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The designer as agent of community

Thomas Østergaard, Design, VIA University College, Denmark

Abstract

A “changing paradigm” with a focus on design for social innovation (SI) has emerged over the last decade. (DESI, 2012) The title of this article refers to a perception of design schools and design students as potential “agents of sustainable change” adding new design-domains to the existing traditional design domains. (Chick, 2012, Emilson, 2010, Manzini, 2008, 2012, 2014).

The study finds it is hard for the design-students to establish their “roles” as designers and have a natural “authority” working in complex and time-limited process’. The paper produces recommendations for other educators in terms of preparing, planning and doing a SD for SI course and discusses the critics views on future requirements for Design-educations. (Bason, 2013, Mulgan, 2014, Norman, 2010)

The empirical basis for the article is a case used as part of the collaboration between VIA Design; Design for Change (DFC) in 2014-18 and four external partners; Teknologi i Praksis (TiP), the City of Aarhus, BorgerDesign and CareWare (CaT).

KEYWORDS: service design, design for social innovation, social innovation, design for change, welfare innovation, service design for social innovation, design education

Introduction

As the challenges of the welfare state rises the need for multi-disciplinary insights from citizen perspectives emerged over the last 10-15 years in public management. (Brown & Wyatt, 2010, Jegou and Manzini (2008), Yang & Sung, 2016). Social Innovation (SI) is now used as a new human-centered paradigm of “*value-co creation*” for the long-term benefit of society” (Yang & Sung, 2016) in public management and public networked innovation process’.

In England The Design Council established the RED unit, based on trans-disciplinarity and consisting of both professionals from other than design-disciplines and designers, and Burns et al. (2006) described the units approach as “Transformation Design”, based on involving stakeholders as early in the process, through participatory Design. In Denmark we have had private design as well as public-funded business’ over the last 10 years trying to work their way into the new field of SI, solving public social issues and sustainable challenges, using SD methods. Amongst these companies like DesignIt and Mindlab (<http://mind-lab.dk/en>) have brought SD into SI.

Theoretical Backdrop

SI is connected to the development of new initiatives, strategies, products, services or processes meeting the emerging demands that changes perceptions of authority flows, use of resources, organizations, basic routines or beliefs in the social system in which they arise. SI can be performed by a wide variety of institutions such as communities, associations, NGO's, charity organizations or municipalities or a combination of all. Biggs, et al. (2010) describes SI as a “bricolage”.



Table 1: The process of social innovation (Biggs et al., 2010)

The term “Service Design” (SD) has emerged as a topic in research as well as practice in design research and educations over the last decade. (Nisula, 2012). When defining SD, practices are often described as co-creational involving other professions and non-designers in the idea generating process, using involving methods and participatory facilitation methods. (Burns, et al., 2006, Holmlid 2009) SD implies designing *with* and not *for* people. (Sanders & Stappers, 2008) In this sense, the scope of the process can become *how* the actors relate in the value creation, (Kimbell, 2009) SD is often described as holistic and focused on systems, interactions and transformations. (Manzini, 2009).

New design disciplines emerge within SD, such as Transformation Design and SD for SI. (Nisula, 2012) These design disciplines boundaries may blur, but they are all concerned with the study of co-designing, design for social innovation and transformational change. (Jegou & Manzini, 2008; Sangiorgi, 2011, Wetter-Edman, 2014) In a SD for SI or Design for SI perspective, the DFC course creates connections between the two discourses of the design theory by suggesting that services can be co-designed with an aim of generating social innovation processes in which new constellations between the actors are being established, as well as some students “break-out” and make completely new concepts, co-creating value and social benefits to meet the future needs and perhaps establish alternative production and consumption systems. (Cipolla, 2016, Cipolla & Manzini, 2014, Manzini, 2016).

Yang & Sung (2016) proposes integrating the methodology of SD to create a sustainable mechanism supporting multi-disciplinary stakeholders continuous involvement in SI. Recent research shows the complexity and diversity of the interests of the stakeholders and how the designers often occur during the value creation processes due to the difference of views or values. (Yang, C. F., & Sung, T. J., 2016)

In the following the scope is how the design practice is unfolded and what role the designer has in a SD context, followed by a reflection on SD and SI and finally how value co-creation and SD works.

The design practice and the role of the designer

The act of designing is defined by the capability of visualizing through the use of personal skills manipulating different materials. On the other hand the process of designing requires a wide variety of processing skills. The design process demands both communicative skills, being intuitive, empathetic, creative and capable of thinking deconstructive, holistic, iterative, divergent and convergent. On top of this a designer often has to have a human-centered approach, trying to visualize or frame the users minds, capture experiences and prototype

these with the user. (Kelley, (2001), Press and Cooper (2003), Wetter-Edman (2011).

In the DFC setting, SD for SI becomes a multi-discipline in which “T-shaped people” can collaborate. (Dijk, p. 110, 2011 in Stickdorn et al. 2011) T-shaped refers to the metaphor introduced by the design-company IDEO (Kelley, 2000) and describes the intention of having a broad (the top of the T) understanding in various disciplines combined with a deep (the vertical part of the T) knowledge in a specific area. Ideally the combination of a broader general understanding and a specific skill provides a tool enabling valuable collaborations providing viable service concepts and their implementation. (Dijk, 2011, in Stickdorn et al. 2011)

Research on the actual value-creation of the design-process’ is limited, but central to the idea of value-creation through the use of SD led innovation are 1. Human centered, 2.user experience based, 3. participatory and 4. a contextual understanding approach. (Wetter-Edman, 2014). The designers often have to position themselves in the midst of the challenges and move between different modes in iterative processes, trying to co-create solutions together with users or other designers. This thinking requires a high level of abstraction and an open mind towards creating unknown solutions, using visual thinking and multiple sorts of prototypes. (Cross, 2006, T. Brown, 2008) The encounter with, mapping of human experiences and interactions in the service are crucial to the design-process and the design-students. (Wetter-Edman, 2014).

