

Aiming for Behaviorally Aware Digital Design

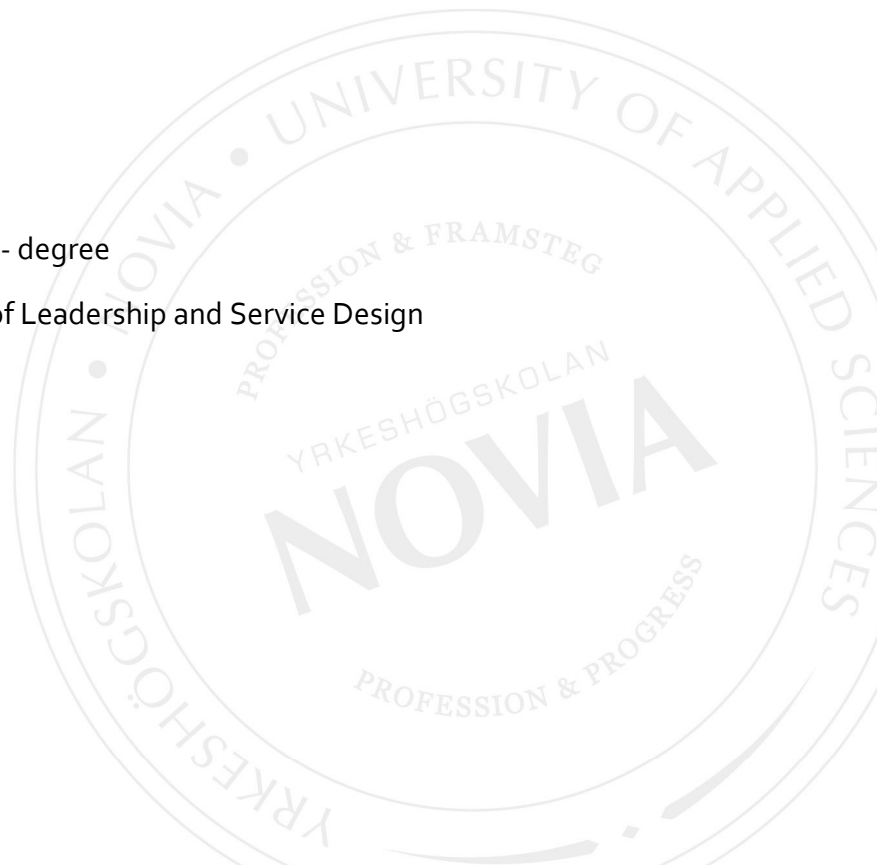
Creating a Training Concept in Digital Nudging

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Abstract

The objective of this thesis was to create a training concept and materials to train designers on how to make better use of behavioral insights and nudging in digital service development. The research questions were: How could digital nudging be exploited in service development more widely? What factors slow down the uptake of digital nudging at the moment? How could training designers support the uptake of digital nudging?

The topic is current since an individual's daily life is full of choices made in digital environments, whether they are interacting with mobile apps on their phone or buying products on-line. Decisions on screens are often made quickly, and what is not always explicit is that this interaction on screen is based on content and structure that has been designed by a service provider defining how the choice options for the user are presented. Industry calls for more behaviorally aware design, yet there is a lack of understanding and practical skills in how the behavioral aspect should be taken into account in digital product design. On the other hand, designing products that intentionally steer human behavior poses new requirements and ethical questions to a designer's work that need to be taken into account as well.

This thesis makes usage of a multidisciplinary approach by combining service design, behavioral economics and information systems sciences in creating a training concept. The methodology and tools included for example, desk research, interviews, surveys, co-creation, prototyping and testing the training concept. The research showed that there is increasing interest among designers and industry towards behavioral design and nudging. Nevertheless, the lack of understanding of the advantages and opportunities of a behavioral design approach, and skills related to making use of it, are currently significant factors preventing organizations from making use of this approach.

Language: English

Key words: service design, behavioral design, nudging

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1. Introduction

Living in the era of digitalization, companies in all industries are forced to consider the question of how digitalization will affect their business, how they reorganize their operations and how they interact with customers as the customer experience is taking a digital shape. From another perspective, also an individual's daily life is full of choices made in digital environments, whether they are interacting with mobile apps on their phone, buying products on-line, reporting working hours in digital systems or buying a public transport ticket from a ticket machine. Decisions on screens are often made quickly and without further consideration, sometimes leading into situations that later on show not to be optimal for the user. How the choice is presented on-screen often affects what is chosen. Human behavior and decision making are influenced by heuristics and cognitive biases due to limited cognitive processing capabilities, resulting in bounded rationality. What is not always said explicitly is that this interaction on screen is still based on content and structure that has been designed by a service provider who defines how the choice options are presented.

How heuristics and cognitive biases affect human decision making differs in a digital and analogue environment. Many of the products that used to be analogue also have a digital dimension these days, thus how people behave and interact with products in the digital environment requires a closer look at. The way heuristics and cognitive biases can be taken into account when designing digital products, needs a differentiated approach than from the guidelines developed for analogue usage. The more in extent and the more efficiently the technological advancements allow the service providers and developers to influence human behavior, the more we need a shift of paradigm from technologically feasible into ethically sustainable solutions: what technology enables is not always sustainable to implement. This requires a particular notion of a designer's ethics when it comes to steering human behavior through design intentionally.

For the last decade behavioral sciences' perspective to customer experience and services has been acknowledged, and behavioral economics is able to provide interesting insights into how people make decisions, even the ones that appear to be the smallest ones, but yet are significant moments during the customer journey. From service providers' point of view, it is worth thinking about how to use behavioral insights in creating services that are viable, functional and lovable, thus creating customer loyalty for the long term. One of the many

ways of utilizing behavioral insights in the design process is called nudging. According to Thaler & Sunstein (2008, p. 6), a nudge is any aspect of the choice architecture that alters people's behavior in a predictable way while not forbidding them any of their options or changing their economic incentives significantly. This way of creating choice architectures that gently and reversibly steer user behavior towards the desired direction has been picked up in many industries, all the way from traditional consumer research to health policies and in recent years even digital services.

In the digital world, the most advanced research and use of nudging are conducted under information system sciences, where this systematic approach of utilizing behavioral insights in a digital environment is called digital nudging. According to Schneider, Weinmann and vom Brocke (2016, p. 1), digital nudging is "the use of user-interface design to guide people's behavior in digital choice environments". In practical terms, the digital nudging can come down to such functions as using defaults, reminders or social references of use, that are common features from everyday use of digital services even though they would not be recognized as nudges.

Digital nudging is a relatively new approach to looking into digital choice architectures, and there is currently a lack of hands-on knowledge of how to make use of digital nudging principles in a systematic way in a design process. It is not exceptional that digital choice architectures are still today developed through trial and error, by finding a solution to a problem by trying out many possible solutions, and learning from mistakes until a solution that works is found (Mirsch, Lehrer & Jung, 2018, p. 2). On the other hand, quite a lot of academic research on nudging and how people interact with technology at the point of decision making exist. In this thesis, I use a multi-disciplinary approach and combine the existing theoretical knowledge of nudging from both behavioral economics and information system sciences. As a result of this research and development project, I created a training concept and materials to train designers on how to make better use of digital nudging opportunities. By this work, I hope on my part to bridge the skills and knowledge gap that at the moment exists between the academic research and designers, the latter being those who in practice create the choice architectures for our everyday usage. The training materials are not included in this document, but their structure and content are described in Chapter 7.

Service design offers the tools needed to work in this area to look into the decision making moments that take place along the user journey. In fact, I claim that the power of influencing people's daily choices in the digital era quite often relies on those people who don't even

know they possess such power: user experience (UX), user interface (UI) and service designers. In the context of intentionally designing for altering human behavior, this requires a gentle reminder - designers work, and responsibility does not end when the service is ready to be released. It continues as long as the choice architectures created are in use and steering people's decision making. This is a default option that a designer cannot opt-out from.

2. Research problem and questions

With this thesis, I aim at increasing awareness and lowering the threshold for utilizing nudging in digital service development. The outcome of this thesis is a training concept targeted for designers to enable them to make more extensive use of digital nudging in their work. In the area where there is quite a vast amount of academic research already existing about the topic, the designers need easily to test and deploy knowledge for recognizing the opportunities for nudging, and concrete examples of how digital nudging has been used successfully, for example in user interface design work.

According to Saaranen-Kauppinen and Puusniekka (2009), a functional research problem is clear and unambiguous. By defining the research problem well, it is easier to steer one's work and research better towards what is meant to be researched and developed, and it prevents one from getting lost on exciting, yet unnecessary, side-tracks. Quite often, the research problem and questions change during the research process, and when applying service design thinking in research, the reframing and iterating the problem is typical during the research process. In qualitative research, which is the case here, it is more often useful to set more general targets for the research and prepare oneself to iterate, than to set predetermined goals and rigid problems already at the beginning of the process.

The research problem of this thesis is defined as:

Digital service designers need more hands-on knowledge about utilizing digital nudging to be able to make use of it in service development.

The hypothesis being that:

Nudging would be more widely utilized if there were more hands-on knowledge available and awareness of what it is and how to make use of it.

This thesis answers the following research questions:

RQ1: How could digital nudging be exploited in service development more widely?

Supporting research questions:

RQ2: What factors slow down the uptake of digital nudging at the moment?

RQ3: How could training designers support the uptake of digital nudging?

3. Project schedule

A Master's thesis can be considered a project, containing a specific timeline, the goals and the resources available. Objectives of this project have been presented in the section "Introduction", and the figure below, inspired by the Design Council's framework for innovation (2019), shows the schedule of the thesis project.

The desk research on the subject and methods have been conducted largely during summer 2019. Gathering the primary research data through surveys, interviews and workshops took place from October until December. Analyzing the actual results, and creating and testing prototypes took approximately six weeks starting in November. Finalization of the thesis took place in December.

This thesis project does not have an external commissioner. Co-creators of this project included individual UI/UX designers, design professionals specializing in behavioral insights, and design communities such as Ompeluseuran Palvelumuotoilijat that took part in the process from the end-user perspective.

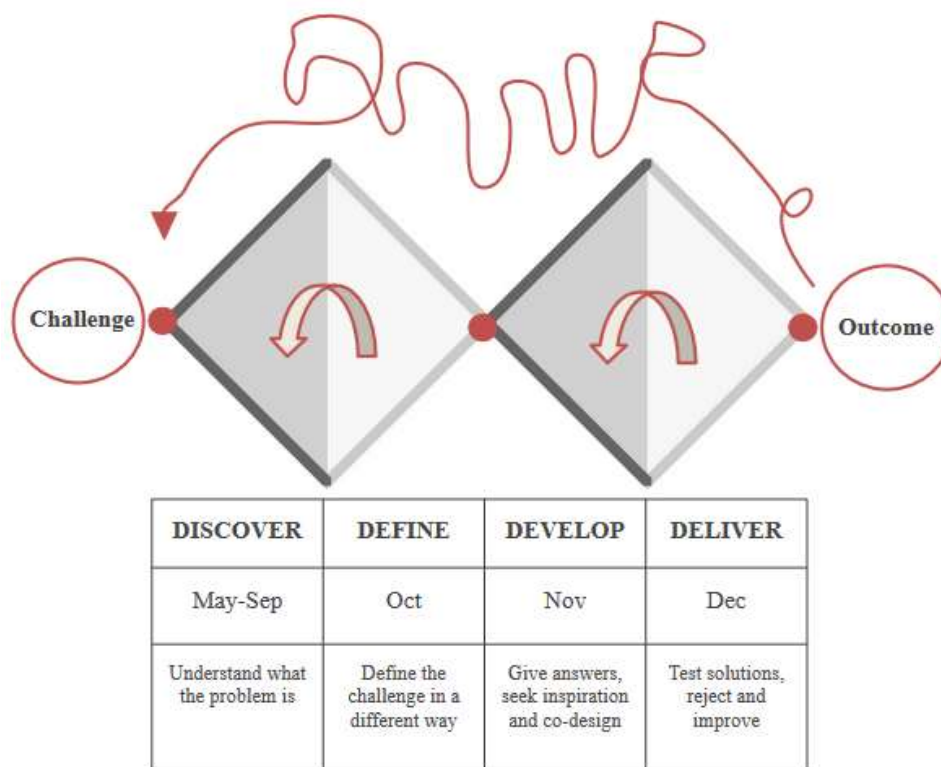


Figure 1: Project schedule.

4. Theoretical background

Service design is, by nature, interdisciplinary and there are several different disciplines that comprise service design. This position of not being defined or managed by a single discipline allows freedom for continuous evolution and exploring new ways of applying service design. Combining it with more established academic disciplines opens new perspectives for research and development activities. Bringing experimental and iterative elements of service design to disciplines that are more known for utilizing convergent rather than divergent thinking creates paths for innovative thinking and discovering new. New knowledge is constantly created within and with the help of service design by combining further information with old, known with unknown and proven methods with experimental ones. This requires a solid theoretical background to back up what has not yet been done, with facts and deep understanding of the phenomenon being examined.

4.1 Frame of reference

A frame of reference describes what kind of theoretical aspects are taken into account in the research process, how these aspects are connected, and how they support the main idea of

the thesis. In this thesis, I look deeper into how information systems sciences and behavioral economics approach the question of nudging, and how these views can give support in creating easy-to-apply information for recognizing the opportunities to use nudging in a digital environment. Service design and design thinking allow us to use that theoretical information, enrich it with further research and support the work by providing a sequenced process to develop the solution from a user-centred point of view.

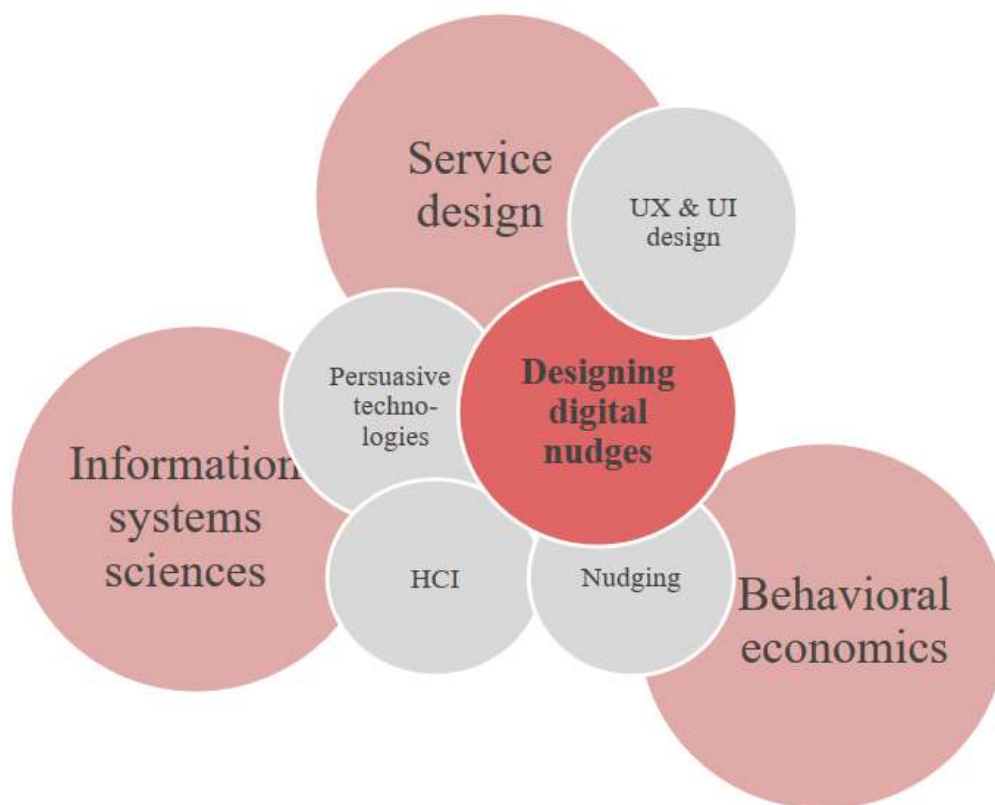


Figure 2: Frame of reference.

4.2 Behavioral economics and nudging

Since the late 19th century, economics has seen human decision making through the lenses of homo economicus, whose decision making is perfectly rational in pursuing wealth for his own self-interest, and being aware of the possible costs and benefits that come along with alternative actions to choose from. This view has during the last decades been challenged by behavioral economics by combining psychology and economy to get a richer, and more realistic, look at people as decision-makers. Behavioral economics recognizes that there are psychological, emotional, cultural, cognitive and social factors that profoundly affect human decision making, and seeks to understand how people make choices that from another perspective may appear irrational.

In addition to the scientific community's interest towards the behavioral economics approach and concepts about consumer decision making, it has attracted public attention during the last decade, thanks to well-popularized science by such books as *Thinking Fast and Slow* (Kahneman, 2011), *Nudge* (Thaler and Sunstein, 2008), *Predictably Irrational* (Ariely, 2008) and *Hooked* (Eyal, 2014). With the take-up of the behavioral sciences approach towards society and change, behavioral economics has become a staple in the understanding of ways to engineer environments to promote sustainable and positive behavior changes. (Reed, Niileksela, & Kaplan, 2013.)

The concept of nudging was introduced for the first time in behavioral economics by Cass Sunstein and Richard Thaler in their book *Nudge: Improving Decisions about Health, Wealth, and Happiness* (2008, p. 6), where they argue that individuals' choices are often irrational, which sometimes makes paternalism necessary by helping people make choices that are good for them. As Thaler and Sunstein formulate:

“A nudge, as we will use the term, is an aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting fruit at eye level counts as a nudge. Banning junk food does not.”

For the designer, the task is to create a decision making architecture that increases the likelihood of certain behaviors by addressing specific psychological effects, by either making use of them or by helping the users to overcome those. According to Sunstein (2014, p. 583), nudges can, for example, be notifications that inform consumers of an alimentary about calorific intake or labels on products that tell about nutrition, yet the consumer decides what to do with such information and whether it affects one's behavior. In the U.S. an example of a nudge is a case of automatic registration for a pension plan with an opt-out option, thus preserving the full freedom of acting according to nudge or to consciously act against it, for instance by opting out from the pension plan.

