participants had to picture a time when they or somebody they knew had been mentally challenged and what the university could do to support students throughout their studies, worked really well to kick off the journey mapping.

The journey mapping process was a bit difficult to grasp in the beginning but after some explanations and further introduction, the mapping process went really well. The participants were good at discussing, asking each other's opinions, and they all had interesting and valuable conversations while creating the optimal user journey together. The **'Write your own'** option cards were used successfully and to a large extent, which heightened the co-creation aspect.

The students co-created the possible solution/service together and used the option cards to support their process and final outcome. The option cards were a great inspiration for the participants and were used both to spark other ideas and in combination. The emotion cards and reflection cards worked as an add-on to both progress and to give more depth to the journey mapping. The participants were not limited by the cards, which had been an initial concern from our end. The co-creation workshop ended up having a surprise element for us since it also had elements from conducting an interview. The participants talked with each other and with us, about what they think AAU is doing for their students now and how it is to be a student at AAU. They also reflected on what could be improved compared to what is offered now, when discussing how to create the optimal journey mapping and bridge into the next activity.

CRITICAL REFLECTION

As already mentioned the design experiment consisted of two workshop sessions with a total of 6 participants, all of them Service Systems Design students from the AAU Copenhagen campus (one group in 2nd semester, the other group in their 4th semester). The selection of participants might seem a bit narrow, as we want to develop a solution that could be suitable for all AAU students. In an ideal scenario, we would have liked to have representatives from all educational disciplines at AAU. However, the broad recruitment for workshop participants proved to be difficult, as only students from the Service Design study replied. We believe their motivation to attend was much higher, as they were familiar with the tools and the overall online workshop setting. There too, we also took into consideration that our prior research involved more than 50 diverse students from the survey and interviews. With this in mind, we felt confident enough that two workshop sessions with service design students together with already gathered data and insights would be valid enough to point out a further direction for our project. This luckily also proved to be the case, as all the findings pointed towards some very determined themes, that we could bring into further ideation.

5.3.4 IDEATION

As mentioned in the introduction of this phase, the next step in the design process is to develop ideas based on the gathered knowledge from a previous Discover phase and the insights from the co-creation workshop. In order to develop ideas on how the problem statement could be solved, a brainstorming and ideation session was carried out.

Throughout the design process, we have gained a comprehensive understanding of AAU's existing well-being support system. All the findings extracted from both desk research, interviews, surveys, and workshops are synthesized and the most common options were clustered in the table 5. These findings work as a foundation for our ideation process, as we aim to emphasize both existing offers, as well as be open about new emerging ideas and directions for a possible future solution.

	Website	Student App	Student counsellors
Pros	<ul style="list-style-type: none"> • Possible to find help and guidance • Many different options to chose from • The chatbot has been very helpful for some students 	<ul style="list-style-type: none"> • Good for showcasing a weekly schedule and courses • Can be used to collect data about the AAU students mental health • Tries to guide students about the different options & possibilities • Tries to provide methods to deal with stress, time management, and ways to help student structure their study 	<ul style="list-style-type: none"> • Helpful when it comes to studying relevant matters • Nice to have at the campus
Cons	<ul style="list-style-type: none"> • Very difficult to find • Difficult to navigate & overwhelming • Not intuitive • Hard to grasp (many menu points and sub-menus) • Does not provide the same options, if you switch to the English language 	<ul style="list-style-type: none"> • Lack of awarness - no one knew it exists (or doesn't know that it contains more than the schedule) • It is superficial (only advices the students in relation to time management, prioritizing tasks, and making a to-do list) 	<ul style="list-style-type: none"> • Not everyone knows they exist • Not sure what they can be used for • The counselors are 'just' students with no prior qualifications on dealing with difficult problems • Not qualified to help with heavier issues • They don't have to have a special training or education to become a student counselor - not a professional background

Table 5: AAU's existing well-being support system analysis.

IDEATION METHODS

The purpose of the ideation was to find ways to improve AAU's current support system but also to create either new or expand an already existing service. For the ideation session, three different methods were used in the process: a sailboat to map out the highs and lows, a mind map to brainstorm on different ideas, and a SCAMPER to define a concept. The ideation session was kicked off with different warm-up exercises to get into a creative mindset.

As a first ideation method, the sailboat retrospective was chosen. The purpose of the method is to identify what is pushing a project or service forward, as well as what holds it back (Being Agile, 2021). Through that, we gained a great overview of areas that should be improved and optimized. When moving on from the sailboat into the mind mapping session, the pain points from the first exercise were kept in mind (ibid.). The mind mapping was conducted to elaborate on some of the ideas that had emerged during the first ideation and to sum up before moving forward. To investigate how to improve the current support system at AAU the SCAMPER method was carried out.

The method is an easy and straightforward way to generate new ideas and to innovate on already existing services or products (Creately, nd.). This is done by looking at the service from 7 different angles: substitute, combine, adapt, modify, put in another use, eliminate, and reverse/rearrange (ibid.). After adding different suggestions and ideas, which were also based on the learnings from our co-creation workshop, to the different angles, the suggestions were clustered into themes. The method gave a good overview of which areas had room for improvement.

Based on the clusters and the key areas we narrowed down our ideation, and in addition we made sure that the main research points

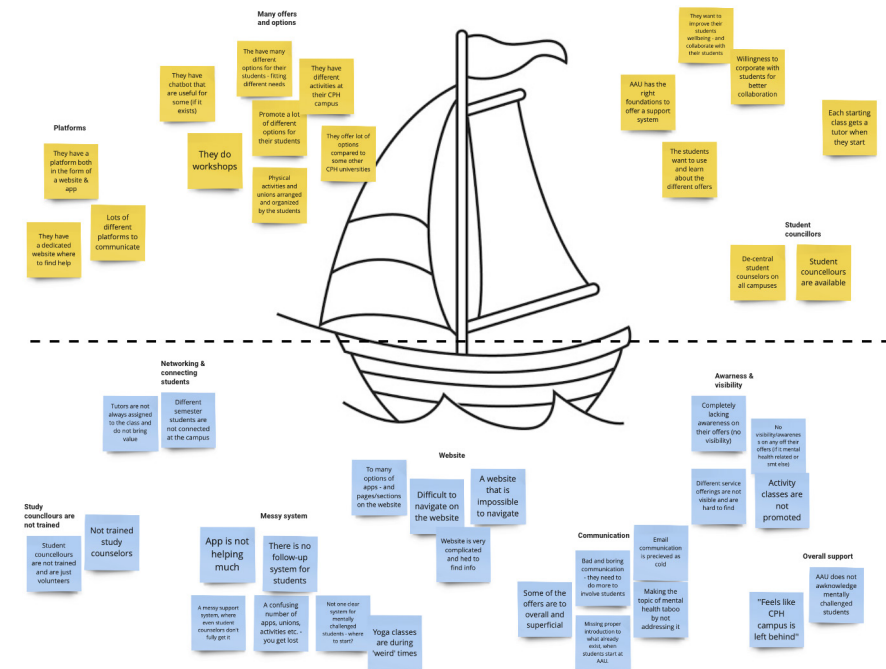


Figure 29: The sailboat retrospective.

gathered supported the generated ideas. Therefore, we collected the most important data from desk and field research, together with the learnings from the workshop and made sure that the concepts created are supported by clear data points. Based on that, the focus areas were defined together with 2 different concepts. Leading us to conclude ideation with a general recommendation, and in that connection also a suggestion on a new website universe, and a volunteer mentorship program. In order to communicate the essence of these ideas and concepts we created 2 different mood boards with the key points and ideas and gave them a title (Figure 29; Figure 30). These ideas served as the foundation of the next part of the design process - the specification of the final solution to the problem statement.