In the DFC course, the aims were creating “ideas, systems or process” that could “enable or help the user to a better position, everyday life or understanding”. The aim of the course was also to bring the design students into new professional contexts, with a focus on creating a social approach using methods from SD for SI. So, understanding the expert-users experiences and working out-side-in to the core of the challenges was the approach of the designers. (Sangiorgi, 2012). But understanding the social and personal context, both in terms of actual physical settings, irrational and sensitive values, (such as emotions, personality) issues of the person requires an empathic and often anthropological approach of the designer. Design ethnography aims at understanding the future users of a design and can be a helpful tool to work with for the students, as they try to identify with the people they are co-creating with.

In ‘Design for the 21st Century’ Inns, (2007) describes 6 roles of the designers. Inns describes the roles as; 1) negotiator of value, 2) facilitator of thinking 3) as visualizer of the intangible, 4) as navigator of complexity, 5) mediator of stakeholders and 6) as coordinator of exploration. (Wetter-Edman (2011), Inns, (2007:24). Attention has risen towards the role of the designer in the co-creating process’ (Leadbeater, 2008, Sanders & Stappers, 2008) and designers working for service innovation are often described as “*facilitators of co-design process*”. (Wetter-Edman, 2014.) Sanders and Stappers described in 2008 how the design practice is changing from a product oriented to a purpose focused design approach and how this influences the role of the designer. Sanders and Stappers, (2008) describes how the roles of the participants in a co-designing process gets “mixed up”. The designer has to be capable of listening, sensing and supporting the user-experts. So, instead of “designing only” the designer becomes an anthropological researcher and often have to perform at least two roles at the same time. In this process, the designer might even discover losing her own domain, the design-position, to a non-designer. (Dijk, in Stickdorn, et al. 2011)

Some of the methods used by the design-students can enable the person involved in mapping their lives and experiences are storytelling –personal narratives through the use of sketched “user-journeys” – “storyboards” made on-site with the person. It requires a holistic view of the persons lives. The role of the designer in the SD for SI is having a *human* rather than *user*-centered entry to the process and understand, real-life situations with the person, building empowerment and common narratives of a better future situation, (value-creation) through common visualization, storytelling and on-site prototyping and future possibilities

together. (Wetter-Edman, 2014) But, it is, by far, not easy and it will be influenced by the Designers personal values, prejudices and moods.

Yang & Sung, (2016) analyzes the key factors for developing a lasting design-led social innovation process. In 2016 they issued their research based on a large scale participatory action research program in Taiwan, including more than 4200 designers and volunteers involved in multidisciplinary SI program called “5% Design Action”. Yang & Sung, (2016) identified four types of key stakeholders for building a lasting value co-creation mechanism in designing for SI: 1: designers (referring to designers and other professionals); 2: NPO/NGO and Public participants; 3: private sectors participants; 4: co-creation platform owners. Yang & Sung (2016) defines the roles of the designer as foremost “challenging current positions” and contributing with a user and human centered focus resolving the challenges of the lack of resources by offering new outside-in perspectives, escaping old logics and restraints in the organizations. Secondly, their research, concluded designers developed “products” satisfying both the providers and receivers needs based on value-co creation process’. Thirdly the designers managed to combine and use their expert skills by using the SD methods and tools to facilitate and extract knowledge from multi-disciplinary debates, and thus lead the process into a deeper insight and a more efficient value-co-creation.

Value co-creation in SI

Value co-creation processes brings risks and potential costs to the process of designing as well. It is based on working with multiple networks of people, values and systems, in which it can be hard to establish trust and common aims, especially in often very fragile or delicate social innovation issues. (Yang, & Sung, T. J, Prahalad & Ramaswamy, 2004) But using diversity as a social collaborative and praising multi-disciplinary can help generate dynamic open collaboration-models between the stakeholders. In order to meet the demands of many stakeholders wishes, the value should therefore preferably be co-created. But these value co-creations in service systems are highly dependent on resources, time and spaces for interaction. (Yang & Sung, 2016) Defining the key-stakeholders and their roles and their personal motivators is needed in planning the SI design-process.

Yang & Sung, (2016) proposes investigating “motivators” in the design-process, such as the expansion of specialty, as both designers and professional who worked for years in a certain profession could gain new knowledge and increase their practical capacity of working multi-disciplinary.

The NGO and public sector participants could, according to Yang & Sung find the roles of introducing the current status as well as guide the innovation process and presentation of the result in a wider complexity. Their motivators for participation and lasting innovation can be found in the injection of innovation and energy through the participation of external designers. Through long-lasting collaborations in the project 5% Design Action, many of the NGO’s and public sector participants became familiar with the applied methods and design tools in use over time. This became useful for the empowerment of the organizations capacity for own innovation. In the DFC program, many of the NGO’s and public participants already knew, used or had experience with design-led innovation, methods and tools. To them it really *is* a motivator for collaboration, as they already experienced the energy and enthusiasm from other projects, but to some of the “expert-users” these tools and the language connected to them, were unknown.

A meaningful motivator for the public sector to participate is entering in networked relation-innovation. Value co-creation with external stakeholders provides relation-making and lasting friendships and even new resources; man-power, skills, knowledge, technology, creativity and innovation. These motivators for participation were highly underlined by our collaborating partners from the both the public sector (CareWare / Aarhus Municipality) and

the NGO's. (Yang & Sung, 2016)

The fourth category; Owners of Co-creation mechanism, consists, according to Yang & Sung of the original initiators, coordinators and producers behind the process. Their role is to maintain and produce the innovation process. Their motivation would be an urge to develop sustainable business models, new networks and strengthen teams and professional growth. In our case, this would be VIA Design, TiP, CAT and Aarhus Municipality. According to this study, the motivation to join becomes stronger for external companies as the process contains strong capacities in compliance with what Yang & Sung found in their research. (See table 2)

Table 2. The sustainable value co-creation mechanism in social innovation, adapted from Yang and Sung (2016).

