

Designing for one: How designing for one enriches the student design process

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Abstract

Designing for one is a form of design participation in which a designer works together with one individual. The result of this interaction is a bespoke design that is responsive to the needs, abilities, preferences and situation of the individual. Applied with design education, this research sought to understand the ways this approach impacted a) student learning, b) the generation of empathy and c) the traditional design educational space. This study involved six methods of inquiry for examining the impact of designing for one on the student experience: four Student Module Cases Studies, one expert design educator workshop with 21 participants, 28 student interviews, seven expert design educator interviews and included mapping (a method used within the workshop), observations and post analysis thick descriptions. In terms of student learning, the study identified seven key learning experiences that students had when designing for one, with the most prevalent being: Process (the students developed knowledge about the design process, research methodology and the act of designing), Design Skills (they learned about and applied specific skills related to their discipline), Soft-Design Skills (they developed understanding regarding using and incorporate soft-skills into their design process) and Interaction (they identified the value of the interaction between themselves and their participant). Regarding empathy, the study identified 11 factors that influence the forming of an empathetic relationship between designer and participant, resulting in a set of empathy factors that can be referred to when seeking to build relationships within design participation. In terms of impacting the *routine* design space, the study identified 11 variables that design educators can use to disrupt a traditional educational setup with the most important variables identified being *participation with real users* (bringing students in contact with real users) and the location of the *module situation* (taking the 'classroom' off site into a situation of use). By purposefully placing students within these individual situations of an 'other', the result is a form of design participation that emerges from the orchestrated relationship and the exchange. The result of this thesis, then, is the offering of designing for one as pedagogical approach that increases levels of complexity, planning, research and collaboration serving to complement existing design educational practice.

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Chapter 1.

Introduction

Beginning with a background story into the origins of the research topic and where it places itself in relation to other design theories as well as providing insights into the researcher's existing design education and research practice, this chapter provides a definition of the *designing for one* approach as well as initial insight into its application. Following this, the aims and objectives of the research are mapped against existing gaps in literature and supported by defined research questions.

1.1 Defining designing for one as a means of design participation

The research in this thesis is situated within a clear design paradigm. At the centre is the **process of making** which can be seen to be both a technique of problem-solving as well as the resulting output of this process. Related to this is an educational system that provides students **knowledge into the process of making**. It provides the skills and experiences required to achieve designer status; educating students in processes and outputs that others will recognise as design processes and designed outputs. Finally, this study draws from the concept of **making through collaboration** in which the making-of is not done in isolation, but rather values the external as a means to increase the value of the thing designed as well as a potential means to further the participant's own voice.

Employing this paradigm, the study provided a dedicated investigation into designing for one as an approach within design education. The term *designing for one* refers to a (student) designer designing for one individual in which the individual's specific interests, accessible tools, capabilities, etc. shapes the designer's process and are reflected in the resulting bespoke design. With a primary focus on education through experience, this *knowledge into the process of making* specifically through

designing for one is positioned within the student-centered exploratory processes of Problem-based Learning (PBL). Designing for one both adopts and challenges conventional approaches to PBL. Unlike PBL's concept of 'triggers' in which students begin with a set of predetermined information that is used as a means to engage and motivate students towards a particular problem (Moallem et. al 2019), designing for one uses an orchestrated relationship between student and participant as a situation that offers motivation, engagement, problem definition and learning. PBL's specific attempts at integrating 'open-endedness' into the problem space (Moallem et. al 2019), both factors into designing for one's creative need to work within an 'unknown' (Gero and Kumar 1993; Boden 2007) yet contrasts well against a rigid design educational framework (Wilson and Zamberlan 2017) that includes expectations attributed to learning outcomes and technical skill acquisition (Kelly 2019). In terms of designing for one as a form of *making through collaboration*, the engagement required can neither be fully placed within participatory design, in which a marginalised participant is accepted as a full design partner as a means to empower them (Muller and Druin 2002; Ehn 2008; Bratteteig and Wagner 2016) nor as co-design, in which a design is created through a collective process (Sanders 2002; Sanders and Stappers 2008). Although some would suggest that these two collaborative approaches are two sides of the same coin, the designing for one approach carries a banner of collaboration not in terms of its impact on a design outcome nor specifically in terms of empowering participants, but rather in terms of the relating between designer and participant. Empathy (in various shades and degrees) emerges through this relating. And it is this empathetic relationship that informs both the designer's process and outcome. As such this thesis both builds upon both participatory design and co-design principles but also offers a more nuanced extension, particularly in relation to design education.

1.2 Precluding the thesis

In 2012, the precursor to the research carried out in this thesis began as part of a project funded by the former Flemish Digital Research Institute (iMinds) that looked to identify how linked 'smart' objects (the Internet of Things) could support a person with dementia living at home. This involved working with people with dementia in their homes, as well as carrying out observations and interventions in care facility dementia wards. This initial project ranged from collaborative research actions such as paper



Figure 1: Detail of paper prototyping session (Wilkinson 2013).

Figure 2: Participatory paper prototyping sessions with nurses in Dendermonde, Belgium (Wilkinson 2013).



prototyping and interface development to carrying out observations and small interventions in people's homes.

