Designing a student-centered learning experience

The Digital Wellbeing Sprint

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Designing a student-centered learning experience: The Digital Wellbeing Sprint

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The purpose of this thesis is to understand students' expectations and perception of value regarding their experiences in higher education and then contribute these insights to the design and development of the Digital Wellbeing Sprint (the Sprint).

The Sprint is an intensive summer innovation course offered by an alliance of three Universities of Applied Sciences (UAS) in the Helsinki metropolitan area. Student teams work on real projects from businesses, municipalities or third-sector organizations with support from industry experts, mentors, and teachers. By working through the design process, students gain knowledge and experience in cocreation, service design and open innovation. From the perspective of the UAS alliance, the Sprint serves as an educational research, development and innovation (RDI) environment that aims to inspire a new approach to higher education that will engage, motivate and prepare students of today for the jobs of tomorrow.

This thesis embraces service-dominant logic and student-centered learning by taking the point of view that value in education is not created by the university and delivered to students; value is created with the student whose needs, interests and perspectives should be considered in the design of a learning experience.

Qualitative research, including surveys and interviews with students from the 2016 Sprint, is used to understand value from the student point of view. The findings are presented through the lens of jobs to be done and suggest students 'hire' education to make progress towards a goal and value is created when progress is made. The results offer an understanding of the desired progress, or jobs, students are hiring the Sprint to help them achieve. Three high-level job categories were identified: learn from others, collect experiences and take the next step. Within each of these categories lie insights into students' desired progress and outcomes of learning. To make these insights actionable, 'how might we questions' are outlined for each category. These are intended to ignite new ideas for how the organization can apply a deeper understanding of the student in the design of student-centered learning experiences. Ideas are also offered for how the UAS alliance can create additional value by supporting student jobs.

Perspectives from service-dominant logic, student-centered learning, and jobs to be done are intended to make steps towards a new approach to higher education. As of the date of publication, the findings of this research have been used to inform the design of the 2017 Digital Wellbeing Sprint and are being considered by the three Universities of Applied Sciences on a larger strategic level. The approach and findings can similarly be used to support the design of student-centered learning experiences in environments such as living labs, sprints, hackathons and design curriculum.

Keywords: Service-dominant logic, student-centered learning, higher education, value cocreation, jobs to be done

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1   Introduction

Since the industrial revolution, there has been a predominant production/consumption approach to business; evidenced even in the language used to describe the roles of 'producers' and 'consumers.' It is a goods-dominant logic where consumers are mere beneficiaries of the producer's output and value is derived from ownership. (Lusch & Vargo 2014).

A new era dominated by service has dawned and the roles have changed. Business is less about producing and more about *provid*ing a service. As *provid*ers, solutions are expected to be *custom*ized to the needs of the *custom*er. This relationship involves a two-way understanding and through it a new type of value is formed. Value extends beyond a single purchase; it is created each time a good or service used. This understanding has given growth to numerous fields of practice focused on understanding the customer or user; they embrace a *user-centered* or *human-centered* approach.

In the same way, a new era is dawning in education. The focus is less on teaching and more on learning. Where a teacher was once considered the 'sage on the stage' there is a move to become the 'guide on the side.' Information isn't held by the teacher and imparted to the student; rather the teacher is a facilitator of learning and viewpoints of the students play an essential role in learning. Value is about more than acquiring and retaining information, it is created through the experience of learning and again each time that knowledge is applied in the world. This has also given growth to new fields of educational practice focused on understanding the student or learner, they embrace a *student-centered* approach.

This thesis explores the logic and mindset of this new era through a case called the Digital Wellbeing Sprint (the Sprint); an education program developed by three Finnish Universities of Applied Sciences (UAS's) in the Helsinki metropolitan area. The Sprint embraces the new era of service-dominant logic and seeks to prepare students for a transition to working life by gaining experience in collaboration, cocreation, design and open innovation.

The question is, how can the same logic promoted by the Sprint be applied to develop the concept further? The goal is to apply service-dominant logic to support the design and development of the Sprint as a service offering. It will embrace a student-centered approach by first understanding students' expectations/perception of value.

Serving as a mentor during the Sprint pilot in 2016 and currently working as a Design Thinking teaching fellow in higher education, I also have a personal interest in this thesis topic. The research, coupled with my past experiences and future goals, leaves me to ponder a fundamental question: As design educators, how do we practice what we preach?

1.1 Research and development objectives

The focus of this thesis is a service offering called the Digital Wellbeing Sprint offered by the alliance of three Universities of Applied Science in Finland: Haaga-Helia, Laurea and Metropolia. The customers of this service are Finnish and International students pursuing either Bachelor's or Master's degrees from the three schools and studying subjects such as health care, social services, business, technology, media, design, engineering and computer science.

The goal is to *understand students' expectations/perception of value around their experiences in higher education, then contribute these practical insights to the further design and development of the service offering of 'The Sprint.'* The perspective is from user-centered design, suggesting the user should be at the heart of the design process. This is adapted to the educational context and referred to as student-centered learning or student-centered design.

The scope includes the first phase of the typical design process which is focused on *establishing a deep understanding of the learner* as this is the foundation for designing a student-centered learning experience. Insights will go on to inform the development phase in which solutions are identified, refined through testing and implemented into the learning environment. As the service provider has established a team responsible for the development phase, identification and implementation of solutions are not included in the scope of this thesis. However, suggestions are included for further consideration by the development team.

The two key research questions aim to understand the learner and this understanding can contribute to the design of learning experiences:

1. What value do students seek from higher education and, more specifically, from the Sprint?
2. How might we rethink education by considering the value students are expecting from educational experiences such as the Sprint?

1.2 Structure of the thesis

This first chapter introduces the topic of the thesis, its research and development objectives, and a brief overview of the key concepts. Chapter two offers background about the development project, including an overview of the case organizations and the Digital Wellbeing Sprint.

The third chapter presents the theoretical grounding for the thesis. Divided into three main sections, the first introduces the concept of value in services through the lens of service-dominant logic. It explores how value is created as a service is experienced by its users and connects jobs to be done as a practical approach to support value cocreation. The second section again considers the topics of value and experience, this time in the context of education. It likens student-centered learning to the concepts of user-centered or human-centered and explores how design is used in education. The third section provides an overview of learning theories and aims to support a deeper understanding of the educational context.

The fourth chapter covers the development process and methods used in the qualitative research. Divided into two main sections, the first introduces the design process while the second offers a step-by-step description of the process and methods. Chapter five summarizes the empirical findings and results of the research and offers insights into how it can be applied to the further development of the Sprint. The sixth and final chapter offers a summary of the work as well as a discussion about its value and opportunities for additional research.

1.3 Key concepts

This thesis is built on the understanding that the Digital Wellbeing Sprint is a *service offering*. The *service provider*, also referred to as the *organization,* is an alliance of three Universities of Applied Sciences. The *customers* of this service are students, also referred to as *learners*. The *service experience* is the mechanism through which the organization cocreates *value* with the learners. Finally, *higher education* is the context within which this service is offered. In addition to this foundational understanding, the following key concepts are introduced:

Jobs to be done (JTBD) - Jobs to be done is a theory that suggests customers buy products or services not for the reward of the physical acquisition, rather because of the job it helps them accomplish or the progress it helps them make (Christensen, Hall, Dillon & Duncan 2016b). The application of this theory offers a practical approach organizations can use to understand and deliver on the outcomes customers are looking for when hiring a product or service (Ulwick 2016).

Service-dominant logic - Organizations once saw value as something embedded in the product and delivered to customers at the point of purchase, called value-in-exchange (Lusch & Vargo 2014, 23, 38). Service-dominant logic opposes this view, suggesting value is only proposed – not provided - by the organization (2014, 57). Value is created together with the customer at the time the offering is experienced or used, referred to as value-in-use.

Furthermore, value can mean different things in different contexts and to different people, or value-in-context. (Lusch & Vargo 2014, 23).

Student-centered learning (SCL) – The concept that learning environments should be designed to incorporate the needs, interests and perspectives of the students; students play an active role in the learning experience; and teachers facilitate learning as opposed to imparting information. (ESG 2015, 12; Langworthy et al. 2009, 30). As an approach to teaching and learning, it is said to increase student motivation and engagement and offer opportunities for self-reflection (ESG 2015, 12).

Value cocreation – A fundamental element of service-dominant logic, value cocreation suggests multiple stakeholders are involved in creating value. That is, value is not produced by one stakeholder alone, such as a company, and given to the customer. Rather, it is the combination of the company offering, the customer need, and resources from other stakeholders that enable value to be realized. (Lusch & Vargo 2014, 57).

2   The development project

This thesis focuses on the development of a concept called the Digital Wellbeing Sprint. The Sprint was developed and piloted in the Summer of 2016 as a partnership between three Finnish Universities of Applied Sciences. It was designed and tested as an intensive two-week summer school concept focusing on digital wellbeing, cocreation, and entrepreneurialism explored through real-life challenges provided by businesses, municipalities or third-sector organizations.

A strategic alliance formed by the three Universities, along with a successful pilot, has resulted in an initiative to run the Sprint again in 2017. As an educational research, development and innovation (RDI) project, the long-term vision is to shape the future of Finnish education (Hirvikoski 2016. Personal communication.) The following section introduces the case organizations behind the Sprint and provides further background about the concept.

2.1 Case organizations

The three case organizations are Universities of Applied Sciences (UAS), referred to in Finnish as ammattikorkeakoulu (AMK). In the Finnish higher education system, UAS are focused on preparing students with practical, professional skills for transitioning to working life. This expert job training is designed to respond to the needs of the labor market and provide a pipeline of skilled workers to support regional development. (Arene 2014, Ministry of Education and Culture 2006.)

Approximately 88% of UAS core funding is directly from the government with a separate funding allotment for public research. This core funding model covers an operational mix of 85% education and 15% research that is monitored through a set of performance indicators. According to the Finnish Ministry of Education and Culture, these "indicators relate to degrees conferred, student progress, research productivity, external research funding (including by the Academy of Sciences and TEKES, a research council), contract income, and internationalisation (student mobility)"(Ministry of Education and Culture 2016).

Traditionally, both national and international students could attend a UAS tuition-free. However, a 2015 Finnish Parliament ruling allowed universities to charge international students a minimum 1500 euro per year with the maximum fee set at the discretion of individual institutions. Study placement remains free for Finnish students, those in programs delivered in the Finnish language and those from inside the European Union and the European Economic Area. (Yle Uutiset 2016, Ministry of Education and Culture 2016)

Haaga-Helia University of Applied Sciences

Haaga-Helia is known among the Universities of Applied Sciences for its business orientation. Other focus areas include: "communication and information management, information and communication technologies, tourism and hospitality, and wellness combining health and sports." The UAS offers study opportunities at both the Bachelor's and Master's degree level to approximately 11,000 students across five campuses. (Haaga-Helia 2016).

Laurea University of Applied Sciences

Laurea is known for its work in service innovation and design and offers Bachelor's and Master's programs in business, healthcare and social services, restaurant hospitality and security management. The UAS has seven campuses and approximately 7390 students. (Laurea UAS 2015, 10).

Metropolia University of Applied Sciences

Metropolia is the largest UAS in Finland with approximately 16,500 students and operates in 20 locations (Metropolia UAS 2016). With the largest number of students specializing in technology and engineering, Metropolia also offers Bachelor's and Master's degree programs in health care and social services, culture and economics, and business administration (Metropolia UAS 2015).

Strategic Partnership

In 2016 the three Universities – Haaga-Helia, Laurea, Metropolia – formed a strategic alliance before the Finnish Ministry of Education and Culture. The resulting alliance designated these Universities as experimental environments in which to research and develop the future of Finnish education. Director Tuija Hirvikoski (2016. Pers. com.) frames the initiative saying, "We are in the business of modernizing Universities of Applied Sciences and becoming the role model to the rest of Europe."

The trio is attempting to tackle topics such as:
- faster completion of studies
- greater student mobility among programs
- entrepreneurship education
- innovation partnerships with small to medium sized enterprises (SMEs)

These objectives are being explored through seven development projects, most relevant to this thesis is the Professional Summer School (PSS). PSS is an initiative to promote year-round study as a direct response to the need for faster completion of studies in Finland. (Laurea UAS n.d., Laurea UAS 2016).

A "faster transition to working life through high-quality education" was laid out by the Finnish Ministry of Education and Culture (2006) as a common objective for all universities by 2025. The global economic downturn has strengthened the education system's resolve to meet this objective. According to The World Economic Forum Global Competitiveness Report (2016), Finland's competitiveness has declined over the past three years with a weakening macroeconomy. It is believed that speeding up the transition to working life, while maintaining quality education, will help the macroeconomic environment of Finland. True to the nature of Finnish Universities of Applied Sciences, the alliance is responding to this market and economic need.

2.2 Digital Wellbeing Sprint (The Sprint)

The Digital Wellbeing Sprint was piloted in the summer of 2016 under the name 'Digital Wellbeing Co-creation and Start-up Summer School 2016.' According to an informal memo:

> "The main idea was to gather a multidisciplinary group of students from each institute [Haaga Helia, Laurea and Metropolia] and their partner institutes for a two-week long intensive course, give them real working life problems from partner companies, and provide them new tools for co-creation of service-design innovations" (Hirvikoski et al. 2016. Project documentation).

The structure of the Sprint is designed around the service innovation process by Ojasalo, Koskelo and Nousiainen (2015) which integrates foresight and service design (Figure 1). The dynamic forces of *sensing* and *seizing* are influenced by foresight. Foresight is about *sensing* needs within the environment, identifying the possible opportunities for the future, then *seizing* those opportunities by formulating a response or set of potential responses (Ojasalo, Koskelo & Nousiainen 2015, 194). The process includes four steps and is influenced by *design thinking* which offers both a method and mindset for innovation and *service design* which applies design thinking in the context of service development (Ojasalo, Koskelo & Nousiainen 2015, 200).

PROCESS APPROACH: HOLISTIC, ADAPTABLE, ITERATIVE

SEIZING

| MAP & UNDERSTAND | FORECAST & IDEATE | MODEL & EVALUATE | CONCEPTUALIZE & INFLUENCE |

SENSING

NATURE OF METHODS:

Evidence-based	Collaborative	Visualizing	Visionary
Empathetic	Imagining	Simulating	Synthesizing
Contextual	Open-minded	Experimental	Transformative

ILLUSTRATIVE METHODS AND TOOLS:

Ethnography , probes	Ideation workshops, design games	Scenarios	Visioning
Contextual interviews	Trend cards	Service ecology maps	Change paths
Environmental scanning	Personas	Customer journey maps	Multilevel service design
Content analysis	Storytelling	Prototypes	Business model canvas
Delphi	Futures wheel	Socio-drama	Role scripts

METHODOLOGICAL APPROACH: FUTURE-ORIENTED, PARTICIPATORY, CREATIVE
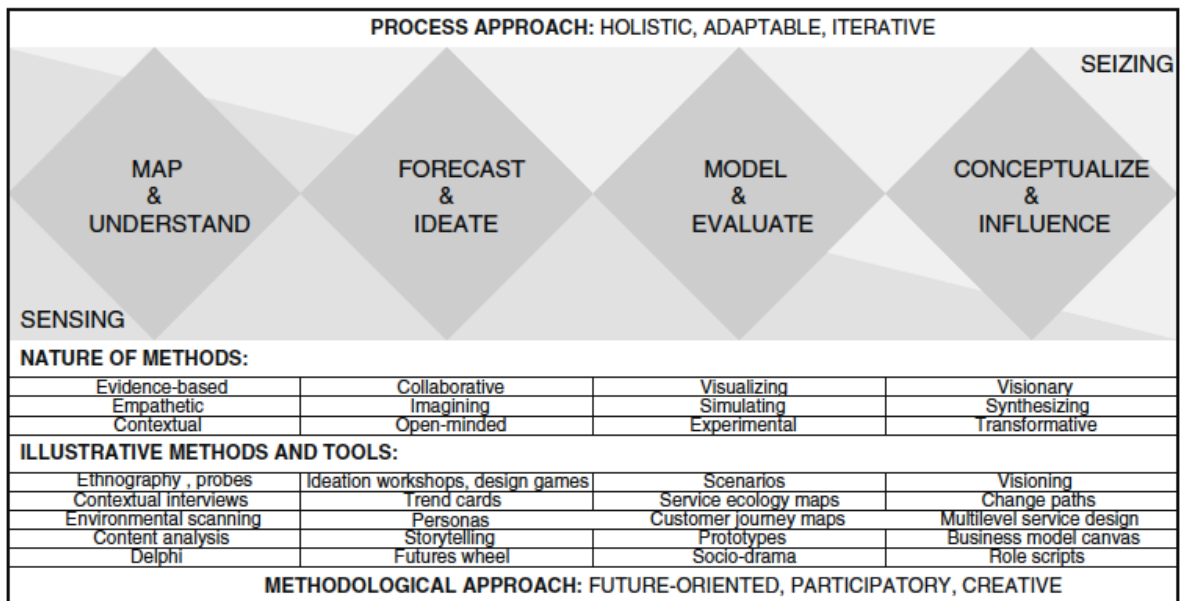
Figure 1: The service innovation process grounded on foresight and service design (Ojasalo et al. 2015)

In the pilot, participants of the Sprint were introduced to the concept on day one, then followed the service innovation process spending two days for each step. The Sprint wrapped up the final day with team pitches introducing the new concepts. Over the course of the two weeks, students were encouraged to 'get out of the building' to collect insights and viewpoints from real or potential customers. Each day participants came together to listen to a guest speaker, take a field trip or receive guidance relevant to where they were in the process. Student teams worked in breakout rooms staffed with mentors, typically Master's students, and teachers from the three Universities made rounds to offer additional support. Out of 103 students enrolled, 62 registered in-person to participate and 54 completed the Sprint. Further details of enrollment figures can be found in Appendix 2.

The Sprint's collaborative environment involving a variety of actors including end users, fellow students, and public and private sector organizations also reflects the Living Lab movement (Summer School 2016). The purpose of Living Labs is to bring together a diverse

set of actors to cocreate innovative solutions and through this collaboration, create value for each actor (Ståhlbröst 2012), as well as for society. According to the European Network of Living Labs (ENoLL), participating companies benefit from a closer link to their customer and opportunities for rapid iterations during development; users benefit from the solutions that help to solve their problems; and developers are able to apply their knowledge to real-world problems (Garcia Robles et al. 2015).

A look forward

Organizers have a bold vision for growth. Within the next three years, they would like to scale up both the number of sprints and participants. The vision for the year 2020 is to have four Sprints totaling 400 participants. While the aim is to promote year-round study and faster entry into working life, the organizers have two additional goals. (Hirvikoski 2016. Personal communication.)

The first goal is to attract an international audience for the Sprint. This will help to reach growth goals by expanding into new markets. Furthermore, unlike Finnish residents, international students may be charged a fee for participation which will support monetization efforts. The 2020 internationalization goal is for 25% of the budget to come from international project funds or direct income from international students. (Hirvikoski 2016. Personal communication.)

The second goal is 'one week, real impact.' In the short term, this may mean the Sprint helps students find job placements in Finland or take a step towards beginning a start-up. The future is where these two goals merge. The hope is that in this world of international mobility, Finnish Professional Summer School efforts will influence a generation of people who recognize the unique capabilities of Finnish companies and are eager to build connections or buy services. (Hirvikoski 2016. Personal communication.) To make this vision possible, organizers are commissioning further research and development efforts; this thesis is one of such efforts.

3   Theoretical grounding: Value and experience in education

This thesis adopts the view of service-dominant logic which, since its inception by Vargo and Lusch in 2004, marks a shift in how organizations perceive their role in creating value for customers. This chapter explores service-dominant logic and its role in understanding value. As service-dominant logic suggests value must be experienced and created together with the various actors (Vargo & Lusch 2014, 57), the topics of service experience and value creation are also reviewed.

Organizations adopting a service-dominant logic seek to understand the value proposition of their product or service, that is, to understand the role it plays in creating value with other actors (Lusch & Vargo 2014, 57). Jobs to be done is explored in this chapter as both a theory and a framework for uncovering potential value propositions that are sought by the customer.

In service-dominant logic, value-in-context emphasizes that value is variable in different contexts and is influenced by other resources and actors. Since the context of this thesis is set in education, a section is devoted to understanding and designing for value in learning experiences. Various learning theories are also introduced to draw a link between the goods-dominant to service-dominant logic shift in business and the teacher-centered to student-centered shift in education.

3.1 Value and the service experience

Many companies and organizations exist today to deliver solutions to customers which meet their most basic expectations (Sandström et al. 2008, 121). However, visionary organizations are embracing service as a driving force of innovation and work together with customers to create innovative new solutions to customer challenges. These firms engage and interact with customers and look at collaboration as an opportunity for cocreating value for both the customer and organization. (Tekes 2010, 9).