KEY STAKEHOLDERS	ROLE POSITIONING	MOTIVATORS
Designers	<ul style="list-style-type: none"> • Challenging current conditions • Strengthening users' demands • Leading multi-disciplinary discussion 	<ul style="list-style-type: none"> • Expansion of specialty • Establishment of relationship network • Opportunity for self-actualization
NGO/NPO and public sectors	<ul style="list-style-type: none"> • Introducing the current status of issues • Guiding the direction of innovation • Delivering the results 	<ul style="list-style-type: none"> • Injection of innovation and transformation energy • Establishment of relationship networks
Private sectors	<ul style="list-style-type: none"> • Providing human resources • Supporting funds 	<ul style="list-style-type: none"> • Training of human resources • Injection of innovation energy • Improving resource synergy
Owners of Co-Creation Mechanism	<ul style="list-style-type: none"> • Producers • Coordinators 	<ul style="list-style-type: none"> • Sustainable business model • Co-creation effectiveness • Team and individual growth

Critics of the Designers role as Agent of Community

According to Bason, (2013) design-methods have been applied in many kinds of collaborations in Denmark. But Bason sees a series of challenges, which are connected to using design-led innovation in the public sector: The first is, how to ensure the new design-led approach to actually find its "authority" within the complex nature of the many participants, stakeholders, users and end users. The second is about building and assessing capacity for using design-led innovation in the public sector. Design-led innovation has to become "internalized" to have an effect and cannot solely consist of external consultants (experts). Bason points the design-schools have to address the need and help the students to become agents of the communities. The third challenge is how to open up the bureau-crazy to co-production. As the public sector takes a more collaborative approach through design-led innovation it forces the public sector to work inclusive and multidisciplinary, across sectors and the political system. But dealing with many and different stakeholders can be an overwhelming task for anyone – also a designer. The underlying wish to act "with" rather than "for" the end users and citizens is challenging in SI.

Norman, (2010) is very explicit in his critics on the role of the designer in the new design-domains. He stresses several issues which needs to be altered at the curriculums of the Design Educations. According to Norman design-students are often puzzled by the fact that their solutions are seldomly implemented, and if they are, they often fail. This, he claims, derives from the design-schools where students are insufficiently taught. He writes: *"It is rare for design education to have course requirements in science, mathematics, technology, or the social sciences. As a result the skills of the designer are not well suited for modern times."*

To understand and interact with complex social or political issues the students also lacks requisite understanding and knowledge about technology, personal biases, basic scientific research and validation skills, behavioral sciences or academic research. Norman underlines how hard it is to find a valid testing method at the design-schools where designers often provide limited testing of ideas and concepts among their fellow students and only rarely

uses social or behavioral “blind-testing”. Instead Designers are practitioners who try to apply rather than extend knowledge. Scientists, on the contrary, are interested in truth. Scientists keep experimenting, trying to validate their insights between several theories. Designers often use a “naïve psychology approach” in which they confuse the way they would prefer people to behave with reality. Designers are often unaware of the vast experimental and theoretical literature connected to the issues they work with and on top of that not aware of how to use statistical variability in their own designs, Norman (2010) claims. But how should the designers know how to deal with these issues, Norman asks. They are often taught by traditional designers who have no experience within the new design-domains. “*The uninformed are training the uninformed*”, he claims.

According to Norman, the design-schools need to adapt new disciplines to build skills and knowledge about scientific research, control and validation process, technology, social science, organization and HR. The design-schools have to move away from being schools of architecture and art and into the fields of science and engineering, creating new people who can work across disciplines empowering the quality venue for the efforts of the practice of designers.

Empirical setting:

The DFC course at VIA Design has a collaboration with the Center for Assisted Living Technology (CAT) under the City of Aarhus. The Center for Assisted Living Technology hosts the CareWare, and Teknologi i Praksis, (TiP) a social-economic business. The purpose of our collaboration with CAT is to develop new services, designs and solutions as part of the DFC course. Moreover, the collaboration aims to increase students’ understanding of how to use their professional and academic skills in a new social context and co-create solutions with users of welfare innovation. The co-design-facility for the students was Godsbanen, an entrepreneurial site for NGO’s, designers and start-ups in Aarhus.

To the students the possibility to see welfare innovation at TiP’s showroom increases the understanding of the great potential of this area, providing students to understand how projects are designed, the technology used and products applied. The products exhibited include smart textiles, fold-up scooters, geriatric aids in wood, furniture and new wheelchair concepts. In addition the students were introduced to other start-ups, social entrepreneurs or NGO’s working with SI.

Table 3 gives an overview of the participating partners and their roles, as defined by Yang & Sung (2016).

