Teaching service design in an interdisciplinary educational context

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Abstract

Designing services include participation of users and stakeholders at different levels varying from minimum participation to co-creating with these actors to form a holistic perspective. Values are created collaboratively with people, but the intensity, the extent, the timing of involving people and their roles vary widely. Since such a context has a diverse nature in terms of including people with different backgrounds, mind-sets, and communication approaches, it is important to find a common platform for communicating with the design ideas and visualizing those design ideas in a group of students from different disciplines. Opening up the design process for others and finding a common platform for teams to communicate and prototype services especially in the early design process and might contribute to creating better services with higher qualities. Co-creation is in the focus of this paper as an approach in education because it allows people to communicate and cooperate among each other regardless of their backgrounds. Based on this perspective, the aim of this paper is to explore how to create initial design ideas in a group of students from different disciplines by getting all the students participate actively in the early design process. This exploration was made by conducting a series of workshops with students from industrial design undergraduate program as well as with students at different levels from entrepreneurship, business, psychology and engineering undergraduate programs. Depending on this exploration, enactment and mock-ups are found to be most effective tools during the early design process to fuel participation and creativity. Applying co-creation as an approach have benefits in terms of playing a role as a background for improving and increasing the creativity, thinking out-of-the-box and developing innovative solutions in the future.

Keywords: Service design, industrial design, education, non-design students, interdisciplinary context

1. Introduction

As we move from an industrial to a post-industrial society, Cross (1981) portrays a potential crisis in design and a completely new paradigm of design emphasizing that 'such a paradigm would suggest a reorientation of the values, beliefs, attitudes of designers and the goals of design (i.e. the nature of design products and the methods for achieving these goals)'. (Cross, 1981, p.5)

The very beginning of 21st century witnessed the emergence of a society and economy based on experiences, knowledge and services (Manzini, 2011). Especially the knowledge age has showed us new business models where stakeholders might have multiple models and create consume value by supplying a background or basic guidance where people can contribute in many different flexible ways (Brand&Rocchi, 2011). It is not only products that are designed for users anymore, but recently it is more of a series of interactions and experiences as part of bigger complex systems that are designed for people.

Services are complex; they contain people, artefacts, processes, performances and environments created and developed by different groups of actors involved in the design and development process (Segelström & Holmlid, 2009; Diana, Pacenti & Tassi, 2009). Together with this expansion of focus and diversity of actors involved even in the early design process, designers began to build up frameworks, backgrounds for different platforms in designing services; designers serve as catalysts and facilitators.

Values are created collaboratively with people, but the intensity, the extent, the timing of involving people and their roles vary widely. One of the key characteristics of designing together is participation, co-creation and democracy (Ehn, 2008; Fallan, 2012; Sanders & Stappers, 2008). Co-creation is in the focus of this paper as an approach for value creation. Designing services include participation of users and stakeholders at different levels varying from minimum participation to co-creating with these actors (Sanders & Stappers, 2014). Since such a context has a diverse nature in terms of including people with different backgrounds, mind-sets, and communication approaches, it is important to find a common platform for communicating with the design ideas and visualizing those design ideas while co-creating. Co-creation is a critical approach in service design practice because it allows people to communicate and cooperate among each other regardless of their backgrounds. Applying co-creation as an approach might have benefits that would go beyond the actual service design project for client organisations and might play a role as a background for improving and increasing the creativity, thinking out-of-the-box and developing innovative solutions in the future.

Sanders and Stappers (2008) refer co-creation to "any sort of act of collective creativity", "to a very broad term with applications ranging from the physical to the metaphysical and

from material to the spiritual…" (Sanders & Stappers, 2008, p. 2). In a recent European Commission report on 'Design for Innovation', from management perspective, co-creation is seen about joint creation of value by companies and its customers and crucial to innovation (Dervojeda et al, 2014).