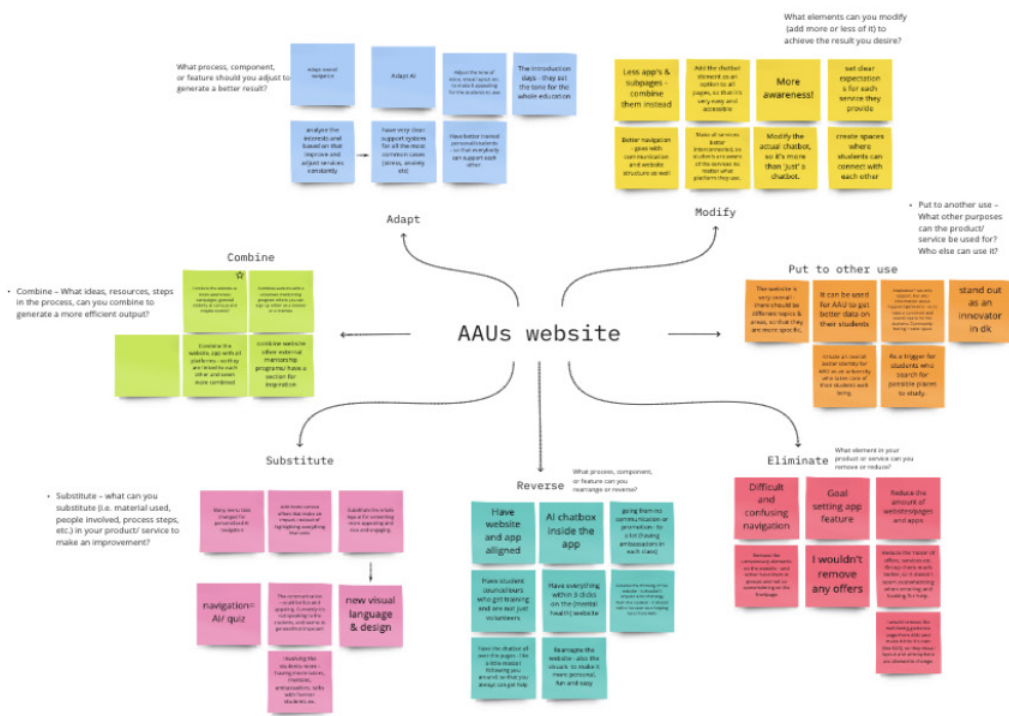


Figure 30: The SCAMPER method & clustered themes.



Figure 31: AAUniverse mood board.



Figure 32: AAYOU mood board.

5.3.5 CONCLUSION ON DEVELOP

In the Develop phase, we started off by creating the card deck used within the design experiment. The creation of the cards was based on an ideation session, in which it was discussed how to best orchestrate and structure a meaningful conversation around a journey mapping workshop. The card decks were our solution to that, and further ideation led us to explore different versions of existing cards, which functioned as an inspiration for our final card decks consisting of ice breaker cards, reflection cards, option cards, and emotion cards.

Due to our co-creational approach we wanted to engage the users as much as possible, which is why we planned, prepared, and hosted two online co-creation workshops, with as much user involvement as Covid-19 and the remote setting would allow. We assume that it would have been most ideal to conduct the co-creative workshops physically, as the interactions among the participants possibly would have been even better in that case.

However, it is difficult to conclude this based on the challenges, and we still feel confident that we reached the desired outcome for further ideation and development. Through various ideation tools, we narrowed down all key findings from the workshop along with knowledge gained through the project and combined it all into two tentative concepts.

5.4 DELIVER

DELIVER

In the Deliver phase, the purpose was to summarise our gathered insights and gained knowledge into a final deliverable. In our design case, the design process has focused on exploring the value of co-creation and user journey mapping in relation to creating a potential solution and explored how this approach could support the design process. Throughout the design case, it quickly became clear that developing a completely new and different service was not the right outcome for this process. Instead, we developed an overview of the most crucial areas that needed improvement but also presented an opportunity to extend and expand an already existing service at AAU, based on the insights from the co-creation workshop.

The chapter is divided into the following subchapters:

- 5.4.1** Concept description
- 5.4.2** Further recommendations
- 5.4.3** Evaluation presentation for AAU

5.4.1 CONCEPT DESCRIPTION

AAUNIVERSE

AAUniverse is an online platform that gathers together all the service offerings around mental health and student's well-being. Its aim is to create a place for the students where they could get a very fast and easy overview of what the university could help them with in case of any mental health challenges. It is created with a goal to prevent the most common struggles students have during their studies such as stress and anxiety by guiding them easily through different service options on the platform where they can not only get the overview but also take immediate action and sign up effortlessly for the services they need.

Emphasis is on the creation of a community that improves the university experience for the students by feeling supported and guided throughout their studies. Through the creation of a solid foundation, the concept could be also taken offline and be implemented in the AAU campuses around Denmark where there are (bi-weekly) pop-up booths or even AAUniverse centers where students can go to get information and guidance.

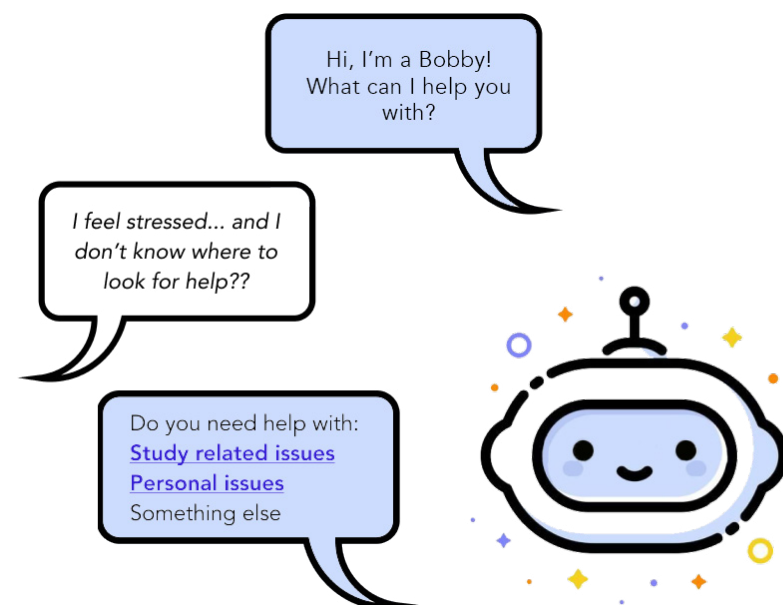
AAUniverse is a webpage that is interconnected with the official AAU website and therefore is available 24/7 to all the students. A key element of the platform is an AI chatbot that greets the visitor and helps to find the most suitable service options based on a short chat and questionnaire. Through that, we solve the difficult navigation and make sure that the students who are currently mentally vulnerable feel supported and can find a suitable service offering effortlessly and fast.