The contrast between companies that deliver only the basics versus those that work with customers to innovate presents two different dominant logics: goods-dominant logic (GDL) and service-dominant logic (SDL). A dominant logic is useful to organizations in that it can help align operations across the organization to a shared approach to business, thereby improving efficiency and performance. It also reduces wasted efforts by filtering out "ideas and behaviors that don't fit with the dominant logic." (Chesbrough 2010, 1745).

GDL adopts the product and manufacturing focus of the Industrial Revolution. It's a mindset that suggests the exchange of goods is central to business and concentrates on the maximization of profit, often through making and selling a product better, faster and cheaper. (Lusch & Vargo 2014, 4). The result is a one-way sale to the customer; we made this, you buy it. This has been the long-standing dominant logic.

In 2004, Lusch and Vargo proposed a new dominant logic called Service-Dominant Logic. SDL does away with the one-sided approach where the firm 'produces' and the customer 'consumes.' Rather, it offers a mindset more akin to a partnership where value is mutually realized, or cocreated. Where goods are exchanged, they act as a conduit through which value is created rather than the source of value itself. (Vargo & Lusch 2004). Value derives

from the context in which the good or service is used and can be influenced by other resources and actors. (2014, 23) It is the organizations following SDL that Tekes (2010), the Finnish Funding Agency for Technology and Innovation, refers to as 'forerunners.' Chesbrough (2010) argues the prosperity of nations relies on this shift from product-based economy (GDL) to a service-based economy (SDL).

3.1.1 Service-Dominant Logic

To explain SDL in a different way, goods are *operand* resources – tangible, physical and often static – think of a car part. Services are *operant* – dynamic, change rapidly, easily influenced by people and rarely static or physical – think of the mechanic you use to install the part. (Bitner et al. 2008, 67; Lusch & Vargo 2014, 123). From a goods perspective, you buy the part to make the car run again. Money was exchanged; therefore, value was exchanged. From a service perspective, buying a part is useless unless it is installed in your car. That installation relies on human knowledge; a service is delivered and value is likely realized when driving away in a car that runs again.

With SDL, the exchange between a firm and its customer doesn't happen at the point of purchase. Rather, the offering of the firm and the needs of the customer come together to produce value at the point the offering is used, referred to as *value-in-use*. (Lusch & Vargo 2014, 23). For example, when a telephone is used to connect with others or insurance is used to regain health after an accident. Furthermore, the value created is always unique to the situation in which the offering is used, referred to as *value-in-context* (2014,23). For example, a certain type of emotional value may occur when a telephone is used to call a loved one far away. If the context changed and one was stranded on the side of the road, a more functional value may occur in the ability to call for help.

Lusch and Vargo (2014, 14-16) present four axioms, or foundational beliefs, upon which service-dominant logic is built:

A1 "Service is the fundamental basis of exchange."
The definition of service, according to Lusch and Vargo, is "The application of operant resources (knowledge and skill) for the benefit of another actor" (2014,14). Therefore, in SDL knowledge and skill are exchanged versus goods, and that exchange offers value.

A2 "The customer is always a cocreator of value."
Axiom two is embodied in the first example of the telephone shared above. A phone (a good) is developed through the knowledge and skills of the firm, the customer puts his or her knowledge and skills to use when making a call, therefore combining the skills of the firm and the customer to cocreate value.

A3 "All economic and social actors are resource integrators."
The firm and the customer are not the only two actors involved in creating value. In the case of the phone, additional resources are required to produce value such as third-party owners of the towers or satellites responsible for making a call, the government responsible for legislation, and even the person on the other end of the call.

A4 "Value is always uniquely and phenomenologically determined by the beneficiary."
Value relies on the unique way an individual perceives or experiences the value. This experience is fluid, changing day to day and influenced by the unique and evolving context in which a service happens.

3.1.2   The service experience and value creation

The foundational beliefs of service-dominant logic provide the base upon which *service experience* and *value creation* exist. In axiom four, Lusch and Vargo argue value in services is experienced (2014,16.) Sandstrom et al. (2008,118) pick up the concept of the *service experience,* highlighting three aspects:

1.   The service and the service experience cannot be separated. The two are so
         intertwined it would not be possible to purchase a service without also having a
         service experience.
2.   The experience is always unique to the individual and situation. For example, the
         experience Mary has on Monday morning at her local coffee shop may be entirely
         different from what she experiences on Wednesday.
3.   The customer is involved in cocreating the experience. Using the example of Mary at
         the coffee shop, she may be in a hurry on Monday morning which emphasizes a sense
         of urgency within the experience that may not be present on her relaxed Wednesday-
         morning visit.

This elaboration uses similar tenants as Lusch and Vargo (2014), however, shifts the conversation to a wider concept of value within a service experience. It argues new strategies must be adopted that are rooted in "a common understanding of the drivers responsible for favorable service experiences" (Sandström et al. 2008, 121).

Sandström, Edvardsson, Kristensson and Magnusson (2008) also propose a framework for examining value proposition as it related to the service experience and the concept of value-in-use (Figure 2). It begins with the physical/technical enablers behind a service, this is the infrastructure upon which a service is built and includes elements such as the physical space, equipment, environment, technology and tangible artifacts. According to Sandström et al.

(2008, 115), "*Physical/technical enablers* serve as a foundation for the actual value propositions made to the customer."
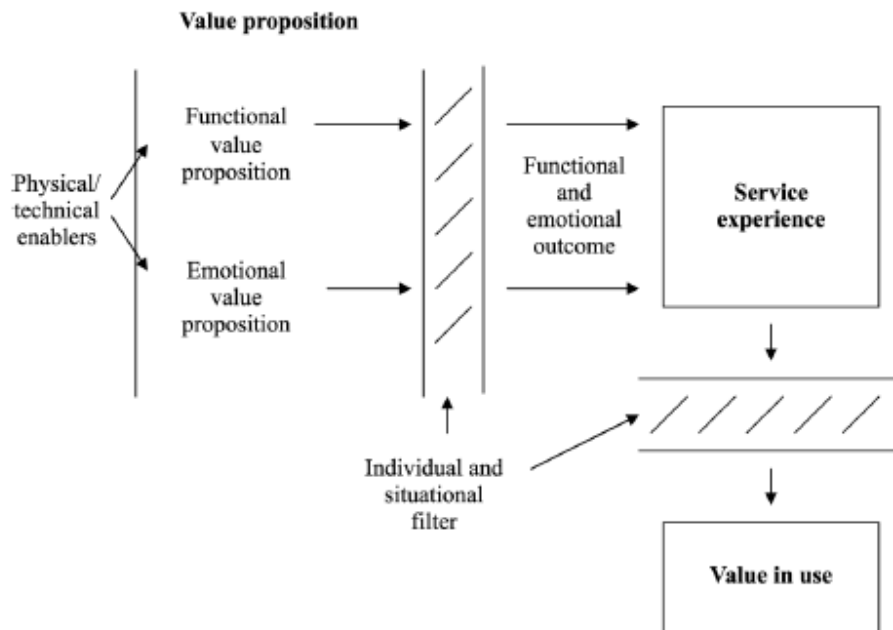

Figure 2: "A framework for how the service experience is linked to value in use" (Sandström et al. 2008, 121)

After an initial consideration of the physical/technical enablers and the value propositions they support, Sandström et al. (2008) focus on what Grönroos (2011) might consider the 'customer sphere.' Moving out of the periphery of the service provider, Sandström et al. (2008) introduce an individual/situational filter to the service experience. This echoes Lusch and Vargo's (2014) fourth axiom "Value is always uniquely and phenomenologically determined by the beneficiary." The individual/situational filter embraces that axiom by incorporating a dimension of value that is entirely unique and personal for each individual and situation (Sandström et al. 2008, 115). This filter considers everything that is unique to the user within the service experience including demographics, skills and competence, and attitude or situation, just to name a few. Value-in-use, then, is the customer's evaluation of the functional and emotional outcomes of the service and the service experience. (2008, 120).

Grönroos (2011) elaborates on the firm-driven foundation for value propositions, calling this the 'provider sphere' (Figure 3).He highlights the importance of viewing value either as created by the customer at the time of use (value-in-use) or as an 'all-encompassing process' in which both the provider and customer are engaged. He argues it is not possible for the two approaches to co-exist.
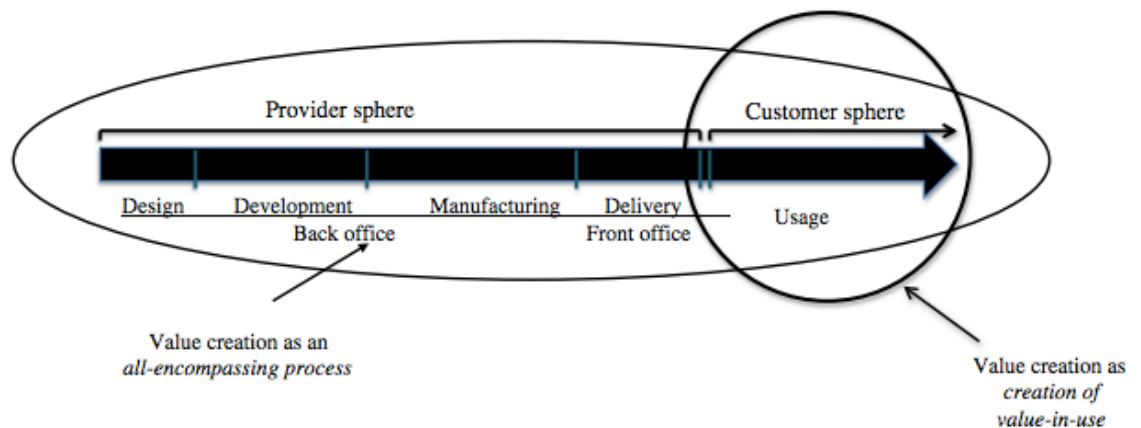
Figure 3: "Value creation as the customer's creation of value-in-use or as an all-encompassing process including provider and customer activities." (Grönroos 2011, 283)

Seeking to shape the discussion around how value is created for the customer, Heinonen, Strandvik, and Voima (2013) present their perspective in the form of five conclusions about value:

1.   Value is not always created deliberately.
2.   Value is not only created in the provider sphere but in the 'cumulated reality' of the customer.
3.   Value spans over time, exists in different contexts, and considers various frames of reference.
4.   Value is experienced in a social context as well as from a cognitive and functional perspective.
5.   Value does not exist in isolation; the customer's world, or reality, is interconnected with other's realities.

Many of these points incorporate the views of others, for example the fact that value does not exist in isolation is echoed by Lusch and Vargo's (2008, 2014) third axiom "all economic and social actors are resource integrators." This perspective speaks to the interconnectedness of people and services. The accumulation of value over time is likewise echoed by Grönroos and Voima (2013) who provide the example of the purchase of a new car. The act of thinking about oneself driving the new car is a form of value for the customer, possibly occurring even before the car is manufactured. Therefore, value-in-use is accumulated before the tangible 'use' of the car ever occurs.

Central to these discussions is the question of how value is created. It is not a physiological response that can be explained through science, rather it is intangible and ethereal. Grönroos (2011, 282) admits that little is known about how and when value is created, where

it ends and what exactly it includes. However, these theories provide an opportunity to pause and think about value and how it is created.

3.1.3 Jobs to be done and elements of value

Almquist, Senior and Bloch (2016) take a more practice-based approach to value. They agree the concept of value is complex, yet argue for the existence of 'universal building blocks of value.' Their argument is based on 30 years of customer research using both quantitative and qualitative methods which have led to the definition of 30 different elements of value, categorized into four groups: Functional, emotional, life changing and social impact (Figure 4).
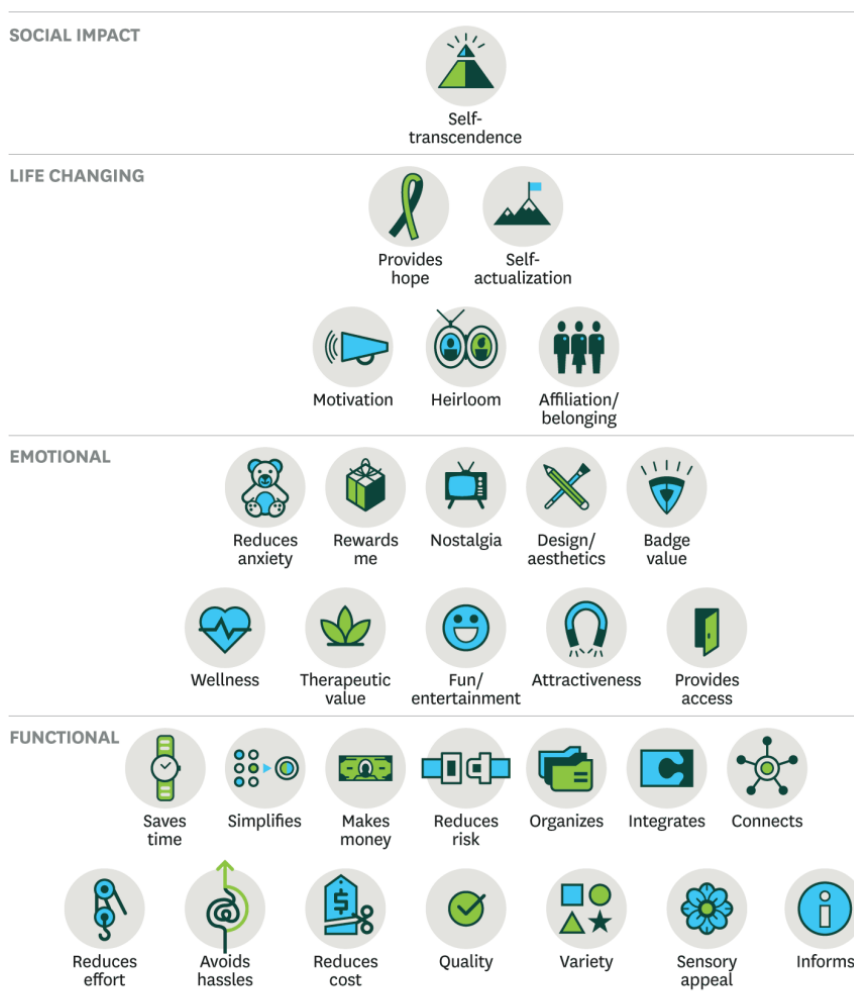
Figure 4: Elements of value (Almquist et al. 2016)

What makes the approach by Almquist et al. (2016) unique is the categories detail specific value elements held within. For example, if something saves you time, it offers functional value. It is believed that when organizations strike the right balance of these elements,

customer loyalty is strengthened and revenue grows (2016, 49). This balance suggests organizations understand their customers enough to see the interconnectedness of each element such as how the functional value of saving time may also provide an emotional benefit in reduced anxiety and the ability for a customer to have more time to do what they love.

The Almquist et al. (2016) categorization of value reflects the functional and emotional value propositions proposed by Sandström et al. *(2008)* as well as the well-established functional, emotional and social dimensions of jobs to be done (Christensen et al. 2006, 2016b; Ulwick 2016; Silverstein et al. 2012) (also see Table 1). This relationship suggests a connection between the satisfaction of customer jobs and the creation of value.

Jobs to be done, also referred to as Jobs-To-Be-Done Theory or simply JTBD, broadly suggests that customers in a given context want to make progress and 'hire' a product or service to help make that progress. This desired progress is called the 'job.' (Christensen et al. 2016b, 56). A quote by Theodore Levitt is often used to explain *jobs to be done theory*: "People don't want to buy a quarter-inch drill. They want a quarter-inch hole!" (Christensen et al. 2007). Traditional goods-dominant logic suggests value is exchanged between a firm and a customer at the point of purchase, in this case, of a drill. Service-dominant logic suggests the value is created in use (Lusch & Vargo 2014, 23) when the drill is used to make a hole. JTBD builds on this concept by suggesting the context in which the value exchange occurs, or 'the job,' is the unit of analysis for further development (Christensen et al. 2007). Considering Levitt's quote in this context, a drill becomes just one of many solutions that could be 'hired' to make a quarter-inch hole.

Using jobs to be done, a drill manufacturer may no longer need to make a better drill, rather can focus on helping the customer make a quarter-inch hole. The manufacturer might view its competitors differently; a customer might borrow a drill from a neighbor or hire a maintenance worker. It may also begin to view business differently, from selling a product to offering a service; this shift is key for organizations seeking to differentiate their offering in the marketplace (Chesbrough 2010, 530). It is also the key to understanding jobs to be done which "…helps the innovator understand that customers don't buy products and services; they hire various solutions at various times to get a wide array of jobs done" (Silverstein et al. 2012).

A quarter-inch hole is a functional job, but jobs can also be social or emotional. Consider the purchase of an expensive car, a BMW® or Rolls-Royce®. The car represents a social job as it communicates a position in society. It may also serve an emotional job for the owner as a symbolic reward for his or her hard work and achievement.

Conversations around value and jobs to be done reveal dimensions to the customer experience that extend beyond the mere function of a product or service. This perspective further supports the use of a logic in business that is dominated by service (SDL) rather than goods (GDL). While Almquist et al. (2016) detail 30 different elements, more commonly the dimensions fall into two to four broad categories, Table 1 references the terminology used by different authors regarding these dimensions. The similarities between the constructs of jobs and value further suggest the link between jobs and value creation.

REFERRED TO AS:	AUTHOR(S)	DIMENSIONS			
Job dimensions	*(Wunker et al. 2016)*	Functional	Emotional		
Job dimensions	*(Christensen et al. 2007, 2016b)*	Functional	Emotional	Social	
Job dimensions	*(Ulwick 2016)*	Functional	Emotional	Social	
Jobs to be done breakdown	(Silverstein et al. 2012)	Functional (job aspect)	Emotional (job aspect)	Social (dimension)	Personal (dimension)
Value proposition	*(Sandström et al. 2008)*	Functional	Emotional		
Elements of value (categories)	*(Almquist et al. 2016)*	Functional	Emotional	Social impact	Life changing

Table 1: Dimensions of jobs and value

The example of the drill or car is useful in describing a jobs-based mindset as both examples originate from traditionally product-centered fields. However, Ulwick argues examples such as these only scratch the surface of the true potential of jobs to be done saying:

> "Jobs-to-be-Done Theory provides a framework for (i) categorizing, defining, capturing, and organizing all your customer's needs, and (ii) tying customer-defined performance metrics (in the form of desired outcome statements) to the Job-to-be-Done" (2016, 698).

Understanding jobs to be done as a framework expands the concept of the customer need as a single job—for instance, make a quarter-inch hole—to a suite of jobs the customer is trying to accomplish from making the hole to hanging the picture to feeling competent in completing a home improvement project. This understanding offers a more encompassing view and presents possibilities for finding hidden or underserved jobs and identifying

potential solutions. The result is the creation of value with the customer as the job is satisfied (Ulwick 2016, 698).

3.2 Value, experience and design in the context of education

This chapter looks at experience and value in the educational context. Furthermore, it considers at how understanding value for the customer—in this case, the learner—contributes to the design of the learning experience.

3.2.1 Value in the educational context

Students make educational decisions—for example, what course to take, degree to pursue, or vocation to follow—based largely on their expectations for success and the perceived value of the activity (Eccles 2005, 105). Learners place a high value on tasks that support both their long-term goals and their self-image. The higher the value attributed to a task, the more likely a student is to undertake it. (2005, 111).

Eccles refers to the value of the activity as perceived by the student as *Subjective Task Value* (STV). She argues "…the same activity can have multiple sources of STV simultaneously, that more sources can yield to higher levels of STV, and that it is this cumulative STV that is key to predicting behavioral choice."(Eccles 2005, 115). Almquist et al. (2016) have reported similar results related to value in the corporate realm. They argue a company's offering can deliver on multiple elements of value and by doing so, customers are more willing to try the offering and ultimately more loyal to the brand. Where Almquist et al. (2016) identify four categories of value as functional, social impact, emotional and life changing, Eccles (2005) identifies four components considered in the value of an educational task:

- Attainment value – How does the task contribute to one's self-identity?
- Intrinsic value – How enjoyable is the task?
- Utility value – How does the task help meet short- or long-term goals?
- Cost of engagement – What are the 'costs' or tradeoffs required to do this task over another?

Beaty et al. reference the concept of value more broadly concerning a student's *learning orientation* which they describe as "the aims, values and purposes for study—the personal context of the study" (2005, 75). This approach reveals four learning orientations:

- Vocational – Is this relevant to my career? Is the qualification worthwhile?
- Academic – Is this intellectually interesting? Can I make progress?
- Personal – Does this topic contribute to my self-improvement? Am I capable?
- Social – Do I enjoy this?

The views of *subjective task value* and *learning orientations* offer education-specific links to the earlier discussion of the dimensions of value and jobs and provide insights into the importance of considering the student perception of *value* when designing learning experiences.