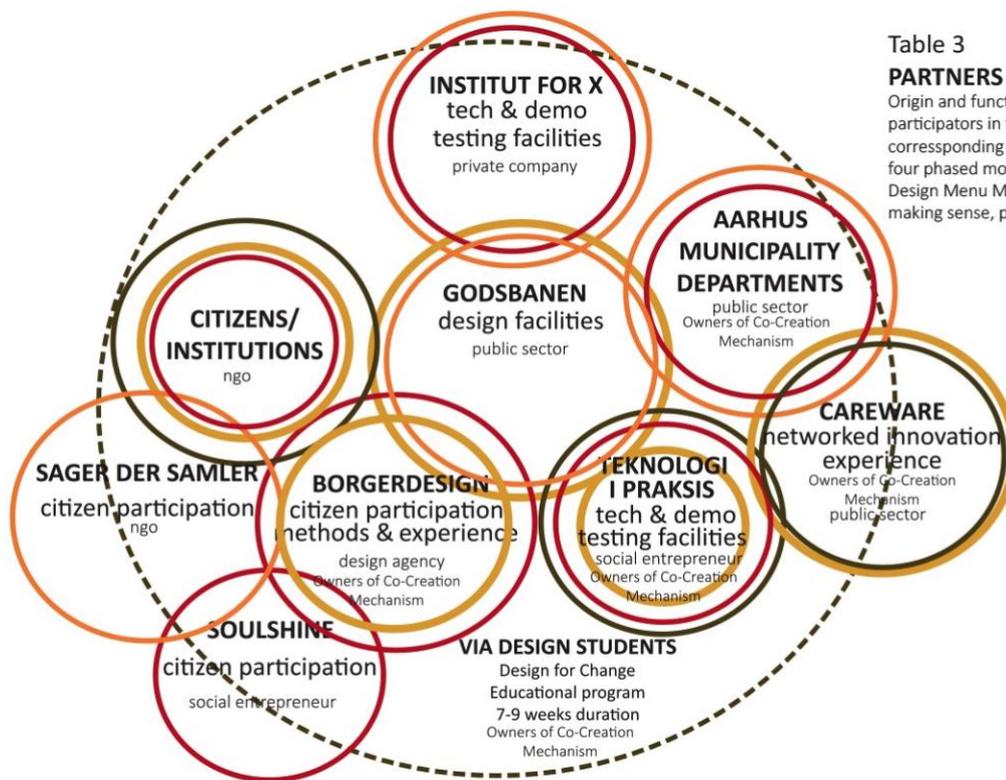


Table 3
PARTNERS AND ROLES IN DFC
 Origin and function of the different participants in the design process corresponding with Lucy Kimbell's four-phased model from the Social Design Menu Methods: exploring, making sense, proposing and iterating.

Methodology

The study was performed to discover if and how VIA Design and the collaborators in our Design for Change (DFC) course could apply SD for SI methods and how the value-creation could improve in order to enhance the collaboration and innovations made. This was done over a four-year action research study of four DFC courses at the length of between 7 and 9 weeks, from 2014 – 2018. Action research shortens the gap of practice and theory (Elliott, 1991) and by adding participatory to action research, this implies the researcher and author of this paper being part of the process from start to end. (Mills, 2000) The study is based on an in-depth case study of collected data using a number of qualitative and ethnographic methods to support the research objective and consisted of three types of data: transcripts from qualitative semi-structured interviews, observation notes, and documents and various objects from the course.

See table 4 for an overview of participants, themes, number of innovations and interviews made.

Time & duration	Design for Change '14 8 weeks, Sept. - Nov. 2014	Design for Change '15 7 weeks, Sept. - Nov. 2015	Design for Change '16 9 weeks, Sept. - Nov. 2016	Design for Change '17 7 weeks, Sept. - Nov. 2017
Category / challenge	Arthritis as a motion barrier	Elderly and Fall Incidents at home	Social Exclusion and Isolation among young immigrants	Sclerosis as a social obstacle
Number of Designers	17	21	25	22
NGO & Public Sector participants	6	7	5	12
Private company participating	4	7	1	7
Interviews	8	11	8	10
Sustainable innovations	1	4	2	3

Table 4. Data collection showing number of designers, NGO's, Public Sector, Private Companies participating as well as number of interviews and sustainable innovations between the participatory action research over the years 2014-2017.

The design-methods used in the course were "The Social Design Menu Methods", (SDMM)(Julier & Kimbell, 2012). SDMM differs from other design-tools as it combines business-, management-, social sciences- and design approaches in one. It has a focus on iteration and testing in the field. It reflects on the fact that a toolkit can't change anything without understanding people, habits, values and social conditions. The SDMM brings a short introductory debate about what a design-led approach means, some 11 methods and canvas-templates for adaption, all containing an easy to understand introduction of how to use the methods in four different modes of activity.

The overall structure of the course contained seven phases; **A:** Bringing the students out of the design-school and into a new design-setting; Godsbanen. Introduction and presentation of the creative communities, workshops, facilities, and Start-Ups of the setting. **B:** Theoretical phase, (still on site); introduction to SI and the SDMM tools, **C:** Introduction to the collaborating partners and their challenges with an already chosen theme; visits at their "home-bases", users, potential co-designers and employees. **D:** Exploration and in-depth anthropological and ethnographical research phase, visiting the involved users, associations, corporations trying to identify the challenges. **E:** Design and Iteration phase, encompassing prototyping, testing and iterating, **F:** Test-phase – visiting users, inviting to pre-launches and demos and **F:** Final Presentation of concepts and ideas with all external collaborating partners at Godsbanen or the participating partners premises.

The designer as Agent of Community in practice

The SDMM introduces four modes which the students can apply when developing a concept or a service: Exploring, 2. Making sense, 3. Proposing and 4. Iterating. These modes work as guides rather than restrictive instructions and are free for the students to adapt their own approaches within these four modes. The students in the DFC course are led to understand three core elements of "the social world": **1. People.** "Often somehow ignored in designing services or represented by people who speak for or interpret others". **2. Things.** "Material and digital things and the living habitats in which they encounter one another (touchpoints and boundary objects)". **3. Organisations.** "Teams, committees, statutory bodies, voluntary or community groups, small or medium-sized businesses, global corporations, virtual organisations..." (Julier & Kimbell, 2012)

After this introduction the students are introduced to the seven habits of social designing: "1. Tell stories and make maps 2. Work at human scales and connect across networks of people and things 3. Look at both the detail and the big picture 4. Make things to explore, test and learn 5. Imagine scenarios of use, and provoke and inspire alternatives 6. Make the familiar unfamiliar and the unfamiliar familiar 7. Create designs that are based on the ways people actually do things, rather than focussing on what people say they do, or what other people think they do." (Ibid)

Table 4, is an illustration of how the students worked during the weeks, using the 4 phases; exploring, making sense, proposing and iterating.