AAUniverse platform gathers together the following service offerings:

- Guidance: student counselor, student mentor, professional mentor.
- Workshops & mindfulness classes.
- Sports and activities: different classes like yoga etc.
- External help offers.

When it comes to making sure that the platform reaches the students and serves its purpose, several implementation activities are planned. Firstly, each student receives an engaging email about the platform. Secondly, to promote the platform leaflets and posters will be present on campus to create awareness.

In addition, different activities, workshops, and booths will be visible at the campuses in order to make sure that it reaches and engages the audience. An even closer overview of the concept can be found in table 6.



WHO?	WHAT?	WHEN?
<ul style="list-style-type: none"> • All the enrolled students at AAU • Student counselors • Professors / teaching assistants • Other important employees at AAU (e.g. workshop organizers, yoga teachers, etc) • External stakeholders (e.g. Studenterrådgivningen, Headspace). 	<ul style="list-style-type: none"> • AAU universe (online & offline) • Universe for AAU students that gathers all the service offerings around mental health together. (+ the physical aspect) • AI chatbot that helps to define problems online and provides easy navigation by answering couple of easy questions. • Overview of all the service options: student counselling, mindfulness classes, sport activities, student buddy, mentorship, workshops etc. 	<ul style="list-style-type: none"> • Available all the time to all the students online • (2.0) available in the campus in the form of a drop-in pop-up booth/ AAUniverse corner • Implementation at the campus: presented at the beginning of students education at AAU - but it can always be used as it is always available.
WHERE?		WHY?
<ul style="list-style-type: none"> • Connected with the official AAU website and the Student App • The universe can be presented around campus on posters, flyers, digital screens, through their offers etc. • (2.0) A physical space that is an extension of the whole universe at the campus. 	<ul style="list-style-type: none"> • Calendar with an easy sorting options that give an overview of different events, and important information relevant for students • Available in ENG + DK • Responsive- works well on mobile; student app leads students to the web version • More personal tone of voice - lighter colors and a more simple layout 	<ul style="list-style-type: none"> • Create a community for the students, where they can find service offerings and improve the study environment through that. • Prevent and support students well-being by giving them an overview of different options and possibility to select an service offering that suits them the most. • Create a better brand/image for AAU as being a great place to study due to e.g. our solution. (Mental health and students well-being is important to them).

■ 1st priority
■ 2nd priority

Table 6: Overview of the AAUniverse concept.

AI CHATBOT

Chatbot welcomes the users and when clicking on the button it takes the user to the questionnaire and based on that provides personal recommendations.

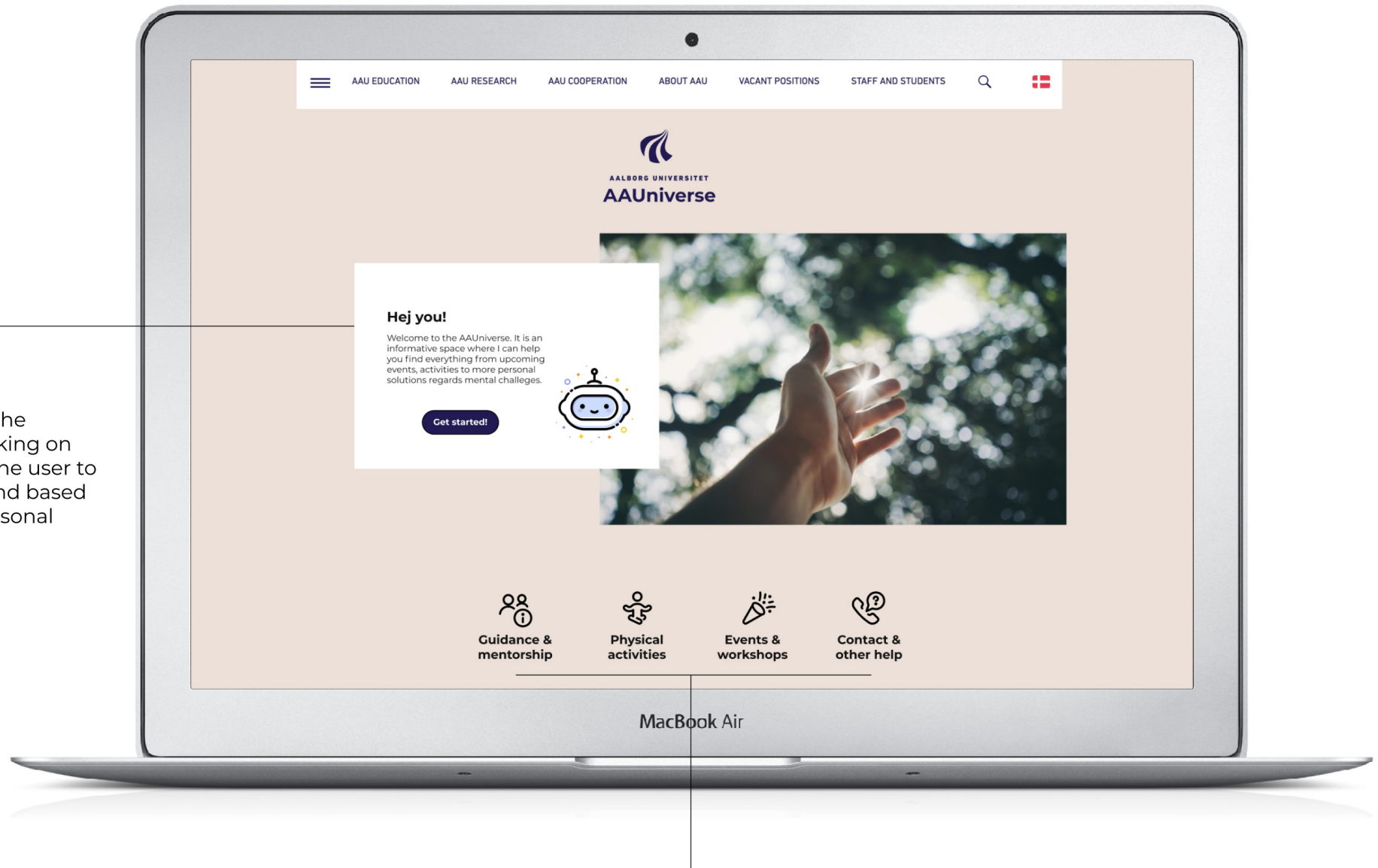


Figure 33: Mock-up of the AAUniverse.

NAVIGATION WITH SUGGESTIONS

Showcasing different options in an easy, intuitive, and user-friendly navigation.