These experiences led to the position that dementia was a lived experience and that, although one could draw similarities across the dementia population, individuals often needed specific support and tools that were particular to their own day-to-day experience and context. The follow-on project looked further at the home situation and had the goal of supporting occupational therapists in the local chapter of the OCMW (Public Centre for Social Welfare). In this project, occupational therapists visited people with dementia living at home, and identified areas in which personalised design could support home-based care and support quality of life¹. Parallel to this continued research, an applied research module was developed for master's students to use this individualised research approach. The resulting module has been running yearly since and provides the opportunity for master's students from all disciplines (product design, interaction design, graphic design, animation, photography, etc.) to participate;

¹ This project is well-documented in Niels Hendrik's dissertation The involvement of people with dementia the design process (<https://lirias.kuleuven.be/handle/123456789/635224>) as well as in numerous publications; most recently a chapter in the book entitled HCI and Design in Context of Dementia edited by Rens Brankaert and Gail Kenning published by Springer in 2020.

working with one individual with dementia, with a specific focus on those living in care facilities and identifying ways in which design can ameliorate this person's life.

1.2.1 The interest in this *designing for one* approach

Regardless of their background or discipline, students in Belgium as well as design students in Germany² did not limit themselves to their own domain, but instead used whatever resources they had at hand to prototype and make things for their



Figure 3 and 4: Design student creates audio landscape of the bicycle route his participant took four times a day every day for 40 years (Dann, 2016).

Figure 5: Film student Ruud discusses his laptop-based activity board with care home residents and family members (Wilkinson 2017).

Figure 6: The inspiration for Graphic Design student Nichole's project, her grandfather's colouring book (Nysten 2013).

Figure 7: Industrial Design students show off their projects, Folkwang University, Essen, Germany (Wilkinson 2016).



² As part of a three-year grant from the Robert Bosch Stiftung, the designing for one approach was implemented within six German design schools in the form of intensive week-long workshops as well as in the form of ongoing support over the course of a semester. From this grant it was also possible to create the Dementia Lab Conference (see: <http://www.dementialabconference.com>), a yearly event that brings together international designers and researchers designing for and together with people with dementia, now in its fifth year.

participant. For needs outside of their discipline, they engaged the help of peers. Students were highly motivated and engaged; some visited their participants outside of the moments required for school in order to carry out additional tests and as a means to gain insight into other parts of the person's day or in order to meet family members and other carers. Students spoke of how 'different' the module was to their other modules, and equally those caregivers who were initially skeptical of the students' abilities, were often delighted and touched by the things the students created.

With continued iterations of the module, so too increased the interest in this individualized approach and how it was functioning within education; its worth. Could the student have made the design without the participation of the person? It was not necessarily the same trajectory as what literature referred to in terms of a co-design process (it lacked the inclusion of formal co-design methods), but there was still a clear association between the thing that was made and the participatory process the student had gone through together with his/her participant. It was drawing on the values identified in participatory and co-design literature (users seen to be experts, participants seen to be collaborators in the design process, etc.) but instead of these being articulated with intent, embedded in a method, these values had been self-evidenced by the participant's inclusion; how the inclusion required a student to build their project around the participant's abilities, needs, preferences, etc.

This notion of designing for one adding *value* extended to the student's way of being within the action of designing. Why were students so engaged and motivated by these experiences in spite of their being 'difficult' and even confrontational contexts? What were they taking away from not only the interaction between themselves and the participants but from the module coursework? For graphic design students in particular, they were found to often struggle initially with the collaboration process, but over the course of the module, some became the process's fiercest supporters. Students found the module at times 'weird' and difficult' but also found it 'satisfying' to get to make something *for* someone. There seemed to be value in this way of working, as the earlier research outside of education had shown, but it was unclear what it was bringing to the student's design process and how this value could be articulated. Could this approach be used elsewhere? Did this only work within the context of working with people with specific needs or would it also work in other contexts? These were



Figure 8: Design students in Berlin, Germany working with a woman at a day care centre (Wilkinson 2016).

Figure 9: Final project submission, Scratch and Sniff Conversation Starters by Graphic Design student (Aerts 2013).

Figure 10: Tactile book and film (Van Hoof 2017).

Figure 11: An early Graphic Design student prototype (Motmans 2013).



questions that triggered initial interest to pursue a PhD; to get time to test, analyze, and reflect on what was happening in this designing for one approach. Seen to be an approach that was adding value to a student's design process, this idea of designing for one as *enriching* the student design process was to be explored: focusing specifically on the designing for one approach and its impact on the student and his/her experience, its influence on learning as well as making, its effect on how students were relating to individual participants and how it was transforming their design process.

1.3 Aim and Objectives:

building on an identified gap in literature

In short, this research was needed in order to investigate designing for one's impact on the student designer experience, going beyond existing research

surrounding participatory design or co-design use within design education that primarily focuses on the participant's involvement, design processes and the artefact created. The research's aim is based on specific gaps that identified within existing literature and provide a foundation on which the research to be carried out could position itself. Although other designers and artists had worked on the subject of personalisation and bespoke design approaches (Dreessen and Schoffelen 2016; De Couvreur and Goossens 2011; Padfield 2011; Fahey 2008; Cambell et. al 2003), designing specifically for one had not been critically analyzed or explored within the context of design education and its impact on both student designer and educational process. Looking at participatory and co-design literature, the literature focused on the benefit of collaboration for the user(s) (Bratteteig and Wagner 2016; Vines et al. 2013; Sanders 2008; Spinuzzi 2005; Schuler and Namioka 1993) and the collective knock-on effect of their insights on realized design projects: the importance of their voices being heard (Peters et al. 2018; Ehn 2008; Muller and Druin 2002). However, it did not look at the impact these collaborations have on the designer outside of further defining his/her role in the participatory design process as instigator, mediator or designer (Taffe 2017; Sanders and Stappers 2008).