Table 5: Aligned scheme of activities during the Design for Change course using The Social Design Methods Menu, (Lucy Kimbell and JoeJulier, 2013). This work is licensed under a Creative Commons Attribution 3.0 License. Source:www.lucykimbell.com/stuff/Fieldstudio_SocialDesignMethodsMenu.pdf

■ exploring ■ making sense ■ proposing ■ iterating

Design for Change Course, action and methods overview

<p>Week one: EXPLORING Action: The students try to identify anomalies by visiting users or communities and organisations with knowledge about the current theme. Active collaborators are BorgerDesign, CareWare and Teknologi i Praksis</p>	<p>Expected outcome The students become aware of the practical and personal dimension of the users and the encounter provides insight on what works and what could be better as co-designing starts, though it's hard to make reliable appointments</p>
<p>Week two: MAKING SENSE Methods: The students often choose to use the Drivers of Change and Problem Definition methods in trying to make sense of their first field-research and build their first problem definition, on site.</p>	<p>First challenge in outcome expectations It takes time and is often difficult for the students to explain the big canvas, on site. But the canvas' are useful as documentation of common insights. The challenge is concrete - the students have to leave the users physical area to go back to the design studio and work on the problemdefinition</p>
<p>Week Three: PROPOSING & ITERATING Action: Working in the design studio with (Re)defining the proposition and a Outcomes Matrix Canvas for specific groups or stakeholders. This is also done at "Godsbanen" or the designschool.</p>	<p>Second challenge in the outcome expectations The students try to clarify what a service will offer participants and how it could lead to outcomes you want to work towards, which you may not be yet able to define or assess without the end-users or stakeholders.</p>
<p>Week four & five: ITERATING & PROPOSING Action: The students often stays in the studio iterating and reframing the service ecology, using touchpoint definitions and descriptions of possible new touchpoints or drivers of change. Different stakeholders are often invited to a halfway dissemination of the ideas and prototypes.</p>	<p>Third challenge in the outcome expectations The students see opportunities to reconfigure resources in the service ecology and/or get feedback or ideas from those of the stakeholders who can participate in a halfway presentation. The students are now often away from the actual psycal and personal environment of the end-user.</p>
<p>Week 6, 7 & 8: PROPOSING & ITERATING Action: The students create prototypes and blueprints for a future version of the service and prepares prototypes for final presentation. Reflections on how frustrating it is to deliver unsatisfying concepts. A few students continue working with the end-users in real-time labs on site.</p>	<p>Fourth challenge in the outcome expectations Students are able to have a collective conversation about how some of these proposals can or cannot change the lives of the participants. But most students stays in the designstudio due to the lack of time and complexity of intervening with the stakeholders, users and/or other professionals.</p>
<p>Week 9: Final presentations and awards The final presentation provides a chance to become part of a start-up mentoring program made by Health & Rehab and CareWare. Often end-users, stakeholders and naturally BorgerDesign, CareWare and Teknologi i Praksis forms a Jury and selects three winners.</p>	<p>Outcome reflections The Social Design Menu Methods contains several "recipes" for gathering resources, engaging stakeholders, and learning from cycles of quickly prototyping ideas. But time issues and absence of "real" collaboration often leaves the first designs and ideas as real prototypes, that needs to be improved over the later collaboration in the mentoring program. The methods and the "modes" works well in a professional design context.</p>

In the interviews 70% of the students found it helpful using SDDM approach in the design process, even though it meant having to call, visit, interview, observe and interact with all the partners in the project. On the other hand observation showed some hesitance and "fear" amongst some of the students towards how to deal with the big issues and personal problems presented.

The 11 different methods and canvas' meant a lot of guidance in what method to choose, giving a variety of methods of documenting the experiences and expert-users and their personal world, using both objects, personas, skills, ethnography and the students own assumptions. The students became negotiators of value (Inns, 2007) – as they had to work directly with the persons involved. The students often had internal problems in the design-teams to deal with, regarding leadership and positions in the process as well. This could slow the process significantly and in the end corrupt the process. Often discussions were concerned with time, planning and who did what. The concern was mainly on who and how they could get the needed information the fastest way. The role as mediator of the stakeholder (Inns, 2007) depended on how well the teams were at interacting - visiting and involving other actors. This could vary a lot, dependent on each design-team.

In redesigning the course it was needed to guide the students into co-creation process' and its focus on iteration, field-studies, design-ethnography and outreaching research methods. Even so, it is still clear that some of the groups remain locked in a traditional PDCA (Plan-Do-Check-Adjust) approach to the process. This means many of the teams still may perform interviews and then returns to the design-studio and start designing. As an educator, it is impossible to know the doings of all teams, but a "push" of the students into iterations is often required. In the re-designed courses focus has been on trying to help the students manage through the flow of the unknown, whilst still keeping pace with a planned sequencing of the design process.

The students performed well as visualizers of the intangible in all the phases and years the DFC course has existed. The role as the navigator of complexity is a hard position to take for a young student. The complex issues revealed large gaps of knowledge when dealing with people suffering from sclerosis, visiting elderly homes or negotiating with a leader in the municipality on new findings and suggestions for future solutions. Many of our collaborators became the mediators of the stakeholders or coordinators of exploration – as they mentored the students. Some students suffered from not understanding the overall “holistic” or T-shaped approach to the design process, as they were stuck in the perception of the designer as designer of objects or products. But the design students definitely have a potential as “Agents of the Community” if they are taught new disciplines, methods and a holistic approach.