AAYOU MENTORSHIP

Available at the AAUniverse is the volunteer mentorship program called AAyoU. It is offered at AAU for all educational levels, and it is a flexible program where students support students. The aim of the service is to prevent mental health issues, and offer the students a service that supports them throughout their studies and create an overall better study environment, as well as strengthens the network between students.

The mentor will be someone that can support students throughout their studies, can provide advice, support, and guidance on a more personal level, but also help with questions about what to expect from exams, time management, and how to deal with study life in general. The mentors will be from the second semester and up, and who voluntarily signed up. The aim of the mentor will be, of course, to help a fellow peer get a better study experience, but also to network, build a CV, gain experience, personal development, and receive a small gesture from AAU in the form of free coffee and discount on AAU activities. As the service will be volunteer-based, it is important that there is an incentive to become a mentor, as the success of the mentor program is based on the participation and willingness among surplus students to become mentors who support, guide, and inspire like-minded peers.

The mentorship program is structured in a way that students who are in need of a mentor, can sign up online on the new AAU website. The students will take a small quiz in order to establish what kind of mentor the student is in need of, then the students will get suggested one or more mentees based on their needs. The student can either be enrolled in a mentorship group with other students as well so that they can use each other internally or choose to have a 1 on 1 interaction with a mentor.

The website displays clearly what a student can expect from a mentor and what not to expect, but in order to make sure that the match is right. The student and mentor will start the program by having a first meeting to set expectations, needs, and to see if the connection is right.

If a student has an interest in working as a mentor, they can sign up online and then get invited to a private Facebook group with other mentors and teachers, where they can use each other if they have any questions or are in the need of feedback.

An even closer overview of the concept can be found in table 7.

Sign up as a mentee for a
AAyoU mentorship
program

AAyoU mentorship program

Here you can sign up to be part of the program and become a mentee.

*Skal udfyldes

What are your current struggles that the mentor could help you with? *

☐ Semester projects are overwhelming

☐ Exam stress

☐ Questions about finding an internship

☐ Loneliness

☐ Andet: _____

By signing up I agree to be contacted by my email and be part of an AAyoU

WHO?	WHAT?	WHEN?
<ul style="list-style-type: none"> • Service user / Mentee: All the students enrolled at AAU. • Service provider / Mentor: students from 2nd semester and up, who signed up for the service. 	<ul style="list-style-type: none"> • A volunteer mentorship program - AAyoU • A flexible program where “students support students” • 2 versions: Mentor groups and/or mentor and mentee interaction 1 on 1. • (Mentee perspective): Having a support person throughout the studies who can provide advice, support and guidance on a personal level about the education (e.g. what to expect from the exams and what exams you should prioritize and how to deal with different professors). 	<ul style="list-style-type: none"> • Available for sign up online and accessible 24/7. • The mentorship program are presented in the beginning of the students education at AAU - but the program can be used throughout their study program.
WHERE?		WHY?
<ul style="list-style-type: none"> • Online website, that is interconnected with the AAU Universe online platform. • Implementation: Offered at AAU for all educations both at bachelor and master level. • Implementation and promotion: Posters and flyers around campus, emails and promotion events hosted at campus e.g. with a pop-up booth. 	<ul style="list-style-type: none"> • Possibility to network with older peers (also possible prior to education start through e.g. facebook groups). • (Mentor perspective): Networking, building a CV and getting experience, personal development, free coffeee cupons, merchandise and discounts on AAU activities (like yoga). 	<ul style="list-style-type: none"> • To offer guidance, feedback and mentorship and support the students. • Prevent mental health issues and offer students a service of getting help when they need it. • Get a face on the person you can always contact and get familiar with them. • Create a community around the AAyoU service. • Create an overall better study environment with focus on students’ well-being.

Table 7: Overview of AAyoU mentorship program.



CTA

CTA that leads to a landing page where the user can learn more about the AAYoU mentorship program & sign up if interested

Figure 34: Mock-up of the AAYoU.

MOTIVATION MATRIX

A motivation matrix is a technique that visualizes the functional relation between all the actors participating in the system (Morelli, 2006). This method helps to understand the connections between the various actors that take part in the solution as well as adds clarity to the roles by investigating the motivation behind their actions (Silearning, 2020).

As it is a great analytical strategy tool for managing partnership it was decided to map out the relationship between key stakeholders of the AAyoU mentorship service. Through that, we are able to answer questions regarding each stakeholder's interests and what could be their expectations from their involvement.

Gives to	AAU (as an institution)	Mentee	Mentor	Other students
AAU (as an institution)	Better community, happier students which possibly could lead to a lower drop-out rate	Provides, maintains, and improves the service.	Provides, maintains and improves the service. As well as, creates a recommendation letter for the work.	Information about the AAUniverse and AAyoU mentorship.
Mentee	Feedback about how to improve the service.	Taking action to feel more supported and guided.	Feedback and communication.	Sharing stories and experiences by word-of-mouth. therefore also providing information about the service.
Mentor	Feedback about how to improve the service.	Support, advice and feedback based on the personal experience.	Improvement of communication, mentorship and leadership skills. Access to the mentorship network and possibility of gaining new valuable connections and friendships.	Sharing stories and experiences by word-of-mouth therefore also providing information and awareness about the service. Also, through their 'work' contributing to a better study environment.
Other students	Possibly questions about the service to know more about how it works.	Possibly questions about the service to know more about how it works. Possibility of becoming a mentee in the future.	Possibly questions about the service to know more about how it works. Possibility of becoming a mentor in the future.	Possible word-of-mouth advocates of the service.

Table 8: Motivation matrix.

USER JOURNEY

To get a better understanding of how the AAyoU mentorship program works, a visualization of the steps and interconnections can be found below in figure 35.

The presented journey has the starting point from when AAU launches their new website universe, which is also including the new mentorship program. The journey shows the perspective of both the mentor, mentee, and AAU, and provides a more approachable overview of the service and the interactions in between.

Some parts of the journey will continuously go in a loop, e.g. will the students get help and helpfully feel supported several times throughout the study, and AAU will have several mentors through their system and continuously adjust to the feedback. The journey shows the perspective of both the mentor, mentee, and AAU, and provides a more approachable overview of the service and the interactions in between. Some parts of the journey will continuously go in a loop, e.g. will the students get help and hopefully feel supported several times throughout the study, and AAU will have several mentors through their system and continuously adjust to the feedback.

