

THE BENEFITS OF GENDER EQUALITY AND DIVERSITY IN DESIGN EDUCATION

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ABSTRACT

Cultural diversity amongst master students at Institute of Design at AHO has increased, which provides a multitude of methods and practices. Since different new design disciplines, as e.g. service design [SD], are becoming new branches at many industrial design [ID] departments, there seems to grow a complex academic environment. Why do we see even more gendered choices? The context of this paper is the student cohort at two master courses, in ID and SD respectively. These two specialties could potentially give an 'intersectional' sound mix of student's background, origin, culture and gender. Still we identify some tendencies towards gender segregation especially in the two disciplines. In short, SD takes the institutional holistic approach and the ID systematically technological approach; where male students dominate ID and female students dominate SD. Is it e.g. conventions in the society, faculty or the course briefs that most likely give these kinds of "female and male" courses? For an interdisciplinary understanding of diversity, Sterling [1] gives us three categories and cultivates some of their particularities. These three "general properties" that, in concert, underpin diversity are variety, balance and disparity. At a time when most design educations tend to continuously add new design disciplines, it seems timely to ask how this, seemingly flourishing landscape, could benefit designer's properties and plurality. In order to celebrate diversity, this article therefore explores different ways to cross-pollinate and build interdisciplinary teams.

Keywords: Diversity, design process, embodied knowledge, gender equality, interdisciplinary

1 THE BALANCE OF THE GENDERS

Talking to the young graduates revealed that we in ID and SD need to work towards themes and courses that attract all genders. Even though countries in Northern Europe are known as gender equal, with equal rights and possibilities, it seems not to be the case in all creative educations. "The Art and Design Academic Registry (ADAR) figures for students in design courses in England and Wales show a consistent pattern of gendered choices. Women are under-represented in product and furniture design, and over-represented in fashion and jewellery. This discrepancy reproduces the stereotypical dualism whereby women are associated with the body and the decorative, and men with technology and the shaping of nature [2]. The author recognises how we can find these conventions in Clegg and Mayfield [2] use the dichotomy of "soft" and "hard" in descriptions of design projects, as the projects span between services in public and private sector (soft) and objects for production industry (hard).

AHO as a national institution aims for social responsible students. We nudge them to show openness to gender questions in design contexts. Autumn 2014 we gave a course called *Challenge gender roles!* Students were to design/ redesign a product or service that improves an un-preferable situation, arisen through unfair treatment of people's gender. Initially the students did not think the society was especially gender streamlined, until they conducted a market research. The awareness grew among the students and at IDE.

Despite our focus on gender questions, we need to address an upcoming segregated student situation. Spring 2017 we had a situation in fourth year master, with majority of female students in SD. The distribution was in SD 14 females -1 male. In ID there were 2 females - 8 male students that joined the course. We asked ourselves if this was a coincidence. Following autumn, we had a similar pattern with dominance of females in SD and male in ID. So, the answer seems to be that it shows a tendency. The next question was: has it become precedence in how student should make their choices? Is our course description's, briefs or partners attractive only for the gender in majority? This lack of gender

diversity made us conscious on the unwanted phenomena, and we fear it influences future student's choices. As "diversity are a factor and stimuli for innovation and productivity" [1], and as variation is a component in diversity, we will address this gender streamlining. This study does not present a solution to this problem but investigates the reason of female and male courses. Where nothing else is mentioned, it is about lack of diversity in the master level tracks, industrial- and service design.

2 DIVERSITY AND INNOVATION

The gender awareness revealed an unwanted asymmetry in distribution of students at the courses. The lack of gender plurality has some possible consequences for the design results. Sterling [1] argues that diversity and performance have a strong relationship, where lack of diversity might result in lack of innovation. Further Sterling [1] has established a common used framework describing diversity with help of three different properties; variety, balance and disparity. Variety can be explained as there is a need for different approaches within the group. As in nature, we can recognise different species among the same type of animal. Whereas disparity describes the degree of difference among different species and balance pin point how much of each species is present in the group. According to Sterling [1] variety seems to be more important, he argues that if both disparity and balance is equal, variety by itself seems to contribute to diversity. Coming back to the asymmetry in how genders are present in our two courses, can Sterling's framework help us stay aware of future consequences of lack of performance due to lack of variety?