Almost ten years later after the book "Nudge" by Thaler and Sunstein, the concept of nudging as it is used in behavioral economics has gone through only some slight modifications, mostly due to discussion on whether nudges are always libertarian paternalistic by definition, which has been an assumption of some economics. One of the most recent and widely accepted ways of understanding nudges is from Pelle Gudmond Hansen (2016, p. 158) who has defined the so-called minimal definition of a nudge as follows:

“Minimal Definition: A nudge is a function of the choice architecture that alters people’s behavior in a predictable way (1) that is called for because of cognitive boundaries, biases, routines, and habits in individual and social decision-making and which (2) works by making use of those boundaries, biases, routines, and habits as integral parts of the choice architecture. Thus a nudge amongst other things works independently of (i) forbidding or adding any rational relevant choice options, (ii) changing incentives, whether regarded in terms of time, trouble, social sanctions, economic and so forth, or (iii) the provision of factual information or rational argumentation”.

Hansen’s reformulation of the nudge is successful in the sense that it points out that, in relation to and as differentiated from other possible interventions to human behavior such as the provision of actual information and rational persuasion, nudges may incorporate incentives while even being consistent with the removal of certain types of choices (Hansen, 2016, p. 158). This aspect and insight are worthwhile, also when taken into consideration when creating digital choice architectures.

4.3 Nudges - Choosing fast and slow

The human decision-making process and acts are, according to behavioral economics findings, irrational because of cognitive, emotional and social factors (Thaler and Sunstein, 2008). The underlying mechanisms of how nudges work rely on the concept of dual-process theories or so-called two modes of thinking, that explains how human thinking works when taking a decision. Daniel Kahneman (2011, p. 20) explains this dual-process as distinguishing between System 1 and System 2, that take action under different circumstances:

- **System 1** operates automatically and quickly, with little or no effort and no sense of voluntary control.
- **System 2**, instead allocates attention to the effort requiring mental activities. System 2 is slower in information processing and is controlled deliberately.

For instance, when one detects that one object is more distant than others, or one is driving a car on an empty road; these are examples of the kind of situations where System 1 takes control of how a human perceives information and behaves according to it. These kinds of capabilities of System 1 we share with other animals, and we are born to perceive the world around us without specific intention or effort.

The mental activities related to System 2 require attention and are easily disrupted if one's focus is drawn away. To give some examples, one is using System 2 thinking when walking at a faster pace than feels natural, telling someone a specific phone number or searching for memory to identify a surprising sound. (Kahneman 2011, pp. 20-23.) Table 1 below illustrates how Hansen (2016, p.16) has distinguished the main differences between the two systems based on Kahneman's model.

Table 1: Two cognitive process theories

System 1, Automatic Thinking	System 2, Reflective Thinking
Uncontrolled	Controlled
Effortless	Effortful
Associative	Deductive
Fast	Slow
Unconscious	Self-aware
Skilled	Rule Following

According to recent studies, most everyday activities are mainly driven by System 1, which makes human decision making prone to cognitive biases and heuristics. (Kahneman, 2003). In this context, heuristics means a problem-solving method that uses mental shortcuts to produce solutions that at the moment feel good enough, but later through deeper reflection may prove not to be optimal. As an example of heuristics, let us assume that there is a given deadline to come to a conclusion, and one takes an illogical action based on a selective use of data because of feeling pressure from peers. This choice made can appear good at the point of the decision making, but with more thorough reflection one understands that the primary reason for this choice was merely due to peer pressure and the decision making was steered by a simple heuristic.

A cognitive bias instead means a systematic error in human thinking that affects decision making or judgements that people make. Cognitive biases reduce the mental workload related to decision making and help in making decisions faster. They can, for example, be based on memories about earlier experiences that steer towards making the same decisions as previously without thinking twice. Due to the limited capacity of the working memory, brains tend to prioritize the most recent data as a basis for decision making.

Since the background of nudging is in behavioral sciences and many of the nudging principles and nudges themselves are developed in an analogue world, it is worthwhile to look deeper into the specifics of nudging in the digital environment, since nudging principles in the analogue world cannot be entirely copied and directly transferred to the digital environment. The heuristics and cognitive biases existing in the analogue world also exist in the digital environment when people make decisions. Nevertheless, how the biases and heuristics affect our decision making, how much significant influence they have, and how well the nudges designed work in a digital environment, differ to quite an extent to how they are in the analogue world. Therefore it should be acknowledged that they need to be treated separately when planning to nudge service users, for example in a service that takes place both in an analogue and a digital environment.

4.4 Nudging in the digital environment

Nudging as a method, whether it happens in an analogue or digital environment, builds on the existence of System 1, where the choice architecture plays a significant role in framing the options available for the user. According to Benartzi and Lehrer (2015), the users of digital services are largely using the automatic and intuitive mode of thinking, the so-called System 1 as explained earlier, which affects the decision making within highly visual and information-loaded digital environments. Whether it is intentional or not, designers of digital environments hereby become architects of those choice structures that are displayed on the screen.

The concept of digital nudging was more widely introduced for information system sciences in 2016, even though some attempts to make use of a behavioral economics approach in the digital environment had taken place already earlier. Currently, digital nudging can be described as a promising field of information systems research (Mirsch, Lehrer, & Jung 2018, p. 2.)

Weinmann, Schneider and vom Brocke's (2016, p. 4) definition of digital nudging is currently the one most widely spread and used in information systems sciences:

"... "digital nudging" as the use of user interface design elements to guide people's choices or influence users' inputs in online decision environments".

Here the digital nudges are intentionally and systematically designed elements that make use of understanding human decision-making process within digital environments, such as in

user interfaces. Digital nudges can, for example, be functions that ease the decision making by reducing individuals' physical or mental effort. For instance, a set default option is created for the user to reduce the effort of making the decision herself. For example, in the figure below the default option relies on the cognitive status-quo bias that the human brain tends to minimize the tasks that require decision making, thus leading the user to behave in an intended way. (Caraban et al. 2019, p. 2). The figure below demonstrates how the user interface utilizes default options in steering user behavior. In this example, the software sets the default option being that the user wants to open the file, instead of saving it, and hereby reduces the user's need to make decisions during the process.

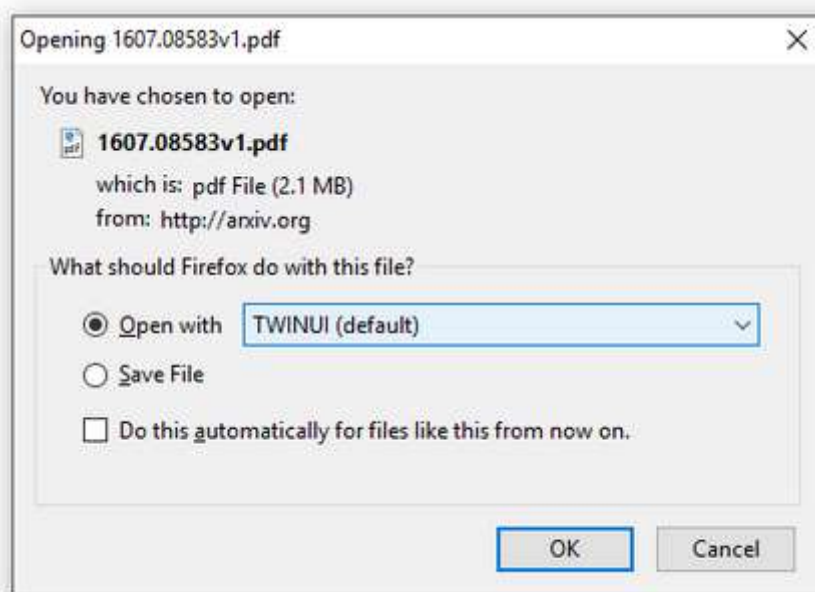


Figure 3: Default option on the screen.

The behavioral economics approach to nudging can be often described as libertarian paternalism, as Sunstein and Thaler (2008) are calling for users' right of maintaining their freedom of choice to prohibit them from making harmful decisions that cannot be undone. For comparison Weinmann, Sunstein and Vom Brocke, having a background in information system sciences, do not limit their research interest to situations that lead to decisions of users' own good, in fact they recognize that "the mechanisms used to nudge people can be used regardless of the morality or virtue of the goal" (2016, p. 4). At the moment, the most widespread usage of digital nudging is taking place in e-commerce fields and in digital services targeted for altering consumer behavior.

The nudges in the digital environment make use of the same System 1 patterns as the nudges in an analogue world, but how the nudges are designed and how efficient they are, vary a lot depending on the context. The interesting character of digital nudging in contrast to nudging in an analogue environment is that digital nudges are relatively easy and low-cost to test and monitor, which makes them a fascinating subject to prototype and test when designing user interfaces.

From a designer's point of view, digital nudging is about how to identify the contact points along the user journey where the user makes a decision. That decision may appear as a click made with the computer mouse on the screen that indicates the user's particular selection, or choice to continue to the next step and contact point of the service, just to give an example. Digital nudging is about designing choices to be made by the user in the online context. In successful cases, we can integrate the design of these moments of decision making into service design and UX process to serve the whole service experience. By identifying these contact points along the user journey, we are able to modify and adjust the choice architecture within the user interface to better meet the user's and service providers' needs.

4.4.1 Models for designing digital nudges

The topic of digital nudging has been under lively discussion and academic debate for a couple of years now. The on-going debate takes place mainly in information system sciences and human-computer interaction studies, and amongst persuasive technologies researchers. Digital nudging and persuasive design both aim at design with the intention to guide users through the decision making towards a goal that is set by the service provider. Even though digital nudging is considered a relatively fresh perspective on design, the concept of persuasion is not new in human-computer interaction studies. The thinking of putting the focus on design elements to alter human behavior arose for the first time in academic discussion at the beginning of the millennium. There are two views within human-computer interaction studies that have influenced this thinking more than others: Persuasive Systems Design by Oinas-Kukkonen and Harjumaa (2009) and Fogg's Behavioral Model (FBM), which was published in 2009. From a persuasive systems perspective, the concept of persuasion is considered as a form of human communication that is aimed at automated judgements and actions of others. Oinas-Kukkonen and Harjumaa (Oinas-Kukkonen & Harjumaa 2008, p. 202) define a persuasive system as "a computerized software or information system designed to reinforce, change or shape attitudes or behaviors or both without using coercion or deception".

According to Castmo and Persson (Castmo & Persson 2018, p. 9), there are similarities between persuasive design and digital nudging that they have summarized in a theoretical intersection model combining these two. This model is based on the research of Oinas-Kukkonen and Harjumaa, and Thaler et al., and the main differences are seen as persuasive design being an attitude-oriented design strategy, that aims at changing attitudes and behaviors, whereas digital nudging is a decision-oriented design strategy that steers users to targeted behaviors and decisions. For instance, Fogg's Behavioral Model differs from digital nudging in the sense that digital nudging aims at leading to beneficial decisions and preserving the freedom of choice, by providing opportunities to undo already made decisions.

It is still worthwhile noticing that persuasive technologies' emphasis on taking the behavioral aspects into account has been on what can be done from a technological point of view (feasibility), whereas the other two perspectives from a service design point of view, financial viability and service desirability, have not been of great research interest in human-computer interaction studies. This aspect is of importance for service design studies and especially in applied sciences.

Weinmann, Schneider and vom Brocke's (2016, p. 4) input for the academic discussion about digital nudging in human-computer interaction studies is presented as a digital nudging process for digital environments that entails the phases of defining the digital context, understanding decision-making process, selecting and implementing the nudge and testing it. This process description served Mirsch, Lehrer and Jung (2017) to iterate the process model thinking, by concentrating on the phases of understanding the decision-making process from a psychological mechanisms point of view and selecting the appropriate nudges to alter user behavior.

Other results from Weinmann, Scheiner and vom Brocke's call (2016, p.435) for information system science researchers to "engage in research on digital nudging." Meske and Pothoff (2017) developed their own "digital nudging process model" (DINU model) to bring behavior change elements from behavioral economics, nudging, and persuasion integrated thoroughly. Their intention was to provide a tool for the application of digital nudging and to support choice architects in the utilization of selected nudging elements.

After studying several models created by researchers representing both behavioral economics and information system sciences, the most solid one from an applicability point of view is the "Digital Nudge Design Method" from Mirsch, Lehrer and Jung (2018). This

model is presented in the figure below and serves as a basis for the training materials created. The "Digital Nudge Design Method" aims at creating a systematic process for designing digital nudges, by incorporating theoretical and practical requirements (Mirsch, Lehrer & Jung 2018, p. 2). This method is comprised of four phases: (1) Digital Nudge Context, (2) Digital Nudge Ideation and Design, (3) Digital Nudge Implementation and (4) Digital Nudge Evaluation, and each of these phases included sub-phases, tools and techniques.

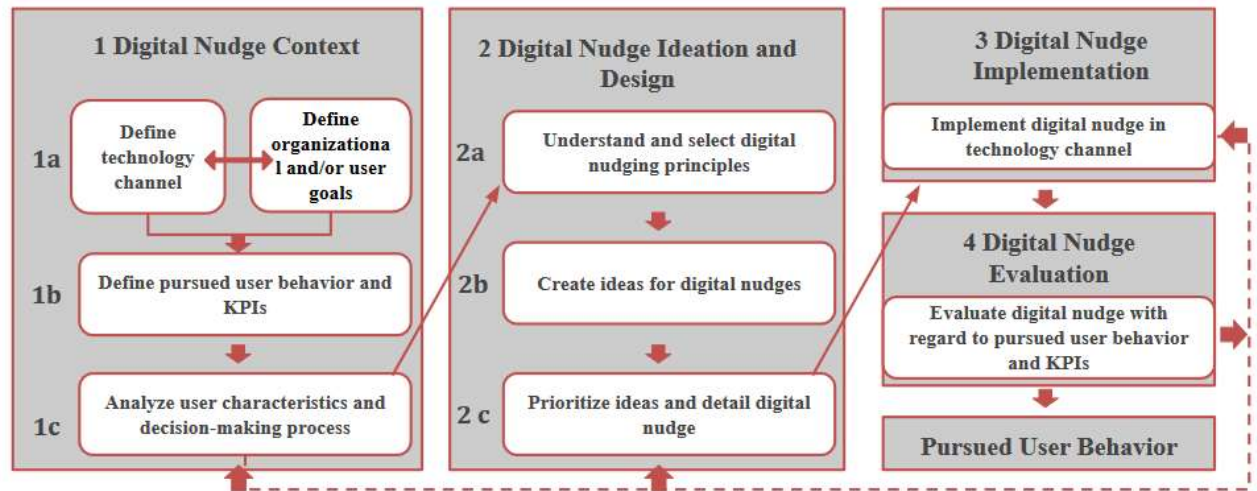


Figure 4: Digital Nudge Design Method.

The Nudge Method and several other models for digital nudging referred in this study still miss the point of making the research results usable and applicable by designers: Mirsch, Lehrer and Jung (2018, p. 2) have tested their concept in collaboration with six companies, but apart from the article published in the Thirty-Ninth International Conference on Information Systems (2018), no applicable materials have been published to make use of The Digital Nudge Design model.

As the discussion within systems sciences show, there has been research about persuasion techniques and nudges in the digital environment for almost a decade. Nevertheless, the research and academic discussion have focused on what are the mechanisms behind applying nudges, but there is not that much of knowledge about how to design digital nudges efficiently. In this setting, my thesis contributes to the implementation and applicability of the research by developing this academic research into training material that can increase designers' awareness and interest towards the use of digital nudging.

4.4.2 Creating nudges that make a difference

Not all nudges are efficient and affect user behavior as planned. Actually, according to some studies, the majority of nudges fail in delivering what the purpose is. Sunstein (2017) claims that these failures are by and large caused by strong existing preferences of users that are more powerful than the nudges made by choice architects, and the other notable factor is so-called "counter-nudges" that confuse the users. It should also be pointed out that there can exist efficient and non-efficient nudges in service simultaneously, if not planned and tested correctly.

As in any design process, when designing nudges one must familiarize herself with the actual user needs at the beginning of the process, to ensure that the chosen nudge will affect the user behavior in the way that is planned. According to Adams et al. (Caraban et al. 2019 p. 1), in human-computer interaction studies related to behavior change technologies, 94% of them tap to so-called System 2 thinking and reflective mind even though up to 95% of people's daily decisions are based on System 1 automatic mental processes. Caraban et al. hereby claim that many of the tools behavior change technologies use are too information-centric, assuming that people lack information in order to change their behavior.

In online nudging research, there are dozens of nudges that can be deployed and studied. The nudges that were selected for this training purpose were chosen based on Dennis Kaiser's systematic scientific literature review, that has evaluated which are the most efficient nudges in the online context. Kaiser analyzed the results of 100 scientific articles about nudging in the digital environment and estimated the efficiency of ten different nudges. (Kaiser 2018, p. 64.) In his quantitative analysis, out of 310 effects 63% have statistical significance, reported as a p-value of 0.05 or lower. The table below presents the ten nudges that have been proven to have a significant effect, having the highest median and average size effect. (Kaiser 2018, p. 67.)

Table 2: Effect sizes by nudging category.

Nudge	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
# of studies (# of effects)	21 (62)	4 (12)	12 (49)	14 (41)	3 (18)	2 (6)	13 (34)	3 (8)	4 (7)	4 (7)
Median effect size	51%	25%	21%	25%	11%	20%	7%	8%	39%	20%
Average effect size	50%	24%	27%	30%	20%	30%	7%	22%	20%	23%
#1 default #2 simplification #3 social reference #4 change effort #5 disclosure #6 warnings #7 precommitment #8 reminders #9 elicit implementation intentions #10 feedback										

In order to keep the training concept and materials concise and easily understandable, only five out of the ten most efficient nudges were selected for the training. They are default setting, social reference, warnings, simplification and reminders. These five were selected as they have a proven effect, and from a user interface design point of view they are relatively easy to understand. Table 3 below summarizes the characters of these five nudges and the nudging principles behind them. The table also forms the basis for the training materials planned to bridge the gap between the theoretical and hands-on knowledge of designers, to further utilization of digital nudging.