I would use co-creation as the collaborative and collective creative work by users and stakeholders because the findings I explain here are not necessarily applied across the whole design process. It is rather applied in the very early design process that is also called the fuzzy front end where everything is blurry and ideas float around among people (Clatworthy, 2011). This is a period where people who are not trained in design work together with design and development team. It is where strategic decisions and the initial concepts of the design might occur as well. The fuzzy front end has become in focus because of its potential to be an important factor in innovation (Allam 2006; Clatworthy, 2011). The fuzzy front end is where the designer plays a catalyser role and tries to show what the organisation could benefit. The fuzzy front end is seen as a period where design might have a strategic role for organisations (Clatworthy, 2011; Junginger & Sangiorgi, 2009).
Finding a common platform for teams to communicate and prototype services especially in the early design process and opening up the design process for others might contribute to creating better services with higher qualities(Holmlid & Evenson, 2007; Sanders, 2013). Personaes, scenarios, blueprints, customer journey maps and role-playing are among the tools and methods to communicate with important characteristics in services (Holmlid & Evenson, 2007; Shostack 1984; Diana, Pacenti & Tassi, 2009). But such tools and methods require background knowledge and experience about how to think about and use these tools and methods. Based on this perspective, the aim of this paper is to explore how to communicate with the design ideas among the team members by using different types of visualizations. This exploration was made by conducting a series of workshops with students from industrial design undergraduate program as well as with students at different levels from entrepreneurship, business, psychology and engineering undergraduate programs.

2. Visualizations as a way to communicate in designing services

In a collaborative context where designers, users, stakeholders and other actors get together and work on co-creating initial design ideas in the early design process, it even becomes critical to find a common language within such a diverse group of people. Visualizations are important for service design practice and it might become a challenge when the service concept is co-created among all the stakeholders in the early stages (Segelström & Holmlid,

2009). Making services tangible and visible through telling, making and enacting are the ways to co-create services (Figure 1) (Brandt, Binder & Sanders, 2013; Sanders, 2013; Sanders & Stappers, 2014). Telling, making and enacting circular trilogy is the backbone of the workshops of which some parts are explained in this paper. In this study, visualizations are taken in a wider perspective including sketches, service blueprints, customer journey maps, personaes, prototypes, role-plays, walk-throughs and such.
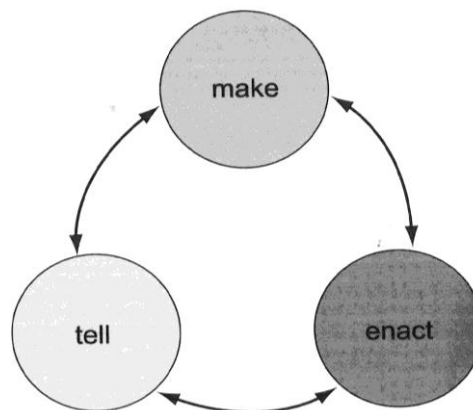

Fig. 1 The telling-making-enacting circular trilogy that represents how actions are connected and are iterative on both directions within the design process (Brandt, Binder &Sanders, 2013, p. 150)

Prototyping is seen as a basic communicative tool; it is widely accepted as a tool for learning and communicating especially when designers collaborate within their group or with other stakeholders and other teams, colleagues in the service development process (Johansson & Arvola, 2007; Blomkvist & Holmlid, 2010; Blomkvist & Holmlid, 2011). In this paper, collaborating with other teams members in the fuzzy front end of the design process with different expertise is tried to be modelled in an undergraduate course. The reason for focusing on the fuzzy frond end is that collaboration is taken in the form of co-creation in this study. And co-creation is rather applied in the very early design process that is also called the fuzzy front end where everything is blurry and ideas float around among people (Clatworthy, 2011). This is a period where people who are not trained in design work together with design and development team. It is where strategic decisions and the initial concepts of the design might occur as well. The fuzzy front end has become in focus because of its potential to be an important factor in innovation (Allam 2006; Clatworthy, 2011).

3. Workshops as a way to explore collective creativity

In 2015 Spring, a series of workshops were conducted in an undergraduate course about designing services. The attendees were students from industrial design, entrepreneurship, business, psychology and engineering undergraduate programs. 3 workshop sessions were held respectively in the course; the first workshop was about creating an initial design concept; the latter workshop was about finding another alternative design concept about the same theme. 4 teams were set up with the students; the main restriction while setting up the teams was that there should be at least one design student in each team. Each team consisted of 4-5 students from the second year of the industrial design program, from the third and fourth year of other undergraduate programs such as entrepreneurship, business management, engineering and psychology. The main intention with these workshops was to explore how students from different educational programs work together in the early design process, what tools and methods they use while communicating with each other and with the audience.