Innovation and performance depend on additional circumstances to diversity; Norman and Verganti [3] present two categories of innovation, for products or services. "Incremental innovation: improvements within a given frame of solutions (i.e., "doing better what we already do"), and radical innovation: a change of frame (i.e., "doing what we did not do before")" [3]. They argue that radical innovations can be driven by technology changes, without any design research or formal analysis of needs. We see in our student number that male students apply for ID where technology is heavily communicated. Further Norman and Verganti [3] suggest one might have innovation by change of meaning. "Meaning-driven innovation starts from the comprehension of subtle and unspoken dynamics in socio-cultural models and results in radically new meanings and languages—often implying a change in socio-cultural regimes" [3]. The lack of gender diversity in our two tracks might additionally be caused by the fact that ID might be associated with radical innovations. Hence the link between radical innovation and technology established by Norman and Verganti. SD is referred to as socially adaptable and cultural aware and one can possibly say that SD innovates through meaning. Taking innovation into this study of gender diversity has given an additional way to look at the properties of the disciplines and how to communicate them further on.

3 COMPARING INDUSTRIAL- & SERVICE DESIGN LEARNING OUTCOMES

After establishing arguments for the importance of diversity for innovation, we can now examine whether the dichotomy put forward by Clegg and Mayfield, of "soft and hard" design, shines through the learning outcomes. In search of diversity we ideally need "soft and hard" qualities to both design tracks. While the variation in course descriptions is crucial to attract students, it has not prevented a gender segregated participation in them. Comparing these learning outcomes below, do we find appealing formulations for all genders, in the search for diversity?

3.1 Industrial Design learning outcome

In ID learning outcome, IDE states "*In general, industrial design concerns the development of new useful physical products by utilising methods, tools and mindsets that have been refined over many decades, if not centuries, of practice*" and "*Industrial design typically revolves around aesthetically strong expressions designed using methods specially developed to promote creative and useful products that are appropriate for their intended purpose*" [4].

The phrase "aesthetical strong expression" points at applied aesthetics for all senses, important for ID are the tactile sense and haptics.

"When it comes to what is arguably the biggest challenge of our time, namely climate change, we are currently working on a digitally augmented version of industrial design's core competence, using models to make future, not yet existing, alternative solutions more discussable and thinkable. With this, we hope to prepare our students by providing them with a reflective mindset and skill set that enable them to design urgently needed products, rather than products aimed at mere consumption"

[4]. “Sustainable futures” should attract all genders, but when writing “digital augmented versions... models...products” is having technological, “hard” undertones. “Often, industrial design takes a very holistic stance, suggesting how and why a certain product should be designed to work in complex environmental, social, technical or economic systems” [4]. With the actions “take a holistic stance...in complex systems”, the mind-set in ID overlaps the most with SD.

3.2 Service design learning outcome

“Service designers form and organise services to create utilisation value for their users. This involves working on how services are structured across, amongst other things, digital touch points, physical products and environments and visual communication” [4].

How SD learning goals differs from ID is especially through the projects contextualisation. This description seems to address contemporary problems. The actions as “form and organise” are common for the two disciplines. The course description lifts out the “structure of services” which is the relationship to touch points, and between touch points for the service, where in ID projects the product is the touch point. “A service design graduate should be able to balance the experiential with the functional and have an eye for detail within a holistic view of the overall experience. This demands strategic design acumen and an understanding of the consequences of front stage change on backstage infrastructure and procedure. It requires an understanding of user needs and experience whilst still being able to design for brand-relevant services offering responses to customer needs. It demands strategic, analytical and systemic thinking whilst still being able to deliver ‘delight’ in the final design solutions” [4]. Having an “eye for detail and design for delight”, is skills for service- and industrial designers, although for the latter it refers to design for all senses through physical material knowledge.

3.3 Reflections around the properties of the disciplines

Industrial- and service design, tangible- and intangible design. What differs is amongst others is scope, production technology and the practicalities of physical design where the services balance up with facilitating skills of a more social kind. “Exploration develops industrial designers’ sensibility and ability to facilitate experiences” [5]. In the article “Time to explore and make sense of complexity?” [5] the authors recognise how creativity is connected to exploration. Little of this is found in the learning outcome from ID. Do we leave out the “soft” aesthetical values?