Table 2 builds on the dimensions of value outlined earlier in Table 1 of Section 3.1.3.

REFERENCE	AUTHOR(S)	DIMENSIONS			
Components of task quality	*(Eccles 2005)*	Utility	Intrinsic	Cost	Attainment
Learning orientations	*(Beaty, Gibbs & Morgan 2005)*	Vocational	Personal	Social	Academic

Table 2: Dimensions of value in education

3.2.2 From teacher-centered to student-centered

The shift from goods-dominant to service-dominant logic reveals the role of the customer and the service experience in value creation. The customer plays a central role which has led to a call for the design of services that are human-centered, customer-centered, or user-centered. In education, a similar shift can be seen in the concept of student-centered learning (SCL) and the realization that the student is central to the educational experience.

A majority of the innovations in the education market have previously been "focused on helping the teacher teach" (JTBD Radio 2012), or a teacher-centered approach to learning. For example, Jagger (2016, 52) discusses online Learning Management Systems (LMS) as tools that are "very light on enhancing the learner's experience and very heavy on the administration of learning." In contrast, a student-centered approach is about moving from what is *taught* by the teacher to what is *learned* by the student. Langworthy, Shear, Means, Gallagher and House offer a definition of student-centered as an approach to education which "provides learning opportunities that are shaped by the needs and interests of the students" (2009, 30). This approach is believed to support student engagement, motivation and self-reflection (ESG 2015). Furthermore, a student-centric approach can improve a learning provider's ability to respond to today's rapidly changing environment with learning experiences that meet the needs of both students and other educational partners (Ojasalo 2015).

Student-centered learning and teaching is part of the European Higher Education quality standards. It was introduced as a standard through the Bologna Process which began in 1999 in an effort to respond to changes in the labor market and the need for modernization of

education systems (European Commission 2017). The standard call for "a paradigm shift towards student-centred learning and teaching" (ESG 2015, 5) and read:

> "Institutions should ensure that the programmes are delivered in a way that encourages students to take an active role in creating the learning process, and that the assessment of students reflects this approach" (2015, 12).

As a learning theory and pedagogical approach, the student-centered concept carries a broad range of implications within a learning environment; some of these are explored further in the following section. For this thesis, however, the basic premise is that the student is an essential participant in creating value within the learning experience. This follows the perspective of service-dominant logic that the customer is essential to the creation of value within a service experience (Vargo & Lusch 2004, 2014; Sandström et al. 2008; Grönroos & Voima 2013).

3.2.3   Design in Education

"Student experience should not merely be an outcome of collaborative activity but something that is consciously considered by the lecturer at the outset" (Adkins 2016, 194)

With student-centered learning, educators become facilitators of learning environments (Langworthy et al. 2009, 30; O'Neill & McMahon 2005; European Students' Union 2014); the role of the teacher changes. Kelly (2016) argues this shift begins with educators who bring a designer-like approach to the learning experience, a role he refers to as teacher-as-designer. This represents an underlying premise that educators are the designers of their classrooms or learning environments (Jones 2017. Personal communication.; Kelly 2016, 90; Adkins 2016, 194) whether or not they think critically about it (Jones 2017. Personal communication.) Discussions around design in education provide a playground for the conscious and critical consideration of what it means to intentionally design a learning experience with the needs of the learners at the core.

Learning Experience (LX) Design is one field that is opening discussions about the intentional design of learning experiences. LX Design is an emerging field combining instructional design, user experience design(UX), cognitive psychology (Jagger 2016, 53), design thinking, educational pedagogy and social sciences (Six Red Marbles 2015). Jagger (2016) describes it as a field that "seeks to increase the learner's uptake, satisfaction and enjoyment by better design." She goes on to say LX Design "puts the human back at the centre and focuses on achieving learning goals (outcomes)."

Most interesting to this thesis is the intersection between Design Thinking and LX Design. A focus on people is at the heart of Design Thinking which Liedtka and Ogilvie define as "a systematic approach to problem solving. It starts with customers [i.e.: people] and the ability to create a better future for them"(Liedtka & Ogilvie 2011, 143). Shapers, an LX Design firm based in the Netherlands, describes LX Design as "the process of creating learning experiences that enable the learner to achieve the desired learning outcome in a human centered and goal oriented way" (Shapers 2016). In this latter definition, we can see the influence of education. The *customer* from Liedtka and Ogilvie's definition is referred to as a *learner*; the *future* is brought a closer into view in referencing *the desired learning outcome;* and the *systematic approach* is referred to simply as a *process*.

Another definition from Adkins (2016, 202) focuses on the intention of design in learning suggesting, "Experience design does not have the communication of knowledge at its heart but is a means of facilitating this process in the most stimulating manner possible. The aim is to deliver a meaningful experience through a variety of active learning situations that endures and enriches the participant."

Plaut (2014) introduces five different layers of a learning experience (Figure 5) organized from the concrete to the more abstract or intangible. Starting with the more concrete, there are the *sensory* elements such as learning materials and course communications. These are followed by the *interactions* that happen within the experience: activities, assessment, etc… Next, is the *structure* or how the experience flows together. Then there are the more logistical *requirements* that are needed to deliver on the strategy. Finally, there is the strategy itself which underpins the entire experience. This strategy includes "the needs and goals of both the learner and their organization." (2014). These elements provide insight into the practical considerations of an experience. They also highlight the influence of User Experience (UX) Design in LX Design as the model was inspired by Jesse James Garrett's book *The Elements of User Experience* (Garrett 2010).
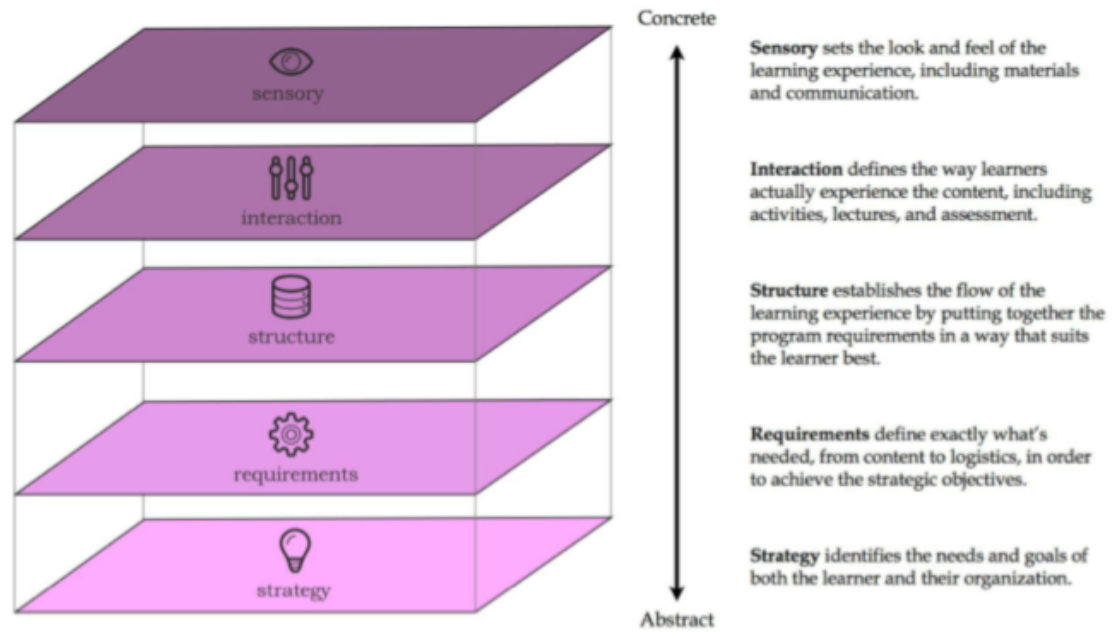
Figure 5: Elements of learning experience design (Plaut 2014)

Kilgore (2016) suggests design in education is following a path similar to what was seen in business with the evolution of user experience design (UX). The tipping point for UX, she says, was in 2005. The launch of the iPod made design available to the masses. Suddenly, one-way online communication from the company to the user was no longer enough. Apple proved online experiences could, and should, be designed to meet user needs; technology was the impetus for change. In the same way, commoditization of education through online learning is challenging traditional education; new technologies are changing pedagogy; and data is providing a new lens through which to see learning patterns. Just like it's big brother UX, LX design is now "among the fastest growing fields in education." (Kilgore 2016).

While there is a pull for design in digital learning environments, it is equally applicable to face-to-face learning (Jones 2017. Personal communication.) and blended learning. Adkins argues that the use of experience design for curriculum development in active learning environments supports a more meaningful student experience (2016, 191). He cites Littleton and Mercer (2013) in suggesting collaborative and social environments support increased learning through 'interthinking' or the use of language to build understanding and solve problems (Mercer 2000). Taking another perspective on the value of face-to-face interaction, Könings, Seidel, and Merriënboer (2014) argue when students become participants in the design process it can enhance reflection for both the teacher and the learner as well as improve students' metacognition.

3.3 Learning theories and the development of student-centered learning

Karagiorgi and Symeou (2005) argue educational designers should have an awareness of the educational theories which underpin the learning experiences. To this end, this section explores the learning theories that support an increased focus on the student perspective and its relevance in education today. These theories include primarily student-centered learning (SCL), which has already been introduced briefly, and Constructivism.

Just as the dominant logic—beliefs, norms and rules underpinning a business' actions—impacts the direction of a company (Chesbrough 2010, 1745), both educators and designers must be conscious of how their perspective and approach affects the learning experience. Learning theories help explain the various perspectives towards teaching and learning. Whether conscious or unconscious, these perspectives, including views about the role of student versus teacher, inevitably make their way into the learning environment.

In an attempt to simplify a what is a broad range of perspectives towards education, there are two main orientations towards teaching and learning: teacher-centered/content oriented and student-centered/learning oriented (Kember 1997). A teacher centered orientation is often associated with the traditional content-heavy, lecture-based approach. The teacher is the "sage on the stage" passing knowledge to students who are there to receive and absorb it. On the other hand, a student-centered orientation is thought of as a more modern approach. The teacher is a facilitator of learning or "guide on the side," working alongside students who are active learners (Langworthy et al. 2009, 30).

Teacher-centered versus student-centered orientations represent a stark contrast in educational approaches. However, reality is not so black and white. O'Neill and McMahon (2005, 29) argue that in practice there is a continuum with teacher-centered learning on one end and student-centered learning on the other (Figure 6). Each educator's approach is likely to fall somewhere on the continuum. That position can be incredibly dynamic based on experience in the classroom, personally held views of the educator, and the context of the teaching situation. This position may change year-to-year or even lesson-to-lesson. O'Neill and McMahon suggest educators aim for progress towards the student-centered learning end of continuum that is appropriate for the teaching situation (O'Neill & McMahon 2005, 29).
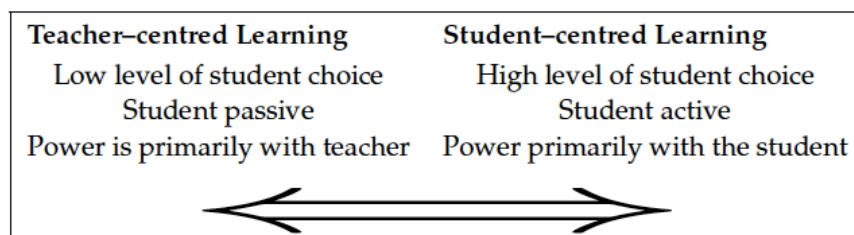

Figure 6: Student-centered and teacher-centered continuum (O'Neill & McMahon 2005, 29)

Understanding student-centered learning

At its core, student-centered learning is about shifting the practice of education from focusing on how teachers teach to understanding how students construct learning. Constructivism, or the Constructivist perspective, holds that learning happens when an individual can make—or construct—meaning out of new information or situations (Carlile & Jordan 2005, 19). Constructivism epitomizes the saying 'perception is reality,' in that it suggests each person has a unique lens through which they view the world. That perspective is 'constructed' by the individual based on existing knowledge and experiences. Learning is a process of being introduced to new information, filtering and validating, then integrating into the learners ever-evolving understanding of the world. (Ertmer & Newby 2013; Carlile & Jordan 2005; Perkins 1999).

A constructivist would likely be aghast watching a traditional lecture where the teacher talks through slide after slide and students take notes (or don't) for a gruelling two hours. In the constructivist view, knowledge is not seen as a concrete, transferable object. Rather, it is a set of raw ingredients with which the learner can build and rebuild meaning and understanding. (Ertmer & Newby 2013, 55).

A constructivist may pose a question, ask students to assess the answer, then help them design experiments to test their hypothesis (Perkins 1999). Knowledge is not delivered by teachers and received students. Instead, the teacher becomes a guide offering information as 'raw ingredients' and helping students to build meaning out of them. The attention shifts from what is taught (teacher-centered) to what is learned (student-centered). The perspective also changes from an environment based solely on the teacher's point of view to one where the multiple perspectives of the learners are also considered. In this environment ideas and views of the world can and will inevitably collide. (Carlile & Jordan 2005, 19).

If one considers O'Neill & McMahon's student-centered and teacher-centered continuum (Figure 6) as a practice-based interpretation of learning and adds a theoretical layer over the top, constructivism would fall in line with student-centered learning. Two new terms would also be introduced to the theoretical layer: cognitivism in the middle and behaviorism at the teacher-centered end of the spectrum (Figure 7).

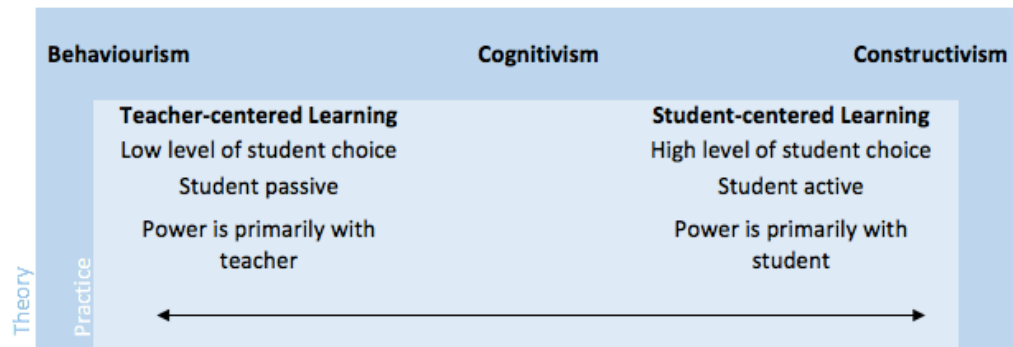| | Behaviourism | Cognitivism | Constructivism |

Figure 7: Revised student-centered and teacher-centered continuum (based on O'Neill & McMahon 2005, 29)

The juxtaposition of these two layers shows the influence of theory on practice. Constructivism, while the most recent, is only one learning theory among the world's continued attempts to understand and optimize our ability to learn. Being true to the constructivist perspective that past experiences matter in constructing an understanding of the world, it is important to also consider the influence of other learning theories, in this case, behaviorism and cognitivism.

Behaviorism

Behaviorism stems from 19th-century work in experimental psychology. Think about the experiments with Pavlov's dogs. A controlled stimulus is introduced and when conditioned to that stimulus, the dog performs a specific, predictable response. Transferring that theory to education, the teacher identifies the desired behavior then introduces learning events (the stimuli) designed to impact the behavior. Student motivation stems from the extrinsic punishments or rewards introduced as opposed to intrinsic motivators. (Carlile & Jordan 2005, 14). Essentially, the student is a passive observer rather than an active participant.

From the modern perspective, this theory offers some negative connotations. It suggests a 'puppet-master' approach to teaching, placing an incredibly high level of responsibility on the teacher with little to no consideration of the students' background, motivations or personal aptitude towards the subject. However, the theory has played a role in establishing some of the practices that are still used in classrooms today. For example, the importance of repetition in learning as a form of conditioning that enhances information retention or the role of feedback and positive reinforcement that we now know to be essential in motivation. (Carlile & Jordan 2005, 14).

Cognitivism

The introduction of cognitivism in the 1950s inspired an understanding of learning as a cognitive process. The role of the student began to be viewed an active rather than passive

participant. This shift suggests that environmental stimulus—the lectures, reading, assessment, etc.—contribute to learning, but are not solely responsible. This view is a clear departure from its predecessor, behaviorism. (Ertmer & Newby 2013, 50-51). Carlile and Jordan go as far as to say cognitivism "is diametrically opposed to Behaviourism which disregards mental activity or motivation" (2005, 17).

Cognitivism considers the process by which students learn and "addresses the issues of how information is received, organized, stored, and retrieved by the mind" (Ertmer & Newby 2013, 51). The theory provides a basis for widely-used classroom techniques such as mind mapping as a note taking method, chunking to present information in groups and enhance retention, and laddering to gradually build on what is taught (Carlile & Jordan 2005).

Carlile and Jordan (2005, 18) position Jean Piaget as "the most famous cognitivist" and Perkins (1991, 49) argue Piaget's work was influential in the future development of the constructivist perspective because he recognizes mental processing as an element of learning. This discussion reflects how the various learning theories are not independent, but rather built upon one another as humankind has constructed its own understanding of how we learn. This is reflected in Table 3 which offers an interpretation of the contribution of each theory based on the work by Carlile & Jordan (2005).

BEHAVIORISM	COGNITIVISM	CONSTRUCTIVISM
Importance of…	**Importance of…**	**The importance of …**
Timely feedback	Providing a learning framework, chunking information and laddering learning	Building existing knowledge and experience
Positive reinforcement	Effective notetaking	Student reflection on learning
Designing units to meet learning outcomes	Using multiple methods to present information	Independent thinking and learning
Linking assessments to learning outcomes	De-centering, or offering different points of view	Alignment of learning objectives with assessment criteria
Observing learner responses and adjusting planning accordingly	Active listening and engagement	Making learning relevant
	Considering how you learn as well as what you learn	Embracing classroom diversity

Table 3: Influence of learning theory in education constructed (based on work by Carlile & Jordan 2005)

This understanding of the influence of each learning theory further supports the O'Neill & McMahon (2005) view that practical application of these theories is not black and white. It isn't teacher-centered versus student-centered or behaviorist versus constructivist, rather there is a continuum and it is the educator's role to find the right place on the continuum for the right situation.

How this happens in practice is something that continues to captivate the educational community. Perkins argues the goal of education is seemingly simple – to help students understand, retain, and actively use information and skills – yet achieving that goal is anything but simple and after centuries of study, optimizing the human ability to learn remains elusive (1992, 45–46).

4   Development process and methods

This chapter introduces the process and methods for the qualitative research used in the development project. The research is designed to answer the question: What value do students seek from higher education and, more specifically, from the Sprint? The resulting findings are detailed in chapter 5 Empirical findings and results: Learner value in educational experiences.

4.1 The design process

Just as businesses intentionally design their offerings and analyze their value propositions, intentional design can be applied to learning experiences. Both companies and education providers can use Design Thinking as a method and a mindset for innovation. Adopting a design process that is student-centered can support a deep understanding of the learner and encourage educators to use that knowledge to create meaningful learning experiences.