As individual participation was identified as time-intensive (Greenbaum and Loi 2012; Spinuzzi 2005), one of the questions that this thesis looked to explore was whether this relationship-based *understanding of an individual user* actually provided any specific return. This related well to another gap identified in the literature study: if other domains such as product and industrial design already had ideas around empathy relating to users embedded into their studies and practice (Devecchi and Guerrini 2017; Lindsey et. al 2012; van Rijn et al. 2011), what could this understanding provide other areas of design? Although there was literature suggesting that following through particular participatory methods would lead to empathy (Hess and Fila 2016; Kouprie and Visser 2009), it did not suggest how it manifested in the designer, but rather in the designed product (Redström 2006; Sanders 2002). Literature looking at educational models raised issues regarding the way in which design education is taught; this was pitched against future scenarios in which designers must possess skills that are continually evolving (Kelly 2019; Davis 2017, Margolin and Margolin 2002). Because the literature study looking at creativity suggested that shifting elements of the design process to increase 'the unknown' within the design process might increase

creativity (Runco and Jaeger 2012; Boden 2007; Gero and Kumar 1993), this raised the question of what variables within the designing for one process might be doing just that.

The aim of the research was: **To employ design participation through the use of the designing for one approach within a diverse range of design education contexts in order to better understand it as an approach within design education and to understand its impact on student learning experiences, the formation of empathy and the traditional design space.**

In order to achieve this research aim the following objectives and research questions were identified:

1. Objective: To explore the specific insights that designing for one provides the student:

RQ 1.1 What were student designers taking away from the designing for one experience?

RQ 1.2 How was empathy being established in the design student through participation with the user?

2. Objective: To identify how designing for one was impacting the traditional design space within design education:

RQ 2.1 What was happening within the designing for one approach that was challenging expectations about coursework and the design process?

RQ 2.2 How was designing for one creating spaces within the module that enabled or confronted student designers with the ‘unknown’ and ‘unexpected’?

1.3.1 A method for research

Responding to the research questions (understanding designing for one as an approach within design education, understanding its impact on student learning experiences, how it was contributing to the formation of empathy and impacting the traditional design education space) required a methodological framework that enabled accessing and documenting the associated phenomena. The first research objective

required methods that provided access to documenting student insights. Case studies were used that enabled student experiences to be analysed across cases and allowed for the identification of commonalities and points of difference. These cases were supplemented by post-module student interviews that were transcribed, coded and grouped; further supplemented by observations regarding the student's and their experiences in feedback sessions. These cases and their collective interviews were further analysed by coding them against Baldner and McGinley's empathy scales identifying how empathy was manifesting in the designer's design for one process (2014).

The second research objective required the ability to identify how designing for one was impacting traditional design education. In order to capture this, a workshop method was used (mapping) that was supplemented by seven design educator interviews that looked specifically at how the approach was challenging existing educational structures as well as the expectations related to educating designers. Finally, as a means to explore aspects related to creativity and the importance of 'the unknown', a further analysis of these workshops and interviews provided insights into how the approach was enabling 'unknown' and 'unexpected' elements to contribute to the students' design process within the module.

1.4 Roadmap - The thesis outline

This thesis is broken down into the following sections: First the research began with a **literature review** that focuses on academic texts relevant to the objectives of the study. Because of the social relevance of the initial context (dementia within a care-context), social design and the burgeoning relevance of audience-awareness for designers was explored, with a particular focus on Graphic Design and its reflective desire to do *good* (see Chapter 2.1). Next to this, literature was analysed that specifically looked at how the design process is explained and how this relates to idea-generation within the context of design thinking and creativity; identifying specifically what is necessary within a design process to result in creative outcomes (see Chapter 2.2). Because of the participatory nature of designing for one (designing *with* instead of purely designing *for* users) literature on the subject of co-design and participatory design was also examined; looking both at the tools and resources available for

including people in the design process, as well as identifying different types and forms of participation (see Chapter 2.3). Because the study focused on the experience of students, the literature study explored the idea of knowledge acquisition and identified how education can enable a student's coming to understanding, both within their skills as designers, as well as understanding how these skills can be used to create meaningful artefacts for *use* (see Chapter 2.4). Finally, the literature study also identified and investigated cases within co-design literature, in which designers either worked with individuals or created outcomes through a design process that was inherently bespoke (see Chapter 2.5). The intention is that the literature review supports the reader in developing an understanding of the concepts, theories and topics related to the research, findings and conclusions.

The second section of this thesis focuses on the **methodology** (see Chapter 3) and refers to literature that informs the methodological paradigm. It provides a grounding of the research carried out within a philosophical context, outlines the processes used, and provides a theoretical framework for both gathering and analyzing the collected data. In order to both articulate and document the phenomena of the student designer experiences, a case study approach (see Chapter 3.3) based on Merriam (2009) allowed for the comparison of results as well as the modification and adaptation of the consecutive cases. Next to case study, interviews (see Chapter 3.4), which formed the basis for the data-set used throughout the study for coding and for highlight the student experience in their own words, is defined. Finally, the workshop method is described in detail; a format that allowed for a 21 design educators to not only engage with the topic but engage in small groups on the subject of designing for one as an approach (see Chapter 3.6).

Because this form of phenomenographic case study requires 'bracketing' in which the researcher is transparent about pre-conceptions and viewpoints, the methodology section is followed by a chapter dedicated to describing the four **Student Module Cases** in detail (see Chapter 4). This chapter describes how each was organized, who was involved, characteristics which distinguish themselves from the other cases, etc. This section is followed by the researcher's **findings** (see Chapters 5-7) that relate back to the original gaps identified, the research questions and the literature reviewed.