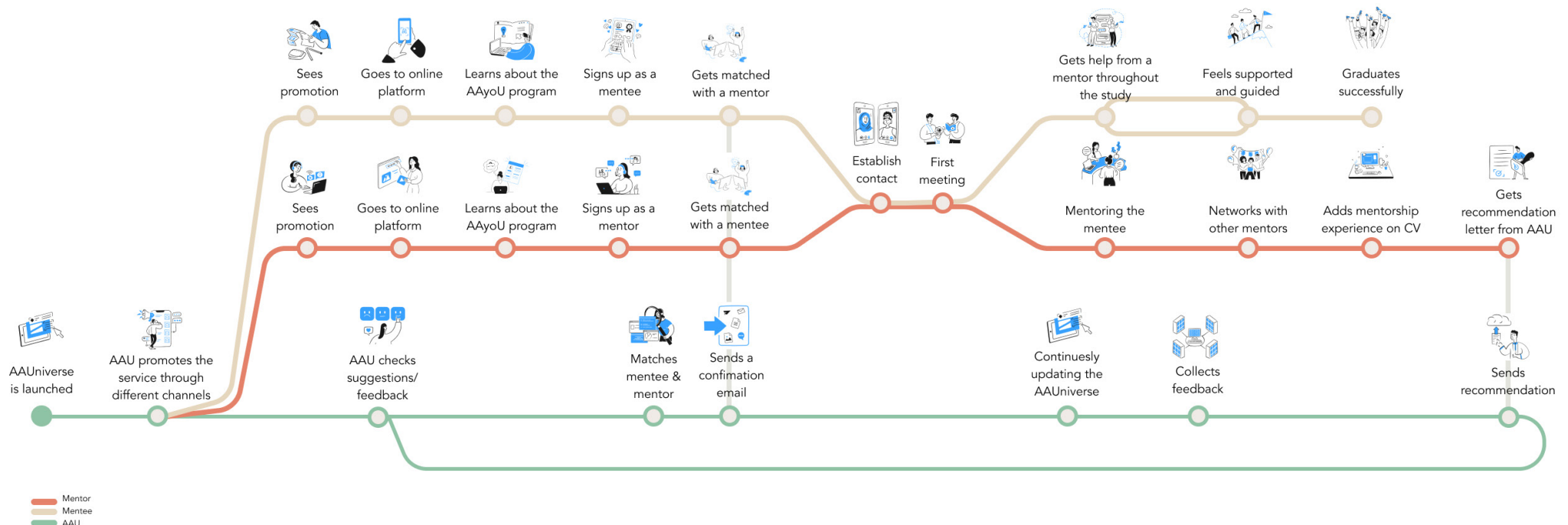


Figure 35: User journey of the AAyoU program.

SERVICE BLUEPRINT

As an extension to the presented user journey, a blueprint has been created. A Service blueprint is a visual representation of the service in detail, showcasing the entire process of the service. It gives a deeper understanding of the interactions between the user experience, all activities happening, actors involved, and the backstage processes (Stickdorn & Schneider 2011).

On the vertical axis, all actors involved in the service process are listed, and on the horizontal axis, all steps required to deliver the service are showcased.

Hereby, the flow of the actions that are happening within each role is showcased. The actions that the user can see are above the line of visibility and the ones that happen in the back are below the line of visibility (Service Design Tools, 2021).

The Service blueprint presents a journey of the first time use including the pre-service and illustrates the activities both from the student, mentor, and AAU, as well as the front -and backstage actors involved in the service, which provides a full overview of the service.

A bigger version of the service blueprint can be found in appendix 8.

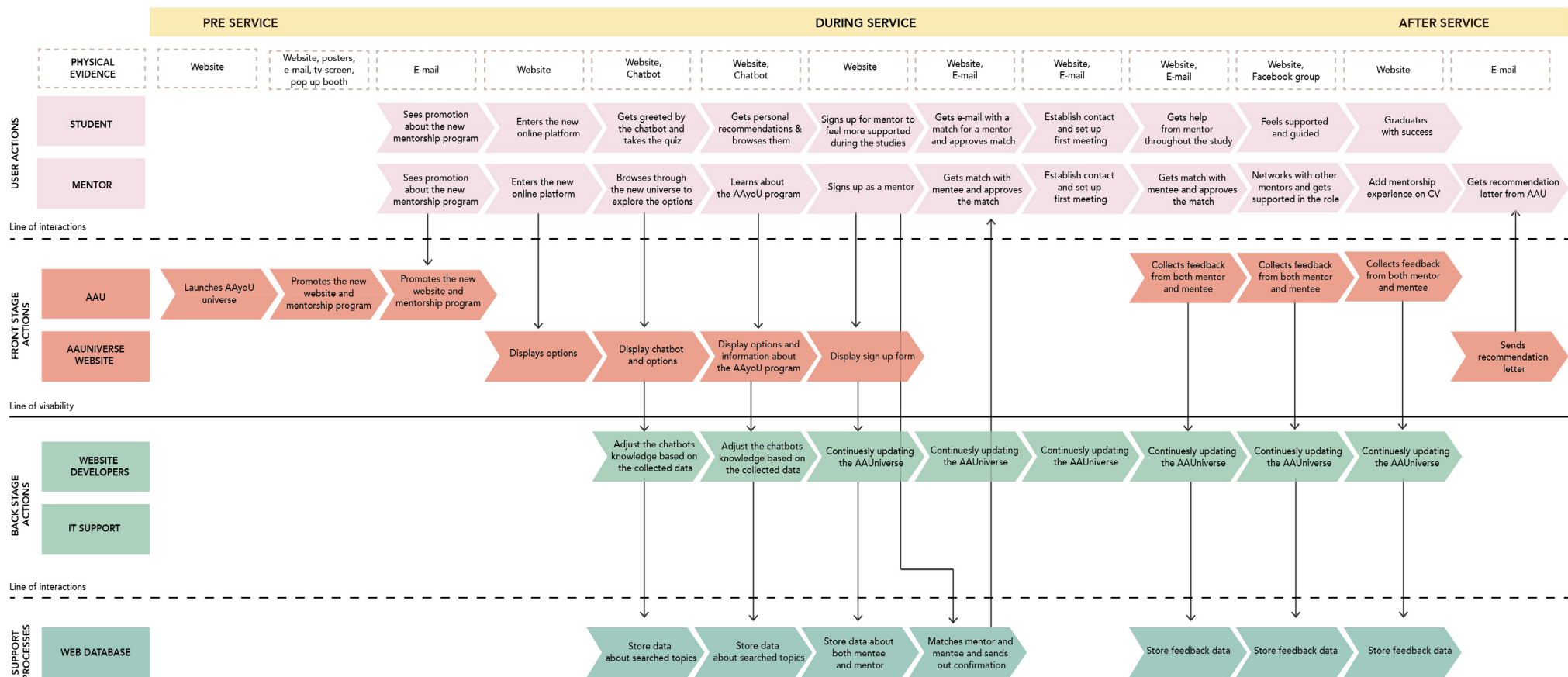


Figure 36: Service blueprint.

CRITICAL REFLECTION ON THE MENTORSHIP PROGRAM

It could be argued that a solution with many dependencies on the students' involvement, is creating more stress for the students and thereby not helping them in the right sense. However, it's a two-sided service targeted on the one hand the potential mentees (the mentally vulnerable students) and on the other hand, the potential mentors (the mentally surplus students). By having this distinction, we want to emphasize that the service is run by the mentally surplus students, who together with AAU sets the right guidelines of what to be expected in a mentor/mentee relationship.