The design process varies by designer, educator or firm, however, all typically follow a common pattern (U.K. Design Council n.d.; Stickdorn & Schneider 2011, 126). The process starts with an understanding of the stakeholder, context and environment; explores a variety of ideas for addressing problems or opportunities; and tests ideas to learn and iterate. This path is seen in the LX Design process of iDesign, an American instructional design firm (Figure 8).
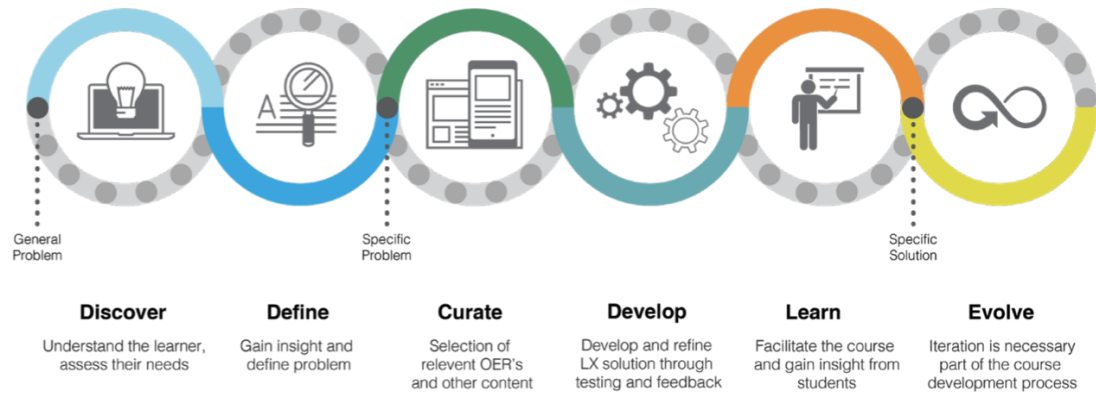
Figure 8: iDesign's Learning Experience Design Process (Kilgore 2016)

The iDesign process merges Design Thinking with the instructional design model called ADDIE—a five-step process including analyze, design, develop, implement and evaluate (Kilgore 2017. Personal communication.) This combination offers a holistic approach to the design of learning experiences. The influence from Design Thinking can be seen in the naming conventions—*Discover, Define* and *Develop*—shared with the U.K. Design Council's Double Diamond (Figure 9).
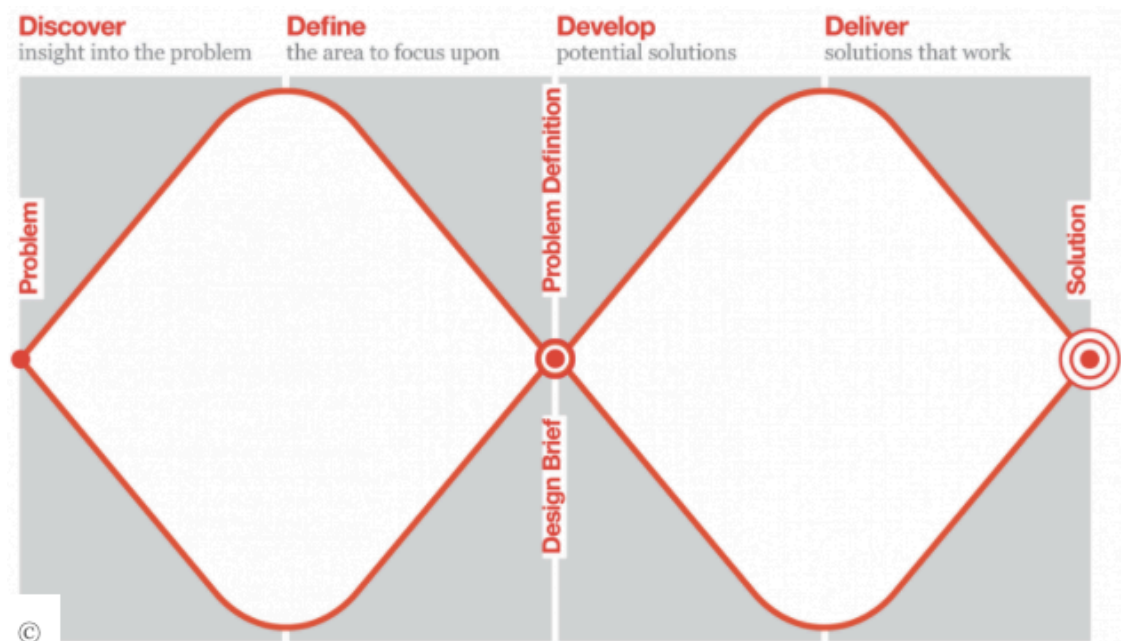
Figure 9: Design Council Double Diamond (U.K. Design Council n.d.)

The comparison with the Double Diamond model is helpful as it offers an institutionally established and well-accepted model. This and other existing design processes also provide documentation regarding potential tools and methods used in each step. The synergies between various processes offer a reminder that the importance of design is not to follow a prescribed process. The value is in consciously considering how student learning can be

facilitated in a stimulating way. (Adkins 2016, 194) The benefit of defining a design process is that it encourages the designer to reflect on the influence he or she has over the outcome (Stickdorn & Schneider 2011, 126).

The design process used in this thesis (Figure 10) has been adapted to integrate the iDesign process and the Double Diamond. The integration of an LX Design process provides the student-centered approach that is essential in the educational context of this project. Including an established design process, such as the Double Diamond, offers a set of proven methods and highlights the importance of considering the organizational goals and objectives.

Figure 10: Design process

Discover	Define	Develop	Learn & Evolve
Understand the learner and learning environment	Define the learner needs and organizational opportunities	Identify solutions; develop and refine through testing and feedback	Facilitate the course and get insights from stakeholders; iterate as part of the course development process
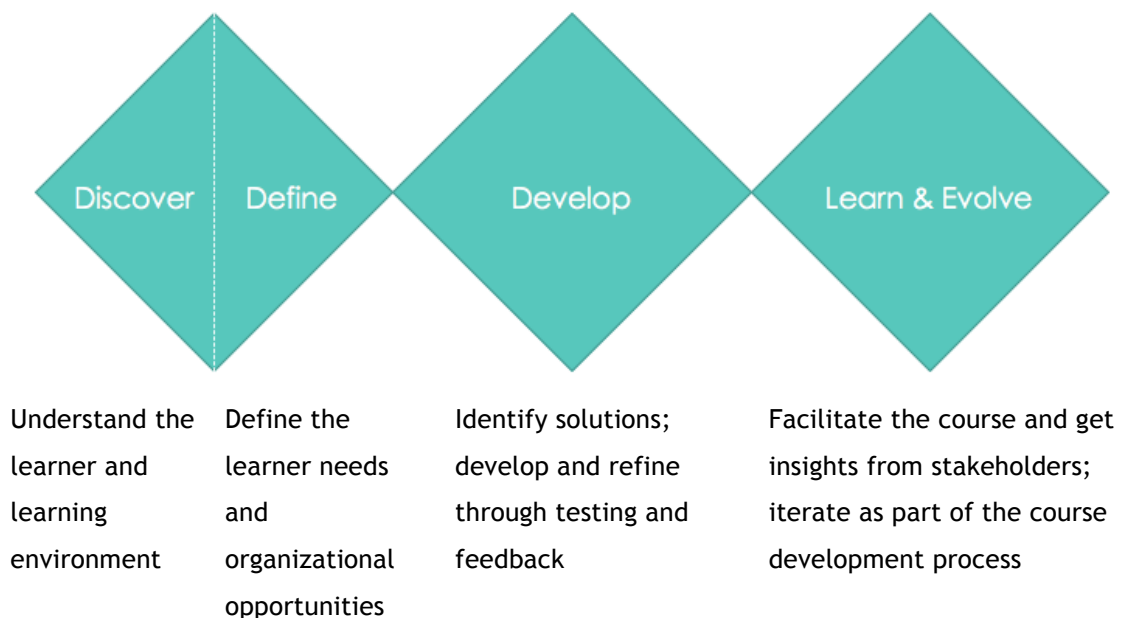
Stockdorn and Jakob (2012) argue the design process used for any given project is dependent on the context of the project itself. Therefore, in addition to the educational and design-driven nature of this project, three other elements must be considered. First, as a thesis project, special attention is paid to the theories used to support the work. Second, planning for the 2017 Sprint—referred to as the *Develop* phase—is running parallel to the development of this thesis. This timing means the delivery of relevant information to the planning team is essential. Finally, while the development project is based in Finland, the researcher is based in the U.K. As a result, concessions are made to support remote collaboration and collection of qualitative data.

4.2 Design process and methods in practice

The following section shows how the design process was implemented in practice and describes the methods used in each step. Design is often iterative and non-linear in nature (Stickdorn & Schneider 2011, 124–127; Kumar 2012, 9), this project is no exception. The final design process is the result of an evolution over the course of the project. As new views and perspectives were introduced and resource considerations were made, the scope and methods were adjusted accordingly.
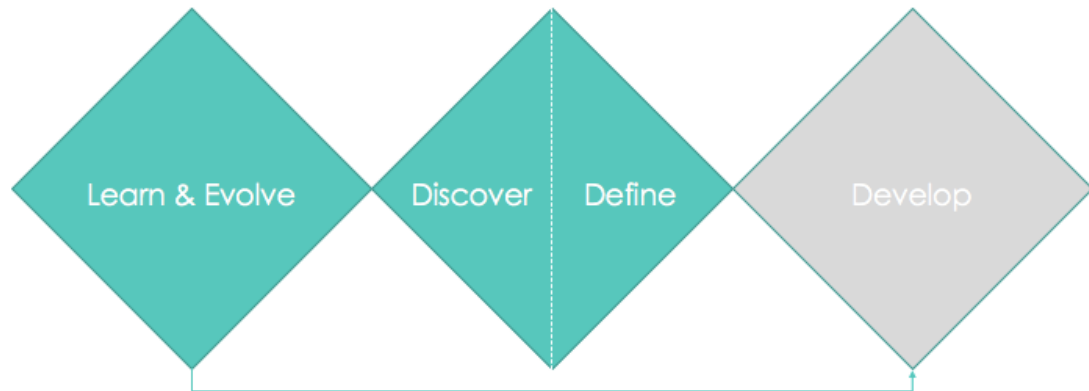

Figure 11: Actual design process

The process and methods are presented in the order they took place in the project (Figure 11). The starting point, *Learn and Evolve*, is typically considered the last step. However, availability of unanalysed data from 2016 and my personal involvement as a facilitator during the Sprint pilot, made *Learn and Evolve* a logical starting point. Using this accessible data first also made it possible to provide timely insights about the learning experience to the development team.

The process then returned to the *Discover* phase, followed by *Define*; the results from these steps were fed into the *Develop* phase. As the *Develop* phase is led by a separate team of representatives from the three Alliance schools, further development falls outside of the scope of this project. However, collaboration with the development team resulted in early insights regarding the usefulness of this work in the development process. These have been included in section 5.5.

Mixed methodologies of data collection are used including survey analysis which offers a broad understanding of the students and interviews which allow for an in-depth understanding of a small group of students (Crouch & Pearce 2013). Different methods of analysis are also used as a lens through which to make sense of the information including context analysis, jobs to be done, and value proposition.

The use of multiple methods offers flexibility when exploring different theories and attempting to understand the user (Muratovski 2015, 3.8.1). It can also serve as a form of triangulation. Triangulation is the use of various types of data, typically both qualitative and quantitative, to gain multiple perspectives (Crouch & Pearce 2013, 1643). Rather than ensuring all the data points to the same conclusions, the goal is to embrace a range of perspectives and explore inconsistencies (Crouch & Pearce 2013, 1643; Creswell 2011, 259; Patton 2001).

As Crouch and Pearce (2013) suggest, the use of mixed methodologies increases the need for clarity in how the research practices generated new knowledge. Within each phase of the design process, the objective, data inputs, methods and the output—or new knowledge generated—has been outlined in the form of a table.

4.2.1   Learn and evolve

The LX model presents *learn* and *evolve* as two separate steps. In *learn*, the educational experience or course is facilitated and feedback is gathered from stakeholders. That information is then used to *evolve* or iterate the learning experience. (Kilgore 2016). In this project, *learn and evolve* are combined, understanding that the next iteration of the Sprint will cycle back to *develop* where problems and opportunities will be addressed and refined.

The 2016 pilot served as a live test of the Sprint concept; it was facilitated and feedback was gathered from students about the experience. The surveys were designed and distributed by the 2016 Sprint team; therefore, only the analysis is included in the scope of this project. The data collected (outlined in Table 4) was analyzed and translated into insights which were fed back to the development team. The objective of this step was to understand the perceptions of students regarding the 2016 Sprint and begin to form an understanding of the types of jobs they are 'hiring' the Sprint to do.

Work completed in this phase also included interviews with members of the 2016/17 Sprint planning teams. The objective of the interviews was to understand the context within which the Sprint development phase will take place.

LEARN AND EVOLVE	
Objective	Understand the perceptions of students regarding the 2016 Sprint
Data inputs	2016 application questionnaire (103 responses) 2016 mid-term survey (29 responses) 2016 end survey (Metropolia only, 8 responses) Sprint planning team interviews (6)
Methods & tools	Basic data analysis Content analysis Data correlation Stakeholder interviews Value proposition canvas (adapted) Jobs to be Done
Output	Enrollment data sheet Jobs to be Done draft Student feedback categorized Key takeaway summary

Table 4: Learn and evolve

4.2.1.1   Data analysis: Basic, content analysis and data correlation

Some researchers criticize traditional research techniques such as surveys for their inability to capture the dynamic life of the customer (Heinonen et al. 2013, 116). However, survey insights can be used as one of a range of perspectives in mixed methodology research. Kilgore (2017. Pers. com.) suggests the use of learning analytics, anecdotal data from the teacher, and student surveys are beneficial for getting to the next iteration of the learning experience.

Basic data analysis

First basic information was pulled from the applicant questionnaire to provide context for the applicants who enrolled in the Sprint (Appendix 2) such as:

- Study level
- Gender
- Nationality
- University
- Desired task (own idea or provided case)

- Degree programme

In addition to the basic demographic information, the surveys included open-ended text responses which offered an opportunity for content analysis.

Content analysis

When working with qualitative data, such as open-ended text responses, there is not one 'right way' to conduct the analysis. What is important, according to Crouch and Pearce (2013, 1655), is that "…research analysis involves detailed reading of the data to identify the strong themes, the patterns or trends or the essence of what is revealed." Text analysis, or content analysis, is one of the ways to identify themes and patterns within information (Creswell 2011, 506).

In the content analysis process, the text is reviewed and segmented, or coded, into themes to make sense of the context of a large amount of text (Creswell 2011, 243). Patton refers to content analysis as a "qualitative data reduction and sense making effort" (2001, 453). Muratovski (2015, 166) considers content analysis as a quantitative method because as data is analyzed, the patterns are recorded, or coded, in a way that can be counted. The coding can be conducted in two ways: inductive and deductive. An *inductive analysis* is a means of identifying themes and patterns based on the results of the data. A *deductive analysis* involves forming the themes and patterns around an existing framework. (Patton 2001, 453).

In the case of the Sprint, content analysis was used to make sense of the responses given in open-ended questions. The analysis was completed in excel. In the applicant questionnaire one question was analyzed, "Tell us shortly why you want to participate in the workshop?" Initially, an attempt was made to use *deductive analysis* by categorizing responses using subjective task value (Eccles 2005) as the analysis framework. The intention was to determine the anticipated value of participation based on Eccles (2005) theory that education-related choices involve one's expectations for success and creation of value. This value construct is broken into attainment value, intrinsic value, utility value, and cost of engagement. However, this approach proved unsubstantiated as the pre-determined categories did not appear to support a deeper understanding of the context of the text.

A shift to *inductive analysis* allowed the themes and categories to flow more organically from responses. After a series of refinements to the categories, the text was categorized into 11 themes (Table 5).

	Total	Percent of total
Teamwork, collaboration, networking	63	61.2%
Gain new skills or knowledge	46	44.7%
Get experience	38	36.9%
Reach a goal	34	33.0%
Work with company/real life	24	23.3%
Entrepreneurialism interest	18	17.5%
Interest in topic	15	14.6%
Intrinsic interest	15	14.6%
Social value	5	4.9%
Language improvement	4	3.9%
Gain credits	3	2.9%

Table 5: Content analysis themes

Analysis of the mid-term survey followed. This survey included multiple open-ended questions. The themes from the application questionnaire (Table 5) were introduced; however, they evolved as the content of the responses required new or combined categories. Due to the nature of the questions, the categories ultimately formed around various elements of the student experience. As the number of responses varied by any one student, with some students writing only brief feedback and others more detailed, a count of the analysis was not used. Instead, the context was further analyzed using a modified value proposition canvas which is discussed in section 4.2.1.3. The resulting categories from the content analysis included:

- Gains –general benefits experienced from the Sprint
- Technical –access to technology such as printing or Wi-Fi
- Facilities & Environment –space within which the Sprint was held
- Communications –how details of the Sprint were communicated
- Mentors –interactions with mentors
- Curriculum –content taught
- Team/People –teammates or other people involved in the experience
- Case – the client or challenge presented
- Other –comments not fitting into one of the other categories

Data correlation

At this point, some quantitative data was readily available such as demographic information and quantifiable themes from the application questionnaire (Table 5). An attempt was made to identify statistical correlations among the applicant attributes and motivations for participation. Mulder and Yaar (2006) suggest that identifying trends using quantitative data

is one way to gain an understanding of users. The intention of this exercise was to identify correlations within the data that may provide an additional perspective. Correlations were run in Excel to identify how strongly various elements were related. No strong correlations were present. Some moderate to low correlations were recorded (Appendix 2); however, little weight was placed on these results moving forward.

4.2.1.2   Stakeholder interviews (and correspondence)

While service- and customer-dominant logic push back on the service provider as seeing itself as the source of value (Heinonen, Strandvik & Voima 2013, 116), there is no argument that the provider still plays a role in value creation. Almquist et al. (2016) refer to this as the 'organizational dimension' and suggest internal stakeholders should be actively considering what the organization's role in value creation is. This suggests the importance of including internal stakeholders in the design process, rather than simply handing the organization a report at the end of the project. De Lille, Roscam and Kleinsmann (2012, 466) argue when an external party is involved in the design process, a knowledge transfer should be maintained throughout the project. The involvement of internal stakeholders also contributes to the collection of multiple perspectives, an important part of a mixed method approach to research (Crouch & Pearce 2013, 1643; Creswell 2011, 259; Patton 2001).

Stickdorn and Schneider (2011, 128) argue it is the designer's first responsibility to understand the culture, goals and point of view of the company. In a design process such as this, educators can provide valuable anecdotal feedback about the course content and planning that can be used in the next iteration (Kilgore 2017. Personal communication.) Embracing these views, interviews were conducted with six representatives from the Alliance schools. These individuals have or have had a hand in the planning and implementation of the 2016 pilot, 2017 Sprint or both.

The goal was to get to know the development team and their varying perspectives; understand the organizational goals; and begin to establish how the research would contribute to the organization's understanding of value. The interviews followed a similar format to that of a Subject Matter Expert (SME) interview, a method used to get up to speed on a particular topic and understand the past, present and future related to the topic (Kumar 2012, 83). As suggested by Kumar (2012, 83), questions were prepared in advance of each interview, however, the conversation was also free flowing. The structure of the interviews changed and adapted as new information was presented and new questions arose.

A project overview, or brief, was produced after an initial interview with Tuija Hirvikoski (2016. Pers. Com.) who is responsible for providing the strategic direction for the Sprint. This document was shared with the consecutive interviewees as a starting point for the

discussion. Interviews ran parallel to the data analysis, and as new information became available it was shared with the interviewees. This flexible approach enabled fast feedback on the usefulness of the research and allowed for process iterations. For the 2017 development team, this approach also provided access to early research results that could inform the planning.

Throughout the project, a knowledge exchange was maintained with organizers from Laurea UAS. As new results and hypothesis were uncovered, they were shared with the team by way of a Google Drive folder and email updates to relevant stakeholders. As planning progressed, Laurea UAS assigned a dedicated project manager(PM) to the development team. Scheduled and spontaneous Skype meetings with the PM allowed for an exchange of knowledge about the progress of both the development planning and the thesis research. This form of collaboration allowed for a co-development approach despite the distance constraints of the project.

4.2.1.3   Value proposition

Plaut (2014) introduces five elements of the learning experience. There is a strategic layer and four more tactical layers that consider the interactions, sensory experience, flow and structure, and logistical requirements. As the mid-term survey from the 2016 pilot was designed to understand the student experience, it enabled to collection of valuable student feedback that applied to the more tactical layers of the experience. For example, was the content of lectures useful? Were the facilities adequate? This is the information that would be directly applicable to the team as they consider the tactical elements of the next iteration.

Ertmer and Newby (2013, 50–51) offer a reminder that while these tactical elements play an important role, there is more to the learning experience. They make reference to Winne (1985) in saying, "Learners' thoughts, beliefs, attitudes, and values are also considered to be influential in the learning process" (Ertmer & Newby 2013, 52). As the goal of the research is to understand the students' expectations and perception of value, it was necessary to explore what elements contributed to the sense of value students experienced from the Sprint and which detracted from it. Moreover, from the student perspective, how might we improve the experience?

The Value Proposition Canvas, a tool used in Value Proposition Design (VPD), was used as a framework for which to consider these elements. A value proposition is about identifying the value customers want (or need) and ensuring the organizations' offering is aligned to maximize value creation. The Value Proposition Canvas consists of two perspectives, that of

the organization and the customer. (Osterwalder et al. 2014). On the customer side, three key areas are considered:

1. Pains – What annoys your customer, stands in the way of achieving their goal, or poses a risk?
2. Gains – What offers a benefit, enhances the experience, or would be a desirable outcome?
3. Jobs to be done – What is the customer trying to get done or achieve? (2014)

Modifying the Osterwalder, Pigneur, Bernarda and Smith (2014) framework, content analysis was again used to determine which comments from student surveys recorded in the informal memo (Hirvikoski et al. 2016. Project documentation.) expressed a pain or gain related to the offering. Jobs to be done were considered separately as part of a more strategic understanding and are explored in the next section. In their place, ideas offered by students were recorded. The results were shared with the 2017 development team to provide insight into the design of the learning experience in seven areas: Mentors; team and people; the case; curriculum; technical, environment and facilities; communication; and advice to future participants. Additional pains, gains and ideas identified through interviews conducted in the next step (Section 4.2.2. Discover) were later added to the documentation. An example of the categorized student feedback is included below in Figure 12.