Table 3: Presenting nudging principles and implementation.

Nudge	Nudging principle	Cognitive bias or heuristic	Operationalization	Implementation example
Default setting	Status quo bias	The tendency of individuals to remain with the current status, as potential disadvantages of change are perceived to be higher than potential benefits. Default setting correlates with loss aversion.	Are there any buttons or check-marks that are already marked as selected?	Default options, e.g. in software packages or in e-commerce, pre-selected option of a buyer wanting to receive newsletters or special discounts for the email address given in the order form.
Social reference	Social norms	Individuals tend to orient towards the behavior of others, searching for social proof for when unable to decide by themselves	Does the UI refer to other users' behavior?	The UI refers to how other users have chosen, e.g. "other users were interested in these articles available on our company blog."
Warnings	Loss aversion	The losses and disadvantages resulting from a decision are weighted more heavily than possible gains. Individuals tend to avoid risks	Does the UI design or flow create a feeling of the haste of pressure to decision making?	Typically graphics or texts to trigger time pressure or to warn about possible loss. For example, when booking a hotel room to announce how many other people are looking at the same room.
Simplification	Simplification	Programmes should be easily navigable or even intuitive; complexity puts people off	Can you recall a very simple sign-up process for a service?	Simplifying enrolment process, forms etc.
Reminders	Reinforcing	Reinforcing behaviors through increasing their presence in individuals thinking. Reminding people of doing something, timing greatly matters.	Is there repetition targeted on the user?	Reminding people with pop-ups, SMS, email notifications to finalize registration for a service or about an appointment, for example.

4.4.3 Nudging with ethics

As already referred to earlier in this thesis, the ethical questions of who should nudge, how, and with what purpose are such that they cannot be disregarded. Designs that intentionally aim at steering people's choices and behavior are always prone to misuse. Therefore ethical considerations should be included already at the phase of defining the design, to avoid harmful nudging, even before the service or product is tested or launched.

According to Thaler and Sunstein (2008), nudging should always take into account the following ethical principles:

- 1) The nudge should be transparent and never misleading.
- 2) The original set of choices should remain available.
- 3) It should be easy to opt-out of the nudge (for example, in a single click).
- 4) The behavior being encouraged should improve the welfare of those being nudged.

As opposition to nudging, which as a concept entails the assumption that the means are good, the idea of sludging presents the idea of using cognitive biases and choice architecture to nudge people badly, in a way that their behavior is not in their own best interests but instead is benefiting someone else. According to Sunstein (2015), sludging usually steers people towards wasting money or time, for example, and quickly leads to regret afterwards.

Another view on ethics and nudging is provided by Lembcke et al. (2019, pp. 9-12) from the information systems' side about digital nudging's ethical principles. They argue that 1) digital nudges should preserve the entire freedom of choice of individuals and they must be easy to avoid 2) for the sake of transparency digital nudges should take into account the ethical considerations of algorithms, and digital nudges should be made comprehensible and transparent to nudgees as well, 3) designing nudges should consider goal-oriented justification, which can be supported through digital user research and feedback tools to collect data, on the consent of the nudgees.

Weinmann, Sunstein, and Vom Brocke advocate (2016, p. 4) that "it is essential for designers to understand the effects so they can choose whether to nudge users deliberately or reduce the effects to increase free will." Designers may be tempted to over-nudge, as digital nudging elements are relatively low-cost to implement. The digital environment is often overloaded, which affects the user behavior, and digital nudges are often more difficult for users to identify than in an analogue environment. This puts an even bigger responsibility on

designers who work on digital choice architectures and services not to misuse limited human cognitive capabilities, and also to be aware of the multiple opportunities that the laws of digital environments pose on human behavior. The line between perfect nudge and limiting the autonomy of individuals is a thin one, and it requires constant evaluation if nudging is implemented on ethically sound grounds.

4.5 Service design and design thinking

Whereas behavioral economics make use of theoretical knowledge on how people behave when making decisions, and information system sciences take this behavioral perspective into the digital sphere, I believe design thinking can bridge the gap between theoretical knowledge and practical implementation, resulting in better service experience making use of these scientific findings from a very multi-disciplinary perspective. Some of the existing nudging models have been structured in ways that respect sequencing often described as characteristic to design thinking, as is described in section 4.4.1., but there is not much evidence of the applicability of these findings in services yet.

In this thesis, the term design thinking is used as an approach to solving complex problems in a human-centred way, whereas service design is understood as a design-based approach to service innovation which has its focus on understanding human experiences, and translating this understanding to better services (Sangiorgi & Prendiville, 2017, p. 8). Service design is seen as a discipline for innovation, having characteristics that encourage the discovery of new perspectives, and new problems to be tackled with new solutions, in collaboration with users and other people involved in the service experience.

Service design applies design thinking in a practical way, and according to (Stickdorn, Hormess, Lawrence & Schneider 2018, p. 26), sequencing is a typical characteristic of service design; hence service should be able to be visualized as a set of interrelated actions. Chasanidou et al. define service design as a “multi-stage process whereby organizations transform ideas into new or improved products, service[s] or processes” (Chasanidou et al., 2015, p.16), which when taken with Stickdorn et al., emphasizes the sequential nature of service development when making use of service design.

This sequentiality can form a basis for a structured and well-clarified process for testing new elements for service development, as well as in identifying the use of nudges in services and visualizing them through blueprints or journeys, for instance. Service design helps in making use of multiple methods to look more deeply into how people use and experience services.

Service design is not only designing for people, but with people, and therefore it should include research across all stakeholders (Polaine et al., 2013, pp. 38-41). The tools used in service design enhance design activities and involve users in an efficient way that places the user at the centre of the service development process. More of the chosen methods and tools to be used are presented in chapter 5.

To summarize, service design and design thinking allow us to use that theoretical information that already exists about digital nudging, enrich it with further research and support the work by providing a sequenced process to develop the training concept from a user-centred point of view.

5. The design process and research methods

Service design is often described as a design process that starts by identifying the context and needs, then moving towards the solution through research, prototyping, testing, and iteration phases. Actually, trying to describe service design without touching upon the process aspect is nearly impossible, because the process gives structure to the creativity, thus turning it into service innovation. According to Koivisto, Säynäjäkangas and Forsberg (2019, p. 42), service design is simultaneously creative and analytical by combining user research and creating solutions into one process. The design process is not only a passive structure supporting separate functions, but they identify the *raison d'être* for the process being:

- **Identifying opportunities for value creation** by understanding user and customer needs, and
- **Creating value propositions and improving the quality of the service** by developing creative solutions that match the user needs and obey preconditions set by the service provider

There are many variations of the process of design thinking or service design that have something in common: they are often described as having from three to seven different phases that all have a separate function. They all root back to Herbert Simon's principles that were introduced already in 1969. (Dam & Siang, 2019) In this thesis, I utilize it as the main framework for the process of the Innovation Framework of Design Council, which has been redesigned with some adjustments in 2019. More about this framework is presented in section 5.1.

The research methods and tools to communicate and elaborate on the results of this design process are selected based on how they support the process from the beginning until the end. Designers' core skills rely on methods that make user and customer research, facilitation, ideation and conceptualization efficient and easy, and in knowing when to choose which tool or method. The tools and methods used are presented in each subsection of the process in more detail, and table 4 summarizes them.

Primary and secondary research refer to types of information that are used to gather the research data. Primary sources, also known as field research, are first-hand accounts of a topic, of which the research data is collected during the time of the study. Primary research techniques include, for example collecting data through observation, interviews, or questionnaires. Primary research sources, for instance, can consist of data sets created, photos, or texts, for example, from design probe diaries. (Healey Library 2019, Curedale 2013, pp. 34-35.) Primary research can often be time-consuming, which in other terms means higher costs than in secondary research. On the other hand, in cases where there is no valid secondary research available, primary research may be the only option.

Secondary research refers to existing research, usually done by others, and it is formed based on primary research. Resources for secondary research can be, for instance, books, websites or newspaper articles that help researchers in defining the research context, analyze data or frame the research questions. The advantages of using secondary research data in a study are for example, that there is usually a lot of data available, it is at relatively low cost, and it can be useful in, for instance, studying trends. The downside obviously is that at times secondary research data may not be aligned with one's own research goals or the data is too much affected by the context of its collection. (Curedale 2013, p.35.)

Obviously, both are needed - primary and secondary research - to have a full picture of the extent of the problem. Secondary and primary data complement each other and help in validating the research problem, questions, and possible solutions. Service design usually makes use of both. In this thesis, I use several secondary data sources that are listed as references at the end of this thesis. Table 4 below summarizes the methods and tools that have been used in this thesis. The initial research phase included light interviews with specialists to form a preliminary understanding of the topic and approach for the actual research process. The research phase included three different surveys: for designers, specialists and potential customers. Altogether seven people were formally interviewed, to gain a better understanding of the problem being solved and the most relevant topics for the

training concept. To complete knowledge of the training needs benchmarking about similar training opportunities, and online ethnography was conducted. There were two training workshops organized to test and iterate the concept. The primary research data was gathered by test and learning cards, personas, empathy maps, a business model canvas, an affinity diagram, a SWOT and an advertisement leaflet about the training prototype. All these methods and tools used are presented in sections six to nine in more detail, and in suitable parts as appendices.

Table 4: Processes and outputs.

Process phase	Methods	Purpose	Outputs
Initial phase	A first preliminary interview with behavioral insights specialist	Gain an understanding of the problem from an industry point of view	Ideas for the training concept
	Desk research about digital nudging	To gain a better understanding of the essential insights	Scoping most crucial topics for the training material, mind mapping the topics
	A second preliminary interview with behavioral insights specialist	Gain an understanding of the current status of the usage of behavioral insights	Ideas for interviewing experts
	A preliminary interview with an adult pedagogue	Ideation and feedback about the training concept	Version 0.1 of the training concept
Discover	Benchmarking existing training materials related to nudging	To gain an understanding of what concepts already exist	Version 0.2 of the training concept, test card
	Survey for designers (35 answers)	What are the designers' training needs regarding digital nudging	Version 0.3 of the training concept, personas
	Survey for behavioral insights specialists (6 responses)	What are the needs of the usage of behavioral insights from the industry's perspective?	Version 0.4 of the training concept, personas

	Online ethnography	What kind of needs and interests exist in online communities?	Thematic analysis
Define	Interview with designers (five interviews)	To specify problems and needs	Version 0.5 of the training concept, learning card
	Interview with behavioral insights specialists (2 interviews)	To validate the problem to be solved	Version 0.5 of the training concept, input to BMC
Develop	1st workshop with designers 26 Nov	To test and iterate the training concept	Feedback, Version 0.6 of the training concept
	2nd workshop with designers 9 Dec	To test and iterate training concept	Feedback, Version 0.7 of the training concept
Deliver	Drafting the minimum lovable product	To identify gain creators	Minimum lovable product, business model canvas
	Finalization of the training concept	To synthesize knowledge into a product	Training advertisement, SWOT analysis
	Survey for potential customers (5 respondents)	To learn about the desirability and price range	Data about the financial viability

5.1 Design Council's Framework for Innovation

The Design Council's Framework for Innovation has been known as the double-diamond model for more than a decade now. In this study, I use the version that was updated in 2019 to match the needs of today better. The double-diamond model has been one of the most popular tools, if not the most popular, to explain how the design process works when creating innovations with the help of design thinking. Even though all industries have their own approach to design and ways of working, there are some commonalities in the creative design process that have been well captured in the double-diamond model. The double-diamond model has its roots in the divergence-convergence model that was introduced by Bela Bethany in 1996. (Hambeukers, 2019.) Nevertheless, as time has passed and the maturity of overall design thinking has grown during the last decade, it is more fruitful to work on a

more elaborate framework for innovation that is broader than the first released double-diamond model.

As one can easily see from the innovation framework (figure 5 below), the framework still encompasses the phases of describing, defining, developing, and delivering, as the phases were structured in the old double-diamond model. The key principles and design methods that designers and non-designers need to take into account have been added to the framework. The concepts of leadership and engagement are required for working efficiently with other organizations and supporting people, are crucial for delivering the solution successfully. As is formulated literally by the Design Council (2019), these are the main factors promoting a culture of innovation success:

- **Leadership** is needed to encourage innovation, build skills and capability, and provide permission for experimentation and learning. Strong leadership also allows projects to be open and agile, showing results along the way and being able to be changed.
- **Engagement** is needed with people who are delivering the ideas and receiving them, but also with other partners who might have other ideas. Developing connections and building relationships is as crucial as creating ideas.

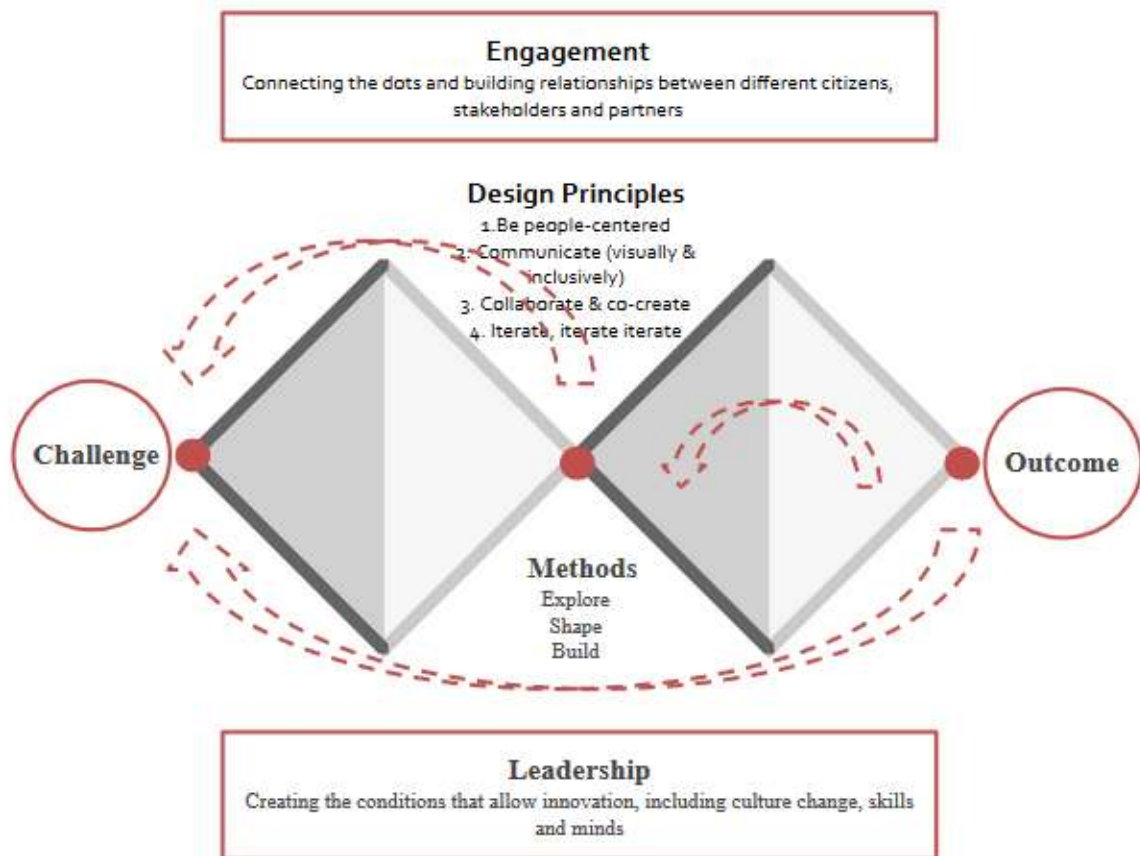


Figure 5: The Framework for Innovation.

The methods used in this thesis, some of them being the same as the ones in the Design Council’s method bank, help in exploring the challenges, needs, and opportunities, shaping prototypes, insights and visions and building ideas, plans and expertise. What the Design Council has added in their double-diamond based model since the first release of the concept is reformulating the design principles that help in making design work efficient. They are as the Design Council (2019) has stated:

- **“Put people first.** Start with an understanding of the people using a service, their needs, strengths, and aspirations.
- **Communicate visually and inclusively.** Help people gain a shared understanding of the problem and ideas.
- **Collaborate and co-create.** Work together and get inspired by what others are doing.

- **Iterate, iterate, iterate.** Do this to spot errors early, avoid risk, and build confidence in your ideas. “

These principles are applied in the course of this study as well to ensure user involvement in developing the training concept.

5.2 Discovering insights

The Innovation Framework, visualised as a double-diamond or double-kite model, starts with the first diamond, which helps people to understand, rather than simply assume, what the problem is. (Design Council, 2019). It also tries to identify opportunities for value creation. Quite often the first diamond is also labelled as “solving the right problem” referring to the situation when often one is able to identify several problems at the beginning of the design process, but needs to choose only one to focus on, and that problem should be the one which is the most valuable for the customer or user once it has been solved correctly. The first diamond requires a lot of research and analytical skills to ensure that one is indeed solving the right problem.

The first half of the first diamond is called the discovery phase. It is characterized as divergent thinking that aims at expanding the understanding of the user and context before defining a name for the problem or solutions. The list below, summarizes the qualitative methods of discovery phase according to Koivisto, Säynäjäkangas, and Forsberg (2019, p. 44):

- **Methods of basic research**, such as interviews, focus groups and surveys that help to learn by listening or reading
- **Methods for contextual research**, such as observation, that can teach about how people behave or act in different situations
- **Methods for exploratory research**, such as probes that can teach about people by interpreting their creations or outputs

5.2.1 Needs of the designers and industry

By researching the views of the designers as a target group of the service, and specialists who utilize behavioral insights in their work, I was able to identify several vital factors and

value-creators that were taken into account when designing the training concept and supporting materials.