Findings of the article:

Some of the findings of this study points at a series of challenges when using designers in a SI process. Some of these findings are corresponding with the findings of Bason, (2013), Mulgan (2014) and Norman, (2010):

1. The challenge of Commitment. 70% of the students left the projects when they had passed their tests. In that sense it was hard to demonstrate any lasting effect of the work committed.
2. The challenges of reality, people and scientific validation. Many of the students were (deliberately) ignorant of appropriate experimental procedures, controls or scientific research methods. The designers used design-tools to examine the challenge and jumped to conclusions too fast, not examining alternatives, statistics, biased assumptions or data in a validating approach.
3. The challenge of Implementation. The students need more knowledge about ethnography, sociology, culture, economics, and organizational issues to prevent the ideas to stay on the limitation of single projects of a “What if?”
4. The challenge of Learning through interaction. Between 30 and 40% of the students were very reluctant to interact and learn from users or other experts. These students were mostly very focused on the actual design, the method or the process and not the holistic learning-process in which they participated.
5. The challenge of language and methods. The language and methods presented in the SDDM canvas’ were useful tools for the designers to demonstrate and document their progress’ or failures to each other, the educators and some of the collaborators. It gave us frames for development, but on the other hand it did become obstructing at times, when the students were using the methods with co-producers. The design language was new to some of the users or patients and this generated lots of frustration and complex situations.

As a planner of the DFC course, I consider it a challenge to make the students committed to working with the challenges they face. The biggest challenge is to set up spaces and forms of interactions making it possible for students to interact genuinely and in collaboration with the users. Experience shows that solutions are rarely being implemented after the end of the DFC course and that part of the reason for this is students’ lack of genuine participation in the process. As a result, the solutions created, were not always representative of the owners or the co-creators. (Norman, 2010)

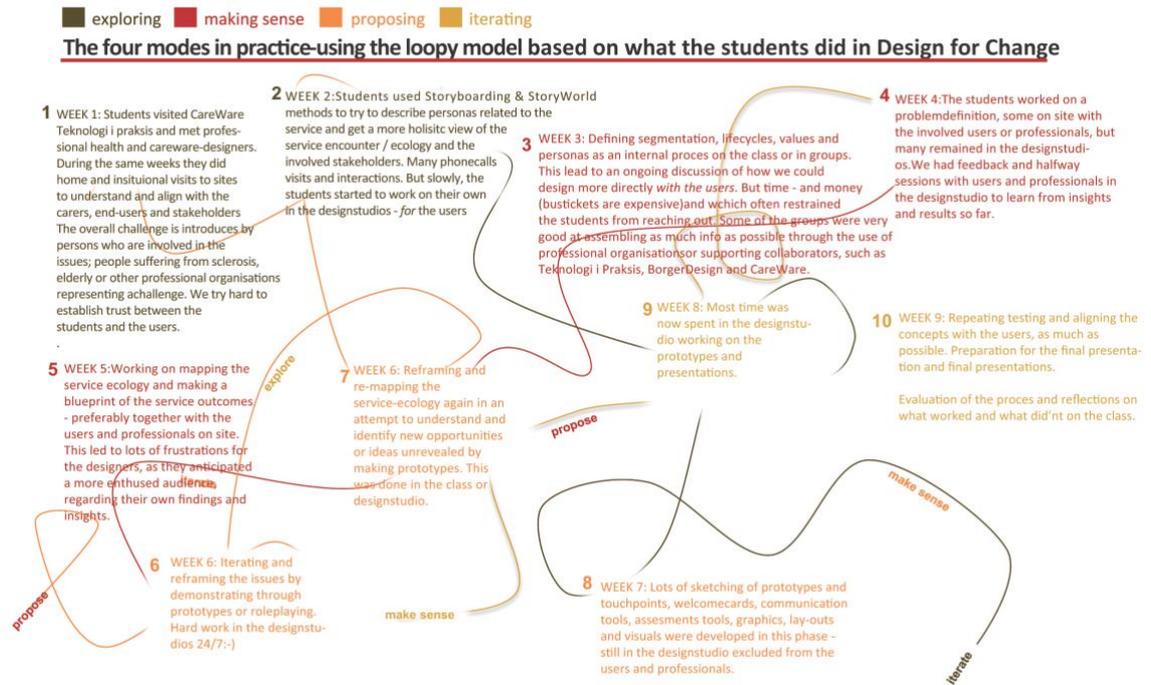


Table 6: The use of modes during the Design for Change course using The Social Design Methods Menu, (Lucy Kimbell and JoeJulier, 2013). This work is licensed under a Creative Commons Attribution 3.0 License. Source:www.lucykimbell.com/stuff/Fieldstudio_SocialDesignMethodsMenu.pdf

The outcomes and service designs for social innovation

We try very hard to implement some students' designs with CAT and Teknologi i Praksis, but it requires the students have the courage and desire to follow up on the implementation of their ideas or designs. A few projects have been nominated to participate in CAT's national social innovation competitions, and three designs at the Health & Rehab trade fair for welfare design, etc. at the Bella Center (<http://health-rehab.com/>). Designs shown at the fair include "PCOnality – community for women with PCO, (www.pconality.com), "Daily Balance" and "Goldy"; two products that aim to prevent falling and where senior citizens earn "social points" and wear "fall belts" in their homes.

Recommendations and conclusion

If the design students are to become "Agents of the Community" we need to introduce and teach other disciplines and methods in the future. Norman (2010) puts it this way; *"Today's designers are poorly trained to meet the todays demands: We need a new form of design education, one with more rigor, more science, and more attention to the social and behavioral sciences, to modern technology and to business. But we cannot copy the existing courses from those disciplines: we need to establish new ones that are appropriate to the unique requirements of the applied requirements of design."* (Norman, 2010)

Here are some suggestions and recommendations:

A: Teach service design "thinking" and motivational psychology.