Figure 12: Student feedback example categorization

4.2.1.4   Jobs to be done

Responses to open-ended questions were used to make assumptions about the jobs students were trying to accomplish through the Sprint. Qualitative research techniques such as interviews, ethnography and observation are often preferred over survey data when considering value and jobs to be done (Almquist et al. 2016; Silverstein et al. 2012, 9). Jobs to be done interviews were used later in the design process. However, developing a hypothesis from the survey data was selected for three reasons:

1. it offered early insights to the development team.
2. it provided a point of triangulation to consider how the jobs that would be identified later in the process might be the same or different as those identified earlier.
3. it served as a form of process iteration as feedback on the usefulness of the results was fed into the *Discover* phase.

Stickdorn and Schneider (2011, 129) discuss the value of visualizing the intangible processes in design. Sibbet (2010, 434) further expresses this sentiment saying "The act of mapping and diagramming is itself a kind of thinking, and the quality of the visuals is not nearly as important as going through the construction process." Using the design principle of visualization along with the student comments made it possible to think through a key question that arose in this step: What is a job to be done within the context of this project?

Returning to the value proposition framework made it possible to take a step back and look at all the information collected—comments from open-ended survey data, an early draft of a report about the Sprint pilot and anecdotal data—from another perspective. Insights were hand written and clustered (Figure 13) with pink representing gains, orange as pains, yellow as jobs to be done and green as ideas.

Figure 13: Jobs to be done exploration

Analysis with the customer side of the Value Proposition Canvas helped to separate the pains and gains; it also brought to light large jobs students were trying to accomplish such as 'get a job' or 'start a business.' However, these jobs are large and abstract. The jobs that needed to be uncovered are smaller, those that help to make progress towards these larger goals (Christensen et al. 2016a, 48). In a podcast interview with Chris Spiek (JTBD Radio 2012), Bob Moesta shares the importance of progress education:

> *"The fundamental premise of Jobs is that people want to make progress. Kids want to make progress. Kids want to get through school to get to college or to get into a job. It depends on their definition of 'progress' and what they choose to engage with to help them make progress." (JTBD Radio 2012)*

Students are hiring the Sprint to help them make progress. Understanding this desired progress is the key to identifying elements the organization can put in place to support it, thereby offering value. The qualitative data was reviewed once again using this lens, this time looking for indicators of progress students were trying to make towards their goals. This

additional analysis resulted in initial jobs and success criteria (Appendix 3). These were shared with the Sprint development team for review and feedback.

To summarize the *Learn and Evolve* phase, the scope of the project was set and multiple types of analysis were conducted using data from student surveys and insights from staff interviews. In the short term, the results of this phase informed early discussions among the 2017 Sprint development team. Some of the topics supported by this research included the formation of teams and pre-assignments, the framing of value in marketing communications and the role of mentors as facilitators. Additionally, the results of this phase were used to inform the next step, *Discover*. Tangible outputs include:

- Enrollment data sheet (Appendix 2)
- Student feedback categorized
- Jobs to be Done draft (Appendix 3)
- Key takeaway summary (Appendix 4)

4.2.2 Discover

Discover is the original starting point for both the iDesign and Double Diamond processes (Figure 8, Figure 9). This step is often used to understand the current experience, areas for improvement and unmet needs of the customer—in this case the learner. The importance of student-centeredness and giving students a voice in the process is evident as methods are used to assess learner needs (Kilgore 2016). This is a divergent step, meaning the intention is to collect information and perspectives, making sense of them will happen in the next step, *Define* (Design Council 2007).

In this project, the opportunity to *Learn and Evolve* based on the 2016 pilot puts *Discover* as the second step in the process. The Sprint organizers introduced the initial concept to the market in 2016 and are willing to adjust and iterate it for the 2017 Sprint. As suggested by commissioning this thesis, they are working to further develop the concept together with the students by identifying jobs and understanding value. Christianson et al. (2007) refer to this approach as coevolution and argue:

> *"In many ways, coevolution is as much an "innovation process" as it is a research method. It creates its own data. When it is undertaken, interviews, observation and empathic participation all can be used to figure out the job" (2007).*

In the last phase, data from the first 'evolution' was analyzed. In the *Discover* phase, the goal is to build on the existing understanding of the student and unpack the expectations and perceptions of value by better understanding the progress, or job, they are hiring the Sprint

for. The primary method used is jobs to be done interviews; subject matter expert interviews were also used to gain a better understanding of current topics related to Learning Experience Design. (See Table 6 for a complete outline of the objectives, data inputs, methods and outputs of this phase.)

Discover	
Objective	Understand the expectations and perception of value regarding the Sprint using jobs theory
Data inputs	2016 Sprint attendees (6 interviews) LX Design experts (3 interviews)
Methods	Jobs to be done interview Subject matter expert interviews
Output	Qualitative data

Table 6: Discover

4.2.2.1 Jobs to be done interviews

The use of jobs to be done provides a practical framework for understanding the progress students are hiring the Sprint to make. In understanding the job, we seek to understand the situation students find themselves in (Christensen et al. 2007) when joining the Sprint. Jobs to be done interviews were used to gain this deeper understanding. Ulwick (2016) cites the use of interviewing in his six-phase, 84-step process for uncovering jobs. Interviews are conducted early in phase one to identify the 'core functional Job-to-be-Done' and develop a job map. In the second phase, interviews are once again used to understand the desired outcomes customers have for the jobs.

Jobs to be done interviews are not about what the customer is doing, rather the aim is to gain insights into what they are trying to accomplish (Bettencourt & Ulwick 2008). For example, Ulwick (2016, 1110) argues asking directly "What job did you hire that product to do?" is not only a mistake, but reflects a product-centric mindset. The right questions are about why the customer is using an offering and what they are trying to achieve through its use.

An interview guide was developed to help direct the interviews and ensure the tone of the interview supported the jobs approach. Interview guides are used by Ulwick (2016) as a tool for preparation. Portigal (2013, 39) further supports this practice, saying that an interview guide should lay out a clear plan, yet leave room for flexibility within the interview. The field guide developed (Appendix 1) applied the jobs framework focusing on four key areas:

- **Goals:** The larger context: What is the student is "hiring" higher education to help him/her accomplish? For example, an ultimate goal of getting a job or starting a business.
- **Progress:** The progress towards the goal the student is looking to make. Specific to this project, this is the progress the student is looking to make over the summer to reach the goal.
- **Success criteria:** The conditions and expectations that need to be met for the progress to be made.
- **Obstacles and other solutions:** The obstacles to making this progress and solutions employed.

A fifth focus area, independent of the jobs focus, was included in the field guide to test a hypothesis about confidence and group dynamics:

- **Position:** Is the student approaching from a position of confidence in abilities or a position of desired confidence?

Christensen, Anthony, Berstell and Nitterhouse argue the first place to begin looking for customer jobs is within the existing customer base, quoting Peter Drucker, "The customer rarely buys what the business thinks it sells him" (2007). Almquist et al. (2007) likewise suggest starting with current customers can help an organization understand the ways it may or may not be supporting the cocreation of value. In addition to these arguments, the already collected and analyzed data from the pilot suggested 2016 Sprint attendees as the target audience. Recruitment requests were made using three methods:

- A post made to the Professional Summer School (2017) Facebook page on 27 January 2017
- An email sent to all 2016 student participants requesting participation; the email was distributed by Mira Myllärinen, Programme Coordinator from Metropolia on 9 February 2017
- Direct requests for participation from 2016 student participants via Facebook and LinkedIn messaging

As the project involved the need for long-distance research, interviews were conducted via Skype and audio recordings were made to allow for deeper analysis post-interview. In the end, six students from the 2016 Sprint were interviewed. The number was kept small as patterns began to emerge among the interviews and the previous research. As the intention of the *Discover* phase is to collect information, the analysis can be found in section 4.2.3 and discussion of the results in chapter 5.

4.2.2.2   Subject matter expert interviews

Subject Matter Expert (SME) interviews are used by designers to quickly understand a given subject, gain insights into current topics and learn where to find helpful resources (Kumar 2012, 83). The use of SME interviews proved useful in learning more about LX Design. As the field is still in its early stages of development, it was challenging to find a significant body of information through desktop research alone. Interviews with three individuals from the LX Design community resulted in the type of insights referenced by Kumar as well as an opportunity to network and make new connections.

4.2.3   Define

While *Discover* was a divergent step, *Define* is a convergent step. The intention is to make sense of the information collected and define, or redefine, the problem or opportunity. In this step, the designer synthesizes information and moves on to the next phase with actionable tasks (Design Council 2007) and a deeper understanding of the learner. Additionally, by understanding who the students are, an educator or designer gains insight into—or at least a new appreciation for—the previous knowledge and experiences learners bring to the classroom.

In this project, the research has been conducted and collected in the two previous steps. The objective of *Define* is to use the information to answer the research question: What value do students seek from higher education and, more specifically, from the Sprint? As value is being considered through the lens of jobs to be done, the jobs and success criteria are outlined in this step. To do this, both a unique case orientation and insight synthesis are used to make sense of the results. (See Table 7 for a complete outline of the objectives, data inputs, methods and outputs of this phase.)

As the intention of *Define* is to move on to the *Develop* stage with actionable tasks (Design Council 2007), the results of this analysis are framed using *job statements* and *how might we* questions. These support the second research question to be addressed: How might we rethink education by considering the value students are expecting from educational experiences such as the Sprint?

Define	
Objective	Define value regarding the Sprint using jobs theory
Data inputs	All data and analysis collected from the previous steps
Methods & tools	Unique case orientation Insight synthesis Job statements How might we questions
Output	Job statements How might we questions

Table 7: Define

4.2.3.1   Unique case orientation to value and jobs

In taking a unique case orientation to research one "Assumes each case is special and unique; the first level of analysis is being true to, respecting, and capturing the details of the individual cases being studied; cross-case analysis follows from and depends on the quality of the case studies" (Patton 2001, 41). This approach can be valuable in understanding the experiences of various participants and the differences among them (2001, 55). It is also reflective of the understanding that value is unique to each individual; shaped by one's experiences and interpretations; and influenced by physical, social psychological and other dimensions (Heinonen et al. 2013).

By applying unique case orientation to the interviews collected in *Discover*, "the everydayness of the customer's reality (2013, 112)" was embraced by viewing the student not as a customer, but as a person. According to Heinonen et al., this perspective is central to understanding value under customer-dominant logic (2013, 112). It is, however, an uncommon approach in the analysis of jobs to be done where Christensen et al. (2007) argue the objective "…is always to understand the situation, not the customer."

This study puts forth an integrated understanding of value and jobs to be done by suggesting that student value is created when their jobs are satisfied. Therefore, interviews were analyzed individually as unique cases to better understand how the progress made in the Sprint provides value. This was followed by a cross-case analysis (Patton 2001, 41) in the form of a synthesis of insights (Christensen et al. 2007) to understand the situations in which the Sprint provides value.

In considering the interviews independently, the recordings were reviewed and analyzed. Initially, two different tools for conducting the analysis were tested with the intention of finding the one best suited for the case. The first was a jobs to be done canvas (Figure 14) adapted from the work of Tennø (2014) to include perspectives from Ulwick (2016) and Wunker, Wattman and Farber (2016). After testing this canvas with one interview, it was observed that topics included on the canvas were not applicable to every job case, resulting in a clunky analysis with unclear results.

The Job		The Learner	Related Jobs
NEED What is he/she trying to do? ✚ **SITUATION** Why/when/where is this occurring? ⭐		**CONTEXT** Personal beliefs, attitudes, background	*(Functional, social or emotional)*
COMPETITORS What is the learner comparing against?	**COMPLIMENTORS** What other ways is the job accomplished?	**MOTIVATION** Why is this important to the learner?	
PAINS What stands in the way of the job?	**GAINS** What provides additional value?	⭐ **DESIRED OUTCOMES** How will we know if the job has been accomplished?	

JOBS TO BE DONE CANVAS   *Built on the ideas of Anthony W. Ulwick's book Jobs To Be Done: Theory to Practice; Stephen Wunker et. al. Jobs To Be Done: A Roadmap for Customer-Centered Innovation; Helge Tennø's Jobs To Be Done Canvas*

Figure 14: Jobs to be done canvas

In favor of the jobs to be done canvas, an Excel spreadsheet streamlined the analysis in a way that was more relevant to the case. Figure 15 shows an example of the analysis spreadsheet. Sub-jobs have been removed to avoid the identification of individual interview participants.

	A	B	C	D	E
1		Core Job	Find "me time" to be a student	Gain the skills to get a good job	Gain new perspectives by working in diverse teams
2		Interview	A	B	C
3		Job type	PJ	HE	PJ
4		Primary orientation	Personal	Vocational	Personal/social
5	Motivations, expectations, sub-jobs	Vocational			
6					
7		Academic			
8					
9		Personal			
10					
11		Social			
12					
13					
14		KEY			
15		HE = Higher Education Job			
16		PJ = Progress Job (related to Sprint)			
17		UJ = Unexpected Job			
18		Motivation (before experience)			
19		Consequence (after experience)			

Figure 15: Individual jobs to be done analysis

In conducting the analysis in Excel, a profile was created for each interviewee including information about their studies, background, Sprint experience and what triggered their desire to enter higher education. Next, two to five core jobs were identified for each interviewee (Figure 15). These core jobs were main themes from the interview about the progress the student was hiring the Sprint for. For example, 'find me time to be a student' or 'gain the skills to get a good job.' The core jobs of individuals varied from those broadly attributed to higher education (HE) such as 'gain the skills to get a good job' to more specific progress jobs (PJ) such as 'gain new perspectives by working in diverse teams.' There were also two unexpected core jobs (UJ) students not realized were possible until they were experienced. These included 'stand out from the crowd' and 'decide what to do next in life.'

Many of the core jobs were broad and complex. To build context, sub-jobs, and desired outcomes were recorded for each core job and categorized into one of four orientations: Vocational, academic, personal and social. These are the learning orientations introduced by Beaty et al. (2005) in section 3.2.1. Organizing jobs in this way provides an educational lens to the dimensions of value (see also Table 1: Dimensions of jobs and value).

An example of a personal value dimension of the Sprint was expressed in an interview with a Sprint student and mother who shared, "As a mom, I am always putting my family first." She saw the Sprint as an opportunity to spend dedicated time to "be a student." To realize this value, she invested both time attending the Sprint and money renting a small apartment for herself, away from her family. With a core job to 'find me time to be a student,' her value experience was highly personal and inextricably tied to her psychological perception of her

role as a mother. This insight alone made the unique case orientation worthwhile. Furthermore, the set of jobs, sub-jobs and outcomes were used directly in the insight synthesis process that followed.

4.2.3.2   Insight synthesis

Jobs theory is less about data than it is about stories. Data might explain the 'who' and the 'what,' but stories help explain the 'why.' Clustering or synthesizing insights is a way to begin to build the story. (Christensen et al. 2016a, 59). In using jobs theory, the story is based on an understanding of the situation or situations in which a customer hires the offering (Christensen et al. 2007). Christensen et al. (2007) suggest first defining these situation cases, then grouping them to identify themes.

Silverstein, Samuel and DeCarlo (2012, 9) suggest there is not a standardized method for synthesizing insights and identifying themes; a designer must adopt a categorization scheme that makes sense for the project. Following a basic insight sorting technique, previous research was translated onto cards (Kumar 2012, 141), including the jobs, sub-jobs and outcomes from the individual interview analysis. These serve the role of the 'situation cases' suggested by Christensen et al. (2007).

Figure 16: Insight synthesis

Initial sorting (Figure 16) began to reveal patterns in the data (Kumar 2012, 141). Once clusters were formed, job statements were written. Job statements summarize the progress students have hired the Sprint to help them make. Silverstein et al. (2012) describe job statements as having an action, object and contextual clarifier (Figure 17). In the case of the Sprint, the context falls primarily within the students' preparation for the school to work transition. Therefore, the Sprint job statements focus on the action and object. For example, the job statements of 'learn from experienced professionals' and 'learn beyond the classroom.'
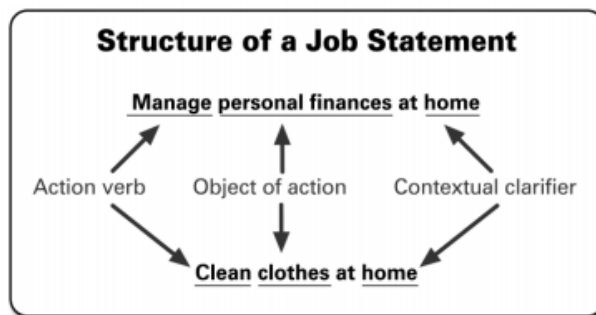
Figure 17: Structure of a job statement (Silverstein, Samuel & DeCarlo 2012, 10)

The insight synthesis resulted in three main job categories: Learn from others, collect experiences and take the next step. Within each category, core jobs and associated sub-jobs and outcomes were identified. Each of these is outlined and described in further detail in chapter 5, final job statements and how might we questions are also outlined in Appendix 5.

These jobs and outcomes provide a deeper understanding of the student and encourage a focus on creating value by supporting student progress. This approach to value creation opens the possibility for improving the existing offering as well as innovating new ways to satisfy jobs (Bettencourt & Ulwick 2008). To encourage blue ocean thinking as the project moves into development, *How might we* questions were created for each job. *How might we questions* frame the jobs as opportunities for further development (IDEO 2012, 19; Berger 2012). They shift the pattern of thinking from using insights to better target the organization's value proposition to using them as a source for innovation. For example, by understanding the job 'Receive feedback to support the iterative learning process,' several possible opportunities for innovation arise:

- How might we link students with mentors?
- How might we use feedback to support the student reflection and iteration process?
- How might we use mentorship support the student reflection and iteration process?
- How might we bridge school and business by including feedback from sponsoring businesses in the Sprint process?

5   Empirical findings and results: Learner value in educational experiences

This chapter introduces the findings of the study, addressing the first research question: What value do students seek from higher education and, more specifically, from the Sprint? Through the lens of jobs to be done, *value* is created when students make progress towards a goal. This progress is called the *job* (Christensen et al. 2016a, 52). Jobs are complex and often have many layers (Ulwick 2016, 730), the jobs of students are no exception. The first four sections introduce the student jobs to be done. Three high-level job categories are identified, each including additional jobs, sub-jobs and desired outcomes. Related to each job is a short section that highlights opportunities for the Sprint organizers to engage with the insights. These are listed in the form of *How might we* questions. *How might we* questions can be used to reframe problems or insights into opportunities and provide a stepping stone for ideation. (IDEO 2012).

The chapter closes with a look at how the findings of the study can be applied to the development of the Sprint, addressing the second research question: How might we rethink education by considering the value students are expecting from educational experiences such as the Sprint? However, before getting into the complexity of student jobs and the opportunities they present, we will meet some of the students who make up the segment of learners from this study.

5.1 Meet the learners

To be learner-centric, we must know who our learners are. The learners who are attracted to the Sprint concept are a unique set of students from the three Universities of Applied Sciences. In general, we can say that they are motivated, even if these motivations manifest in different ways. They are eager to engage in experiences that enable iterative learning, which we will discuss further in this chapter. And, many are anything but 'traditional students.'

These students have *hired* higher education to do a *job*. Some want to gain the skills to get a good job, make a career change, or just figure out what to do in life. At a high level, they all share a desire for change; expecting to be different upon completion of the degree than when they began. Below is a brief introduction to three learners interviewed in this study. These are not personas, fictional profiles attempting to represent a larger group (Stickdorn & Schneider 2011, 178), they are three individual people.

> A mom and master's student who constantly makes decisions based on what is best for others sees the Sprint as an opportunity to find 'me time' to be a student. She rents a flat for the Sprint and enjoys the feeling of independence. She spends

evenings working on tasks the team didn't finish during the day and the weekend exploring Helsinki with her family.

An undergraduate student who already holds a Masters in Economics is on study leave from a full-time job she found monotonous. The Sprint meets her degree requirements, and summer studies will help her meet her goal of faster graduation. After all, you can do a lot in three months. In addition to taking an online innovation course that compliments the Sprint, she values the flexibility to spend a six-week holiday with her kids.

An international undergraduate student on a six-month study trip in Finland, a place renowned in his home country for its incredible education system. Through the Sprint he may be introduced to Finnish companies with internships and hopefully learn more about business. The key is that it is fun and he will learn. However, he prefers a more flexible schedule than the 9:00-17:00 structure. It's a big commitment after having only two hours of class per day the semester before. He and his team often leave by 15:00 and may do some work later in the evening.