Chapter 5 specifically focused on the investigation into designer experiences, looking to understand what students find to be of particular value and noteworthy from the designing for one approach. Through analysis of the data sets from the Student Module Cases looking specifically at the interview responses, the analysis homed in on these areas: key takeaways, impact on process and influence of participation. The findings identified in Chapter 6 focused the relationships that were formed between student and participant, building an understanding how empathy was being manifested during the designing for one approach. Rooting the analysis and subsequent coding of the data sets from the Student Module Cases in literature that suggests that empathy is the result of interaction and participation, the analysed data identified factors that both influenced and evidenced the empathetic relationships between student and participant. Chapter 7 looked to identify the variables within the designing for one educational process that were particularly different from conventional design modules. Although the findings in the chapter articulate points of difference, the analysis in this chapter did not focus on the creativity of the designed outcomes, but rather focused on identifying what was causing friction within this routine space.

These finding chapters each refer back to specific instances within the Student Module Cases in order to highlight these nuances and patterns. Following the findings, the thesis provides a **discussion** about what these findings mean, how these findings can be interpreted and how they can form a basis for others to build upon (see Chapter 8). Chapter 8 makes a clear association between the aim of the research and the findings. Next to this, it links insights from the literature review and findings in order to propose designing for one as new participatory model for design education.

Finally, a **conclusion** (see Chapter 9) sums up the aims and objectives of the research carried out, as well as how it contributes to existing academic knowledge. Looking specifically at its contribution to knowledge in areas such as design and empathy, co-design and participatory design within the context of education, the findings are offered to the reader as tools that can be used to transform educational practice. Following the conclusion, an exhaustive list of **references** offers an opportunity for further reading and an **appendix** (referred to throughout the thesis) that allows for further readings, detail or additional examples.

Chapter 2.

Placing designing for one in a context

This chapter is a literature review that places designing for one in the context of academic research, academic dissemination and industrial/educational relevance. Looking first at the social leanings of designing, from doing good work to being responsible, it then looks at where this social-ness takes place within the design process. This review identifies the role of participation within the design process and investigates education's response to it. It offers differing viewpoints on how designers are able to handle collaborative design and looks specifically at the process of learning: exploring the role of empathy and meaningful encounters as part of both the learning and the design process. Finally, it concludes with a review of four related case studies from literature which help to identify why this research is necessary and how this investigation is researching between the gaps in existing literature.

2.1 Design is inherently social

This section focuses on *social design* and looks to define it from various critical perspectives. It combines views of professional designer/practitioners, design writers as well as academics who focus on design both as lecturers and as theorists. Each considers the question of design's function and how it operates as a powerful contributor to a global system that includes commercial drivers, cultural constructs and inequality. What is the expected role of the designer within this system and what are the alternative models for designer identity or participation within it?

2.1.1 Designing for 'worthwhile purposes'

Seeing the function of design as part of the machine of consumerism and capitalism, in 1964 designer Ken Garland considered the what-if scenario of design

skills being a potential source for social good. Creating a manifesto that was signed by over 20 fellow designers, photographers, design students and colleagues working in the creative industry of 1960s Britain, the First things First manifesto (see Figure 12), suggested that the skills of a designer could be better used to address real-world issues. In it, Garland proposed that design as a whole should reverse its priorities “in favor of the more useful and more lasting forms of communication” and suggested that society at large would tire of consumerism and call for designers’ skills to be applied to “worthwhile purposes” (1964).

Until Andrew Howard’s³ 1994 article on the original manifesto was found in the back pages of *Eye* magazine by writers at the Canadian-based non-profit and anti-consumerism magazine *Adbusters* in 1999, the manifesto was not yet a part of mainstream design history curricula. The essay in question called into question graphic design’s social function. Drawing on the manifesto from 1964, Howard posited that design was not necessarily a political positioning, but could not be separated from “the social context in which it is received and from the purpose it serves” (Howard 1994). Dividing design into two camps, those exploring the aesthetic (which he found empty) and the message (which he described as being one-way-messages whose goal was to end in *buying more jumpers*), Howard discussed the then contemporary idea of design’s



Figure 12: First Things First Manifesto (Garland 1964).

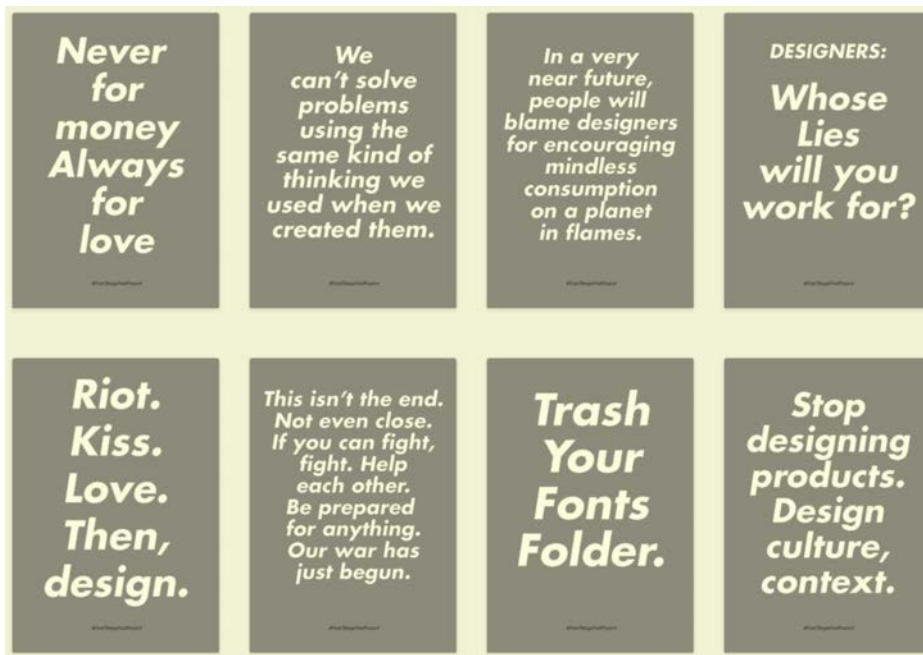
³ See: Howard, A. 1994. There is such a thing as society*. *Eye*. 13(4).