The primary research included two separate surveys. The first one was for designers, and the second one for specialists who utilize behavioral design at their work. In addition, I conducted two interviews with the specialists to deepen my understanding of what is the need towards the usage of behavioral insights from the industry's perspective. Another set of interviews was conducted with five designers to test some of the elements from the training materials and to learn about their perceptions of human behavior.

The data collected from the primary research helps in designing the training content based on the industry's and designers' needs. Based on the desk research and some preliminary interviews with behavioral design specialists, I was able to summarize the starting point of the discovery phase in a test card, which is presented in figure 6 below. From quite early on, I found out that in Finland, there is no existing training concept for utilizing behavioral insights or nudging in a digital environment. According to findings from desk research, it was evident that there was mainly a lack of hands-on knowledge and understanding of how one can take the behavioral aspect into the design process and thinking. It was also found out during the desk research phase that in recent years, there have been interesting scientific publications primarily in the area of human-computer interaction (HCI) design concerning digital nudging, but not much current information about how to apply that knowledge in practice in design work. The test card illustrates the starting point of the design process concerning the needs designers have for digital nudging.

not limited to only those participating in workshops, but for everyone interested in the topic of digital nudging. The survey consisted of three parts, of which the first one was to collect basic information about the respondents, such as educational background and work experience in general. The second part of the survey was targeted more specifically to education and work experience related to service and product development. There was also one question to find out whether the respondent has experience in designing digital products in his or her current work, in trying to influence a user's decision making. The third part of the designer's survey focused on what kind of educational needs the respondent can identify related to digital nudging, and in addition to an open question, the respondent was asked to prioritize the most interesting training topics from a list that had been preselected for them.

Analyzing the survey results, one could see that respondents are highly educated and specialized professionals. Only 11.5% of the respondents had less than five years of work experience, whilst 51.4% had more than ten years of work experience. This indicated that the potential participants of such training are likely to be looking for advanced professional training to complement their previous studies. When asked separately about the work experience related to product and service design, 22.8% of the respondents had more than five years' of experience in the field, with 31.5% stating 3-5 years' of experience. The majority of the respondents (74.3%) had experience in designing digital services. For the question regarding if one does interaction design, 42.9% answered yes.

Most of the respondents (71.4%) had their educational background in humanities, social sciences or economics. The vast majority (29 out of 35 respondents) had at least a Master's level degree, and most of the respondents (20 out of 35) also had a degree in a field related to service or product design, such as Master in Business and Administration (MBA) in service design. In question 2c, the respondents had an opportunity to state if in their current work they try to influence users' online decision making, and 54.3% of the respondents gave a positive answer. In the following open-ended question (2c), eight respondents specified that they do try to influence user decision making in designing digital channels, such as websites, other digital channels for customer interaction or when designing efficient user journeys for digital services.

From the training content point's of view, the most interesting answers were gained from questions 2d and 2e. Question 2d was an open-ended question: "tell in your own words what kind of training content would support you to understand how users behave in decision-making moments along the user journey." This question received 25 answers, designers

telling about their wishes on what would be beneficial for them to learn. Most of these wishes (13) related to real-life cases and examples of successful usage of digital nudging; there were five who were especially interested in the ethics of digital nudging and seven answers that can be classified as generic wishes to understand digital nudging opportunities and theory better.

Question 2e was a multiple-choice question where the respondents were allowed to choose the three most interesting preselected topics out of 10 preselected topics. In addition to ten shortlisted topics, there was an option "other," but nobody chose that one. The figure below shows how the different topics were favored by the respondents.

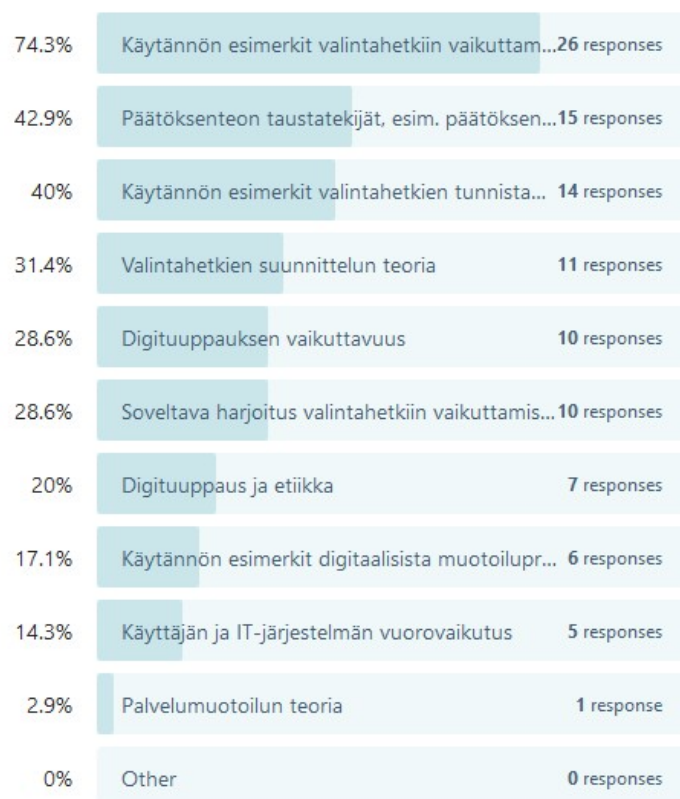


Figure 7: Distribution of selected topics for the training.

The vast majority of 74.3% chose the option "practical examples of digital nudging implementation," and 42.9% were interested to learn about "factors affecting decision making." Almost 40% chose "practical examples to identify the moments when nudging might occur," and about one third (31.4%) were interested in "theory of digital nudging."

5.2.3 On-line survey for specialists

The other survey was targeted for specialists who utilize behavioral insights in their work, and the purpose was to collect first-hand information about how Finnish companies and other organizations use behavioral insights in their product and service development at the moment, and what in general prevents organizations making further use of this approach.

The survey was conducted online, and the link to the Typeform survey was sent to eight hand-picked professionals who had been identified as being experts in this area. Most of these people I had met and talked with in person earlier during the thesis project. The survey was open for three weeks (weeks 46-48/2019), and six out of eight people responded to the survey, which can be considered adequate. The survey consisted of five open-ended questions, and the questions were on purpose quite open and straightforward to ensure a high response rate with broad answers to present the different views. The survey is included in appendix 2 of this thesis.

The first question of the survey was about their professional background, to understand the perspective of the respondents. These answers showed a multi-disciplinarity of the topic, as the respondents represented a large variety of disciplines from psychology to interaction design, and from social sciences to information system sciences.

In the second question, the respondents were asked to describe their personal view of how well service and product designers currently make use of behavioral insights in their work. Answers ranged from poorly to a limited extent, and the reasoning for these views was explained through focus in user research being somewhere else than in behavioral aspects.

“Usage of behavioral insights is not common. The development work is often done with traditional design methods and using user research, but the behavioral design methods or theoretical models are unknown.”

The second question was: “Who in Finland successfully utilizes behavioral insights in product and service development? How?” This question received five answers identifying certain companies that either are well known for such an approach or who brand themselves with behavioral insights. The companies named in this context were Palmu (Solita), Valintamuotoilijat, Vincit, and Idean. One of the respondents also noted that some research-based start-up companies in the health tech sector are known for utilizing the behavioral design approach in their service and product development. Two of the respondents pointed out that the usage of behavioral insights in certain companies is highly personalized, and

thereby it varies between projects whether this approach is taken into account or not. One of the respondents described the level of how behavioral insights knowledge and skills are put into action as:

"It quite often is as a perspective itself when observing the micro-level social and material context where the behavior takes place. In addition, it means the understanding of representations (like values, meanings, etc.) that steer the behavior. It is also crucial to take these insights to be tested through experimenting..."

The fourth question was about identifying the factors that currently obstruct organizations from further utilization of behavioral insights in their product and service development. There were four answers that brought up lack of knowledge about behavioral insights, when it comes to the ability to understand the theoretical basis of such an approach, or to use existing theoretical models for the application of such knowledge, and a lack of expertise and inability to recognize the timeliness of this approach in relation to a project timeline. One of the respondents stated that the employers don't have such skills at the moment, as there is no currently suitable educational degree to support such an approach.

From the point of view of how to enable the utilization of behavioral insights in the development work, there was a point made that bringing this kind of expertise and perspective as part of the processes can be difficult, especially when there are no clear and established processes for the design and development work. Another valuable point was made about the implementation of this approach:

"Applying scientific knowledge to service and product development is seldom easy or fast fix. There are no specific solutions that fit all cases, and there must be a willingness to experiment and iterate several times."

One of the respondents revealed that quite often the behavioral aspect is narrowed down to a simplified view that behavior comes down to the values and other ideal level factors, which is not the whole truth.

"It is often difficult to go the micro-level of behavior because one must choose very tangible things to examine in order to form some sort of understanding."

Another respondent brought up the point that even though there is interest in the utilization of behavioral insights, people tend to respond with impatience when waiting for results.

"Quite often, I see that the focus is too much in ideas and thoughts, not in real-life practices and concrete behavior".

All in all, the responses from the survey described the current situation of the utilization of behavioral insights in product and service development as being on an immature level, even though there is increasing interest in this topic.

5.2.4 Online ethnography findings

Online ethnography is an approach used to investigate how people interact with one another in online communities (Stickdorn et al. 2018, p. 120). The research starts by defining the research questions and online communities that might be valuable for creating an understanding of how the online community understands the research topic. In a traditional sense, ethnographic research involves the researcher becoming a part of the community that is researched (Tomitsch et al. 2018, p. 94). Online ethnography is especially suitable for investigating online communities that are active, revealing people's online behavior, their thoughts, and reactions towards each other's entries.

At this stage of the research process, I wanted to understand what kind of perceptions professionals have about behavioral design and nudging, so as to better understand the underlying needs that might be useful information when designing the training concept. I decided to use online ethnography for investigating Facebook and LinkedIn content that is created by professional designers. Both digital platforms allow the user to search with keywords to find relevant content. Because the Finnish designer scene is bilingual, it was worth doing the search in both languages to see what kind of entries there exist concerning the theme. The question, in this case, is:

- How do Finnish online communities refer to behavioral design and nudging?

I started the research on Facebook by using the search function for the selected keywords. With the term "käyttäytymisen muotoilu" (behavioral design), I was able to find public entries that referred to events under that theme. In these events, the behavioral design was referred to in the context of political decision making, marketing and sales perspectives, and design research. The same search, done in closed Facebook designer groups that I am a member of, resulted in finding one behavioral design-related event in Helsinki that took place in November 2019. What is interesting in that entry were the answers that were given when the event organizer asked group members: "what are the things that you would like to learn about behavioral design?" as in figure 8.



Figure 8: Online ethnography about behavioral design.

That posting got more than 100 reactions from the group members, equalling to ~10% of the group's total size, which can be considered as a strong statement about the interest. There were 39 comments answering that question, of which most were related to how to implement behavioral design, what kind of tools exist, cases, and examples about implementation and ethical questions. What was interesting to notice was that it seemed as if several group members appeared to be mixing the concept of behavioral design and nudging, which are not the same, nudging being the only way of applying behavioral insights in the design process.

Doing the same search exercise with the word "tuuppaaminen" (nudging), the results were less. There was only one event referring to it in public groups, which was a webinar targeted for people who are interested in local food. In the closed group search, I managed to find the advertisement for the Helsinki Summer University course on nudging that was organized in August 2019, and one event organized in January 2019 about utilizing nudging and leadership.

By switching the search words into English, I found even fewer results about events or public discussion on Facebook in the Finnish design community. There was an announcement about

one event related to behavioral design tools that took place in September, and one event in March in which one of the topics was an introduction to behavioral design.

On LinkedIn, I performed the same kind of search first in Finnish and then in English with the words ”käyttäytymisen muotoilu” (behavioral design) and ”tuuppaaminen” (nudging) which brought up public posts concerning public policy, healthy lifestyle and interesting blog postings about the topic. Nevertheless, there is no active discussion in Finnish or in groups for design professionals in Finland that would gather together the people interested in utilizing behavioral insights in their design work.

It is worthwhile mentioning that sometimes the results from using online ethnography are limited due to the nature of many professional discussion groups being accessible only for members. The lack of conversation, or rather the lack of openings regarding behavioral design and nudging, can be seen as resulting from a situation where at the moment there is not enough critical mass to keep the professional discussion going, or there is no suitable platform or channel for the discussions on this topic. When there is an opening for the discussion, there seems to be interest in discussing or sharing ideas. Nevertheless, this part of the research gave valuable insights into building the training content from the perspective of how designers’ online communities refer to behavioral design and nudging.

6. Define

The definition phase of the design process aims to identify the right problem or challenge to be solved. It is about letting go of some of the ideas and topics that have been discovered during the first phase of the process. It comes down to narrowing the insights and crystallizing where the focus of the project actually is. The insights that were gathered during the discovery phase help to reframe the problem to be solved in a different way. Sometimes the definition phase is said to be the most challenging one, because firstly it requires one to synthesize and analyze findings from the discovery phase, and secondly because the problem statement created at this stage steers the actions taken later during the process.

In this section, I synthesize and analyze the findings from the desk research, surveys and interviews, to structure the training concept’s focus and content in a way that it will meet the needs that the designers and industry pose for nudging to enable its uptake in the design process. This phase starts by interviewing the designers and specialists and synthesizing the

findings in the form of personas, empathy maps and an affinity diagram to pin down the factors that need to be taken into account when designing the training content.

6.1 Interviewing the doers

The interview is one of the most-used qualitative methods for collecting insights from users, customers or other stakeholders. Interviews help one to learn about particular experiences, expectations, products and ideas, for example. Interviews can be supported by co-creating boundary objects, such as mind-maps, personas or inspiration cards. (Stickdorn et al. 2018, 122.) At this stage of the research process, I used interviews for a double purpose: 1) to find out if the findings from the discovery phase were relevant, 2) to test some of the assumptions and materials that are part of the training. This allowed testing if the understanding and approach for the training were relevant. There were altogether seven interviews conducted: five designer and two specialist interviews that are presented in the following sections.

6.2 Interviewing the designers

The designer interviews were semi-structured interviews that were supported by visual materials, including screenshots of nudging elements that were presented for the interviewees. The interviewees were UX and UI designers, not required to have previous experience or understanding about nudging or utilizing behavioral insights in design work. The interview consisted of two parts, the first one concentrating on designers' professional roles and relations to user behavior, and the second part a test-like session to see how well the designers were able to recognize user interface elements that include nudging or elements that intentionally try to alter user behavior. The test was implemented by showing six screenshots from nudges that exist on a commercial website, and interviewees were asked to explain how he or she thought that the service provider was trying to steer customer behavior.

All interviewees worked with developing digital products, representing UX, UI, visual or graphic design. The designer's proximity to customers and users varied a lot. Some had difficulties in naming the users because of them being so many, and some had regular direct interaction with customers and users, frequently participating in the design process through user research and testing. The understanding of the word "behavior" varied a lot between the interviewees. Some referred to user behavior in quite a simplistic manner, while two out of

five interviewees elaborated the behavioral aspect of design profoundly, demonstrating a complex and holistic understanding of human behavior.

All interviewees were presented with six screenshots that present nudging in the user interface. All these nudges are presented in Table 3. The Figure 9 below is one of the examples used in the testing session.

Example 3



Figure 9: Recognizing nudges in UI design.

The purpose of the testing session with designers was to find out how the designers recognize UI elements that aim at steering user behavior. All interviewees were able to name some of the factors that steer user behavior, mostly on a level of reflective thinking like “it makes the user think this is a one-time offer” or “the user sees there are only two pieces left”. Designers were able to point out feelings and emotions that the nudges were designed to raise, such as the feeling of hurry, trust, connection to other customers and easiness, but only some were able to explain from a behavioral perspective what causes these feelings.

The nudges included in the testing were default setting, social reference, warning, simplification and reminders, of which the most well-recognized were the warnings, defaults and social reference. Most of the interviewees were not able to describe what the behavioral aspect is that makes the nudges work, except that the ‘social norm’ was recognized and explained by three of the interviewees, and ‘warnings’ was recognized and explained by two.

What can be learned from the interviews with designers is that they recognize quite well the elements and functions that are known as nudging, but in most of the cases they are not able to explain the nudging principle or behavioral pattern that the nudge is built on. Not sharing the understanding of concepts or terminology to some extent poses a risk, as it can hinder systematic usage of behavioral insights in design work. Taking an even broader perspective, if designers are not able to share efficiently an understanding of how they perceive user behavior, how could the business owners do that either. On the other hand, it is, to some extent, also a terminological question: professionals with different educational backgrounds use different terminologies and concepts when describing the same phenomenon, from slightly different perspectives. Behavioral design and nudging require a systematic approach in order to be efficient, and therefore some further harmonization of terminology between designers representing different fields might be useful for the sake of consistency when describing user behavior. It also appeared that the concept of user behavior was more comfortable to talk about than the concept of human behavior.

6.3 Interviewing the specialists

To dig down deeper into how the industry currently utilizes, and what prevents it from further utilizing behavioral insights in service and product development, I decided to have an interview with two specialists who utilize a behavioral insights approach in their work. Both interviewees had long experience in design-related professions, and shared their own views about the topic and also commented on the survey findings.

Both interviewees pointed out that how the behavioral insights approach is taken into account in R&D activities depends a lot on whether talking about consultancies or in-house design units. The difference between industries is also significant, and the question can also be viewed from the perspective that there are also differences between the same organization's units in how much the behavioral aspect is thought about. There appears to be a wide variety in maturity level, whether taking into account that the user's behavior is something considered of self-evident value for service and product development, or whether it is something that is not even given much of a thought. According to other interviewed specialists, the behavioral approach is something that is treated with quite high interest, even considered as some sort of silver bullet solving all problems at once, which can lead to frustration when the results from utilizing behavioral approach take a longer time to materialize into something that can be measured.