As you can see, each of these students brings with them a different set of knowledge and experiences that influence their motivations and methods of learning. Heinonen et al. argue the uniqueness of each individual, from one's health to social relationships, serves to "build up the person behind the customer" (2013, 112). These elements impact not only how they learn, but how they perceive the experience and therefore experience value. (2013, 112). This diversity doesn't make design simple but recognizing it is the key to the multidisciplinary environment that sets the Sprint apart and that students have come to value.

5.2 Learn from others

A desire to learn from others is a key theme in the research. Amid increasing trends towards online education (Kilgore 2016), this is an important reminder that human interaction matters. Learning from others is an important job within the context of students' higher education goals. This desire to learn from others can be broken down into three smaller jobs:

- Learn from experienced professionals
- Receive feedback to support the iterative learning process
- Learn from each other (learn from peers)

JOB: LEARN FROM EXPERIENCED PROFESSIONALS

"Most of the teachers are just teachers, and they haven't been in business at all, but sometimes we have guest speakers from a real business. I find it way more

> *valuable … and I also listen to them way better because they know what is going on at the moment." – Interviewee*

As reflected in the quote above, students see a gap between "the real world" and academics. This is not to say one is valued over the other, rather there is a desire for theory that supports practice. Opportunities to bridge academia and vocation, school and business, are extremely valuable to students. As we will see later in the section 'learn beyond the classroom,' students are willing to go above and beyond to get a taste of the real-world from setting up a business to taking on extra projects. However, accomplishing this job does not always require a hands-on approach. This is a case where a 'sage on the stage' approach to delivery still provides a degree of value.

Sub jobs/outcomes

Learn about practices and process in industry	Vocational
Compare what I've learned in my degree with what is happening in business to either validate my skills or identify gaps for further learning	Vocational/academic
Gain the perspectives of multiple stakeholders including investors, start-ups, project managers, and the various implementer roles such as designer, IT, engineer etc…	Personal
Meet and network with experienced professionals to ask unanswered questions	Vocational/academic
Self-validation, "Can I hold my own in a conversation with a professional in my desired field?"	Personal
Make a good impression and open new job possibilities	Social/vocational

Opportunities

1. How might we go further in bridging the gap between academics and vocation?

2. How might we encourage business professionals to participate in the Sprint?

JOB: RECEIVE FEEDBACK TO SUPPORT THE ITERATIVE LEARNING PROCESS

> *"It is really hard to find the specialists with different views to come and give comments on your concept in real life." - Interviewee*

> *"Not having a mentor in this field that has a lot of experience is a big challenge so you have to figure out a lot on your own and spend more time trying… an experienced mentor would help with that." – Interviewee*

Feedback is essential to the learning process. This is no surprise as the role of feedback and positive reinforcement is well documented even in the earliest of learning theories (Carlile & Jordan 2005, 14). However, feedback is not just a theory or best practice; students want feedback. It is part of their iterative learning process (more on this in the section 'Learn through practical implementation and iteration') as it makes learning more efficient and is seen as having a positive impact on project outcomes.

Despite this, students still find it challenging to receive quality feedback. This is one reason why access to experienced professionals with varied perspectives and a willingness to provide feedback is perceived as a highly valuable element of the Sprint. However, it is important to note the shadow side. Feedback seen by the students as inaccurate or provided by someone unqualified detracts from the experience. Unqualified feedback makes the learning process less efficient as it required students to stop and explain their project with little hope of receiving valuable feedback in return.

Sub jobs/outcomes

Access to competent mentors/specialists to ask questions	Educational
Access to competent mentors/specialists to get relevant feedback	Educational
Learn from the experiences (and mistakes) of competent mentors or specialists	Educational/vocational
Make learning more efficient; learn faster	Educational
Use new perspectives to build on ideas and improve project/learning outcomes	Educational/vocational
Make new connections about the practical application of learning (i.e.: how do professionals do XYZ in practice)	Educational/vocational

Opportunity
1. How might we connect students with mentors?
2. How might we use feedback to support the student reflection and iteration process?
3. How might we use mentorship to support the student reflection and iteration process?
4. How might we bridge school and working life by including feedback from sponsoring businesses in the Sprint process?

JOB: LEARN FROM EACH OTHER

"I try to go to as many events and workshops as possible which help me to meet new people and communicate." - Interviewee

> *"When you see how other people do the same things you are trying to achieve and then when you learn from them how they overcome the same challenges it helps a lot… It is eye opening to see other people's perspective." – Interviewee*

Peer-to-peer learning important to students. In the application questionnaire for the 2016 Sprint, 61% mentioned working in diverse teams, collaboration, or networking as a reason they wanted to participate. During interviews the sentiment was echoed; the opportunity to work with people who are different – from different countries, programs, schools or backgrounds – is incredibly valuable. One interviewee said, "it's like going abroad without leaving home." In contrast, however, students also have a desire to work with those who share a similar attitude and motivation towards the challenge and an open mind.

> *"Love to join in a group, which is collaborative, innovative and ready to pounce on mission." - Questionnaire response*

> *"We were all similar minded people; it was quite an experience to have with everyone in the group, maybe that is the reason we still hang out and are still friends." –Interviewee*

The result of team diversity with shared mindset is empowering. Interviewees referenced how the right balance leads to a feeling of being able to do more as a team than one can do alone:

> *"Sometimes we were more confident as a group. Now we know where we are going and how we are moving further."*

> *"I wasn't alone. I was with a team. We were confident that as a team we could do it."*

There is also evidence of self-actualization through teamwork. One student responding to the 2016 mid-term survey reflected on this saying, "Realising my own potential and skills within the group frame, I didn't expect to be such a big asset to my team as I have proven to be."

Sub jobs/outcomes

Gain new perspectives by working with people who are different from me: internationals and people from different study programs, schools or backgrounds	Social/educational
Work with people who share a similar mindset	Social
Widen networks (meet new friends or business connections)	Social
Explore my role on diverse teams	Personal

Experience a different (hyper-collaborative) way of working to apply to my current or future work	Vocational
Discuss questions, frustrations and ideas with others	Educational

Opportunities

1. How might we increase networking during the Sprint beyond teams?
2. How might we build teams to maximize both team diversity and shared mindset?
3. How might we support the exploration of individual and team roles during the Sprint?

5.3 Collect experiences

In the previous section 'learn from others,' many of the sub jobs reflect the students' desire to bridge school with working life. This bridge doesn't happen in a single instance; rather it is built from a collection of experiences. Students are looking for ways to implement knowledge and skills, learn, and then apply them again. It's an iterative learning process enabled by the collection of experiences.

Students will go to great lengths to collect these experiences, far beyond what is recorded on university transcripts. They will take on extra projects at school or for friends, engage in a series of internships, attend extracurricular workshops, or start a business over the summer just to give it a try. Each of these experiences offers a new form of iteration as students explore their view of the world and their role in it.

The following section presents how the job 'collect experiences' is manifested in different ways including learning through iteration, a desire for learning beyond the classroom, and an overarching sense of self-exploration.

JOB: LEARN THROUGH PRACTICAL IMPLEMENTATION AND ITERATION

> *"My way of learning is to repeat the processes as many times as possible…When I am doing it I am studying various options and in every round I am trying a different kind of methodology and different kind of combination of the methods so that I learn… I learn by doing." – Interviewee*

The most explicit testimony for the concept of iterative learning was provided by the student above. However, the same sentiment was expressed by other students in more subtle ways:

> *"The internships helped me a lot with defining what I want to do later … I did a full-time programming internship and then I found out I can do programming and it's not that boring, but it's not something that I want to do my whole life. So, for this internship I was looking for something else and more like a business approach." – Interviewee*

These students provide insights into an iterative learning process that embraces a hands-on, learn by doing approach. The repetition becomes a series of learning iterations that serve to improve one's skills, understanding of the world, or understanding of him or herself. The importance of feedback that was discussed earlier plays an integral role in these iterations. Opportunities that offer a new way to test and iterate skills or understanding provide value within the learning process.

In relationship to the Sprint, the dedicated time to be able to focus on one experience—as opposed to taking many different classes at the same time—was noted as particularly valuable. Some students also mentioned registering for at least one other summer course, taking place either before or after the Sprint, that complimented skills they were looking to develop.

Sub jobs/outcomes

Have dedicated time for exploration	Educational
Repeat and test existing skills/understanding	Educational
Learn new skills/gain new understanding	Educational
Do this in an environment that offers a new perspective/setting	Educational/social
Receive feedback collected through these experiences	Social
Reflect on feedback collected through these experiences	Personal

Opportunities

1. How might we design a series of experiences that support iterative learning? (Increasing the number of Sprints is one of the 2020 goals.)
2. How might we connect the jobs 'take the next step' and 'learn through practical implementation and iteration' to design a series of experiences that bridge school and business?

JOB: LEARN BEYOND THE CLASSROOM

> *"Some [skills] I studied in school and some of them I studied online and working on projects, and at the moment I am also developing or creating a website for a friend of mine…"* - Interviewee

An entire ecosystem of learning is operating outside the classroom. The learner segment related to the Sprint is particularly likely to engage in this ecosystem which is fiercely connected with their desire for iterative learning and the collection of diverse experiences.

In fact, these values are so important that students engage in this ecosystem often on their own time and for no credits or monetary exchange. A few examples of extracurricular activities found in this study include:

Read books, articles and blogs	Study abroad
Follow thought leaders (Ex: on Twitter)	Assistant teaching abroad
	Set up a consulting company
Attend events, workshops & hackathons	Create a start-up
	Accept additional school projects
Attend Erasmus programs	Accept projects for friends (i.e.: build a
Take online courses	friend's website)
Work in internships	

This willingness to engage in new experiences underpins the view that education is about much more than just collecting credits or a diploma. In the application questionnaire only three out of 103 students mentioned credits as a motivation. In the interviews, one student working to graduate quickly—therefore the collection of credits was important—shared the view that credits provided a unique 'excuse' to try something new.

> *"Programming is something you can learn at home easily … I know it is online and available, but unless someone is pushing me to do something it's not going to work. That's one of the reasons why I went to the university." – Interviewee*

> *"I'm a bit done with just learning stuff and not applying it…In my spare time if I have a problem with something I just create something for it to solve it." – Interviewee (same as above)*

This desire to learn beyond the classroom, along with the other insights presented thus far, represent the changing role of higher education as a provider of learning experiences; environment for trial and error; source of structure and support; and, of course, sanctioned provider of a degree that represents the individual's hard-earned knowledge.

Sub jobs/outcomes

Feel supported through education	Academic
Find new, meaningful ways to test my knowledge and skills	Academic
Diversify my experiences	Academic/vocational
Find new experiences that complement classroom learning and expand my knowledge (independent of credits)	Academic
Find new experiences as part of degree requirements (within credits)	Academic

Opportunity

1. How might we design a series of experiences that are diverse yet complimentary so they build on a set of skills? (Increasing the number of Sprints is one of the 2020 goals.)
2. How might we integrate with other learning resources to enhance or extend the Sprint?

JOB: LEARN AS A MEANS OF SELF-EXPLORATION AND SELF-PROMOTION

> *"So I specified gaps in my knowledge, it took me half a year and after I understood what the gaps I have are and which skills I actually want…" – Interviewee*

We have already established that learning is about more than just credits and that students will go above and beyond to gain new experiences. There are many vocational, academic and social jobs related to education, but it is also extremely personal. Students explore their role in the world through education; they determine who they want to be.

Students in the study expressed a very a conscious effort to be well-rounded, to balance hard and soft skills; understand both the big picture (the what) and implementation (the how); and adopt technical and business skills. They are also keenly aware of the need to set themselves apart in the professional world.

> *"When I went to one of these workshops in Helsinki that I understand there were people who were studying Masters in other universities and they didn't have [those] skills and I did. So then I understood like okay, these are skills that are important then." – Interviewee (Undergraduate)*

The collection of experiences supports this self-exploration. Experiences are personally valuable when they help students understand who they are, how they are different or provide clarity about the next step to take.

Sub jobs/outcomes

Identify gaps for further development	Personal
Identify what sets me apart	Personal
Gain a balance of skills; be well-rounded	Personal/Vocational
Collect experiences that will set me apart	Social/Vocational
Reflect on feedback collected through experiences	Personal

Opportunities

1. How might we use the design process offer another perspective on self-exploration? (For example, a life by design sprint that applies the design process to individual challenges or life plans.)
2. How might we support students in identifying gaps in knowledge or skills?
3. How might we help students position the Sprint (both the activity and the knowledge gained) as something that sets them apart?

5.4 Take the next step

"The subjects I have chosen before and after professional summer school... I was able to align myself more with what exactly I want to do, to choose the specific subjects in my degree program." – Interviewee

"... I am currently a start-up entrepreneur... I could have never imagined I am in this position right now." - Interviewee

Learning from others and collecting experiences is all about the process and experience of learning. However, sometimes this process can be intangible, it is difficult to gauge just how much one has learned and grown. At the end of a class, a student has a grade which is added to a transcript and becomes concrete evidence of new-found knowledge. Long-term recognition of hard-earned skills maybe getting an internship, new job, promotion, or starting a business. However, it is the progress towards goals that can be elusive.

In interviews, students mentioned some of the more tangible ways they have been able or would like to, see progress made in the Sprint.

- Validated existing business idea
- Entered idea into a competition
- Posted final presentation to LinkedIn
- Received comments on the experience from recruiters on LinkedIn
- Selected subjects for degree program
- Would like to: Find a business partner
- Would like to: See the post-Sprint progress on projects and be able to contact the team members

Sub jobs/outcomes

Realize progress made	Personal
Identify what's next	Educational/vocational
Find the resources to take the next step	Educational/vocational
Communicate what sets me apart	Social/vocational

Opportunity

1. How might we help students see their progress in a more concrete way?
2. How might we help students make their Sprint experience more visible to stand out to employers/funders?
3. How might we help students take the next step with their ideas from the Sprint?
4. How might we connect students with the resources required to take the next step?
5. After the Sprint, how might we track and make visible new progress on projects?

5.5 Development phase: Application to the Sprint

In the *Develop* phase of the design process, designers identify solutions then develop and refine them through testing and feedback. This chapter explores how a better understanding of students' expectations/perception of value can contribute to the further design and development of the Sprint. As the planning of the 2017 Sprint is ongoing, some of these opportunities have been realized; others hold potential for future strategic growth. While development was outside the scope of this project, insights have been shared with the development team along the way.

The design of a learning experience is about more than curriculum. As presented earlier, Plaut (2014), inspired by Garrett (2010), suggests five layers of for designing a learning experience ranging from abstract to concrete: strategy, requirements, structure, interaction and sensory. As a basis for understanding how student feedback, needs, goals and jobs can inform design in education, Plaut (2014) and Garrett's (2010) five layers are grouped into two broad categories: strategy and tactical (Figure 18). The strategy layer is related to the overall vision of the Sprint, the things one might not take the time to think about when in the thick of planning. The tactical layer addresses the day-to-day planning and organization that is essential to bring the strategy to life and move the next iteration forward.
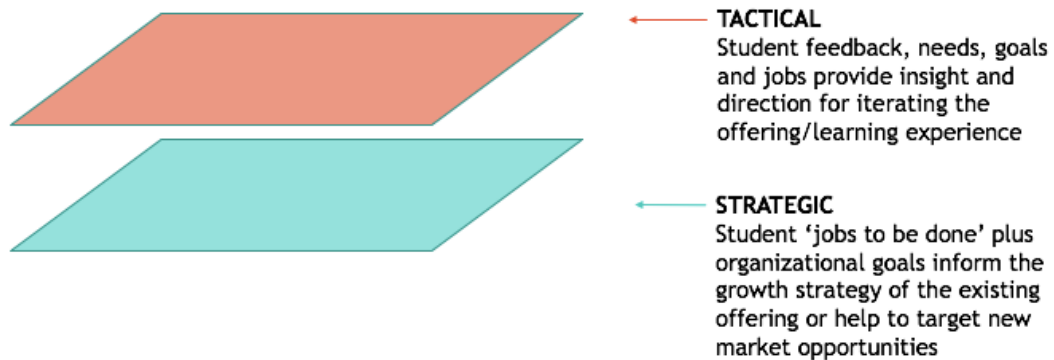
TACTICAL
Student feedback, needs, goals and jobs provide insight and direction for iterating the offering/learning experience

STRATEGIC
Student 'jobs to be done' plus organizational goals inform the growth strategy of the existing offering or help to target new market opportunities

Figure 18: Layers of application

5.5.1 The strategic layer

The strategic layer includes "the needs and goals of both the learner and their organization" (Plaut 2014). Here the feedback, needs, goals and jobs of students can be used to provide insight and direction for the growth strategy underlying the existing offering or, as Bettencourt and Ulwick (2008) suggest, to target new market opportunities.

The current Sprint strategy is layered. On the broadest level, the UAS Alliance has a strategic purpose: "to promote student mobility and entrepreneurship education and help create easy-access programmes for innovation between higher education institutions and SMEs in the Helsinki metropolitan area" (Laurea UAS n.d.). As an element of the Alliance, Professional Summer School and the Sprint exist to support faster completion of studies and smoother transition to working life (Laurea UAS 2016). These objectives primarily encompass the needs and goals of the organization. However, as we have seen from exploring both service-dominant logic and student-centered learning, the needs and goals of the student are also fundamental to the learning experience. The *jobs to be done* and resulting *how might we* questions identified in this thesis offer the opportunity to integrate what learners value into the strategy or the 'big picture' of the Sprint.

5.5.1.1 Strategy development & ideation

According to Christensen et al. (2007), a purpose brand "links customers' realization that they need to do a job with a product that was designed to do it." The customer jobs act as a 'true north,' connecting the right customer with the right offering and guiding the design of the offering (2007). Establishing a 'true north' will be valuable to the Sprint organizers as they work towards their vision to grow to four Sprints totaling 400 participants by 2020. In any planning or strategic work there are sure to be conflicting ideas and visions. By returning to customer jobs the team can realign by asking the simple question, "What are our

customers [or students] hiring us to do" (Christensen et al. 2016a, 300 quoting Hari Nair Sime Darby's group chief of the Strategy Innovation Office)?

Although it is a simple question to ask, "What are students hiring the Sprint to do?" as of now the answer may vary by stakeholder; it will require time for stakeholders to construct an individual understanding of student jobs. The intention of the research conducted in this thesis is to offer the first step towards that understanding. As a next step, those responsible for the strategic growth of the Sprint should come together to review the findings and discuss their impact on the vision.

As a continuation of the design process, the organization can merge student jobs and desired outcomes with their strategic goals. The resulting *How might we* questions can then be used as a starting point for exploring new opportunities. For example, the student jobs of 'receive feedback to support the iterative learning process' and 'learn from experienced professionals' can be considered with the organization's strategic goal to support a 'smoother transition to working life.' This might lead the organization to ask, "How might we use mentorship and feedback to help students advance their learning for the next iteration?" (Figure 19).

Figure 19: How might we example 1

In the same way, the student job of 'use learning as a means of self-exploration and self-promotion' might be considered along with the two strategic goals 'smoother transition to working life' and 'increase number of Sprints & attendees.' Using this combination, the organization might seek to answer questions such as "How might we support students in identifying gaps in knowledge or skills?" and "How might we help students stand out to future employers/funders?" (Figure 20).

Student job

Use learning as a means of self-exploration and self-promotion

Strategic goals
- Smoother transition to working life
- Increase number of Sprints & attendees

How might we...

support students in identifying gaps in knowledge or skills?

help students stand out to future employers/funders?

Figure 20: How might we example 2

Efforts should be made to continue to work together with students to deepen the organization's understanding of student jobs as well as its role in cocreating value. This approach will support the further coevolution of the Sprint while also embracing student-centered design. The organization might consider involving students in cocreation sessions to prioritize *How might we* questions and begin to brainstorm possibilities for growth. The resulting concepts could then be validated through testing and iteration during the next Sprint. Organizers might frame interviews with students, such as those conducted during the pilot (Piironen et al. 2017), in the context of jobs to be done to understand how jobs evolve from year to year. As a form of participatory action research, facilitators of the 2017 Sprint could consider reframing their support by asking not "how can I help" but "what are you trying to achieve." The results could be mapped live help organizers develop a deeper context-based understanding of the more detailed jobs to be done occurring during the Sprint.

Adkins (2016, 201) argues that by consciously design learning experiences, "… what we are questioning from a pedagogic perspective is the value of going to university and undertaking a course and that the knowledge gained through this experience is as valuable (if not more valuable) than merely the information that is imparted." In other words, information must not be viewed as the only conduit for value; value is created through the experience of learning. An interviewee personified Adkin's theory saying, "programming is something you can learn at home easily … I know it is online and available but unless someone is pushing me to do something it's not going to work. That's one of the reasons why I went to the university." This viewpoint is important when considering the Sprint as an RDI project and an opportunity for innovation in education. By taking a student-centered approach and considering jobs, the organization is valuing learning as an experience.