role in generating *meaningfulness* and what, as a graphic designer, this would require in terms of understanding, and what this understanding would mean in terms of churning out designs (Howard 1994). Seemingly early for his time, Howard saw design as a means to mediate and create agency, yet in doing so, he argued, it was just as important to identify why one doesn't or can't create agency. If a body of work is meant to be meaningful, that "plays a part in the development of a stimulating visual culture", then it required understanding how that culture is formed as well as how it shapes those participating or not participating in culture (Howard 1994). For Howard, it meant "addressing people's need for a culture in which they can participate actively, for which they can help shape the agenda" (1994).

Having stumbled upon Howard's article, the manifesto still felt relevant to the editors of *Adbusters* 35 years on. In 1999 *Adbusters* re-published an updated version of the original manifesto with Garland's blessing, stating that its "sentiments had become 'more rather than less relevant'" (Poyner 1999). Published across several design magazines in several countries, the signees, all of whom were visual communicators, again called for changes to design's priorities; lamenting the use of "skill and imagination to sell dog biscuits, designer coffee, diamonds, detergents, hair gel, cigarettes, credit cards, sneakers, butt toners, light beer and heavy-duty recreational vehicles" (First Things First Manifesto 1999). Commercial work, they insisted, was now not only what paid the bills but a sort of limiting expectation of what "graphic designers do" leading to this type of work now being "how the world perceives design" (Poyner 1999).

Nearly twenty years later, in 2018, over 50 years after the first edition, *Adbusters* drew from the First Things First manifesto yet again. In its most recent form, the manifesto called for *activism* instead of offering a passive *declaration*. Working within extremes, it asked designers to stop using their design powers to fuel "a grotesque consumer culture" and positions this use against a reality that while consumerist culture thrives, "most of the world's population lacks basic education" (First Things First Project, A Billion People 2018). Quite a different approach, it calls for design to be *woke* instead of designers throwing their skills into *woke-washing* the corporations, products and services that are contributing to these long-standing social issues (Jones 2019). Going beyond good intention, it calls out the role of design, specifically within

Figure 13: First Things First Manifesto 2018 (Adbusters 2018).



advertising; “advertising campaigns have demonstrably helped rake in billions of pounds for big corporates, there is no evidence any have significantly changed the world for the better...progress is achieved through protest and struggle, not well-intentioned sandwiches” (Jones 2019). Targeting specifically design education, as did the previous Manifesto in 2000, this current rendition reinforces 2000 signee, Katherine McCoy’s position that the act of designing “is not a neutral value-free process” (Poyner 1999). Participating within design, even as a creator, involves constantly choosing sides. To be a designer working within the commercial space, these manifestos articulate, is in fact supporting this commercial system; *implicitly endorsing* the saturation of commercial messages (Poyner 1999).

The idea of roles within this system and the inherent potential of design as a catalyst within it, is furthered by Margolin’s recent article on social design, which identifies both professional and student designers, as well as design educators as crucial partners in imagining a world that *could be* (2019, p. 18). He suggests there is a difference between what designers *do* and the inherent potential of what they *could* do (2019, p. 18). This potential, he suggests, is what people are currently expecting from *Design’s possibilities*: its power to persuade, to visualise, to deliver understanding, to explore, to build, etc. Margolin sees *possibility* embedded in design; design is an action (design as a productive activity) and design is inaction (leaving all that is dysfunctional

untouched) (2019, p. 18). Like Howard's 1994 suggestion that designers should become aware of the cultural constructs inhibiting design's contributing to meaningful social change, Margolin calls out the designer and design educator for their inherent roles within this gamut: "objects, graphics, systems, services and even political and legal structures ... When all these entities function well, design is a productive activity that enables positive action. When they do not, and design leaves the fundamental reasons for this dysfunction untouched, it becomes an obstacle to meaningful change" (2019, p. 18). Instead of being resolved or recognised, these obstacles are smoothed over, or even ignored. In an interview in AIGA's Eye on Design, David Rudnick suggested that if designers are not sure if they are solving real problems, then the work they are creating is filler that is "papering the fissures between perception and reality with clumsy attempts at meaning" (Peart 2017).

The perception of design is that it works in service of. Looking at it from a perspective of user, AGDA, the national organisation representing the Australian communication design industry, suggests that "design has always been about who not to design for" (Inclusivity or Exclusivity, 2019). For those signing these manifestos, design was (and is still perhaps), in a sense, reflecting on its identity and its role, or what Poyner suggested, was design's being "in danger of forgetting its responsibility to struggle for a better life for all" (1999). For Poyner specifically, the 2000 manifesto drew a comparison between two conflicting applications of design: that of graphic design offering a *function* by providing the public with necessary information, services and objects, and secondly that of *persuasion* by offering the public incentives to purchase beyond necessity (1999). As the success of designers depends heavily on their being in tune with attitudes and nuances within contemporary culture (Soar 2002), they play "an important role in lending traction to the contemporary routines of capital accumulation by articulating these values and tastes to the promotion of ideas and events, services and products" (Soar, 2002, p. 571).