Having commented some of the learning outcomes of ID and SD, we can now continue with comparing the two different terminologies. Within the disciplines there is professional terminology as *materials*, *experience* and *product*, just totally different outcomes of the descriptions. A *material* in ID can be metal or wood, and in SD it can be time. A *product* can be a bicycle or a service experience. The delivery of the *experiences* to the users is in ID the physical product itself with the immaterial aspects alongside. The experience of a service can be expressed as a reaction to a service delivers tone of voice, or the journey through a service. Both disciplines have prevalence over time. Involving different actors is common, it depends on the actual project to what degree. And finally, you don’t normally acquire a service product, but we still own most physical products. So, how do these descriptions and characteristics attract different genders?

Spring 2018 we conducted an interview series with young graduates. Expert interviews with alumni from ID and later from SD, where we got some important ideas. Monitoring the gender diversity, gave at the same time some results that surprises the designers we interviewed.

4 ALUMNI INTERVIEWS

At IDE we believe that diversity is key to broaden our perspectives, to help us increase our acceptance, diminish discrimination and have richer personal and professional learning experiences.

The kinds of questions were: During your two last years what comes to your mind when we ask if you experienced diversity. We asked about fellow students: both cultural and previous education, and gender diversity of their groups. We also asked about diversity in the design deliverables and design expressions.

4.1 Industrial Design alumni

When our first expert user was asked, a male, he confirmed that when he applied was interested in learning to design objects. The outcome he wanted, was to work with wood in the workshop, and to experiment with machines and material. Although he chooses to go abroad to take up the material

design later, he felt it should not be necessary. In the last three semesters in his two master years, he chooses one ID course, and was the following semesters satisfied with the possibility to describe his own learning goals as a self-programmer.

He talks about his progression through the whole master and the last project: *“It’s actually quite funny, it was in a first-year form task, I decided my direction. I decided to bend wood and started my first exploration. Organic form in curved wood expressing energy. The sculptural form inspired me to work with craft, but second year was more service design and fewer workshops. If I knew what I do know now, I would have used more time to get better at form.*

During a study trip to Germany I found Hochschule für Gestaltung (HfG) Offenbach, Institute for Material Design. Back home again one year with industrial design, led to a connection with a possible tutor for a self-programmed course.

By coincidence I discovered the ceramists called Ment, the partner to be. The first meeting with Ment gave an entrance to cooperation. Joints, was a challenge we found interesting to examine. We decided to study different ways of joining wood and porcelain. I started experimenting to get away from the first ideas I had. The shift from massive wood to wood balusters came early. A combination of bend wood, material agency and possible function, gave new ideas. I had to deliver results for the school while the exploration was not seen as an end result. Concepts for food serving came out of the co design workshop with Ment.

The main reason to go into abstraction and wood bending is self-centred. To work directly into material gave experience, the delivery was not of importance for me. What I value most from this final semester is experience with wood and achieved embodied knowledge.”

As the dialog continues it is obvious that this is a mainly an introvert process. A relaxed attitude towards the results are striking, his unique design is though achieved through exploration.



Figure 1. Exploration by a graduate from Industrial Design. Erlend Furset Söderlund

4.2 Service Design alumni

Having spoken to the representative for ID, it is quite the opposite kind of comments we get from our SD representative. She insists our language at the IDE, visual and verbal is of fundamental significance for the “image” of the disciplines. Especially the visual samples we use at the institute, in our yearbook, in social media and at our web page. She presents her thoughts in general terms: *“I experienced diversity in the student group, students from many countries and perspectives on the master’s level. And each individual finding themselves within design. Students coming from other countries, representing different ways of practicing design.”* Here she remembers students introducing discursive design and describes what she further thinks is lacking, a focus on and aesthetics at IDE AHO.

Gender diversity is great! When I think of it... a lot of typical industrial design drawings are very "masculine", when we see drawings of cars and objects like Koos Eissen’s, it seems like this is the right way to draw. This has a very un-personal, masculine style which I could never relate to and felt distanced to. I think a greater variety of expression would encourage more girls to become hard core industrial designers.”

“My most useful service design methods are the ones for creating and communicating overviews of a problem or issue. That facilitates discussions or point to conclusions to the next step. For example, a positioning map, or a customer journey, pain point journey, scenario...”