If the Sprint is viewed as an opportunity to cocreate value by supporting student jobs, the organization might also consider its competition. Christensen et al. (2007) suggest, "Although most marketers view their competitors as those who make the same category of products,

this is generally only a small subset of the 'job candidates'" (Christensen et al. 2007). Universities are not the only solutions students are hiring to accomplish their jobs, the competition includes:

- Books, articles and blogs
- Social content from thought leaders (Ex: Twitter and LinkedIn)
- Events, workshops & hackathons hosted by businesses or universities
- Idea competitions
- Erasmus programs
- Online courses
- Internships
- Study abroad
- Independent projects for friends, the school or a company (ex: freelance work)
- Creating a start-up

When we consider JTBD in the sense of a product, it's possible that a consumer will be purchasing one solution to do the job. In education, we see students drawing from a variety of sources to gain a broad range of perspectives, essentially construct their own learning environment (see also 5.3 JOB: Learn beyond **THE CLASSROOM**). Rather than considering the other sources as competition, this presents an opportunity for resource integration. The concept of resource integration is a foundational premise of service-dominant logic and suggests existing resources can be combined to create new resources, thereby cocreating value for each actor (Lusch & Vargo 2014, 74). Lusch and Vargo offer the perspective that "no one actor has all the necessary resources to create value; rather, value creation is a joint function of the service provision of multiple actors, as integrated by the beneficiary." Individuals integrate their personal resources, such as knowledge and time. Organizations integrate resources such as staff and monetary investment to develop the offering. They may also integrate or collaborate with other market resources to create new value and expand their offering. (2014, 130).

This perspective may be particularly beneficial when considering the student job 'take the next step.' For example, might a partnership with an existing market resource such as a hackathon or start-up accelerator present the next step for student ideas? Considering the goal for resource integration is to create value for each actor, the partnership may look as follows. As a value to the hackathon or accelerator, the Sprint would provide a funnel for qualified applicants who have knowledge of the design process, are experienced in cocreation and have already taken their concept through one design cycle. For students, their experience in the Sprint might set them apart from the competition and the ability to further develop their ideas could support the job 'learn through practical implementation and iteration' as well as help them 'take the next step.' The UAS alliance might benefit from

the increased visibility through the partnership and ability to iterate and grow its offering in a new way.

The organization might also embrace resource integration by creating a series of learning activities designed to build on the learning outcomes of the previous Sprint, thereby supporting iterative learning. This might include other market actors—such as hackathons or accelerators as mentioned earlier—or existing resources. The Professional Summer School (PSS) concept—of which the Sprint is one element—already offers a suite of course options during the summer months. The opportunity with PSS as an existing resource lies in mapping potential 'paths' through the offerings to support the jobs students are trying to accomplish. This idea is emphasized by what Adkins refers to as seamless learning. "Seamless learning occurs when a student experiences a continuity of learning across a combination of technologies, social settings, times, and locations" (Adkins 2016, 203).

5.5.2 The tactical layer

The feedback, needs, goals and jobs of students provide insight and direction for improvements of the existing offering. The intention is to iterate—or evolve as it is referenced in the iDesign process (Figure 8)—the learning experience. Iteration not only improves the learning experience, but evolves the organization's understanding of its role in value creation. Some of the elements considered in the tactical level of the design include those listed by Plaut (2014):

1. **Sensory** – How will the experience look and feel? What communications and learning materials will support the experience?
2. **Interactions** – How will groups be formed and interact? How will activities work? How will interactions between students and clients take place? What will lectures and assessments look like?
3. **Structure** – How will the experience flow together? What is the program or timetable? How will learning be constructed through the experience?
4. **Requirements** – What skills and knowledge should be developed? How? What methods and content will be used? What logistics—personnel, facilities, technologies—must be put in place?

This section introduces three examples of how the development team has used the research for the next iteration of the Sprint. In these examples, the insights from this thesis offer context regarding a challenge or question and provide a starting point for brainstorming various solutions.

5.5.2.1   Group dynamics and attendance

Group dynamics and attendance were challenges noted by 2016 Sprint organizers and attendees alike. During the pilot, many students who had applied never came to registration on the first day. This created a major challenge as organizers scrambled to reorganize teams at the last minute. During interviews, students shared that lack of attendance from teammates and issues with team dynamics resulted in delayed progress on projects. Considering this feedback, the organizer team wanted to know: How might we use the pre-assignment to assess commitment to attendance and form groups with better dynamics?

We have learned teammates are important cocreators of value for students; they value the collaboration, networking and diversity of perspectives. Learning from others was found to be one of the core jobs students are hiring the Sprint to help them accomplish. Team dynamics are their best when diverse people share a similar mindset reflected through a shared attitude and motivation towards the task as well as an open mind. (For more, see the section: Learn from each other.)

By discussing these insights, it became clear a reframe of the question might be in order: How might we use the pre-assignment to better understand the mindset and motivation of participants? From this question, a short ideation session emerged as a starting point for further discussions by the development team:

1.   Pre-assignment question framing – Frame the pre-assignment in a way that provides indicators as to the students' attitudes and motivations. For example: Describe your ideal day participating in the Sprint…

2.   Active participation assignment – This was an idea offered during interviews with Sprint planners: The assignment could ask students to actively scan relevant industry-related materials before and after the Sprint and engage in discussions surrounding them. For example, by posting key findings to the Facebook page or a blog. This approach would test willingness to participate. It also embraces the concept of 'sensing,' which is an essential part of the Ojasalo, Koskelo and Nousiainen (2015) service innovation process as it encourages students to "recognize, interpret, and shape" developments in industries, markets and customer needs.

3.   Allow self-selecting of teams – Post profiles or pre-assignment responses to a central website and allow students to self-select teams. Benefits could include less coordination for event planners, self-identification of those with similar mindsets, and group accountability for attendance if group members were in contact in advance of the Sprint. Challenges would include the need for an infrastructure to enable team formation, the need to manage group formation for those who have not self-selected teams in advance and a risk of bias in team formation. Some large

online courses use a self-selecting method of group formation which could offer further insights into the pros and cons of this idea. This idea was also requested by two separate participants in the feedback.

4.   Teamwork strategies – In addition to considering group dynamics in team formation, the Sprint content might include some tools and strategies for effective teamwork.

5.5.2.2   Mentor and facilitator session

Mentors and teachers play a major role in the Sprint. Whether they are Master's students volunteering as mentors or paid teaching staff, this team is the 'front line' of the service offering. In many ways, this model honors student-centered learning in that teachers are not the "sage on the stage" but rather the "guide on the side." Relating the educational experience to a service experience, Sandström et al. (2008) suggest that "the service employee has the potential to influence the value-creating experience by interacting with the customer. Skilled personnel adapt interactively on the basis of their customers' reactions and responses" (112).

It is beneficial for the organization to develop the mentors and teachers' ability to adapt to the needs of their customers, the students, and to understanding their role in value creation. Results from this thesis could contribute to training and support in the following ways:

1.   Provide insights into the diversity of learners present in the learning environment including varying levels of experience, diversity of subject specialisms and differences in motivations. This understanding supports a constructivist approach as the backgrounds and experiences of the learner are recognized as essential elements of the learning experience.

2.   Connect service-dominant logic, a concept that would likely be familiar to the mentors, to student-centered learning to establish both a theoretical and practical understanding of their role as facilitators of learning. For mentors who are participating to gain experience, this approach aimed at deepening their facilitation skills offers additional value in exchange for participation.

Based on my personal experience as a mentor at the 2016 Sprint and evidence from student feedback, organizers might also consider assigning roles among the mentor/teacher group. For example, students reported that inefficient use of mentors hindered progress more than it helped saying, "Over the past 3 days we've had 5 different people coming to our table and everytime a new person comes up we have to stop working and spend the next 30min explaining our project. What we get back from this isn't much" (Mid-term survey).

One potential solution for this challenge is to assign a 'core mentor' for each team. The core mentor may have one or more teams and would be responsible for general guidance. He or she would report back the status of teams, possibly in a daily mentor check in. The ideal 'core mentor' would have a solid understanding of the end-to-end design process and be able to fill in gaps between lectures as well as facilitate activities such as the ideation session. 'Floating mentors' might be those with more subject-specific experience, for example, someone who is knowledgeable in generating user insights or in rapid prototyping. These mentors would check in regularly with core mentors to understand how they might offer their expertise to teams. Furthermore, all students and mentors would be aware of the individuals who can offer expert knowledge and could call upon them as needed. This could be accomplished by a public 'experts wall' displaying details and contact information for the floating mentors or other subject matter experts (SMEs). This is only one potential solution to the challenge. When considering other solutions, the main design drivers are:

1. Minimize inefficient mentor visits to teams
2. Maintain open access to multiple mentors in case one mentor is not a good fit with the team
3. Make SMEs available to provide feedback and support at times when it is most relevant to teams
4. Improve communication among the group of mentors and teachers

5.5.2.3   Schedule

Insights from this thesis were useful in a review of an early schedule, particularly related to guest lectures and client interactions. As mentioned previously, attendance and team dynamics presented some challenges during the Sprint. This was seen especially in attendance—or lack of—during lectures. Teams reported that teammates missing lectures resulted in delays as they needed to stop and explain the task or background before moving forward. Other students suggested the lectures were too broad and struggled to apply the lecture back to the project. These insights proved useful in making suggestions for improving the schedule in a few ways.

First, it has been suggested that lectures planned as the first or last activity of the day include a motivator to support attendance. Ideas might be the addition of a morning check-in which would serve as an extrinsic motivator related to attendance and assessment. However, an intrinsic motivator might prove more effective. For example, organizers might consider bookending the session with a guided networking activity which would appeal to students who value the networking opportunities offered by the Sprint.

Next, organizers could support learning by sharing the learning objectives of the lecture or guest speaker with the students. Ideally, a student-centered learning objective highlights how the students should be able to apply what they learn. In other words, the objective is "focusing on what the student will be able to do, rather than on the content being covered by the teacher" (UCD Centre for Teaching and learning 2005 as cited in O'Neill & McMahon 2005, 30).

Another insight from the research is that participation and team feedback from the client plays an important role in the experience of working on a 'real-life' project. After reviewing the draft schedule, it became apparent one-to-one time with the client was missing. Scheduling client time will be a unique challenge for the 2017 Sprint as it moves to a single-client model in place of the previous year's multi-client approach. Organizers will need to work in close cooperation with the client to identify ways to support this element of the student experience. They might consider scheduling blocks of time with the students and the sponsoring organization or work with the client to identify multiple representatives to answer questions and provide feedback to teams on an on-call basis.

6   Conclusions

This final chapter offers a summary of the work including key insights from the theoretical foundation and the qualitative research. It then explores the value of the work and transferability of results. Finally, it presents opportunities to consider for further research.

6.1 Summary

This thesis explores value through *service-dominant logic* and is supported in the educational context by *student-centered learning*. Design is proposed as an approach to rethink traditional education and *jobs to be done* as a lens for considering the students' perspective in the design process. The theoretical work concludes:

- Applying service-dominant logic in education offers a new perspective on how educational value is produced through the experience of learning.
- A student-centered approach to learning reflects service-dominant logic in that it supports a focus on the student as a cocreator of value.
- As a cocreator of value, the needs, interests and perspectives of students must be considered alongside those of the university, program or teacher.
- Considering the student perspective requires a conscious approach to the design of a learning experience. Just as the customer should be at the heart of the design process in business, so should students be at the center of educational design.
- Students 'hire' education to make progress towards a goal. Value is created through the experience of learning and ability to make the desired progress.

The first research question: *"What value do students seek from higher education and, more specifically, from the Sprint?"* speaks to a desire to better understand how events like the Sprint cocreate value with student participants. The results of this question prove relevant to the case project as a starting point for discussions, planning and strategy. They serve to provide organizers with an answer to the question, "What are students hiring the Sprint to do?"

Participation in educational experiences presents an opportunity for students to make progress towards their Higher Education and work transition goals. In the Sprint, value is cocreated with students in a way that bridges academia with working life. *'Learning from others'* plays an essential role in the creation of value. This includes learning from knowledgeable professionals to gain insights into personal successes and failures as well as relevant industry topics; receiving feedback on work; and gaining new perspectives from peers who are different, yet share a similar mindset. The importance of others in the creation of value within the student experience emphasizes the concept of 'value cocreation.'

Experiences such as the Sprint also offer a way for students to *'collect experiences.'* These experiences contribute to the iterative learning process by supporting theory, practical implementation and experiential learning. Students are then able to build on their new knowledge, skills and understanding in the next learning cycle. A desire and willingness to collect learning experiences outside of the curriculum suggests an opportunity for organizations to offer further value by integrating with other resources—such as using relevant industry materials or serving as an entry point into idea competitions.

Finally, while value is cocreated within the learning experience, it is also important for students to *'take the next step.'* Students need to be able to see the progress they have made, identify actionable next steps, and have the opportunity to implement their learning in a working environment.

The second research question: *"How might we rethink education by considering the value students are expecting from educational experiences such as the Sprint?"* suggests a willingness to consciously consider the needs and perspective of the student within the learning environment. This understanding of the student can be used to inform development on a tactical level related to the day-to-day planning, implementation and improvement. It can also be used on a strategic level to grow the profile of the offering by considering both the needs of the organization and the learners. The starting point for rethinking education is a willingness to consider the jobs, needs and perspectives of the students and use them to inform the design of the learning experience.

In the case of the Sprint, understanding the value of the experience for students offers a 'true north' from which to navigate towards future growth goals. It offers the possibility of a shared understanding that creating educational value is more than the transfer of information; rather, it is the entire experience of learning. The learning experience is interdependent on other stakeholders and resources, suggesting new opportunities for integrating resources to develop and grow the offering. In the day-to-day planning, understanding what students are trying to accomplish can inform the delivery, flow or schedule of the learning and it can shape the experience and interactions among teachers, mentors and fellow students. Insights can also drive the marketing messaging responsible for connecting the right students to the right educational experience.

6.2 Value of the study and transferability of results

The findings of this research have already been used to inform the design of the 2017 Digital Wellbeing Sprint on a tactical level in a variety of areas. Knowledge of the pains and gains experienced during the 2016 pilot combined with the student jobs offered new perspectives for designing the schedule and related activities. Understanding the value of 'learning from others' informed discussions about team formation and how pre-assessments might be used to support the student experience. The job 'learn from experienced professionals' inspired new ideas about the role of external professionals in the Sprint. The findings will also be presented at a training session with Sprint mentors to empower a teacher-as-designer—or in this case, mentor-as-designer—approach so the jobs, needs and perspectives of students are considered in the day-to-day implementation.

The findings are also being considered on a strategic level and have been shared with the principal partners from the three UAS. Early discussions regarding the student job 'take the next step' have inspired a variety of ideas from creating customized paths within the PSS suite of courses to offering more access to partners to develop student concepts after the Sprint. Combining 'take the next step' with 'learn as a means of self-exploration and self-promotion' has resulted in discussions about how the organization can help students showcase their work to make their progress tangible and attract future employers or funders.

The vision of the Sprint as an educational RDI project is to shape the future of Finnish higher education (Hirvikoski 2016. Pers. Com.). Feedback from the UAS alliance suggests that applying the principles of service-dominant logic and embracing student-centered learning by understanding student jobs holds the potential to inspire a new approach to higher education (Hirvikoski et al. 2017. Personal communication.) Central to this approach is a desire to engage, motivate and prepare students of today for the jobs of tomorrow.

The Finnish education system is praised around the world as best-in-class. Globally, it is ranked number one in primary education and number one in Europe in higher education according to the World Economic Forum (2016). The BBC (2016) has touted Finland as one of the top two countries with the "highest performing graduates," referencing a report by the Organization for Economic Co-operation and Development (Coughlan 2016; OECD 2016). This status puts Finland on the world stage as thought leaders and a driving force for innovation as educational systems worldwide work to adapt to societal changes and meet the needs of their customers – the students.

In the introduction, the question was posed: "As design educators, how do we practice what we preach?" We can do this by examining our learning environments in the way we would any design challenge and applying the design mindset, process and tools to constantly reach for new and improved outcomes. Applying design to education brings it full circle as a model for today's students who will become tomorrow's workforce. This thesis contributes to design in education by integrating a *student-centered approach* with an understanding of student *jobs to be done* and the related cocreation of value within the learning experience. Connections to *service-dominant logic* support learning as an experience that is best when cocreated with the student rather than simply provided by the university or educator.

This approach to the design of education, as well as the findings about students' jobs, can be used to support the design of student-centered learning experiences in similar project-based environments aimed at completing a design cycle together with students such as living labs, sprints, hackathons, jams and design curriculum. Insights have already proven valuable in designing and developing my own design thinking course curriculum for Higher Education. They have offered new perspectives on engaging students in the construction of their learning; asking for feedback and working to understand their perspective; identifying and fill critical gaps in learning; and using participatory research to include students in curriculum planning.

When searching for a new paradigm in education it is not realistic to expect a sudden shift, we can only seek progress. When considering progress towards student-centered learning, O'Neill and McMahon (2005, 29) suggest there is continuum; the goal is simply for each educator or organization to make progress in the right direction as is appropriate for each unique learning environment.

6.3 Opportunities for further research

This thesis looks at the expectations and perceptions of students in higher education. My perspective as a designer and teaching fellow in higher education offers both strengths and weaknesses. As a strength, it provides deep personal interest in the topic and the opportunity

to implement and test new methods and understandings actively in the classroom. As a weakness, this thesis takes an inclusive view of design, suggesting it is every educators' responsibility, not one that is reserved for learning experience or curriculum designers. While this may be the ideal, it is far from the reality. It would be valuable to consider the perspectives of experienced educators to identify what would need to take place to manage such a change and further a student-centered approach in Finnish higher education. Such a study would likely encounter dissension as well as positive best practices from educators already embracing student-centered learning. A further study of the educator point of view might also capture the teachers' jobs to be done and offer suggestions for integrating both perspectives into the learning environment, as a student-centered approach with disregard for the educator is not likely to prove fruitful. To motivate educators they too must feel respected and have autonomy in making decisions about what is right for their classroom (Langworthy et al. 2009, 29).

One of the key findings of the research is the concept of iterative learning, the idea that each learning experience is part of a series of experiences that serve to improve ones' skills, understanding of the world, or understanding of him or herself. The research suggests value in offerings that support students' ability to test and iterate in this way. Insights about the elements required for a successful iteration of learning would lend a deeper understanding of the concept. Future research may also consider the role of both positive and negative experiences and their relative contribution towards the next cycle of learning. For example, working in a dysfunctional team is often a negative experience at the time, but anecdotal evidence suggests it may offer a high long-term value to learning.

While the connections appear obvious after study, little academic research is found on the connections between service-dominant logic and the rise of user-centered, human-centered and even student-centered approaches. Further study of these connections could offer insights into the theoretical underpinnings and contribute to the continued shift from goods-dominant logic to service-dominant through these areas of practice. In a similar way, the connections between user/human-centered and student-centered warrant further research. This has the potential for education to benefit from the successes, failures and best practices of user/human-centered approaches that are already well established in business.

This study puts forth an integrated understanding of value and jobs to be done by suggesting that student value is co-created when student jobs are satisfied. The transition from understanding a job to fulfilling it, thereby creating value, would offer an interesting study. This might include further research into the connections between the elements of value and jobs to be done.

Finally, the educational environment of Finland is unique compared to that, for instance, of the United States of America or the United Kingdom. The social benefits available in Finland—including low or no cost tuition, study leave opportunities and financial support for students—result in a more accessible education system. This impacts a students' options to pursue education at different life stages as well as attitudes towards higher education as a pathway for growth and development. Furthermore, the case of the Digital Wellbeing Sprint is an optional summer offering that, by nature, is likely to attract more intrinsically motivated students eager to engage in new experiences. As each learning environment is unique, the adoption of the results must be measured accordingly. Future researchers might consider this thesis as a framework for conducting research customized to their unique educational context.

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Figures

Tables

Appendices

Appendix 1: Field guide

All interviews will be completed via Skype.

Primary research question: What value do millennials seek from higher education? Why?

Specific context: Higher education goals; desired progress over summer months

Looking for:

- **Goals:** The larger context: What is the student is "hiring" higher education to help him/her accomplish? For example, a goal of getting a job or starting a business.

- **Progress:** The progress towards the goal the student is looking to make. Specific to this project, this is the progress the student is looking to make over the summer to reach the goal. The progress is categorized by emotional, social and functional.

- **Success criteria:** The conditions and expectations that need to be met for the progress to be made.

- **Obstacles and other solutions:** What obstacles did you face in making this progress? What solutions did you employ to help make progress?

- **Position:** Is the student approaching from a position of confidence in abilities as indicated by or a position of desired confidence?