It is Soar's idea of the designer's agency (what he refers to as traction) that calls into question the role of design and designer as well as what alternative pursuits for a designer might look like or what outcomes might be attached to them. In the Design Observer, Poyner and Beirut discussed the manifesto's importance to Graphic Design's history. For Poyner, the purpose of the manifesto was a call for reflection similar to a non-designer's quest for purpose in life: "you're a designer, you have to make decisions

about your life and where you want to invest your time and talent. Are you doing what you want?” (Burgoyne 2004). For Beirut on the other hand, the manifesto offered an uncomfortable standpoint that seemed to suggest “that the core of society - the mass market - be abandoned by designers in favour of the frills”; offering little or no alternative in between (Burgoyne 2004).

Beirut suggested Graphic Design possesses an inherent desire to be used ‘for good’ but lacked knowledge around how to do this.

“In New York after 9/11 a lot of people were thinking what can I do as a graphic designer to help? I hate to say it but posters weren't really the answer at that time: a cool T-shirt wasn't going to ameliorate pain or address the root causes of that event. There is a way for designers to get involved but it requires engagement with much bigger ideas in the world and not to think that the limit of your scope is to figure out how you make the T-shirt.” (Burgoyne 2004).

In this example, there is a disconnect between produced artefact and the social happening the designers were trying to tackle. Although Beirut’s example from 9/11 is perhaps extreme because of the volatile political and social response that ensued, Shea agrees that the problem with design goes much deeper: “a single logo or poster design rarely addresses the totality of the social issue that prompted the designer’s engagement in the first place” (Shea et al. 2012, p.10). For many graphic designers, however, this type of output is synonymous with what designers do. Resnick confirms this: “What design signifies to the general public remains passively identified with aesthetics, styles, and trends when, in essence, it could promise so much more” (2016, p. 12). The intention of a designer may be real and authentic, however the application may fall short. These works often miss what Millman identified as the potential *performativity* that a designed thing possesses, or rather the power that designers can summon: the ability to endow an “inert material with a capacity to incite action” (2007, p. 2).

For Poyner, part of the issue with this idea of designer responsibility is that “designers, as members of society, do not feel that same sense of social responsibility” as in times past (Burgoyne 2004). This might have as much to do with how the world sees design (imposed limitations/expectations) as how design currently sees itself. Throughout design history, it is easy to find ‘movements’ which have seen their way of

working in opposition to existing norms. The Arts and Crafts Movement of the late 19th century, for instance, was concerned with the intertwined relationship of market, output and quality. Its leader, William Morris, believed that creating (designing) “connected its makers at every stage of their work with the wider community that used, enjoyed and benefited from the made object” (Morris 1890 reprinted 2002, p. 12) and this form of making resisted the mechanisation of labour. Modernism too, although plagued by an association of designing for the masses, and thus accused of being *dehumanizing* (Atkinson, 2018, p. 1), had very clear social ambitions. Modernism focuses on “designing the ‘use’ of objects” and was a “reaction against what was seen as preoccupations with the form, or rather decoration, of objects with little relevance to needs of people and society” (Redström 2006, p. 124). Post Second World War design was also dominated by ideological positions such as making people's post-war lives better by “designing their environment and information more effectively” (Burgoyne 2004). Perhaps ironically, then, one sees a common thread running through each of these; each of these movements has a very prominent idea of user and his/her role within design.

Not only visual communication has grappled with these roles in recent history, but it is paralleled by Industrial Design. Designer turned activist Victor Papanek’s initial

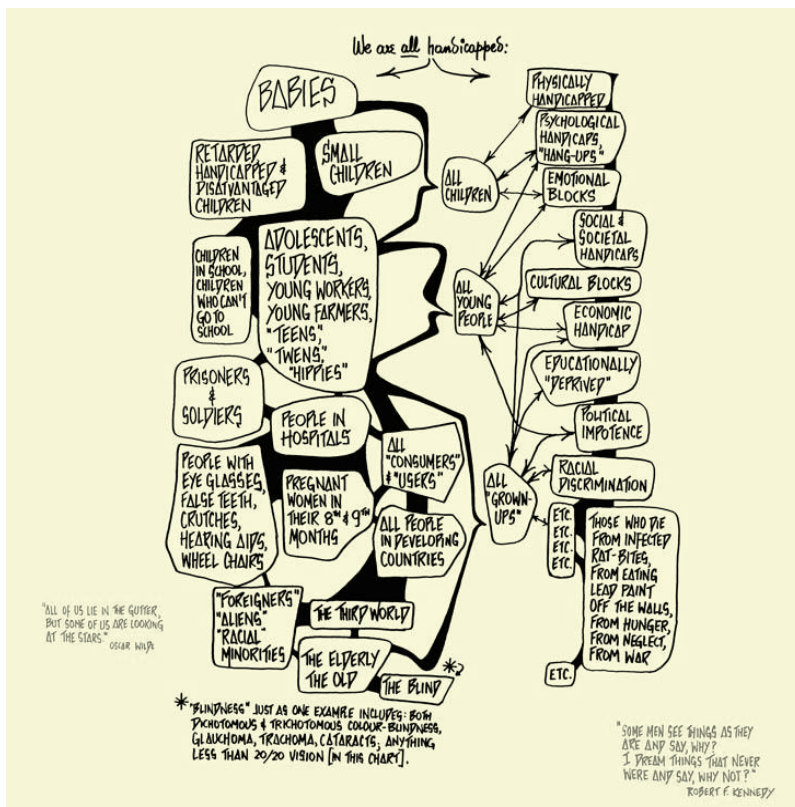


Figure 14: We are all handicapped, a portion of "Big Character. Poster No. 1 Work Chart For Designers" (Papanek 1973).