The first step could be to try to alter the immanent perceptions of anything through working with the students in design courses with a focus on motivational psychology, thus mapping the journey of the collaborators in a service blueprint together. (Bisset, p. 300, in Stickdorn et al., 2011) By doing so, the students, as well as the other participators could try to define what motivates a community to innovation and get a grasp of the importance of a human-centered, collaborative, iterative, sequential, real and holistic approach to SD. (Stickdorn et al., 2018) In other words, we need to ask tough questions about "the why" – our fundamental motivators for design interventions and the stakeholders involved. (Bisset, in Stickdorn et al., 2011) To become an Agent of community, its not about tools but getting

motivated for changing reality. By working with the motivational psychology the durability of an innovation has a larger chance of improving. Yang & Sung (2016) also provides a frame for setting the motivators and describes how these influences the process, as well as they recommend keeping the track of the process, before, under and after the intervention. This map could also work as a overall “journey map” for the design process for both students, co-creators and educators during the process.(Stickdorn, Hormess, Lawrence, Schneider (Ed.)2018)

B: Teach (social) Science at the Design Schools.

Design students obviously lack systemic/political and (social) scientific insight to be part of SI processes. The DFC course revealed gaps in students’ knowledge about social conditions, management, economics, etc. This challenge has been identified by several researchers; Bason (2015), Chick (2010), Mulgan (2014) and Norman (2010). Giving “authority” (Bason, 2013) to the designer in a SI process requires an understanding of the social frame / and thus the whole concept of the SD for SI holistic logics. But the designers also lack fundamental knowledge on how to demonstrate scientific validation for their value-propositions.

C: Teach the roles of the T-shaped designer. Working with the students on what T-shaped means can provide a respect for other professions. Designers can’t work alone but should be part of interdisciplinary constellations supporting a high professional innovation standard. This is pointed by Bason (2015), Mulgan (2014) and Chick (2010).

D: Teach the partners.

The co-creation partners require tools to understand design language and methods. Therefore, there is a need for introductory processes with the partners illustrating the purpose and taxonomies of the teaching methods/didactics. The study showed a majority of our collaborating partners had a fixation of “design and designers” as “producers of things, objects or aestetichs”. There is a need of providing an understanding of SD as series of actions and design as a “concern” or “dedication” shifting focus to relational or immaterial components orchestrated in a co-creation process with many Stakeholders contributions. (Bason, 2013, Troncon, in Stickdorn et al., 2011)

E: Establish lasting and real “spaces” and “labs” for the communities and the designers to interact in. Emilson, (in Ehn et al. p. 19 (2014) describes the emphasis on establishing long-term relations and using prototypes as a way to explore anomalies and possibilities. He describes three methodological frames for the design led collaboration. The first is to set up collaborative design processes where the diversity of the stakeholders can work side by side and thus become supplementary to each other. The second is to build long-term relations and trust within the participating stakeholders. The third is to demonstrate fast prototyping to explore possibilities in real-life contexts, still showing anomalies and dilemmas. (Emilson, in Ehn et al. p. 20, 2014)

F: Teach the students technology

The designers need to be introduced to the wide world of IOT and technological wonders of this world. Integrated technology into designs requires basic knowledges and practice. (Norman, 2010)

Some of the other challenges are the obvious ones; time and money.

When setting up the framework or trying to find the useful tools for creating design led SI it is urgent to make the methods do-able and understandable in real organizations where resources are often low, time is stretched, attention likely to be limited and management often unwilling or reluctant to try out new unknown or insecure concepts even if they are met with the most omnipotent Agents of Community. So, be prepared.

References

- Biggs, R., F. R. Westley, and S. R. Carpenter. 2010. *Navigating the back loop: fostering social innovation and transformation in ecosystem management*. Ecology and Society 15(2): 9. [online] URL: <http://www.ecologyandsociety.org/vol15/iss2/art9/>
- Bason, Christian (2010) *Leading Public Sector Innovation – Co-creating for a better society*, University of Bristol
- Bason, Christian (2015) *Design for Policy*, Gower, Design for Social Responsibility Series
- Burns, Colin, Hilary Cottam, Chris Vanstone, and Jennie Winhall. 2006. *Transformation Design* (<http://www.designcouncil.info/mt/RED/transformationdesign/>)
- Brown, L. D. (2015). *Bridge-building for social transformation*. Stanford Social Innovation Review, 13(1), 34-39.
- Brown, Tim, and Jocelyn Wyatt. (2010). *Design Thinking for Social Innovation* (http://www.ssireview.org/articles/entry/design_thinking_for_social_innovation/).
- Brown, T., & Wyatt, J. (2010). *Design thinking for social innovation*. Stanford Social Innovation Review, 8(1), 30-35.
- Chick, A. (2011) *Design for Social Innovation: emerging principles and approaches*, (2012), Iridescent, volume II
- Cottham, H & Leadbeater, C. (2004). *Health. Co-creating Services*. Design Council – RED unit, London, UK.
- Design Council. 2012a. *Public Services by Design* (<http://www.designcouncil.org.uk/our-work/leadership/>)
- Design Council. 2012b. *Co-designing Ways to Improve How We Live, Work AND Play* (<http://www.designcouncil.org.uk/ourwork/challenges/Communities/Dott-Cornwall1/>)
- DESIS. 2012. DESIS Network (<http://www.desis-network.org>)
- Elliott, J. (1991). *Action research for educational change*. Milton Keynes, UK: Open University Press.
- Emilsson, Pelle et al., *Making Futures* ed. By Pelle Ehn, MIT Press, (2014, p. 25)
- Emilsson, A., Seravalli A. and Hillgren, P.A., 2011; *Dealing with dilemmas: Participatory approaches in Design for Social Innovation*, Swedish Design Research Journal 1, 2011
- Hillgren, Per-Anders, Anna Seravalli, and Anders Emilsson. 2011. *Prototyping and Infrastructuring in Design for Social Innovation*. CoDesign 7 (3–4): 169–183.
- Howaldt, Jürgen, and Michael Schwarz. M. 2010. “*Social Innovation: Concepts, Research Fields AND International Trends*”, (http://www.sfs-dortmund.de/odb/Repository/Publication/Doc%5C1289%5CIMO_Trendstudie_Howaldt_Schwarz_englische_Version.pdf)
- Jégou, François, and Ezio Manzini, eds. 2008. *Collaborative Services: Social Innovation and Design for Sustainability*. POLI.design.
- Kimbell, Lucy. 2011. *Why I'm Joining the Young Foundation as Head of Social Design*