Preparation

Mention to interviewees in advance they can think about these two areas:

- What are/were you hoping to achieve through your studies in higher education? (Did/do you have some specific goal?)
- Thinking back to last summer, what progress towards that goal, if any, were you hoping to make?

Also, suggest that they should have a pen and paper available for the interview.

Intro questions (all)

Tell me a bit about yourself…

- Year in school (or working):
- School:
- Program:
- Where are you from:
- How did you become interested in [subject]?
- What do you typically do during the summers?

Why did you choose the path of higher education?

- Why did you choose [school name]?

Goal

(Ask to write this down)

What are/were you hoping to achieve through your studies in Higher education?

- Why is [X] important to you?
- When did you first realize you had that goal? (story?)
- If graduated, did they reach their goal?

Progress to goal

(Return to paper)

What have you done so far to reach that goal? *(Drawn timeline)*

- What steps are left to go?

Last summer, was there any specific progress towards that goal you wanted to make?

- Why was this an important step for you?
- Was there something else you were trying to accomplish not related to that goal?

What were the different options you had for making that progress? (ie: What was hired? Summer school? Internship? Books?)

- Which options did you choose?
- Why did you not choose [X]?
- What were you trying to achieve by choosing [X]?
    - What did that feature do for you?
- What were the results?
- Is there anything you would do differently?

What challenges did you have in making that progress? *(Watch for emotional, social, functional)*

- How could we help you fix that?

Overall, how did you measure the progress towards your goal?

PSS 2016 + position

(Related more specifically to your experience at Professional Summer school last summer)

How did PSS help you make progress?

- Were there any unexpected ways it helped you reach your goal/make progress?
- What did it enable you to do?
- Were there any negative impacts?

Do you have any advice as to how PSS could have helped you make even more progress towards your goal?

When you started PSS, how confident did you feel about your skills? How did that change by the end?

Can you describe to me the different personalities you were working with in your team?

- How did strong personalities impact the group dynamic?
- How did more introverted personalities impact the group dynamic?

Appendix 2: Enrolment data sheet

Totals for students enrolled in Professional Summer School 2016. Totals do not include recorded cancellations occurring before the start date. Total responses: 103.

Study Level

Master 11%

Bachelor 89%

Gender

Male 40%

Female 60%

Nationality

Other nationality 55%
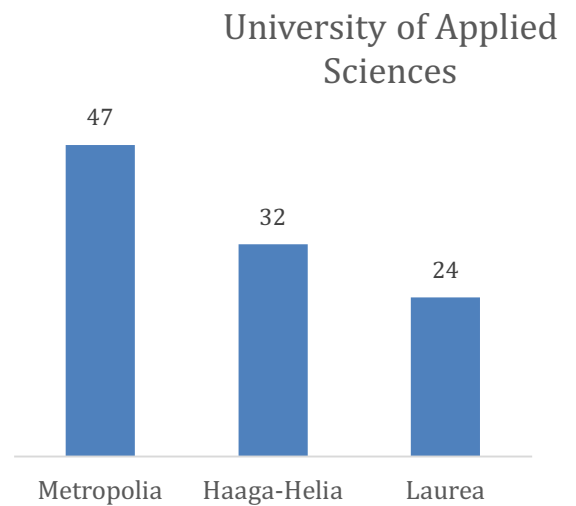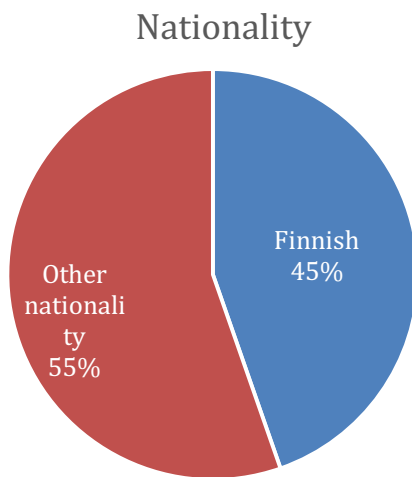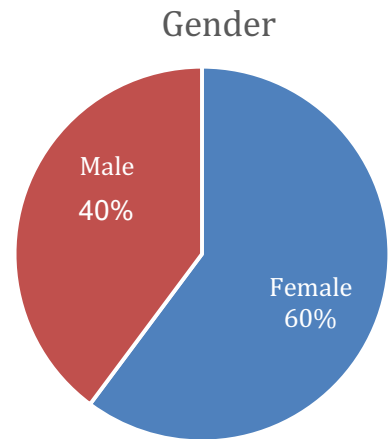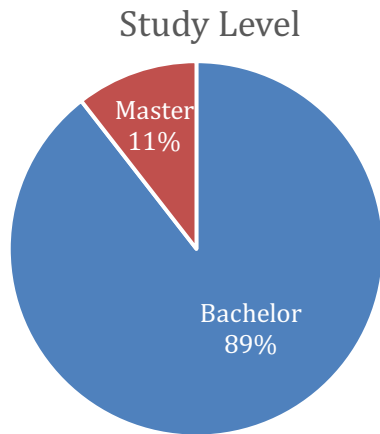
Finnish 45%

* Students self-selected their nationality. Those indicating Finnish and a second nationality were categorized as Finnish

University of Applied Sciences

47
32
24

Metropolia   Haaga-Helia   Laurea

Desired task

Own idea
23%

Case
77%

Degree Program

Other
3%

Design
5%

Hospitality
5%

Engineering
19%

IT
17%

Health
18%
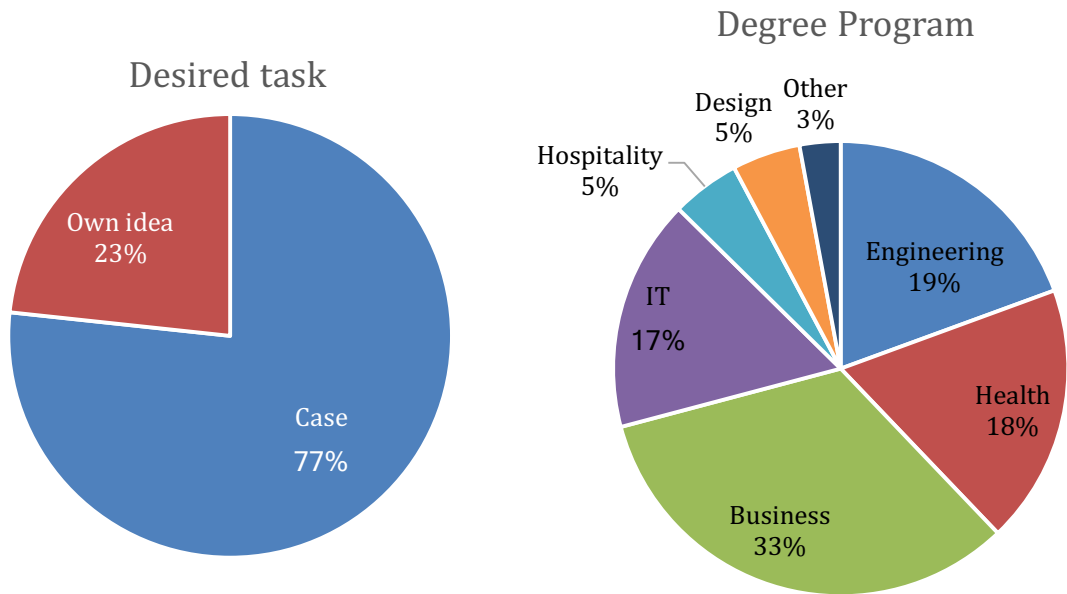
Business
33%

Motivation to participate

Response to the question: Tell us shortly why you want to participate in the workshop?

Category	Percentage
Gain credits	~3%
Language improvement	~4%
Social value	~5%
Intrinsic interest	~14%
Interest in topic	~14%
Entrepreneurialism interest	~17%
Work with company/real life	~23%
Reach a goal	~33%
Get experience	~37%
Gain new skills or knowledge	~44%
Teamwork, collaboration, networking	~61%
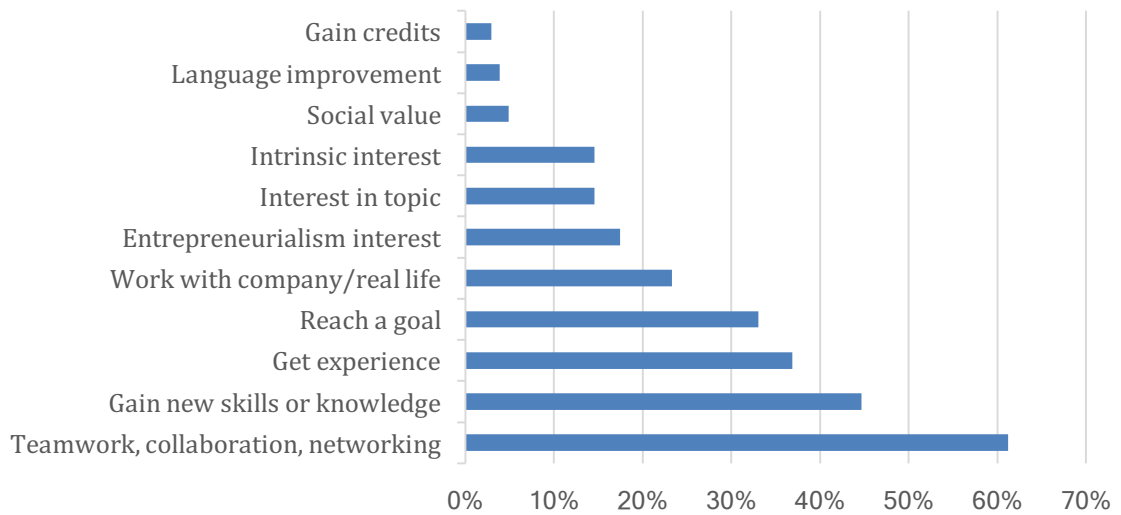
Initial conclusions

o Fewer than half (46%) of students applying to the program with their own idea, reference their business idea or desire to start a business as a reason for their participation.

o Students applying to the program with their **own idea** showed:

   o Interest in entrepreneurialism (46% vs. 9%)

   o Desire to reach a specific goal (38% vs 32%)

o Students applying to the program to work on a **provided case** showed:

   o Interest in the networking and collaboration aspect of the Sprint (68% vs 38%)

   o Desire to apply skills and gain experience (39% vs. 29%)

   o Interest in working with a company/on a live project (25% vs. 17%)

o Students identifying as **Finnish nationality** showed:

   o Interest in a specific topic related to the sprint (20% vs. 11%)

   o Interest in improving language skills (9% vs. 0%)

   o Interest in social value (9% vs. 2%)

o Students identifying as **another nationality** showed:

   o Interest in gaining new skills/knowledge (53% vs 35%)

o Fewer than 5% of the respondents indicated social value, language improvement, gaining credits, or traditional learning (i.e.: lectures, instructors or structured content) as reasons for wanting to participate in the workshop.

o Statistically, there were no strong correlations between demographic data present in the survey (gender, university, degree programme, nationality) and motivations to enroll

o Statistically, moderate correlations were displayed in logical categories:

   o People with their own idea were also more interested in entrepreneurialism (+.42)

   o People with a specific topic interest also showed more intrinsic interest (+.45)

   o People interested in the Sprint to help reach a specific goal were interested in entrepreneurialism (often, the specific goal was to start a business either short or long-term) (+.44)

Appendix 3: Initial jobs and success criteria

Exploring factors that affect millennial students' expectations and perception of value in higher education through Jobs to Be Done theory.

In addition to exploring student feedback related specific to The Sprint environment, this thesis seeks to explore the larger context of the expectations and perceptions of students. The first step was to analyze student responses from the three existing data points (the application, mid-term survey and final survey). In order to develop initial assumptions of the jobs students are trying to accomplish by attending The Sprint, the analysis was done through the lens of jobs to be done. Three interrelated elements are explored:

Goal - The larger context: What is the student is "hiring" higher education to help him/her accomplish? For example, a goal of getting a job or starting a business.

Progress - The progress towards the goal the student is looking to make. Specific to this project, this is the progress the student is looking to make over the summer to reach the goal. The progress is categorized by emotional, social and functional.

Success criteria - The conditions and expectations that need to be met in order for the progress to be made.

Currently, no assumptions have been made about the interrelationship of these three elements, although surely such patterns will emerge in further research. The intention of this initial draft is to:

1. Provide insights to support early-stage planning of The Sprint.
2. To develop interview questions for further research and deeper insights.
3. Receive early feedback about relevancy of the research to The Sprint and better understand the best suited approach and deliverables.

GOALS

- Stay relevant
- Get a job
- Start a business
- Identify a future career path
- Integrate into Finnish Culture
- Be successful in working life

DESIRED PROGRESS TO GOAL

Social

- Connect with others who can help me achieve my goal
  - Connect with companies
  - Find a business partner
  - Connect to others with similar interests
- Ensure my knowledge is competitive to that of my peers (personal comparison)
  - Personal comparison
  - Verbal affirmation from peers
- Make friends
- Prepare for the profile I want to follow
- Share my knowledge with others (learn through teaching)
- Experience working in a team
  - Experience working in a multicultural setting
  - Exposure to other perspectives

Emotional

- Find confidence in my abilities
  - Validate my skills
  - Validate my ideas
- Be inspired with new ideas
- Test my limits (motivation, skills)
  - Be challenged
- Feel more prepared for working life
  - Easier transition to working life
- Answer: What do I want to do with my life?
- Understand the culture

Functional

- Identify a business idea
- Develop my business idea
- Answer: What do I want to do with my life?
- Get credits
- Validate my business ideas
- Improve English
- Gain experience
  - To eliminate risk in business
  - Applying existing skills/knowledge
- Gain skills/knowledge (see list)

Other
- Working with a company
- Working with public
- In a working environment
- To find my skill gaps
- On a practical/hands-on project
- From in-field professionals
- Working on a team
- See a real-life case in action

SUCCESS CRITERIA (what needs to happen in order for the progress to be made)

Learn theory in a practical way

Interesting lectures

Learn more than in a normal class

Ability to retain & apply what I learned

Quality lectures

Meet new people

Learn about a new industry (health tech)

Enhance presentation skills

Mentors to help when we have questions

Motivating

Exhilirating

Relevant assignments

Inspiring

Interactive

Enhance multicultural teamwork

Ability to contribute to group work

Learn the value of learning

Learn the importance of learning different things

Ability to communicate my own ideas

Learned not to be afraid of failure

Widened networks

Achieve something concrete and enjoyable

Deeper understanding of SD concept

Ability to work with a real company

Increased belief in myself

Courage to think outside of the box

Increased openness to the ideas of others

Knowledge and skills to design customer-oriented products/services

Increased understanding of my own capabilities

Fun

Learn how to use key tools

Learn about value proposition

Opportunity to work with with others with different backgrounds

Learn from each other

Learn to do more in less time

Positive atmosphere

Patient mentors

Specific skills & knowledge
- General job skills
- C++/C/Adruino
- circuit design
- using sensors
- reading data sheets
- developing a UI for an application
- Entrepreneurship
- Innovation
- Lean start-up
- MVP
- Business knowledge
- Rapid prototyping
- Service Design
- Concept Development
- challenge conventions,
- How to find solutions to challenges
- Teamwork
- Multi-cultural teamwork
- Critical thinking
- Effective communication
- Networking
- Indistrial/product design
- Marketing
- Digital marketing
- Strategic thinking
- UX
- Business management
- Idea development
- Project management
- Computer skills
- Concept innovation
- Database management
- Collaboration in private/public
- Digitization
- wellbeing
- Technology in healthcare

Appendix 4: Key takeaway summary (mid-project)

3 takeaways from initial research

There are three things that have stood out as being attractive to students:

1. The people they will meet (networking and working with others to explore their team working skills)

   In the applications, 61% of students mentioned teamwork/collaboration/networking as a reason they wanted to participate (This was the most referenced reason)

   People said things like:

   "I would like to meet new people, networking with them, find new opportunities, maybe job opportunities, and to find out what kind of problems and solutions do we have, when thinking Digital Wellbeing...Love to join in a group, which is collaborative, innovative and ready to pounce on mission."

2. The ability to work on a real case (this bridge between school and working life and all the benefits that come with it).

   37% mentioned a desire to gain experience through participation and 23% more specifically mentioned the work with a company or on a real-life case

   People said things like:

   "...now I want to imply my theoretical knowledge practically and gather some real life work experiences. I believe attending workshop like this will give me an opportunity to achieve this kind of practical experiences and enrich my knowledge."

3. It's as much about the "doing" as it is the learning. It's about the social/emotional benefits of learning from each other, exploring, and making sense of things.

   Only 3 students referenced credits as a motivation for participating.

   People said things like:

   "I searched for different kind of summer courses where you could achieve something concrete and enjoyable."

   "Realising my own potential and skills within the group frame, I didn't expect to be such a big asset to my team as I have proven to be."

   "Learning to work with different cultures and difficult topic and still survive."

Next steps

In the next phase of research, I will be interviewing students from PSS 2016 to understand the 'Jobs To Be Done' around higher education and what they are trying to accomplish with Professional Summer School. It is anticipated these early takeaways will continue to weave into the additional findings.

As supported by takeaway #3, I will also be researching student-centered learning and its application to the further development of professional summer school.

Appendix 5: Final job statements and how might we questions

CATEGORY: LEARN FROM OTHERS		
Job 1: Learn from experienced professionals	Job 2: Receive feedback to support the iterative learning process	Job 3: Learn from each other (learn from peers)
Learn about practices and process in industry	Access to competent mentors/specialists to ask questions	Gain new perspectives by working with people who are different from me: internationals and people from different study programmes, schools or backgrounds
Compare what I've learned in my degree with what is happening in business to either validate my skills or identify gaps for further learning	Access to competent mentors/specialists to get relevant feedback	Work with people who share a similar mindset
Gain the perspectives of multiple stakeholders including investors, start-ups, project managers, and the various implementer roles such as designer, IT, engineer etc…	Learn from the experiences (and mistakes) of competent mentors or specialists	Widen by networks (meet new friends or business connections)
Meet and network with experienced professionals to ask unanswered questions	Make learning more efficient; learn faster	Explore my role on diverse teams
Self-validation, "Can I hold my own in a conversation with a professional in my desired field?"	Use new perspectives to build on ideas and improve project/learning outcomes	Experience a different (hyper-collaborative) way of working to apply to my current or future work
Make a good impression and open new job possibilities	Make new connections about the practical application of learning (i.e.: how do professionals do XYZ in practice)	Discuss questions, frustrations and ideas with others
HOW MIGHT WE QUESTIONS		
How might we go further in bridging the gap between academics and vocation?	How might we link students with mentors?	How might we increase networking during the Sprint beyond teams?
How might we encourage business professionals to participate in the Sprint?	How might we use feedback to support the student reflection and iteration process?	How might we build teams to maximize both team diversity and shared mindset?
	How might we use mentorship support the student reflection and iteration process?	How might we support the exploration of individual and team roles during the Sprint?
	How might we bridge school and working life by including feedback from sponsoring businesses in the Sprint process?	

CATEGORY: COLLECT EXPERIENCES		
Job 1: Learn through practical implementation and iteration	Job 2: Learn beyond the classroom	Job 3: Learn as a means of self-exploration and self-promotion
Have dedicated time for exploration	Feel supported through education	Identify gaps for further development
Repeat and test existing skills/understanding	Find new, meaningful ways to test my knowledge and skills	Identify what sets me apart
Learn new skills/gain new understanding	Diversify my experiences	Gain a balance of skills; be well-rounded
Do this in an environment that offers a new perspective/setting	Find new experiences that compliment classroom learning and expand my knowledge (independent of credits)	Collect experiences that will set me apart
Receive feedback collected through these experiences	Find new experiences within degree requirements (within credits)	Reflect on feedback collected through experiences
Reflect on feedback collected through these experiences		
HOW MIGHT WE QUESTIONS		
How might we design a series of experiences that support iterative learning?	How might we design a series of experiences that are diverse yet complimentary so they build on a set of skills?	How might we use the design process offer another perspective on self-exploration?
How might we connect the jobs 'take the next step' and 'Learn through practical implementation and iteration' to design a series of experiences that bridge school and business?	How might we integrate with other learning resources to enhance or extend the Sprint?	How might we support students in identifying gaps in knowledge or skills?
		How might we help students position the Sprint (both the activity and the knowledge gained) as something that sets them apart?

CATEGORY/JOB: TAKE THE NEXT STEP
Realize progress made
Identify what's next
Find the resources to take the next step
Communicate what sets me apart
HOW MIGHT WE QUESTIONS
How might we help students' see their progress in a more concrete way?
How might we help students make their Sprint experience more visible to stand out to employers/funders?
How might we help students take the next step with their ideas from the Sprint?
How might we connect students with the resources required to take the next step?
After the Sprint, how might we track and make visible new progress on projects?