1971 publication *Design for the Real World* called for a “new social agenda” for industrial designers as an alternative to the mainstream market-led and consumerist approach (Margolin and Margolin 2002, p.24). Papanek saw design as an *accomplice to consumerism*, and felt that by nature, designers had a responsibility within this (Lou, 2019, p. 23). Sometimes referred to as an *alternative designer*, Papanek often worked together with students and potential users of his designs. He “addressed practical issues of everyday life for a great number of people” and worked within the area of inclusion, marginalisation with specific focus on social minorities (Victor Papanek: The Politics of Design 2018).

What Papanek identified, was design’s role as a mediator between humans, the environment and technology. Positioning design in such a capacity creates an innate importance around it. Much like McCoy’s suggestion that design is not value-free, Papanek’s position of design as a mediator causes designers to “function as political actors”, making decisions which both affect daily life but also at times society at large (Klein, 2019). Though at the time this was revolutionary, it is now accepted within various design approaches (human-centered design, universal design, co-design, participatory design, etc. ...) as part of design’s moral conviction; “design is not only about giving form to something; it is a tool for political transformation that must consider social and ethical points of view” (Victor Papanek: The Politics of Design 2018). By turning towards people, design becomes “more concerned with the contexts in which objects and communications are used by people, and with the consequences that the existence of those design creations have on people in general” (Frascara 2002, p.38). This seeing design within a networked system is what Frascara referred to as the *dematerialization of design*. Building on the consensus that designers have not only a role within society, he called for designers to develop an understanding of the cultural impact that the things they make can have.

In his recent critical essay looking at design as problem-solving, designer Rob Peart talked with many creatives about their role as designers within culture, as well as reflecting on his own position within it. Like Papanek and many others above who call out the design industry for its contribution to and its creation of the mess⁴, Rudnick

⁴ see: <https://nowhereandeverywhere.co/change/can-designers-fix-the-mess/>

“The shift pushes the designer into a position of accountability for the work they’re undertaking, as the nature of it demands interaction, feedback, and collaboration with the viewer. And before this starts to sound too conceptual, this kind of work isn’t beyond the technical capabilities of anyone. Still, when thinking about the banal, day-to-day details of actually practicing design, it’s easy to shrug off these ideas as unworkable, wishful thinking. In between battling your inbox, attending extended staff workshops in which no actual work gets done, and eating lunch, not much time is left over for the doing of design as it is, let alone the inward pondering of this kind of strategic inquiry. Nothing short of a total overhaul of how we think about, communicate, and structure what we do each day will enable us to make room for this kind of work.”

Figure 15: Peart quoting Rudnick (2017).

opposes the industry’s monopolization of the *solution*, in which designers (the problem solvers) are heralded as champions “whilst structurally rejecting responsibility for the problem” (Peart, quoting Rudnick 2017). This rejection is due in part because “design has lost sight of the difference between offering solutions to the audience and solutions to the client” (Peart, quoting Rudnick 2017), meaning that designers feel a sense of duty more to the client than to the users. This imbalance, then, calls for the creation of alternative futures in which future designers are informed of their role in the creation of culture, as well as providing them a way to design differently and make “room for this kind of work” (Peart 2017).

2.1.2 Being practical; Doing good work

For many designers, however, placing themselves within this continuum involves working for an agency, but in turn carving out a portion of their design practices to do what they term *good work*. Much like Papenek’s conviction that design is a fulcrum between people, technology and the natural world, designer, theorist and publisher

William Drenttel similarly believed that design has “the capacity to help us understand, transform, and improve every aspect of human life” (In Memory of William Drenttel 2013). For Drenttel specifically, he found his *good work* happening on the outer edges of *work*. It was often community-centred, and was often linked to arts and cultural institutions which he suggested was where the most profound opportunities for creativity existed (2012). Suggesting that this sort of practice was a sort of Graphic Design version of “Robin Hood stealing from the rich to help the poor; even a form of tithing, a ritualized percentage of our practice given back to God” (Designing for Social Change 2012), this well-paid commercial work enabled the *good work*. For Drenttel, however, this was not enough. These *good work* projects were not people-focused enough, but rather focused on outcome and the use of materials; the freedom that doing this type of work offered. Even the *good work* that was for *good causes* was “design about design, design for the sake of design, designers preaching to one another about design’s capability to create impact” (Drenttel 2012). The fundamental shift in his practice started when the needs of people began taking centre stage; when he started thinking of designs as being part of greater wholes, not only as one-off responses (Drenttel 2012). Although he believed this sort of work should still be encouraged, he was uncomfortable labelling it social design. Drenttel, like others, believed social design involved something else; real human engagement (Drenttel 2012).