Before signing up as a mentor, you are provided with detailed information on how to plan, structure, and organize meetings with your mentee. Additionally, the mentor also takes a quiz in the beginning, in which they prove qualified or not qualified to become a mentor. For example, if one mentor scores too low in the intro quiz, they are advised not to become a mentor, as there would be a risk that this would potentially create too much stress for that person. At the same time, the service allows constant feedback, and a possibility to sign off as a mentor at any time, which provides flexibility and a co-determination to set your own limits.

It is also important to mention that the mentorship program is supported by Facebook communities consisting of fellow mentors, and student counselors that the mentor can always reach out to for help and assistance if needed.

5.4.2 FURTHER RECOMMENDATIONS

The last outcome of the design process is a set of further recommendations for AAU, to specify where there is a big potential and opportunity for improvement. The recommendations are based on the insights generated throughout the design process and give an overview of potential suggestions and improvements on how to support the students better and create the best possible study experience.

The two most problematic areas are the awareness and communication about the existing service offerings, along with the current online platforms from AAU. Both will be presented below with suggestions on how to improve the areas.

Awareness & communication

One of the biggest learnings from both our survey, interviews and workshop was that almost none of the students were aware of the offers that AAU provides their students. Several students could not give any examples of what AAU has to offer their students, not only regarding supporting their mental health, but also other offers like the AAU running club. Moreover, the students empathize that they does not know where to find help if they need it and that the communication in general, especially by email, made them feel unimportant to the university. Furthermore, the communication is not speaking to the students and the e-mail seems unimportant to read unless it is information about e.g. exams.

A recommendation for these issues would be to improve the communication, both the tone of voice and visibility. The students of AAU are interested in hearing about the happenings and offers that AAU has.

This could be done in many different ways but some suggestions would be:

- Make the communication fun and appealing, not so formal every time but more personal.
- Promote the different offers from AAU to the students, and not only by handing out a flyer the first day, but continuously promote the offers.
- Have ambassadors in some of the study programs that can promote e.g. the yoga classes, the running club, etc., so that the students also gain awareness from their peers. One of the learnings we did through this process was also that students want a community and to do something together besides school, to strengthen the bond between each other.
- Make all services and offers better interconnected, so that students are getting aware no matter what platform (app, website) they are using.

Online platforms

As an extension to the suggested solution about a new online universe, and the problems mentioned regarding the communication, there are some suggestions for how the current website works. Taking the perspective of a challenged student, it can be very confusing for a student to know where to start and who to contact, even the study counselors are sometimes confused about the complexity of the system.

The website is difficult and complicated to navigate, and there are many options, apps, pages/sections on the website, and no clear system. When a student is feeling mentally vulnerable this should rather work as a helping hand from AAU's side and not require more energy and effort from the students.

Suggestions to solve some of these issues would be to:

- Reduce the number of websites/pages and apps, in order to reduce the amount of noise. Group them so it does not seem overwhelming when entering and looking for help.
- Simplify and adapt overall navigation of the website.
- Have a clear support system for students - for all the most common cases: stress, anxiety, SU e.g. there could be different categories and solutions for that specific case.

Lastly, it should be mentioned that we do not know if AAU tried to implement anything like the suggestions above in the past. However, we see a big potential in providing AAU with these recommendations and giving them the opportunity to use the suggestions as inspiration to make a positive difference for all students, including them with challenges. Based on these considerations we reached out to AAU, to present them with our concepts and provide them with the future recommendations that this project has resulted in.

5.4.2 EVALUATION PRESENTATION FOR AAU

When approaching the end of our process and having clear concepts descriptions written and ready for potential further investigation, we wanted to consult with AAU to see if they could provide any interesting and important insights, as well as valuable feedback of potential challenges and weak points that we might haven't considered. Therefore, we reached out to potential stakeholders at AAU and got in contact with a student counselor at the study service at Copenhagen Campus.

We collected our key findings in a pitch deck, which was forwarded to her as a foundation for an online talk, where we could further discuss and reflect on all the insights she had, as well as further describe our concepts and motivation for the project. Slides of the pitch deck can be seen in the pictures below or found in full context in appendix 9. Overall, the two concepts were clear to the student counselor, who also highlighted the mentorship program as being especially beneficial towards students who are mentally vulnerable and could use the extra support and guidance during their studies.

On the other hand, she emphasized that the overall AAUniverse platform was more seen as a nice add-on for all students, and not something she would consider particularly helpful, if in need of specific support and feeling mentally vulnerable. There too, she also emphasized the struggles related to engaging and acquiring volunteer students for the mentorship program, as AAU has a reputation of lacking a volunteer culture. This is something AAU needs to be aware of and take into consideration if the mentorship program is something they want to implement in the future, as the concept can only work fully if the mentoring students feel engaged in participating and contributing to keeping the service running successfully.

However, it is also something we will emphasize in the following chapters of discussion and reflect, to meet the needs of the students and to improve the concepts based on the insights and feedback given by AAU.

// Deliver

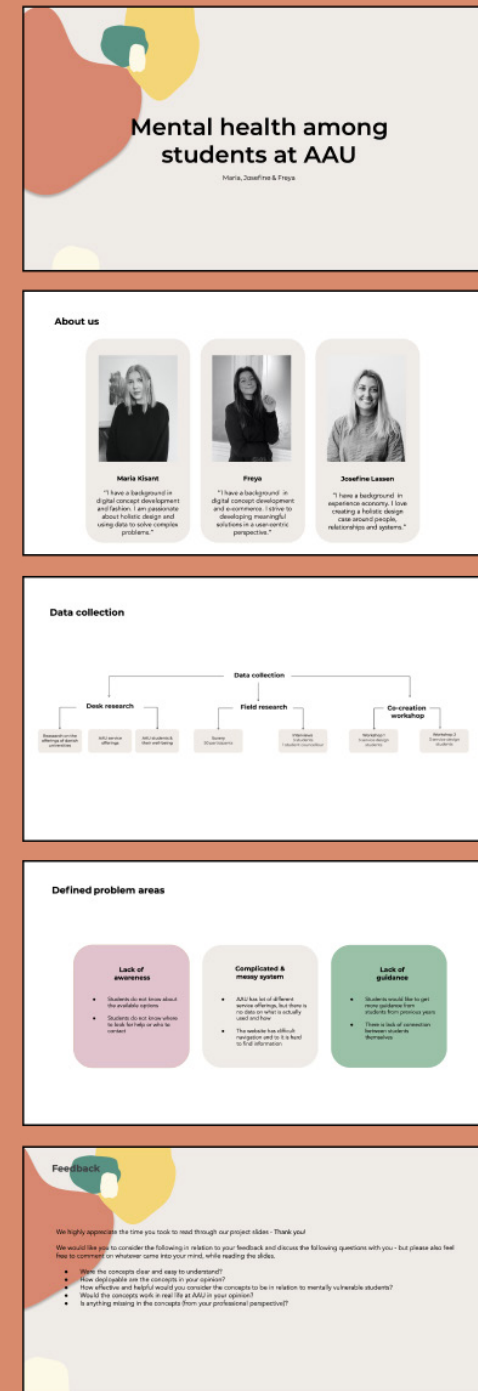


Figure 37: Examples from the product report.