”It is often forgotten that people are complex creatures, which complicates all the development activities that involve human behavioral aspect. If the behavioral aspect is only viewed from the perspective of their own product or human behavior in relation to it, one quickly forgets that the context plays a crucial role in human behavior.”

What prevents the utilization of behavioral insights approach further in different industries, is the lack of knowing the already existing models that different organizations could utilize in their R&D work. Organizations don't need to commit to developing the tools per se, but rather to find out and try the existing tools and methods. What the other interviewee pointed out was, that the difficulty also lies in finding out what is the relevant level of theoretical and practical knowledge that could be utilized in different organizations and projects.

The interviewees recognized the factors brought up in the survey results. In some more mature cases, the user insights approach is not questioned, and there might even be a situation that the level of discussing behavioral insights is not needed anymore, as it is understood as an elementary part of all human interaction taking place with the product.

“Sometimes talking about human behavior can even stir the pot too much when it brings too abstract a level, as the design layer is combined with the human behavioral layer. It can cause confusion when most of the questions taking place during the design process are much more specific, such as what kind of attitudes there exist or what are the procedures related to the context of usage.”

To summarize, the interview results confirmed the existence of current hurdles posing obstacles for further utilization of the behavioral insights approach, but also broadened the range of perspectives of what the current situation in the usage of the behavioral approach to service and product development in Finland is. Based on the interviews, it almost appears as though there would be different business realities of where the views come from; the range of perspectives makes one even wonder whether these professionals act in the same business ecosystem. There seems to be a need to encourage these views and experiences to come together for cross-fertilization, but that is not the purpose of the topic of this thesis. The interviews with the specialist confirmed the assumption that more practical knowledge and on-going discussion is needed to share the understanding of what the utilization of a behavioral insights approach can bring to R&D activities, and eventually benefit the customer and user.

6.4 Describing the users

The users of the training service are the people who attend the training. They can be different from the service customers, as the customers could easily be imagined to be the employers of the designers who want to support their employee's skills building. The customers can, of course, be the self-employed designers as well, since more and more designers work on freelance contracts. The following sections "user personas" and "empathy maps" present what has been learnt from the target user group so far, and section 6.4.3 summarizes the training needs based on the research.

6.4.1 User personas

When researching user needs, one often needs to come up with a particular segmentation of the market consisting of people that share something in common. The commonalities of these people form a basis for product development that saves the service provider from creating a different product for each user. One of the ways to capture the user needs of these groups is creating personas to represent user needs within a particular customer segment. According to Curedale (2016, p.51), a persona is an archetypal character that represents a group of users that share common goals, attitudes and behaviors when interacting with a particular product.

The method for creating personas was invented by Alan Cooper in 1998 (in Curedale 2016, p. 51) who described personas as not being actual people; personas are created by synthesis from observing actual people. The use of personas helps in creating empathy for users, thus reducing self-reference. Personas can be used for analyzing and gaining understanding about the actual users. In addition, the usage of personas helps in gaining buy-in from stakeholders involved in service production. (Curedale 2016, p. 51.)

In this thesis, the purpose of creating personas is to capture the user needs and motivations that have been identified through the designer survey and interviews. The three personas represent possible end-users when the training concept is considered as a service provided for them. These three personas represent experienced and highly educated professionals whose work is related to developing and designing digital services. They work in different types of companies, but they all have in common an interest in understanding more profoundly the aspect of user behavior and the possibilities of utilizing nudging in the design process. The personas and empathy maps were used in conceptualizing the training concept

and helping to synthesize possible value-creators for the training concept, which were utilized in both designing and delivering the product.



<p>PERSONA NAME Zibute</p>	<p>OCCUPATION UX designer in a small start-up company</p>
	<p>DESCRIPTION Zibute moved to Finland in 2013 to complete his Master's degree in Aalto University. He soon got a full time job as a game developer, and now works as an UX designer in a small start-up company.</p> <p>He would like to get familiar with how to utilize human insights in his work, since his studies didn't cover that area will. He is especially interested in the perspective of how to keep the users on the path they have designed as the optimal user journey.</p>
<p>PROFESSIONAL EXPERIENCE 7 yrs as front end developer 2 yrs as title UX developer</p>	<p>MOODBOARD</p> 
<p>EDUCATION M. Sc. (Tech), embedded systems Some courses in UX design</p>	

Figure 10: Persona Zibute.



<p>Persona name Stina</p>	<p>Occupation UI Designer in a large company</p>
	<p>Description Stina is a graphic designer who has a passion for nitpicking the details. She currently works on a project that delivers a new UI for a health tech company, and she is slightly worried whether is she aware of all the behavioral aspects related to utilizing this product. She has discussed this with the team members, but it would require a push for them to take up this topic with the PO.</p>
<p>Professional experience 10 yrs in website development tasks</p>	<p>Moodboard</p> 
<p>Educational background M.A. (Communications) Courses in graphic design</p>	

Figure 11: Persona Stina.

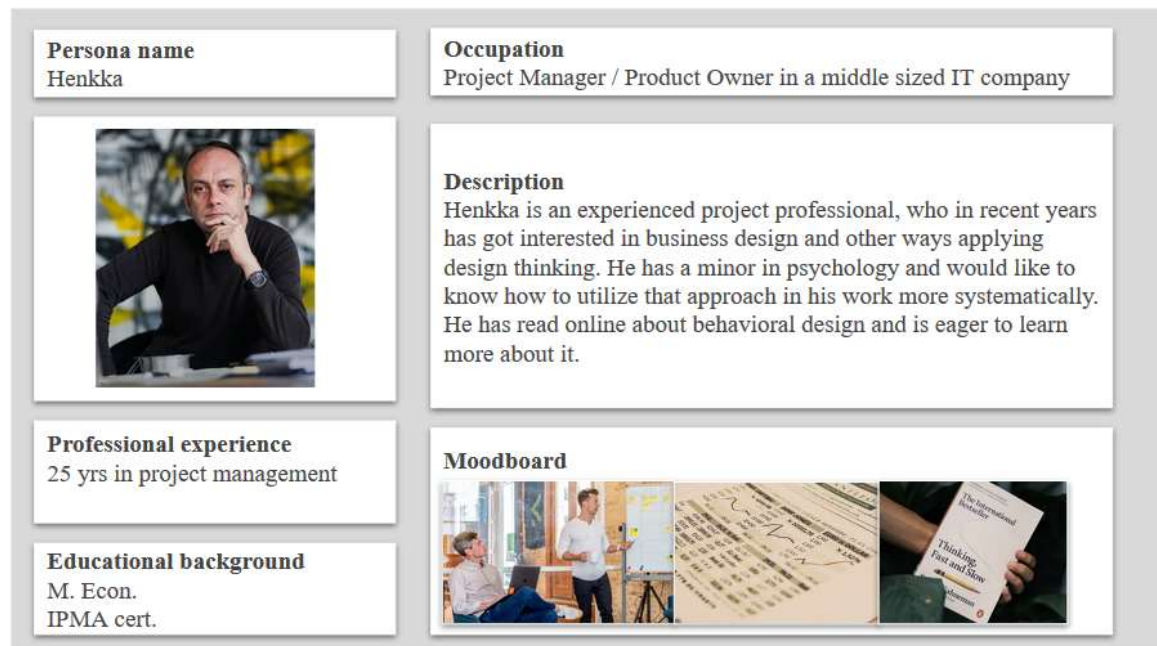


Figure 12: Persona Henkka.

6.4.2 Empathy maps

Empathy maps help in analyzing the user experience and forming a high-level view of where the strong and weak points of the service experience are. Empathy maps are most useful at the beginning of the design process, making sense of the information gathered in the user research phase. Empathy maps work well together with personas by making the user needs tangible to reveal the thinking and emotions of the user. Empathy maps help to create empathy towards the user, and they can be created separately for each of the persona or customer groups.

The information that is mapped should be based on real information about the customers, collected for example, from interviews, focus groups, user analytics or through observation. (Curedale 2016, p. 221). For this thesis project, the empathy maps for the three personas were created to build empathy towards the possible end-customers. The information used for creating the personas was collected through the survey and interviews, and the identified needs are presented in more detail in the following section.

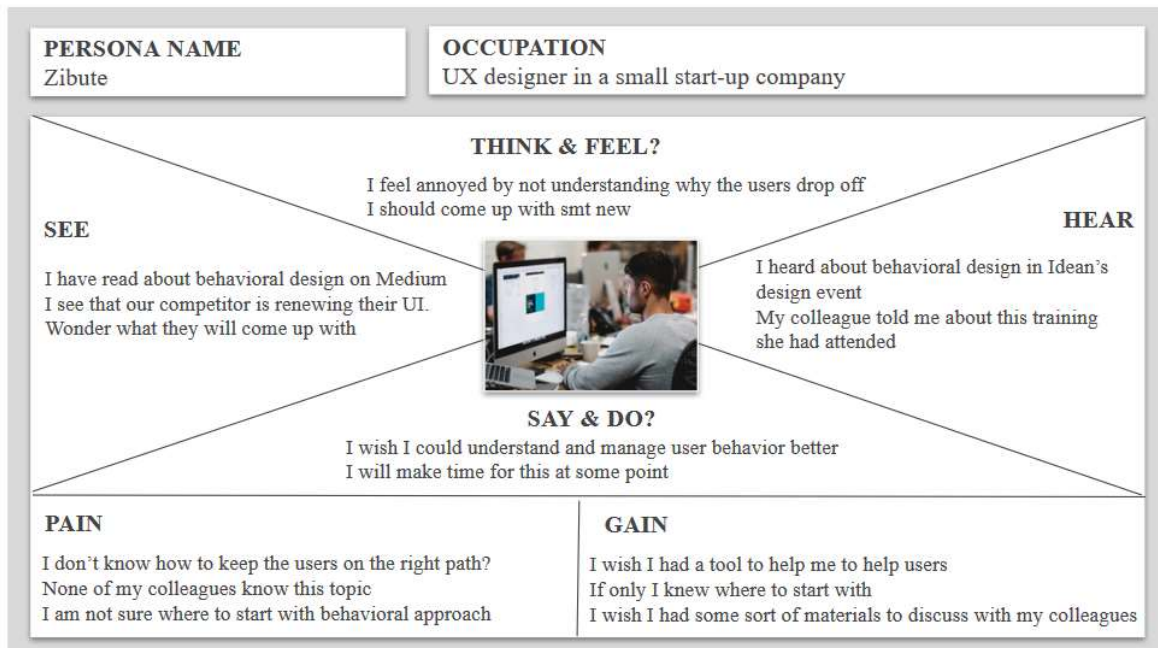


Figure 13: Empathy map Zibute.

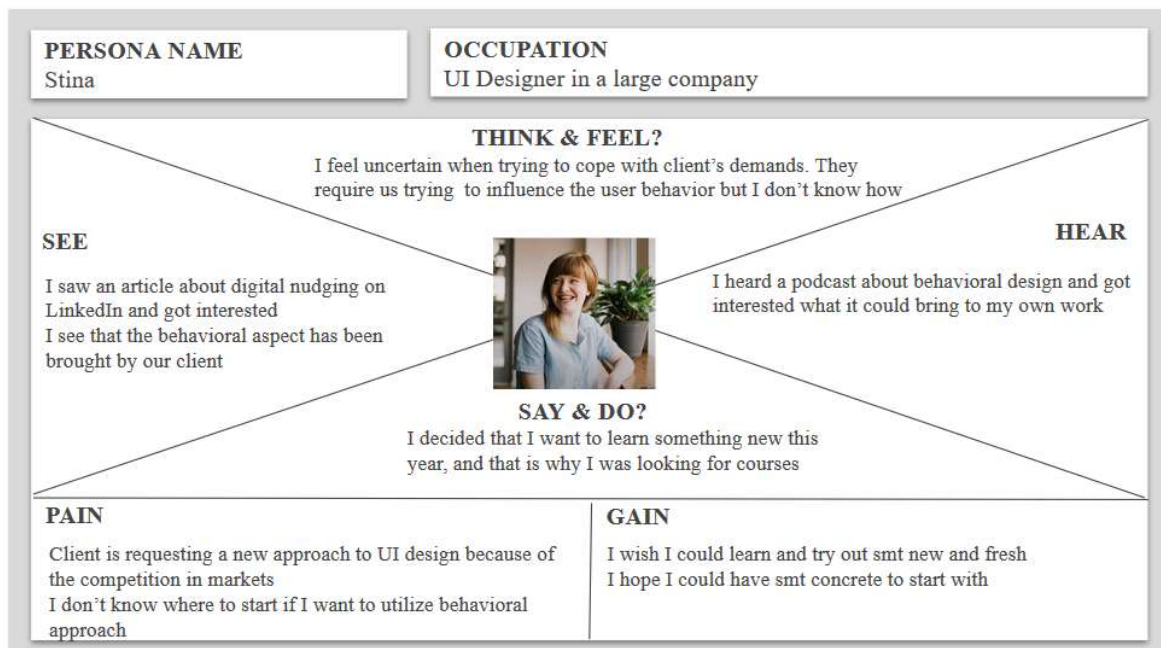


Figure 14: Empathy map Stina

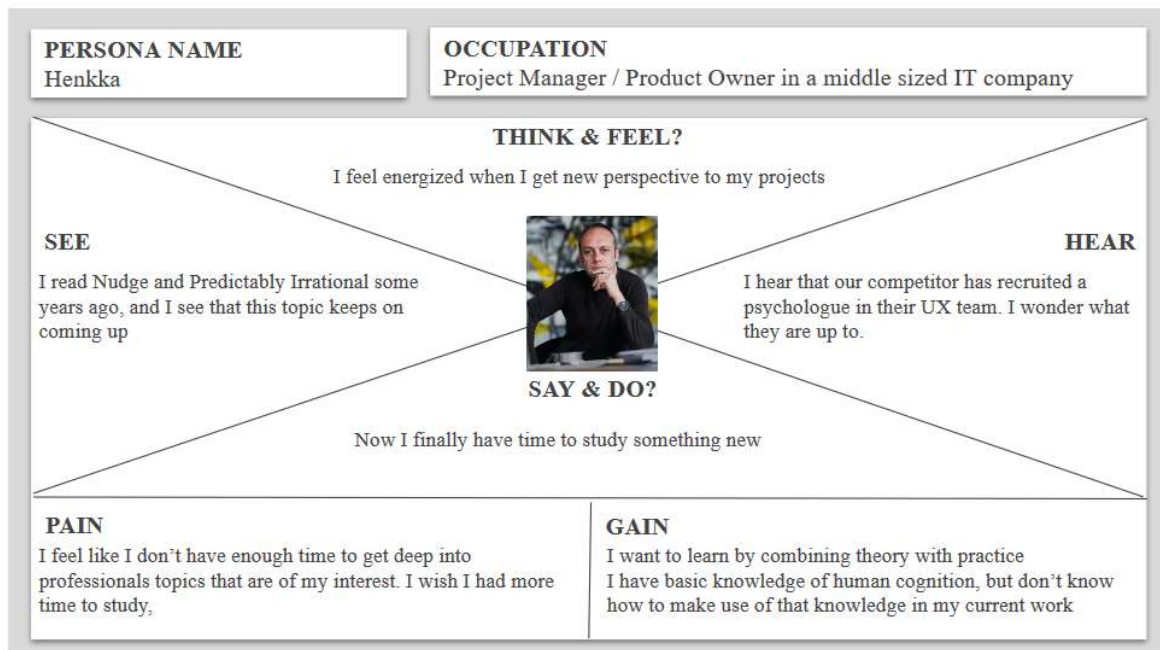


Figure 15: Empathy map Henkka.

6.4.3 Summarizing the training needs

What was learnt from the desk research phase, the surveys and interviews, shows that the needs for digital nudging training can be categorized in three areas. They will be covered in the training topic-wise: theory, practise and examples.

According to designers, they identified that from a theoretical perspective it would be useful to learn about the psychology of user behavior, cognitive biases, behavioral design, how to utilize nudging efficiently and what kind of ethical questions are related to steering user behavior by nudging. The specialists instead identified that the problem lies in the lack of theoretical-level understanding of utilizing behavioral insights, lack of understanding of behavioral insights as a systematic part of the processes, and lack of proper educational opportunities in Finland from this perspective.

The needs identified under the category of practical information included, from the designers' perspective, methods and tools for digital nudging, measuring the success of nudging and how to make data analytics and digital nudging work together. Specialist concerns were related to the ability to apply the right level of behavioral insights, meaning the need to find the right micro-level view on behavior to be able to measure the changes, and ability to spot when the right timing for nudging or behavioral intervention is.

The third category of training needs was labelled as examples, since the majority of designers answering the survey pointed out that they would be interested to hear about examples and case studies of how nudging has been implemented successfully, but also to help in understanding how these types of perspectives could help in one's work.

The surveys revealed the view that there is a lack of understanding and skills in how to make use of behavioral design approach in creating excellent services and products, even though there is currently a great interest in this topic. On the other hand, I was left thinking: what is actually “the proper education” that was mentioned by one of the specialists? What the wide range of educational backgrounds of the interviewed specialists demonstrated, was that those design professionals who currently make use of behavioral insights represent several fields and educational backgrounds. Therefore, I would conclude that studying the behavioral aspect is an essential part of a designer's education and a prerequisite for efficient usage of behavioral insights, but it does not necessarily require a whole degree of its own to make better usage of such an understanding.