The process during the workshops and the presentations of the teams were documented by video recordings, photos and notes. Students presented their work mostly by role-playing, mock-ups, sketches and prototypes. The process and the findings used in this paper is focused on the first workshop since the students were given very limited time and asked to create initial design ideas together and present their ideas in an effective way for the first time.
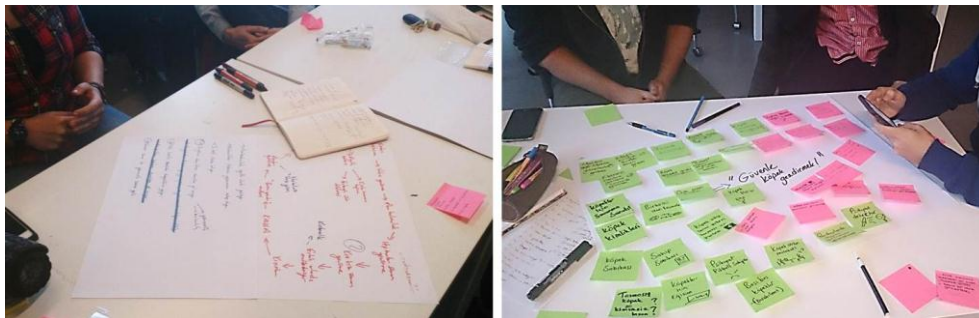

Fig. 2 The process of brainstorming, storytelling and creating insights within the teams.

The workshops consisted of 4 main phases as a process: research, creating insights, ideation and prototyping. The research and creating insights processes are taken into consideration as the telling leg of the tell-make-enact circular trilogy. In the beginning of the first workshop, the students were given quick background knowledge about the early design

process and how to create insights from their research, make interpretations from their insights-create very initial design ideas- and then make prototypes of their very initial design ideas in order to communicate both within the teams and with other teams. The focus in this first workshop was on how they could communicate with their design concepts since visualizations are essential in designing services because of the intangible nature of services. Because of the given limited time, the teams did not have time go out in the field and make research based on a relatively longer period. Instead, the students were guided to brainstorm by sharing their ideas and storytelling about how people behave, what they think and experience about the given theme within their teams. Based on this first phase, then the students worked transforming what they found earlier into insights (Figure 2). This was the process where the teams took extensive guidance from the workshop instructors since it was especially the first time for non-design students try to think within this perspective respectively. The next step was creating very initial design ideas, visualizations and prototypes to be able to communicate both within the teams and with other teams as well which constitute the making leg of the tell-make-enact circular trilogy (Figure 3). The last step in this workshop was communicating with the initial design idea that the teams created and presenting it via prototypes and role-playing that form up the enacting leg of the tell-make-enact circular trilogy.

There was too much frustration in the beginning among the students, but gradually this frustration level decreased. Working in a team based on a designerly approach got the students to understand and experience the mind-set. The students took intense guidance from the workshop instructors during the first workshop. No specific roles were given to students, but it was observed that the design students led the process within the teams even though the teams were not guided in that way.

The students were encouraged to share their ideas as open as possible. Rather than explaining every step one by one in detail in a lecture format, the students were pushed for hands-on experiencing even if they do not have background education on the design process and designerly tools and methods. The majority of the students easily and quickly experienced the early design process and without having design education background, they quickly and actively participated in whole process together with just a couple of design students. The students seemed to feel much more comfortable and engaging about enacting and making rather than creating insights. How their research, initial discussions, brainstorming sessions evolved into insights and then to early design concepts were seen much more important than the output of the workshops.

Among the reflections of the students, some of the attendees stated that they would apply the same approach they experienced in the workshops in their start-ups since especially the students from the entrepreneurship undergraduate program already have their own start-ups. On the other hand, some of the attendees wrote about their resistances on working in such a mind-set that is too far away from what they are used to do even though they stated that working in teams was a beneficial experience for them in terms of collective working.

4. Conclusion

This paper aimed to explore how communicating with the design ideas among the team members as well as other people by using different types of visualizations through co-creation. This exploration was made by conducting a series of workshops with students from (industrial) design and non-design undergraduate programs. Based on the observations, dialogues and the students' written reflections, it was found out that collective creativity created positive results such as even some of the non-design students who have their own start-ups got inspired of the approach that was taken throughout the workshops. Together with the design students in the teams, all the attendees seemed to participate comfortably since the design students took leadership positions in these designerly based

way of approach to the given themes. As seen in the literature review, the students mostly and more comfortably used enactment-roleplaying, mock-ups and prototyping in order to communicate with their design ideas both within their teams and with other teams. Even though non-design students do not have any background knowledge and skills about role-playing, prototyping and creating mock-ups, it was observed that the students practically used those tools and methods. Moreover, based on this small exploration, it is possible to assume that the role of design might expand towards facilitating the creativity of non-designers together with designers.

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