<http://www.youngfoundation.org/blog/social-innovation/why-im-joining-young-foundation-head-social-design>).

Leadbeater, C. (2008). *We-Think*, Profile Books, London.

Leadbeater, Charles. 2009. *The Art of With* (<http://www.charlesleadbeater.net>)

Maffei, S; Mager, B. and Sangiorgi, D. (2005), *Innovation through service design. From research and theory to a network of practise. A users' driven perspective*. Joining Forces. 22-24 September 2005. University of Art and Design Helsinki.

Mager, B. (2009): *Introduction to Service Design. Digital communications tool*. Culminatum Innovation 2009

Manzini, Ezio, Jégou, François, 2008, *Collaborative services, Social innovation and design for sustainability*, Edizioni POLI.design, First Edition: November 2008, supported by EU: EMUDE _ Emerging User Demands for Sustainable Solutions

Manzini. E. (2008) 'Collaborative Organisations and Enabling Solutions. Social Innovation and Design for Sustainability', in Jegou, F. and Manzini, E. (eds)

Manzini, Ezio; (2011). *Design schools as agents of (sustainable) change: A Design Labs Network for an Open Design Program*. 9–16, CUMULUS // DRS SIG on Design Pedagogy 1st International Symposium for Design Education Scientists La Bourse du Commerce, Paris 18–19 May 2011, Corresponding author: Industrial Design, Arts, Communication and Fashion, Politecnico di Milano | DESIS-Design for Social Innovation for Sustainability

Manzini Ezio; *Design When Everybody Designs, an introduction to Design for Social Innovation*, MIT Press 2016

Mulgan, G., *Design in Public and Social Innovation*, NESTA 2014

Meroni, A & Sangiorgi, 2011, *Design for Services*, Gower Publishing Limited, Farnham

Mills, G. (2000). *Action research a guide for the teacher researcher*. Upper Saddle River, NJ: Prentice Hall.

Mulgan, Geoff. 2012b. *Better by Design* (<http://www.nesta.org.uk>).

Murray, Robin, Julie Caulier-Grice, and Geoff Mulgan. 2010. *The Open Book of Social Innovation*. Young Foundation and Nesta.

Nisula, Janne-Valtteri: Laurea University, Espoo, Finland, "Searching for Definitions for Service Design - What do we mean with Service Design?", ServDes.2012 Conference Proceedings Co-Creating Service; The 3rd Service Design and Service Innovation Conference; 8-10 Feb.; Espoo; Finland, Linköping University Electronic Press, Linköping Universitet, 2012.

Norman, Donald, 2010, "Why Design Education Must Change", Core77, 2010

Prahalad, C. K. and Ramaswamy, V. (2004), *Co-creation experiences: The next practice in value creation*. Journal of interactive marketing. Volume 18. Number 3, 2004.

Sanders, Elizabeth B.-N. & Stappers, Pieter Jan: *Co-creation and the new landscapes of design, CoDesign*, Taylor & Francis, 2008

Stickdorn, Marc & Schneider, Jakob (Ed.), *This is service design thinking: Basics, Tools, Cases*, BIS

Publishers, Amsterdam, 2011

Stickdorn, Marc, Markus Hormess, Adam Lawrence, Jakob Schneider (Ed.); *This Is Service Design Doing, Applying Service Design Thinking in the Real World*, O'Reily Media 2018

Tischer, U., Stetting P., Ed., (2016) *Changing Paradigms: Designing for a Sustainable Future*, Cumulus Think Tank, Aalto University, Publication No 1 of the Think Tank Series from the Cumulus International Association of Universities and Colleges of Art, Design and Media.

Wetter-Edman, K. (2010a). *Comparing design thinking with service dominant logic*. Design Research Journal(2), 39-45. Wetter-Edman, K. (2010b). The concept of value in design practice : An interview study. In S. Clatworthy, J.-V. Nisula & S. Holmlid (Eds.), Proceedings of 2nd Service Design and Service Innovation conference, ServDes.2010, ExChanging Knowledge. Linköping, Sweden, December, 1-3 (pp. 87-100). Linköping, Sweden: Linköping University Electronic Press.

Wetter-Edman, K., Sangiorgi, D., Edvardsson, B., Holmlid, S., Grönroos, C., & Mattelmäki, T. (2014). *Design for value co creation: Exploring the synergies between design for service and service logic*. Manuscript submitted for publication. (Found on Researchgate, March 2018)

Yang, C. F., & Sung, T. J. (2016). *Service design for social innovation through participatory action research*. International Journal of Design, 10(1), 21-36.

Links:

DFC Blog: <https://entrepreneurshipvia.wordpress.com/2017/09/15/design-for-change/>
<http://www.carewareweb.dk/da/CareWare-2018.aspx>