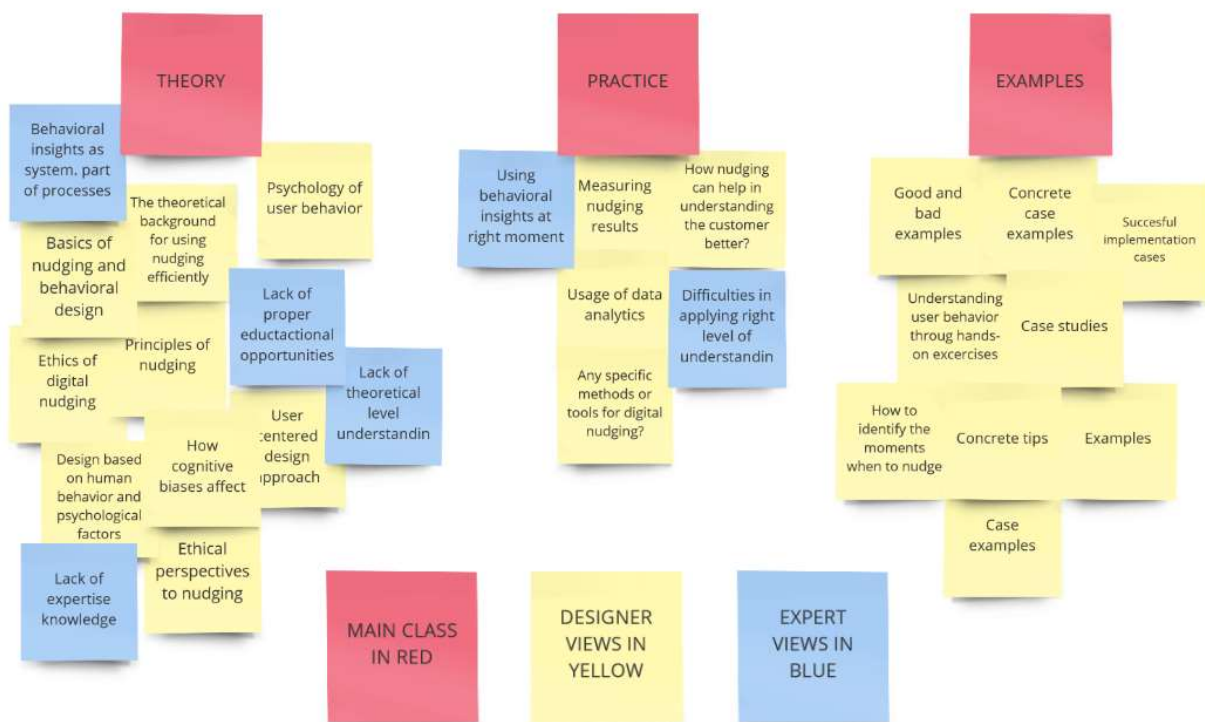


Figure 16: Needs for training compiled.

7. Develop

The development phase of the design process forms the first half of the second so-called double-diamond, once again diverging the thinking and encouraging creating alternative solutions, seeking inspiration from elsewhere and co-creating with others. At this stage, usually, solutions are created according to the problem statement, and they are tested and iterated towards a working solution. According to Koivisto, Säynäjäkangas and Forsberg (2019, p. 46), it is essential at the development phase to create prototypes, visualize ideas, even to simulate experiences to promote creativity. The feedback and criticism from the customers and users are utilized to improve the solutions.

In this section, I present the prototype of the training concept and materials. In addition, I explain how it was tested and iterated and analyze what was learnt from the testing and iteration phases. The mind-map below captures the varied topics and aspects that have come up during the design process. As they are summarized in Figure 17, they were used as a basis for creating the training concept content.

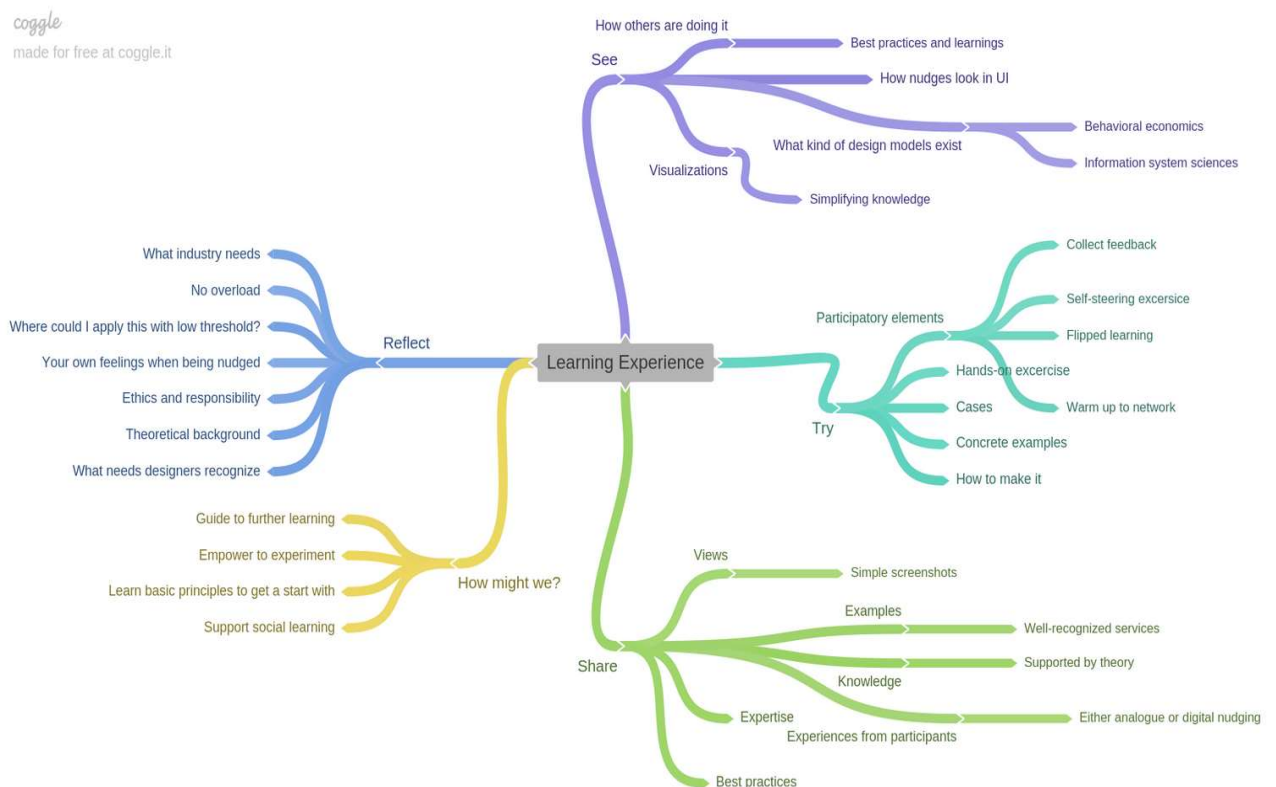


Figure 17: Ideating possible elements for the training.

7.1 Designing a training concept

The design work started in September, when the literature review and interviewing an adult pedagogue the idea of the training concept started to take shape. The first idea was to provide professional designers with a learning experience, where they would have the opportunity to familiarize themselves with the principles of nudging, get some concrete ideas of how it is applicable in the digital environment and have some tips on how to start applying digital nudging in a very light way in their own work. As the idea was to create complementary training for those already practising service design or having the basic knowledge of the service design process and tools, the starting point for the training was to form such content that would offer something new for the participants by using participatory elements in the training, and not to go into the design process and principles as such.

After the consultation session with the adult pedagogue, I decided to take into consideration all three styles of learning, supporting the learning process by allowing participants to learn by seeing, hearing and doing to ensure that the training meets the requirements of different learning styles that the participants might have. The training session was planned for 14-16 participants when facilitation of the group work would still be doable with good quality with only one facilitator. This allows the facilitator to concentrate on each sub-group's work. The first version of the training is illustrated through the low fidelity wireframe in Figure 18 below.

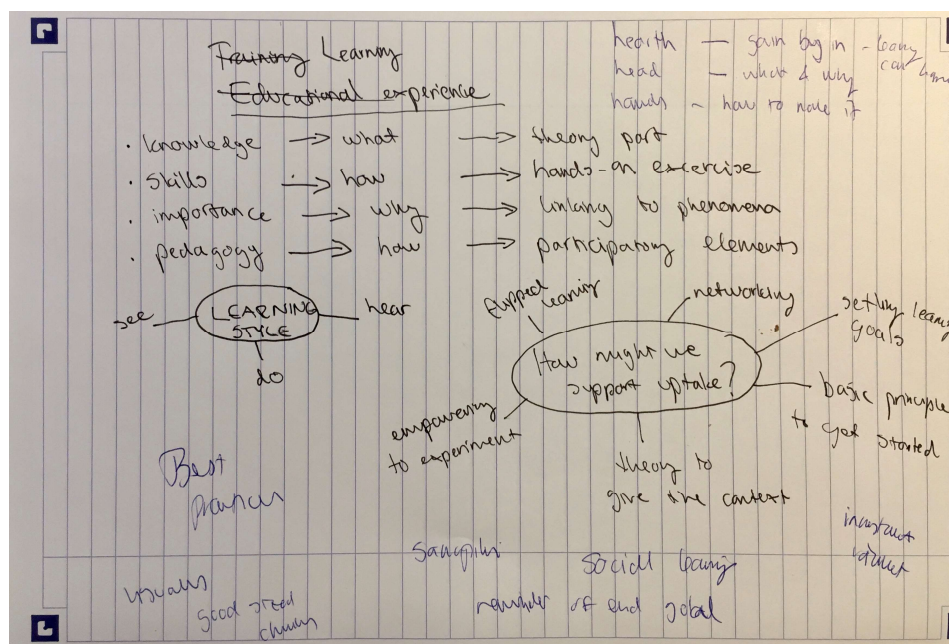


Figure 18: Wireframing the training concept.

Before starting to draft the training concept further, I familiarized myself with other training opportunities and materials related to nudging. Actively seeking for events related to nudging, I managed to find only three during 2019 in the Turku and Helsinki regions. The first one was a two-day course about nudging organized by Helsinki Summer University (13-14 August 2019) which I attended. The second one was a free-of-charge morning session about behavioral design tools that I, unfortunately, was not able to attend, and the third one was a testing session with the Bridgeable Behavioral Design Toolkit, which was an introduction for this specific tool. This benchmarking of other nudging related trainings and training materials convinced me that in order to deliver a free of charge training concept about the specific topic successfully, I would need to narrow down the content to the amount that would be doable to deliver in a maximum half-day session. This is due to my previous experiences, that it is difficult to make people who work in day time to commit for a whole day event unless they have confirmed their participation by a fee. Not showing up to a free of charge event is the most expensive event type for the organizer, since the no-shows don't decrease fixed organizing costs, but the value gains, like leads for sales, meaningful connection or visibility, are less. Therefore to have all seats taken is valuable for such an event.

The following step of the design process was to ask the end-users what kind of training needs they have in relation to digital nudging. The more specific description of the survey and results are explained in sections 5.2.2. and 5.2.4. The survey respondents indicated a clear preference for practical knowledge of how to make use of nudging in digital environments when the top six topics (see figure 7, on page 32) of respondents preference were

- practical examples of digital nudging implementation
- factors affecting decision making
- practical examples how to recognize moments to nudge
- exercise how to utilize nudging in decision-making moments
- efficiency of nudging
- theory of digital nudging

Based on the survey results and desk research, the first version of the content for training content and materials started to materialize in Powerpoint format. The workshop agenda consisted of three parts. The theory part covered the theoretical background of digital

nudging, heuristics and cognitive biases, digital nudging as part of the design process, models for digital nudging, and tips and examples of implementation. The second part was a practical demonstration of five existing digital nudges on the Zalando user interface. These were presented as screenshots with an explanation of how the nudging element works, and what the heuristic or cognitive bias behind reasoning their usage is. The third part of the training was a hands-on exercise to identify the usage of the nudging of a chosen digital service. This part was labelled as ”Digital nudging bingo”, and workshop participants were encouraged to choose a particular online service in groups of four to six participants, to see if they could find all the five nudges presented during the second part explaining nudging elements.

Ohjelma

Aika	Teema	Mitä opimme?
9.00-9.15	Tervetuloa	Miksi olemme täällä
9.15-10.00	Mitä on digituuppaaminen?	Teoria: Mitä digituuppaus on ja miten se ilmenee
10.00-10.30	Digituuppaus muotoiluprosessissa	Teoria: Digituupkauksen mallit ja vinkit
10.30-11.15	Digituuppausbingo	Käytännön harjoitus pienryhmissä
11.15-11.30	Palautteenanto ja tilaisuuden päättäminen	Mitä voin viedä jatkoon



Figure 19: Agenda of the first training session.

Other elements of the training concept were upfront reading materials sent to the participants, an introduction and orientation exercise at the beginning of the training, an orientation exercise, collecting feedback, and facilitated networking on LinkedIn after the event.

To enhance the learning experience, an article by Schneider, Weinmann and vom Brocke (2018) about digital nudging was sent to the participants one week before the training, to allow them to familiarize themselves with the topic. The purpose of the orientation exercise at the beginning of the training was to help the participants to get into the right mind-set. The orientation exercise was about setting a concrete personal learning target for the session, and it was reviewed after the training to ensure that all the relevant aspects and questions about the topic were covered during the training session.

7.2 Realization of the workshop

The two training sessions were organized on 26 November and 9 December 2019 in Helsinki. They both were free of charge and organized in Helsinki Central Library's meeting venue in order to minimize the direct costs of the workshop. The estimated length of the workshop was 2.5-3 hours, and one was held in the morning and the other in the evening, to ensure that those interested would be able to attend regardless of whether they could participate during work time or not. The workshop was advertised in social media, in the Facebook group Ompeluseuran palvelumuotoilijat, and all available tickets were sold out in a couple of hours' time. There were 14 seats for both workshops, assuming that there would be a couple of sign-ups who would not come. Both sessions had interested people on the waiting list, and the optimization of the number of participants worked well since there were eventually 12 people in the first training session and 11 people in the second event who arrived.

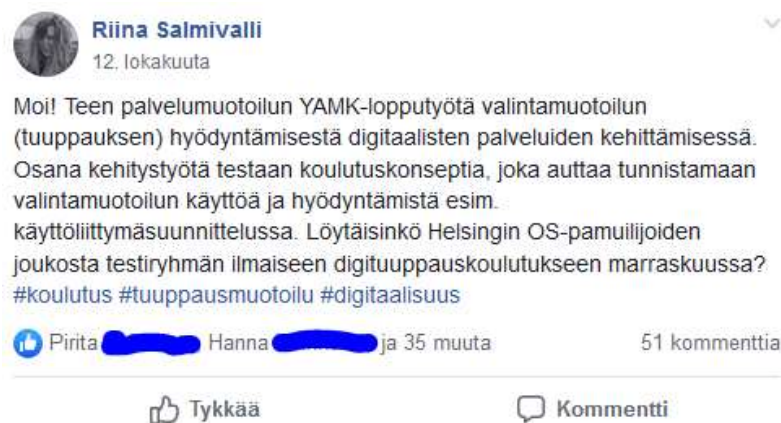


Figure 20: Calling out for training participants on Facebook.

The group Ompeluseuran palvelumuotoilijat was chosen to be the community to offer this training prototype for because there are very active people in this group, of which most are already professionals in service design. Marketing of this event to the Facebook group also enabled the topic to have visibility, and also get respondents for the online survey targeted for designers. Some active members of this group were also willing to test the online survey and offer feedback about it before it was published.

At the training session itself, I had printouts for the digital nudging bingo and feedback forms on paper. Other materials were in Powerpoint format. The feedback was collected at the end

of the workshop, and there was a specific timeslot allocated for that; the participants were told at the beginning of the training to prepare to give feedback at the end of the session.

7.3 First workshop: feedback and iteration

The feedback form (appendix 3) consisted of five questions related to content, format and meeting expectations. The feedback collected from the first workshop's participants was very encouraging, as they all answered that the training met their expectations. The participants gave feedback that the most significant value of the training was its practical approach. Several participants said that the most relevant content of the training was the bingo, where they had an opportunity to reflect the real-life examples with given training material examples. The bingo was described to be too light-weight to implement, yet it helped in the learning process. The fact-baseness, choosing to concentrate on the nudges that have proven effective, was seen as being valuable as well. Another thing that was appreciated by the participants in the training materials was the user journey map illustration, with specific lanes for mapping the user decision-making process, as two lanes were labelled "decisions to be done" and "possible nudge". It provoked discussion during the training, and it was recognized separately in the feedback forms.

There were also some suggestions on how to develop the concept, which is valuable. The theory part was seen as a bit too long and heavy, as there were three different nudging design processes presented. Another idea for improvement was to make the theory part lighter by bringing a part of it already at the beginning of the training set, as the models were perceived as interesting but too heavy. It was also suggested to bring a real-life case story to be presented, to leave some more room for a facilitated discussion with peers. It was noted by some of the participants that some of the terms, like heuristics, could be explained in more detail, that there could be stronger linkage to the UX/UI-process and that on some slides the text was a bit too small to be seen well. Since the topic was of great interest for the participants, I sent the list of references for this thesis for further reading by the participants after the event.

The feedback from the first workshop was mostly positive, and some of the improvement ideas were easy to take into account when iterating the content and materials for the second workshop. The balance between theory and practice should be adjusted, and small content-related issues, like a more profound explanation of certain terms and text size, were easily fixed before the second workshop.

7.4 Second workshop: feedback and iteration

The second workshop was held two weeks after the first workshop, which allowed some time to adjust the content and concept according to the feedback received. The pre-reading and a list of thesis references were sent as an email attachment to the training participants a week before the actual training. There were 14 people registered for the second workshop and eventually 11 came to participate, which regardless of the cancellations enabled group work in three groups.

The feedback from the second training was quite similar to the first one, and the participants were delighted with the training. The amount of theory was slightly reduced for the second workshop, and some technical issues pointed out in the first session were fixed. The participants appreciated the same aspects as in the first workshop, e.g. the combination of theory and hands-on exercise was seen as an efficient combination to strengthen the learning. Some of the participants suggested prolonging the training concept to allow for diving deeper into different examples, e.g. in non-commercial website usage, and others would have wanted to expand more on the ethical aspect of nudging. Another point that was raised separately by three participants was, that even though the concept as it is now is targeted for designers, it could be of interest to project managers, marketing professionals and c-level executives with the emphasis on ethical matters. For the next possible training session, it was suggested to include a pre-task for the participants to come up with examples of on-line nudges, or to include a section about measuring the impact of nudging.