“It is very interesting why more women choose service design and guys go for product. When I think of product design, the first I think of is very masculine drawings that are not relatable to me. Also, Solid works, Catia etc. feels very technical and not relatable.

The education is a part of you, it is closely interlinked with your identity. If I were to choose hard core product design, people around me might be surprised because I’m a girl and maybe say that I’m tough (which implies that it is a bold choice and abnormal) these little reactions shape us.

I choose service design because I like to work more theoretical and love illustration and visual communication. I love to communicate complexity and work with meaningful, social issues. “To work with meaningful social issues” already sounds very female and is an example of exactly what we have to address, it has very female connotations. I think the way we talk about it and show it is key to recruiting for diversity.”

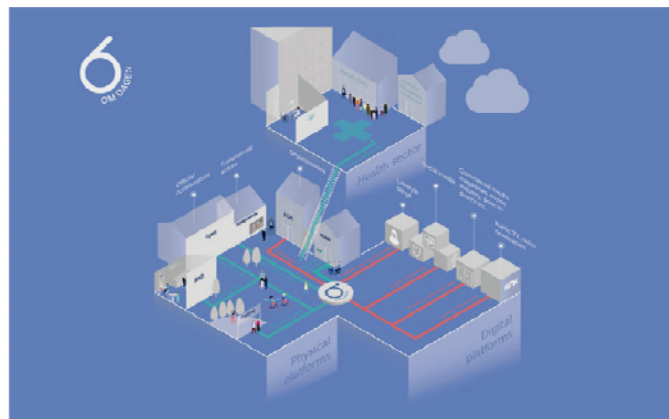


Figure 2. Visualisation of a service by a graduate from Service Design. Ingrid Johanna Fløgstad

4.3 Reflections on graduate’s answers

With the answers from the interviews in mind, we notice that typically our female SD alumnus uses the description “meaningful social issues” as criteria for choosing SD. And expresses problems relating to the masculine methods and techniques in ID, and continuously calls it “hard core”. Preconceptions and conventions, we might say, but still important to address for achieving the gender diversity as we want.

5 CROSS POLLINATION IN INTERDISCIPLINARY TEAMS

To address the gender segregation, we appreciate the movement towards more interdisciplinary, e.g. in “Design Studio” [6], a course at master level. Such cooperation between the teachers open up for interdisciplinary groups of students to work together. From the course description 2017, “...projects can both be done as specialisations towards specific fields, or in inter-disciplinary groups where students from industrial design, service design and interaction design work together” [6]. According to one of the involved course leader’s, it happens that students choose to do cross-disciplinary work inspired and informed by joint lectures. To jump between disciplines is possible only when the skill set is there, it might even give a better gender diversity in the project team.

If the gender segregation in ID and SD courses has established a precedence for future choices, the graduates suggests that verbal and visual language at IDE, is one of the reasons.

In our eagerness to ‘broaden’ the industrial design education, are we about to create precedence for male students to choose the object oriented industrial design and females the immaterial social service design? The diverse character of the processes itself, are additionally reasons for gender segregation. Workshop skills and material knowledge is core competence of ID, and we underestimate the importance of, and persistence needed for building embodied knowledge [7]. Discipline specific spatial- and bodily/kinaesthetic intelligence needs training. Training that seems to be chosen away in the favour of other “soft” actions. Again, do we see a pattern of gendered choices?

Can we possibly change this unwanted situation to an advantage? Interdisciplinary are explained as “co-ordination by higher-level concepts” [8]. Co-operation we aim for in master courses would possibly increase diversity but not eliminate the gender streamlining.

Interdisciplinary cross pollinate and might therefore have good consequences for the degree of innovation. A wide range of international students apply to ID and SD, with bachelor degree from industrial- or graphical design, interior, experimental design or architecture. Ideally this brings several perspectives and design processes together, due to multiple backgrounds and cultures. If the master disciplines turn out to have “less balanced gender distribution” among the international applicants, we have found one more reason for gender segregation.

Before the new design disciplines were introduced, and divided into tracks, the distribution of female and male students was even. Now the balance is threatened. With all methods and tools that overlap, it should not be necessary to move backwards in time to “hard and soft” design terminology. But based on the answers from the graduates, it seems that we are going in the wrong direction, away from diversity.

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