6 DISCUSSION & REFLECTION

DISCUSSION & REFLECTION

This chapter presents the discussion and reflection on the academic research question, based on the key findings and learnings that emerged throughout the case study. The chapter elaborates on how co-creation can use emotional user journey mapping to support the design process. Moreover, the part reflects on the overall process of the design case along with how the process supported the exploration of the research question. Lastly, it is reflected and discussed to which extent the official and personal learning goals and objectives of the thesis have been reached and fulfilled.

The chapter is divided into the following subchapters:

- 6.1** General reflections
- 6.2** Reflection on the official learning objectives
- 6.3** Reflection on personal learning goals

6.1 GENERAL REFLECTIONS

ACADEMIC REFLECTION

For this thesis, we worked with the following research question: *“How can co-creation use emotional user journey mapping to support the design process and creation of a (new) service?”*. Therefore, our literature review focused mostly on co-creation and the role of a service designer during this process. As well as, looking into the emotional user journey as it had a huge potential to support the process of looking into a delicate topic such as mental health and well-being. Additionally, key points and reflections are brought out based on the topics discussed in the literature review in accordance with the design process to reflect upon our key learnings.

Firstly, we looked into service design as a discipline to make sure we follow the design thinking mindset throughout the process. Throughout all steps, we most certainly kept ourselves accountable to keep key principles in mind such as the human-centered, holistic, collaborative, real, iterative, and sequential principles. As a reflection, we managed to follow these especially in Discover and Develop phases where we had a collaborative approach with users and iterated on our processes constantly to create a valuable design experience. Nevertheless, it could be argued that our process could have benefited from putting more emphasis on the holistic approach where we could have included more stakeholders that are experts in their area at AAU. That being said, we faced certain challenges in this part and therefore included a smaller circle of stakeholders.

As we explored the role of the service designer in the literature review it was clear that there are many different ‘hats’ that we would have to wear throughout the process. Since service designers are both researchers, facilitators, experts, programmers, UX & UI designers, as well as designers for many different elements such as blueprints,

user journeys, and much more. Furthermore, service designers are collaborating and tackling different stakeholders at the same time. As a reflection, throughout the process, it was important for us to make sure that we all got to exchange the tasks and ‘hats’ that made us experience the diversity of the tasks and roles of the service designer. What made it easier was that we were working in a team of three people and therefore could support and give constant feedback to each other. We benefited highly from having a very curious mindset in the Develop phase where we made sure that we as facilitators during the workshop asked a lot of explorative questions. Nevertheless, having the same level of curiosity would have highly benefited us already in the early phases of the design process. Therefore, it could be concluded that one of the takeaways from this would be to always stay curious, ask a lot of questions, and make sure to dig deep to find the core reasons and problems.

Furthermore, another key topic that was investigated was the emotional user journey as it captures how the perception of a user changes throughout their experience as well as the emotional aspect is crucial as the experience is what drives users’ stories. Based on that knowledge we saw a huge potential in utilizing this in a concept development phase to map out collaboratively how users would like to feel and experience the service ideally. During this process, we created a very simple user journey map where the focus was on 2 key elements: emotions and ideal touchpoint options. This was supported highly by the creation of conversation cards that were created especially for that occasion. This proved to be a very efficient means, that made it easy for the users to express themselves during the emotional journey mapping.

The answer to our research question *“How can co-creation use emotional user journey mapping to support the design process and creation of a (new) service?”* resulted in the creation of a complex design experience together with customized conversation cards.

By using the cards in the process it helped us to map out the possible solutions in a very structured way as well as helped to open up a discussion between the participants. Nevertheless, it would have been also interesting to test out a broader range of option cards to see if the results would have been different. Also, emotion cards proved to be not as crucial but rather complementary since the emotional aspect was mentioned and brought out during discussions organically. Therefore, perhaps emotion cards could have benefitted us more in the Discover phase during the interviews so that the participants could have expressed their heavy and delicate emotions through cards instead of words.

To sum up, this whole process and result taught us to be more explorative and to try out new methods and ways as it proved to be beneficial for the end result but also enriched us as service designers. It most certainly shaped us as future designers and provided us with a lot of new knowledge, tools, and methods that we can use for future projects.

OVERALL PROCESS

Throughout our project, we have worked with the Double Diamond methodology, which provided a useful framework and structure for our process. At the same time, we have applied the design thinking mindset in all phases to reassure that we stayed human-centered, holistic, and iterative throughout the project. Additionally, we also put a lot of emphasis on being collaborative and co-create with users and stakeholders. However, this will be elaborated on in the 'User involvement' chapter below. It was very beneficial for us to use the Double Diamond in relation to the design thinking mindset, as both the methodology and the mindset really contribute to the service design field.

Overall, we experienced a sufficient and unproblematic process. As we had already been working together for one year, we knew each other's ways of working, which was extremely beneficial especially in a time of Covid-19, where 90% of our work was structured through online platforms. From early on, we agreed that we would have a project manager two weeks at a time, to better structure the agendas and divide work tasks. This project manager role also gave us confidence in being the one in charge and having the responsibility and the overall overview in this period. This worked brilliantly and was continued throughout the whole process. We all experienced a feeling of 'rising up' and taking on more responsibility during our project manager weeks. It also provided the whole thesis with more clarity and created fixed guidelines on how each project week was structured. The role of the project manager in a certain week was among other things to plan, structure, and organize daily meetings, plan an agenda, formulate and distribute tasks with team members, be the main contact of stakeholders e.g. interview participants, and set specific goals for the two coming weeks. When working on a thesis in times of Covid-19, it was extremely valuable to have these fixed guidelines in the foundation of our work. In the beginning, it felt a bit anticlimactic, to be working so much remotely without physical spaces for creative unfolding. However, it, after all, proved to be beneficial for us, as our work was always highly structured, straight to the point, and effective.

From previous projects, we have learned that continuous feedback can help optimize and improve, not only the final concept but also the overall process if you make sure to ask for it and apply it throughout. With this in mind, we made sure to ask our network for help in all aspects of the process where it could be helpful e.g. design of the cards, understandability of the workshop flow, figures and models, and the overall concept ideas. By doing so, we could optimize and validate the design, the process, etc. as we went and at the same time make sure that we got the outside perspective which proved to be very beneficial in all matters.

Another reflection, considering the overall process, was the topic. Throughout the process, we met students, peers, and stakeholders who found the topic very interesting and relevant, which made them feel extremely motivated to participate in discussions, interviews, surveys, and personal feedback talks related to the theme. There was a great agreement on mental health being an accurate and contemporary problem at universities, which is why they like us, saw great potential and room for improvement. This perhaps made the recruitment of participants easier, as there was an incentive to participate and have a say in a discussion evolving the highly relevant topic of mental health.