7.5 Analysis based on the feedback

What can be learnt from the two workshops and the feedback gathered from the participants is that the topic of behavioral design and nudging is at the moment of great interest. It was easy to find participants for both workshops, which is of course at least partially explained by the fact that there were no costs for the participants.

All workshop participants answered that they were satisfied with the training, which can, from one point of view, be interpreted as successful management of expectations. The content was narrowed down enough to create a clear value statement for the training, so that the training attracted the kind of people who were genuinely interested in learning about this specific topic. Creating a training concept based on a relatively extensive theoretical study likely led to the fact that the first implemented prototype of the training was too heavy on

the theoretical side. Yet this was something that was quite easy to balance after the first training session.

The practical examples and hands-on exercises were highly appreciated by the participants of both training sessions. On the other hand, it was not such a big surprise since the survey indicated so well that the examples and practical point of view were the ones that designers were hoping for. One surprising value-creator, that was of interest to many participants, was an illustration in the training materials that visualized how choice architecture design can be integrated into the user journey. Another surprising thing was that the ethical aspect was of great interest, and many participants would have liked to learn more about it.

What I have concluded from the feedback is that I probably have enough content to run a full-day training which would allow more in-depth into the topic areas that have been of most interest to the designers: more extensive hands-on application of nudging and ethics of nudging and behavioral design.

Learning Card Strategyzer

Designers' needs for nudging | Dec 2019 Training

Riina Responsible

STEP 1: HYPOTHESIS
We believed that
designers would need more hands-on knowledge about nudging in order to utilize it

STEP 2: OBSERVATION
We observed
that this topic was of interest to many designers, who hadn't thought about it before. Data Reliability: 3 thumbs up

STEP 3: LEARNINGS AND INSIGHTS
From that we learned that
designers would like to include design of the decision making moments in their work, but they don't usually know how to do it Data Reliability: 3 thumbs up

STEP 4: DECISIONS AND ACTIONS
Therefore, we will
ask organizations who employ designers, would they be willing to pay for such a training!

Copyright Strategyzer AG | The makers of Business Model Generation and Strategyzer

Figure 21: Learning card.

8. Deliver

During the design process, the delivery phase is the point when the service is finalized and released. Implementation is often the tricky part when it comes to exposing your design out the world, and there is a possibility for it to be rejected. The budget and enthusiasm have already often been consumed before the delivery phase, and there is a pressure to move on with the following projects. During the delivery phase, the design is finally exposed to reality, and the viability of the service or product is tested. In this phase, I sketched the minimum viable product to test its attractiveness with potential customers and analyzed the results. After the concept has been finalized and tested, the delivery phase helps in making the decision about whether the solution will be implemented or not.

8.1 Minimum lovable product

The concept of the minimum viable product (MVP) was popularized by Eric Ries in his book *The Lean Startup* (2011). To put it simply and shortly, the MVP means the simplest deployable product that allows releasing the product to be able to estimate its fit for purpose and market. The thinking behind MVP is to avoid building products in isolation so that one doesn't overbuild something that customers don't want to buy. The MVP thinking has crossed industries as part of the push for a more experimental attitude towards innovations. MVP can well present the main functions that the customer might require, but the risks are that it does not take the user experience into account as much as it should to build a sustainable relationship between the customer and the product. Another risk related to MVPs is that in a market where there is a lot of competition between service providers and their similar types of services, it is difficult to differentiate products one from another. The bar for the MVP release can, in that case, turn out to be very high, which dilutes the idea of releasing at an early stage.

In the professional training business, the market is heated, and the ability to differentiate has become ever more critical, which puts pressure on building and releasing something that is highly usable, and one that can create an emotional contact with the product immediately. The Minimum Lovable Product (MLP) is according to Scott Cook "a solution that is so extraordinary on the most important dimension that it inspires positive emotion in your customers" (Furr & Dyer 2014, p. 128). MLP helps to understand what the essential features of the product for the customers are, and that way gain the hearts of a small group of

passionate customers who are willing to talk on behalf of the product and thereby help in attracting more users.

The Figure 22 below, inspired by Laurence McCahill (2014), points out the factors that go beyond the viability of MVP: delightfulness, remarkability and tribality. The digital nudging training concept builds on the emotion of the excitement of gaining new insights, it provides a remarkable experience of providing the gamification part to support the theory content, and it has already gathered a tribe of design professionals interested in digital nudging around it consisting of the training participants. The business viability is examined in more detail in the following sections of testing with customers and creating a business model canvas.

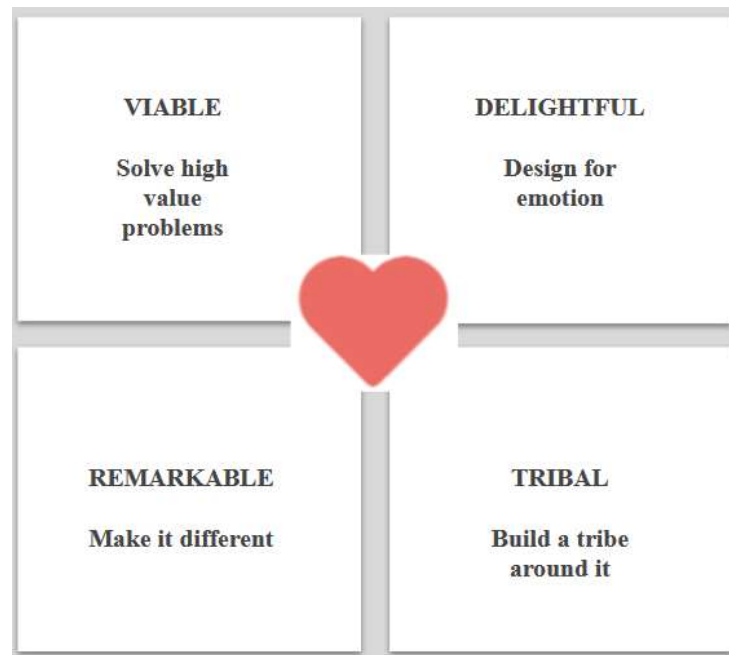


Figure 22: Minimum Lovable Product.

8.2 Testing with potential customers

I tested the service attractiveness with a group of potential customers, in this case, organizations that employ designers and would presumably be interested in supporting their skills and competence building in nudging, in finding out if the training concept is interesting enough. To support this task, I created a service advertisement leaflet (appendix 4) that was emailed to 15 people with a leadership position in design-related companies to test the value proposition and desirability of the product. These ten people were selected based on that the

organizations that they represent are known for being interested in investing in the skills-building of their employees.

The service advertisement included a short introduction to what digital nudging is, how one can make use of it, and what the training entails. In addition to the leaflet, I asked the respondents to complete a short Typeform survey to answer the following questions:

- 1) Based on the leaflet that was attached to the email, do you find the training concept interesting?
- 2) Why? Please explain why you answered the way you did.
- 3) How would you estimate the value of this concept, from your organization's point of view?

These questions were seen as relevant from the point of view that they would allow me to see if there is real customer interest, and to have an estimation about the monetary value of such training for the customers. That would help in finding out whether the training concept is genuinely commercially viable. In addition to the three obligatory questions, there was an opportunity to leave comments and ideas related to the service at the end of the survey.

The survey for potential customers was open for two weeks (weeks 50-52/2019), and it received five responses in total, which can be considered satisfactory for a qualitative analysis of results. The survey was answered anonymously. All five potential customers who answered the survey found the training concept interesting. Since there were 10 people who did not answer the survey, it can indicate that they did not have an interest in the product or participating in the survey, or they were unwilling to share their doubts regarding the product.

The open-ended answers about why respondents found the service interesting revealed that four out of five respondents had a personal interest in behavioral design or nudging, one of the respondents even saying that he or she had utilized behavioral insights in his design work. The need from an organizational point of view was also indicated by one of the respondents:

"I see that as a consulting house, we should be interested in this topic, and make use of this approach in our customer work."

How the product was presented in the leaflet was commented on by two respondents:

"This is an interesting, well-defined topic, and it was articulated well why nudging matters and how the participant would benefit from the training."

"I was missing a sense of urgency to make me buy this training even though I am interested in the topic. You could have used a little nudging in pushing the potential customers towards the buying decision!"

When asking the respondents about the value for the pricing of the training, there was, as expected, variation between the answers. The estimated price for an organization as a customer, the price for a half-day training for 10–15 participants, was between 1200 and 2000 euros. One of the respondents answered that in case he or she would be buying this training for one individual participant, the price would be between 500-1000 euros, one thousand euros being the absolute maximum price for such training for one participant.

At the end of the survey, there was an opportunity to leave comments and ideas about the product, and three out of five respondents left comments. One respondent was missing direct contact information from the leaflet, or a link to a company webpage where the customer could find more information about the training. Another respondent pointed out that this training was limited to designers only, but could also be of interest to other professionals, such as project owners. He also brought up the point that the leaflet does not indicate on what level the topics are covered, which leaves the customer wondering if there is something new for him, if having some previous knowledge of the topic.

8.3 Defining the business model

A business model canvas visualizes the elements of a service that together constitutes the business model of a service or a product. A business model canvas is a fast and flexible way of presenting the factors that support business viability in a structured and clear way.

In the case of digital nudging training, the value proposition builds on creating better products and services with the help of a behavioral insights approach. This can be delivered either by one-time training or providing customers with more extensive support in building competences and product quality, e.g. through consultation. The training concept and materials form an intellectual property basis for the service, but this could also have a value from the consultation business perspective. The most potential customers would be the companies that are interested in better integrating the human and behavioral perspective in

their design process, who do not have their own service design team, or have a lack of resources in their R&D functions.

A light "a man with a van" business model is nowadays more and more often a professional freelancer with a laptop, which allows the cost structure to be light, with low investments and only small fixed costs. This allows flexibility to supply on demand. A significant part of such businesses is built on the networks and interpersonal skills that support sales and continuity of collaboration with customers. Quite often, the leads come from content marketing; thus a presence in the channels where the customers are is crucial. The revenue streams are divided into the training events, where the prices are set either per individual participants or as a lump sum if there is only one buying customer. To spread the uncertainty risk created by the volatility of training businesses, it is useful to have some ongoing consultation contracts, e.g. for subcontracting, to keep the cash flow in balance.

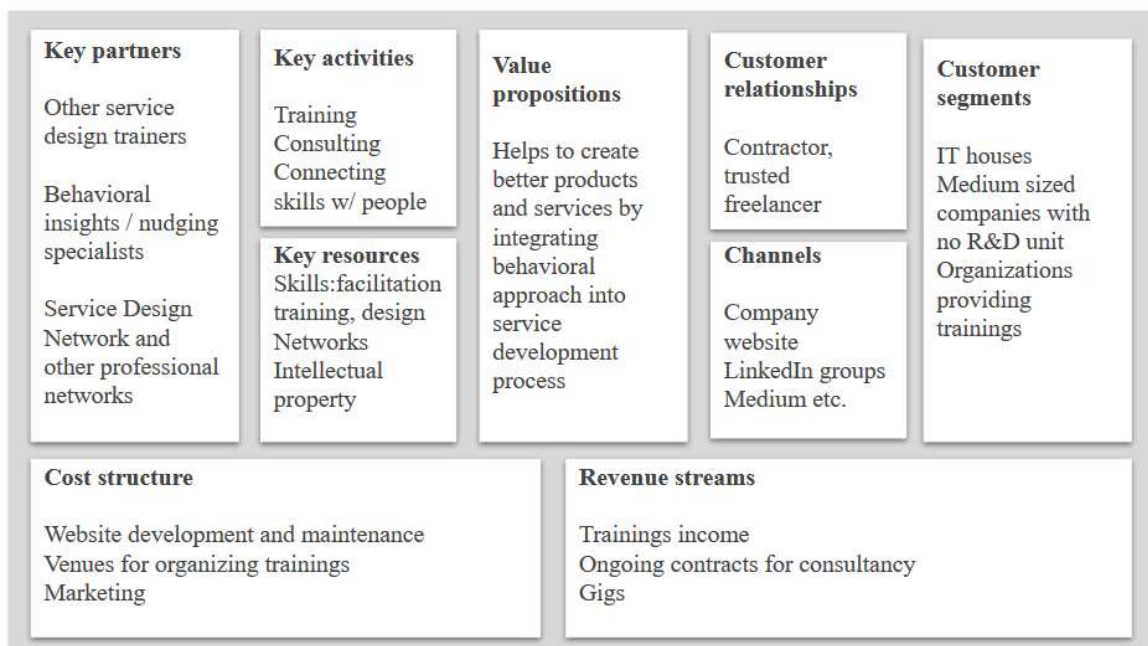


Figure 23: Business model canvas.

8.4 Summarizing the business potential

To estimate the real business potential of a product or service, one must find out if there is enough demand for such training with profit to make it a sustainable business. According to the research and feedback gathered based on the prototypes, the topics of behavioral design and nudging are trending, which indicates that there is room for training about digital nudging also in the near future. The training concept can be implemented in two ways: one

can sell training for an organization that buys all the seats for certain training sessions. The advantage is that it reduces the amount of coordination work between the training supplier and the customer, but on the other hand, it might increase the labour related to customization based on one customer needs, which is not optimal. On the other hand, in such a case there is no need for venue rental, which in Helsinki can easily be 500 euros for a half-day event.

The other option is to organize a training session that is open for any paying customer. The benefit of such training is that it enables higher profit if the session is sold out. The cost structure of such training is very different on a task level, because it possibly requires considerable marketing efforts and a lot of coordination between the service provider and end-customer. The only way of doing this type of training with profit is to offer something that nobody else does and to find the right end-customers easily, to optimize the amount of time used for coordination and marketing activities. In an optimal situation, one is able to sell training to both organizations and individual professionals to even out the risks related to organizing the latter ones with a low number of participants.

The digital nudging training concept's business potential can be examined with a SWOT analysis. SWOT is a typical management consulting tool to ensure that all internal and external factors that might affect a project or product are identified and addressed from the perspective of minimizing the risks.

Usually, the strengths and weaknesses are looked at from the internal point of view, assuming that these are the positive and negative factors that the business owner can influence. Figure 24 below presents the strengths and weaknesses of the digital nudging training concept. The strengths are that during the research process, I have gained a lot of knowledge capital about this specific topic and the research materials and results can function as intellectual property to start the business with. The concept has been tested and iterated with a particular group of end-users showcasing their interest in the product. Having the previous experience of developing and selling professional training services is definitely a strength, as are the networks with design professionals. Likely the biggest weakness preventing the elaboration of the training concept is time in use. Managing, marketing and selling training services is time-consuming, and one must be realistic with the time resources it requires. Another weakness that was identified is that so far, the service has been tested with non-paying customers, the test group receiving the training session free of charge. Therefore attracting enough paying customers to participate in the training might be a threat to the business viability.

The opportunities and threats are studied from a broader perspective, these being the factors that might influence the whole industry. The opportunities and threats related to the digital nudging training concept both identify the timing factor. The behavioral aspect in design and nudging are popular yet underprovided themes at the moment, from a training business perspective. This enhances the first-mover position as a service provider, but on the other hand, one must be aware that trends change quickly. From the industry's point of view there is a need to increase the know-how related to utilizing behavioral insights in design work, but how much is the industry ready to invest in such expertise, and to what extent are they willing to buy consultation instead of training their own staff, are unknown. A threat worth recognizing is that digital nudging training's worst competition does not come from other service providers that offer similar training services, but from other current and interesting professional training topics that compete for the same training budget within organizations.

It is worth stating, in summary, that good design is good business. Developed and tested with service design tools, digital nudging training is a concept that would probably find its own spot and audience in the design professionals training market, but it is honest to say that it would still require a lot of work to create an ideal balance between how much time is put into further development, and how much money can be expected to be made out of this service.

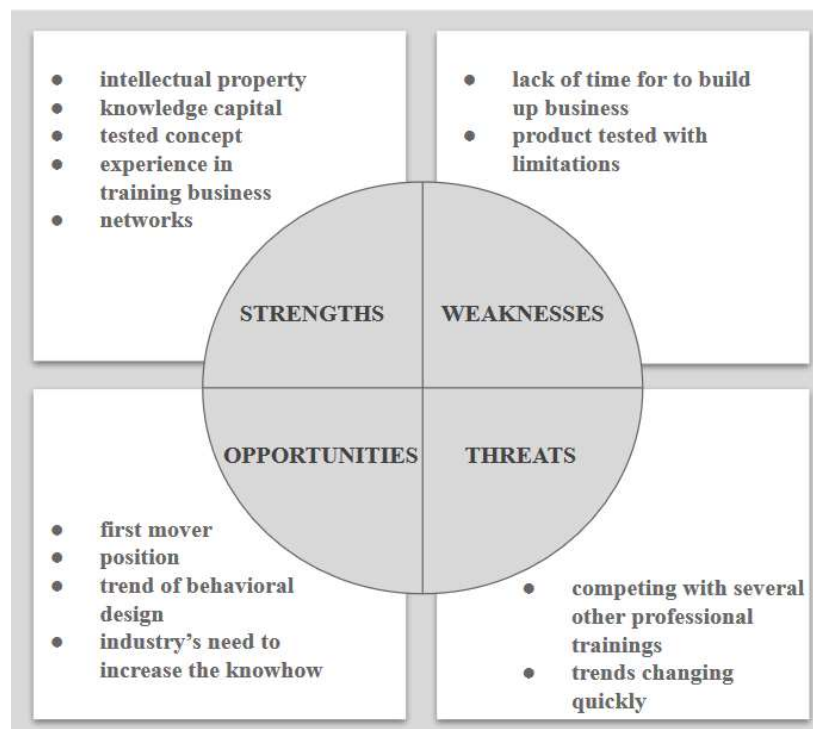


Figure 24: SWOT analysis of the service

9. Conclusions and discussion

The user experience is these days created more and more in a digital format, as digitalization is affecting how people interact with products and service providers. How digital services present the options available for the user brings us around to the question of who defines what the options presented for the users are, why and how. The aim of this thesis was to bridge the gap between skills and existing knowledge about utilizing behavioral insights during the design process, by developing a training concept for designers about digital nudging. The training concept was designed, tested, iterated and productized as part of this thesis work, and the phases of development are described and reasoned throughout the thesis. The research problem and creating a solution for that was approached through behavioral economics, information system sciences and service design perspectives. The research process itself followed the Design Council's Framework for Innovations. This chapter describes the research process, findings and learnings in connection with future research in this area.

The research process required a deep dive into literature about nudging and behavioral insights, which is provided by behavioral economics and information system sciences. The service design approach offered the tools to create the training concept based on designers' and industry's needs. The research process started with initial research to scope the most relevant problems and topics, to lay down the context for the surveys and interviews.

The discovery phase revealed that the designers were most of all missing practical examples, existing cases to learn from and help in identifying the opportunities for utilizing nudging in a digital environment. The survey with specialists utilizing behavioral insights in their own design work, revealed the lack of skills and understanding of the advantages of a behavioral design approach, is a significant factor currently preventing organizations from making use of this approach. Online ethnography helped in validating what the Finnish designers' community find intriguing in the behavioral design approach.

The interviews helped in focusing on what were the most relevant topics for the training to be covered, in order to increase the awareness of behavioral design and nudging in a digital context. The insights from the surveys and interviews were used in identifying who the actual end-users of such training are, and what are their needs and motivations towards the training.

During the development phase, the training was conceptualized as a workshop, and it was tested and iterated twice to find the match between the end-user needs and training content.

The training was productized and offered to a limited number of potential customers to find out whether they would find it desirable and to estimate the monetary value of such training. Feedback was collected from both training sessions, and it was used in iterating the content but also in productization of the service, for example, in creating a business model canvas and advertisement leaflet for the training.

In the delivery phase, the focus was on synthesizing collected information into a minimum lovable product and a business canvas, and creating a first ready-to-release prototype of the training that was tested with potential customers. Testing the prototype helped in finding out that the training concept is of interest for potential customer companies, and it has monetary value, but analysing the business potential as a whole revealed that it would still require a considerable amount of work to make the digital nudging training into a viable business.

Many specialists contributed to the creation of the concept and materials. Preliminary interviews and discussions with the designers and experts representing design and pedagogy helped in formulating first the set of research questions to be examined, and later on in defining the most problematic areas and possible value creators for the project. The findings of the research process were visualized in several different ways. The data and insights collected during the research process were formulated in mind maps, wireframes, personas, empathy maps, affinity diagrams and into other canvases, helping to pinpoint what the most relevant findings based on the research data are.

The research problem was identified at the beginning of the thesis project as "Digital service designers need more hands-on knowledge about utilizing digital nudging to be able to make use of it in service development." The problem's existence was supported by what was learnt from the designers and behavioral insights specialists, that in fact nudging as a research area is known of, but designers don't have enough hands-on knowledge about utilizing digital nudging in their work. This was evident based on the majority of survey respondents wishing for concrete examples and cases of where and how nudging has been used in a digital context.

The primary research question (RQ1): "How could digital nudging be exploited in service development more widely?" was addressed directly in the survey for designers, as they were asked what could help them to utilize behavioral insights and nudging in their work. There was a need for increasing awareness of digital nudging opportunities, but also for supporting the designer's practical ability to integrate the behavioral aspect in the design process by identifying the opportunities of nudging.

The behavioral insights specialists were asked what they saw as the factors slowing down the uptake of digital nudging (RQ2) from their professional and the industry's point of view. The answers painted a picture of increasing interest towards a behavioral insights approach to service and product development, but a lack of knowledge and skills to understand the approach, and to apply it and integrate it to the design process. This also revealed the extensive gap between industries and businesses in how they understand the usage of a behavioral insights approach in service and product development. Significant differences in maturity levels seem to exist, where in some companies the behavioral aspect of user experience and user behavior is a matter of course, whereas in other industries user behavior is seen as something that the service provider manages.

The third research question (RQ3) addressed "How could training designers support the uptake of digital nudging?" The interviews with the designers and behavioral insights specialists enriched the view on how the designers currently perceive the user behavioral aspect of service development, and what the status of Finnish organizations is in utilizing a behavioral insights approach. Training, in this case, was understood as a tool to increase the designer's skills in bringing the behavioral aspect into their own work. The hands-on practical approach for this training and the materials were appreciated as something concrete to help the training participants move forward. The training attracted a lot of interest among designers, and it can be seen as a successful first step in increasing the skills and awareness of designers in the topic.

Other exciting findings from the research can be narrowed into two topics. Firstly, it was interesting to find out how scattered the understanding of behavioral design and nudging currently is. There seem to be remarkable differences between those companies who already actively include the behavioral insights approach in their service and product development and seem to consider it self-evident, whereas those coming behind are barely aware of the opportunities that behavioral design and nudging are able to provide. Another thing worth pointing out, which came up quite early during the research phase and where its importance was emphasized during discussions and survey with designers, was the ethical aspect of nudging. There is a remarkable ethical concern existing among designers about what nudging and behavioral insights require from them, but currently there is very little public discussion going on about this topic. The lack of clarity about possible consequences, and questions of responsibility that derive from utilizing a behavioral design approach, bothers designers and more support for this should be provided for professional designers.

The questions of reliability and validity were taken into account when selecting the research methods and planning the actual research process. The consistency between the results gained by using different methods throughout the research process can be considered high. Nevertheless, there are several limitations in this thesis that should be acknowledged. The survey results would have benefited from a larger number of respondents, especially the survey targeted for potential customers. Also, some more rounds of testing and iteration for the training concept with different potential user groups would have been valuable, but due to limited resources, testing the prototype with real users was limited to only two times. The training concept could be developed further to meet different needs: perhaps to differentiate a more technically oriented concept and a version that would tackle the ethical questions more profoundly. According to current knowledge, the training concept will be utilized in the future at least twice with different customer groups. Since the concept is relatively lightweight to implement, it might be later on used for commercial purposes.

The research process itself was quite straight forward and iterative, and the thesis process was completed a couple of months earlier than planned at the beginning of the process. This was most likely due to not having a commissioner, thus having minimal external dependencies affecting the scheduling of the work. From a learning point of view, this thesis work allowed testing of how to integrate different disciplinary approaches with service design. It was fruitful, yet it was challenging to balance the approaches and the infinite number of possible models, theories and aspects that could have formed the theoretical foundation for the training concept. Based on the participant feedback of the training, the ratio between behavioral economics, information system sciences and service design was successful, taking into consideration the educational background and professional experience of the participants. I can conclude that the training met the expectations of participants, and managed to bridge the gap between theoretical and hands-on knowledge existing about digital nudging.

Based on this research experience, I can say there are many yet under-covered aspects of behavioral design and nudging in a digital environment that could be looked into in future research projects. The application of digital nudging models in existing services would be worthwhile, as well as doing more profound research on behavioral design and its consequences to designers' ethics and work. As they are broad topics, they would not likely be covered in one thesis but would instead require uptake in several research projects.

As a recommendation based on this thesis work, I would like to highlight the importance of increasing awareness about human behavior in the design context. The term ‘user behavior’ often narrows the understanding of human behavior into the user’s conscious and reflected actions that take place when using the service. This view disregards the broader understanding of human behavior, where even though it takes place outside the product usage, it influences it, directly or indirectly. The subconscious level of human behavior and automatic thinking processes should also be considered when designing digital services, with responsibility and sustainability in mind. Human behavior is a very complex and broad factor that determines how and why people act as service users as they do. Increasing the designer’s understanding of human behavior, whether the user’s behavior is conscious or subconscious, helps in creating better and more effective products. By understanding human behavior better, designers are also better in understanding the different ethical questions that the more behaviorally aware service creation poses for them.

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Appendices

Appendix 1: Survey for designers

Appendix 2: Survey for specialists

Appendix 3: Feedback form

Appendix 4: advertisement leaflet

Appendix 5: Survey for potential customers

Appendix 1: Survey for designers

Käyttäytymisen ymmärtämisen hyödyntäminen palvelu- ja tuotekehityksessä

Tämä kysely on tarkoitettu digituoppauksesta kiinnostuneille suunnittelijoilla ja kehittäjille.

Kyselyn tuloksia käytetään digituoppauskoulutuksen sisällön kehittämiseen.

Kyselyyn annettuja vastauksia ei voida yhdistää yksittäiseen vastaajaan. Vastauksia hyödynnetään Novia Yrkehögskolanin YAMK-lopputyössä "Digital nudging – the behaviorally aware approach for digital service design" (Salmivalli, 2020).

Kiitos että osallistut!



Vastaajan taustatiedot

Jotta saisin paremman käsityksen koulutuksen kohderyhmästä, vastaathan ensin muutamaan taustakysymykseen.

1a Sukupuoli

- Mies
- Nainen
- Muu

1b Kaikki työkokemus vuosina

- Alle 1 vuotta
- 1–2 vuotta
- 3–5 vuotta
- 6–10 vuotta
- 11–15 vuotta
- 16–20 vuotta
- Yli 20 vuotta

1c Koulutustaso (valitse ylin suorittamasi tutkinto)

- Peruskoulu
- Ammattikoulu
- Lukio
- Alempi korkeakoulututkinto
- Ylempi korkeakoulututkinto
- Lisensiaatti tai tohtori

Appendix 1: Survey for designers

1d Koulutusala (valitse yksi vaihtoehto joka kuvaa koulutustaustaasi parhaiten)

- Yleissivistävä koulutus
- Kasvatusala
- Humanistiset ja taidealat
- Yhteiskunnalliset alat
- Kauppa, hallinto, oikeustieteet
- Luonnontieteet
- Tietojenkäsittely ja tietoliikenne
- Tekniikan alat

> [View all choices](#)

1e Palvelu- ja tuotekehitystyökokemus

- Ei ollenkaan
- Alle 1 vuotta
- 1–2 vuotta
- 3–5 vuotta
- 6–10 vuotta
- 11–15 vuotta
- 16–20 vuotta
- Yli 20 vuotta

1f Palvelu- ja tuotekehitykseen liittyvä koulutus

1g Jos sinulla palvelu- ja tuotekehitykseen liittyvä koulutus, niin tarkenna mikä. Jos kysymys ei koske sinua, niin paina "enter" ja siirry eteenpäin kyselyssä.

1h Onko sinulla kokemusta digitaalisten palveluiden kehittämisestä?

Appendix 1: Survey for designers

2 Kiitos antamistasi taustatiedoista. Seuraavaksi tarkastelemme kiinnostustasi digituuppauksen eri teemoihin.

✓ **2a** Teetkö vuorovaikutussuunnittelua?

- Kyllä
- Ei
- Tämä kysymys ei koske minua

✓ **2b** Yritätkö tämän hetkessä työssäsi vaikuttaa palvelun tai tuotteen käyttäjän valintoihin palvelupolun varrella?

- Kyllä
- En
- Tämä kysymys ei koske minua

☰ **2c** Jos vastasit kyllä, niin voit tässä tarkentaa miten. Jos kysymys ei koske sinua, niin paina "enter" ja siirry eteenpäin kyselyssä.

☰ **2d** Kerro omin sanoin minkälainen koulutussisältö auttaisi sinua parhaiten ymmärtämään käyttäjän toimintaa palvelupolun varrella tapahtuvissa valintatilanteissa.

Appendix 2: Survey for specialists

Käyttäytymisen ymmärryksen hyödyntäminen palvelu- ja tuotekehityksessä

Tämän kyselyn avulla kerätään asiantuntijoilta laadullista tietoa käyttäytymisen ymmärryksen hyödyntämisestä palvelu- ja tuotekehityksessä Suomessa.

Kyselyn vastauksia käytetään tutkimusmateriaalina Novia Yrkehögskolan Leadership and Service Design YAMK-opinto-ohjelman lopputyössä "Digital nudging – the behaviorally aware approach for digital service design" (Riina Salmivalli).

Kyselyyn vastaamiseen menee noin 15 minuuttia.



- 1 Mikä on ammatillinen lähestymistapasi tai koulutustaustasi, jonka kautta tarkastelet käyttäytymistä vuorovaikutuksessa palvelun tai tuotteen kanssa?
- 2 Miten arvioisit palvelu- tai tuotekehittäjien tällä hetkellä hyödyntävän tutkimustietoon perustuvaa ymmärrystä käyttäytymisestä?
- 3 Kuka Suomessa hyödyntää käyttäytymisen ymmärrystä menestyksekkäästi palvelu- tai tuotekehityksessä? Miten?
- 4 Mitkä asiat tuntemissasi organisaatioissa tällä hetkellä estävät käyttäytymisen ymmärryksen hyödyntämistä palvelu- ja tuotekehityksessä?
- 5 Kiitos vaivannäöstäsi! Halutessasi voit vielä jakaa muita ajatuksiasi käyttäytymisen ymmärryksen hyödyntämisestä palvelu- ja tuotekehityksessä.

Appendix 2: Survey for designers

✓ 2e Mitkä seuraavista aiheista kiinnostavat sinua eniten? Voit valita enintään kolme vaihtoehtoa.

- Päätöksenteon taustatekijät, esim. päätöksenteon oikopolut ja vinoumat
- Käyttäjän ja IT-järjestelmän vuorovaikutus
- Palvelumuotoilun teoria
- Valintahetkien suunnittelun teoria
- Käytännön esimerkit valintahetkien tunnistamiseen liittyen
- Käytännön esimerkit valintahetkiin vaikuttamisesta
- Soveltava harjoitus valintahetkiin vaikuttamisesta
- Käytännön esimerkit digitaalisista muotoiluprosesseista
- Digituoppauksen vaikuttavuus
- Digituoppaus ja etiikka



2f Jos valitsit edellisessä kohdassa vaihtoehdon "muu", voit tarkentaa tähän vastaustasi. Muussa tapauksessa paina "enter".

3 Hienoa, olemme melkein valmiita. Onko sinulla muita toiveita tai kommentteja koulutuksen järjestäjälle? Jos ei, niin voit painaa ok. Muista vielä lopuksi lähettää vastauksesi valitsemalla "lähetä".

Tilaisuus: Digituuppaustyöpaja OS-Pamuille 26.11.2019

Vastasiko koulutus odotuksiasi?

Kenelle suosittelisit tällaista koulutusta?

Mikä oli sinulle koulutuksessa hyödyllisintä?

Miten kehittäisit sisältöä tai osallistamistapoja?

Muu palaute:

Kiitos osallistumisestasi ja antamastasi palautteesta!

Appendix 4: advertisement leaflet



**Valintamuotoilu
käyttöliittymäsuunnittelussa
– koulutus UX-/UI- ja
palvelumuotoilijoille**

Käyttäjän tekemillä valinnoilla palvelupolun varrella on suuri merkitys käyttäjäkokemuksen ja onnistuneen palvelukokemuksen kannalta. Tämä koulutus tarjoaa palveluiden kehittäjille perusteet käyttäytymisen muotoilun mahdollisuuksista ja hyödyistä osana hyvää käyttäjäkokemusta.

Valintamuotoilu, eli tuuppauksenakin tunnettu nudging, on ihmisten käyttäytymiseen ja valintoihin vaikuttamista palvelupolun tärkeissä päätöksentekohetkissä.

Sen avulla pystytään tunnistamaan päätöksen lopputulokseen vaikuttavat tiedostamattomat ajatusprosessit, joita on mahdollista hyödyntää osana käyttäjäkokemuksen muotoilua.

Valinta-arkkitehtuuria muokkaamalla pystytään luomaan käyttöliittymään elementtejä, rakenteita ja toimintoja, jotka tukevat onnistunutta käyttäjäkokemusta.

Appendix 4: Advertisement leaflet



Koulutuksen avulla osallistujat oppivat:

- Mitä on käyttäytymisen muotoilu
- Miten ottaa valintamuotoilu osaksi käyttäjälähtöistä kehittämistyötä
- Miten ohjata päätöksentekotilanteita valinta-arkkitehtuureja muotoilemalla
- Käyttäytymisen muutokseen tähtäävä muotoilu ja siihen liittyvät eettiset kysymykset

Puolen päivän mittainen koulutus sisältää teoriaa ja käytännön harjoituksia. Teoriaosuus yhdistää käyttäytymistaloustiedettä, ihmisen ja tietokoneen vuorovaikutustutkimusta sekä palvelumuotoilua. Konkreettisten esimerkkien ja ryhmäharjoitusten kautta päästään pohtimaan, miten koulutuksen oppeja voi alkaa soveltaa omassa työssä.

Koulutus sisältää:

- Neljän tunnin osallistava koulutus ja koulutusmateriaalit 10-15 osallistujalle
- Sisällön tarkempi räätälöinti yhdessä tilaajan kanssa
- Koulutus ja materiaalit saatavilla myös englanniksi

Kouluttajana toimii Riina Salmivalli. Yli 10 vuotta tekniikan alalla työskennellyt ihmiskeskeisten palveluiden kehittäjä, joka on koulutukseltaan yhteiskuntatieteilijä sekä palvelumuotoilija (YAMK).

Appendix 5: Survey for potential customers

1 Hei! Kiitos kun tulit vastaamaan kyselyyni. Kerro nyt rehellinen mielipiteesi, onko koulutuskonseptini esitteen perusteella kiinnostava?



2 Tähän voit perustella vastauksesi.



3 Minkä arvoisena näet tämän koulutuksen? Voit antaa myös hintahaarukan, jonka uskot vastaavan koulutuksen arvoa organisaatiollesi.



4 Onko muita ajatuksia tai ideoita joista haluaisit kertoa valintamuotoiluun tai koulutuskonseptiini liittyen?

A Kiitos osallistumisestasi!