USER INVOLVEMENT

Even though we experienced a great sense of motivation to help and participate in our process, it was still a challenge to recruit a diverse range of participants. We approached potential participants through both Facebook and LinkedIn posts to get a broad selection of possible participants but ended up with mainly AAU students. We believe that the project could have benefitted from a broader range of participants with more people coming from e.g. other study institutions and other educations. However, this was not the case and we needed to shape the best possible process with what we got. With that being said, it would have been interesting to get the viewpoints of students from other educational institutions, as they might have added some interesting perspectives on possible improvements or services supporting mentally vulnerable students.

Another reflection on our user involvement is concerning the stakeholders. We tried several times to reach out to different staff and stakeholders at AAU, but unfortunately, we only heard back and thereby only interacted with a few. This limited number of stakeholders

made the scope of the workshop a bit narrow, as we decided to keep it involving solely students at AAU, and no stakeholders such as counselors, staff at the well-being guidance service, or members of the study environment board. Had some of these stakeholders been more involved in the overall process, we believe that we would have gotten some interesting and valuable insights that would have helped shape the best possible concept/solution, not only from a student perspective but most certainly also from AAU's perspective. Trying to accommodate this lack of user involvement from the professional AAU side, we reached out to them again here at the end of the process, to set up some feedback discussions and evaluations, to also take their viewpoints into consideration. This approach heightened our overall level of user involvement, as it provided a chance for them to also have a voice in the process and comment on the final concepts. Even though we only heard back from one employee at AAU, her feedback was very valuable and interesting, as she brought out some nice challenges and weak points to be aware of. This feedback will be taken into consideration when further testing and validating the concepts.

Furthermore, our user involvement was affected by the limitations and constraints of Covid-19. First of all, we aimed to plan and execute a physical co-creation workshop, but not long after starting the planning process, we had to restructure and reorganize all elements and activities to fit a remote setting. In combination with using the online tools available and by having some prior experience in conducting online workshops, we managed to create a valuable and successful workshop. However, the co-creation aspect was more challenging to ensure in an online setting, as we as facilitators, needed to structure and progress a dialogue that probably would have been much more self-initiated and fluid in a physical space. Despite the online limitations, we did create a workshop board containing the cards and the user journey, which made it resemble a physical setting of sitting around a table and having physical cards to move and place on the journey map.

After the workshop sessions, we sent out an evaluation form to validate the level of interaction and the cards as a 'tangible' element. It was agreed among the participants that the workshop activities and the cards had worked as intended and created a feeling of being somewhat present and co-creating an optimal user journey altogether.

6.2 REFLECTION ON LEARNING OBJECTIVES

6.2.1 REFLECTIONS ON OFFICIAL LEARNING OBJECTIVES

By working on the thesis project, we managed to strengthen and acquire the service design skills, competencies, and knowledge formulated by Aalborg University. The process allowed us to work with and apply a methodological approach suitable for our design case, as well as obtain knowledge about specific methods and theories to create a good foundation for the thesis project to progress it properly throughout the design process. By conducting thorough research of collecting, analyzing, and synthesizing data we created a good knowledge foundation and an in-depth research wall that we used for all our condensed insights and key findings. Through the various activities and tools used in the thesis, we demonstrated an understanding of the service design discipline and acquired competencies of soon-to-be service designers. From our process, we learned that a curious mindset, a flexible and adjustable nature, and an ability to put oneself in other people's place are crucial aspects of a service designer's characteristics, which we will hopefully benefit from in the future. Other great learnings were the constraints and limitations of Covid-19, which challenged us to be flexible and adapt our planned activities according to the circumstances. The situation taught us, not only to work with online tools, but it proved how much

can be done in remote settings and how to make it a success, which is considered to be highly valuable learning for future projects and work settings.

6.2.2 REFLECTIONS ON PERSONAL OBJECTIVES

The following goals present the personal learning objectives that we wanted to achieve by working on our Service Systems Design master thesis:

- Gain experience in co-creation with stakeholders and users.
- Work with different stakeholders and gain experience in communication and planning while doing it.
- Enhance academic writing through the thesis project.
- Practice and develop strong visual skills in Figma (visualizations, wireframes, etc).
- Gain experience in concept validation and testing.
- Create a project that is valuable and up to date, scalable and that can be used to make a difference for university students.

The goals were set before finalizing a direction and a topic for the project. We had an overall wish to use service design in a meaningful and purposeful way in collaboration with potential stakeholders and users, which is why we determined the personal goals for our thesis as a very first thing when starting off this process.

One important goal that we had for this thesis was to gain experience and develop more competencies and knowledge about how to co-create together with stakeholders and users. This was something we tried to emphasize at all possible parts of the project and was especially emphasized during the Develop phase, where we conducted the design experiment of the co-creation workshop. The workshop allowed us to acquire communication as well as planning

and organizing skills, as the remote workshop setting required us to be especially on-point and clear with all aspects of the communication for it to succeed. In other circumstances, we would have liked the co-creation aspect to be an even bigger part of the project, but in the light of Covid-19, we feel confident that we still managed to implement co-creation to some level, but the overall goal is not viewed as fully fulfilled.

Due to the constraints and limitations of Covid-19, we also needed to restructure all our work into online platforms. By doing so, we developed strong visual skills in Figma, where we made all the design cards, all models and figures for the report, and mock-ups for the final concept. This is now a new program that can be added to our CVs, and another great tool for us to implement in our future service designer toolbox.

Another important learning that we wanted to achieve was to enhance academic writing, which has been fully fulfilled during the writing of the thesis. The thesis left us with two concept descriptions of possible solutions for AAU to implement. However, we wanted to create a solution that was scalable, up to date, and valuable, not only to AAU but also to other universities. The concepts are made in a format that would fit other universities in Denmark, and the further recommendations provided to stakeholders at AAU, are something that we believe could also benefit staff and stakeholders at other educational institutions as this is a problem and a topic that is current and relevant and could make a great difference among students enrolled at all universities.

7 CONCLUSION

7. CONCLUSION

This thesis investigated how to use emotional user journey mapping through co-creation in order to create a (new) service. This was done through a design case where the aim was to create a service for Aalborg University that would improve and support mental health and well-being among the students.

To explore the research question, a design experiment was carried out where conversation cards were created to support the emotional user journey mapping during a collaborative workshop with the users. This proved to be a successful as well as an insightful experiment that as a conclusion led us to a clear solution in the Develop phase. Moreover, this proved to be an interesting learning where it was possible to see the value of the usage of cards in the design process to help users to express themselves by having the cards as a tangible element and as a support throughout the mapping of the user journey. Furthermore, the cards, which were a fusion of the process-based design cards and the more emotional psychology cards, proved to be a great conversation-starter for us as facilitators as well as being a reference point among the participants themselves.

As a result of the design case, the Double Diamond was used as a framework where in each phase different service design tools and methods were used. That led to an outcome where a complex yet realistic solution was delivered together with additional recommendations that came directly from the key research points. Based on that it can be concluded that this thesis contributes to the service design field by showcasing the possibility of using personalized conversation cards in correlation with the user journey in order to map out and validate a direction/a solution that is rooted in the participants opinions and thoughts. Furthermore, the proposed solution is perceived to have real value to the university and we hope that AAU will consider the recommendations for future implementation.

8 REFERENCES

8. REFERENCES

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