In the past decade, this idea of good design has moved away from the one-off not-for-profit initiatives towards more fundamental problem-solving. Although AIGA’s initiative Design for Good still promotes Design for Good as a means for designers to “build their practice” and “expand their network”, they also suggest areas in which designers can focus (Design for Good 2013). These are not the warm-fuzzy topics one used to associate with producing socially relevant posters such as promoting local pet adoption or creating posters for the local ballet company. The topics are gritty and real and they need, as the AIGA states, design in order to make headway, or impact. Because they are known themes, the responses move beyond awareness campaigns:

“Domestic violence, Food desert and access to quality nutrition, Gentrification, Homelessness, Immigration, Poverty, Public health, Race & gender equality, Recycling and conservation, School To prison pipeline, Support for artists, Veterans issues, Voter registration and participation, Water access and safety,

Any reality that is unmet or needs clarity, advocacy, and/or a voice...” (Design for Good 2013)

2.1.3 Defining Social Designing for good

So what is good design? What does it mean to design for relevance? There is no agreed definition of social design. There are those who insist that social design is simply design applied to social constructs, and yet there are others who see it as its own creed. In his acclaimed essay *Is Social Design a Thing?* design theorist and academic Cameron Tonkinwise defined the various interpretations of the word social within the broader context of social design:

1. Social Design = Design works with the sociomaterial
2. Social Design = All innovation is sociotechnical
3. Social Design = Design of systems with significant social media aspects
4. Social Design = Social science based projects conducted as/with/by designers
5. Social Design = Design of/for services
6. Social Design = Designing for/of governments
7. Social Design = Designing for/with non-commercial contexts
8. Social Design = Design in the context of unmet needs
9. Social Design = Design-enabled social change (2015)

What the above list captures is social design’s relevance. It brings forward design’s agency: that it is inherently an action that takes place in an acknowledged social context (1). That designed objects are materialised with the intention that they are to be used (2). That all things made work only within specific contexts and infrastructures (3). That online and virtual platforms require their own distinct solutions (4). That design research mirrors or draws from social science research (5). That design can contribute to the way in which services are experienced, shaped and valued (6). That government is a social construct whose intended purpose was to serve people, thus equally open for redesigning (7). That design can contribute to ‘betterment’ without commercial restrictions or monetary return (8). That design can be used to identify and

create for unmet needs (9). That design can enable and contribute to cross-sector, fundamental social change (10).

Social design, then, is a broad spectrum, and within it exist competing takes on how to achieve or respond to it. Wearing many labels, it is referred to as everything from *designing for good* to “public-interest design, social design, social impact design, socially responsive design, transformation design, and humanitarian design” (Lasky 2013, p. 8). Looking to define a few of these further, most recently, social design has been defined as *designing with conscience* (Resnick, 2019, p. 7). Social Impact Design on the other hand refers to the “practice of design for the public good, especially in disadvantaged communities” (Lasky 2013, p. 5). A branch in and of itself, Social Innovation can be defined as developing, promoting and implementing “novel solutions to social problems in ways that are directed toward producing profound change in institutional contexts” (van Wijk, 2019, p. 887) resulting in value that goes “primarily to society rather than to private individuals” (Phills et al. 2008). Finally, Socially Responsive Design “takes as its primary driver social issues, its main consideration social impact and its main objective social change” (Willcocks 2007).

In practice, shifting to a social design model (regardless of what number it is on Tonkinwise’s list, with perhaps the exception being number 4) is difficult. There are, for instance, moral and ethical concerns. Contemporary critics of the design-for-good suggest that it implies a sort of *intentionality* that it is *for good*. This intentionality is focused on the outcome. The intention is betterment, but accomplishing this altruistic endeavour requires investment in not merely identifying that there is a challenge, but coming to a real understanding of the population or domain (Pal, 2017, p. 67). Next to this, there is a real lack of evidence or studies over time that “demonstrate what a designer can contribute to human welfare” (Margolin and Margolin 2002, p.28). This makes it difficult to convince organisations, institutions, etc. to initiate or fund this sort of research outside of its both sounding and looking good. Similarly, the AHRC’s Social Design Future’s review suggests that the funding of social design projects is focused primarily on projects “aiming to have impact, rather than longer-term programmes aiming to build knowledge” (Armstrong et al. 2014, p. 8). It is precisely these types of projects that would evidence a designer’s or design’s real contribution to social betterment. Participatory design pioneer Pelle Ehn furthers this idea: “there is a need for long-term infrastructuring where relationships continue...that is, that a social

design project instigates a conversation and relationships that can be on-going beyond the 'life' of the project itself" (Armstrong et al. quoting Ehn 2014, p. 19). Paralleling Drenttel's remarks about social design needing to involve people, Ehn suggests that an entire shift needs to occur in design practice; design should become more about relationships instead of artefacts (Armstrong et al. quoting Ehn 2014, p.19).

As a broad area of practice, then, social design and its recognition of design working within social systems lends itself towards framing *wicked problems*. Countering the classical paradigm that problems can be defined and designed for (solution oriented) the term *wicked problems* was first coined in the early 1970s as a way to describe the difficulty of working with societal systems (Rittel and Webber 1973, p.160). Much of the 'wickedness' comes from a clash of systems that are measurable against things which are difficult to define. Because this wickedness is characterised by complexity where there are "competing and often contradictory drivers, and scenarios in which there are multiple 'correct' answers to design problems", wicked design challenges require the design process to be social, inclusive and human-centred (Thorpe and Gamman 2011, p. 219). Because of this complexity, wicked design problems do not arrive at solutions as in other design contexts. Wicked design problems are never solved; "at best they are only re-solved--over and over again" (Rittel and Weber 1973, p.160).

This lack of resolution makes it difficult for many practitioners and academics to work with, as they are used to working in areas that require "identifiable measures of success and impact" (Armstrong et al. quoting Micklethwaite 2014, p. 45). It is not that these researchers are ignoring the wicked problems, but rather they are working within communities within a given space and context, while recognising the system in which these challenges take place. The only way for them to tackle these much larger issues is to see their design responses as part of this bigger picture; to create outcomes that have buy-in from the community, that are modular and adaptable and that are derived through "numerous small, incremental steps" (Norman and Stappers 2015, p. 93). However, others see this as incompatible with how design is taught. For Myerson, suggesting that small responses to larger, systems level problems can somehow impart some sort of change goes against design education that promotes "thinking big and bold" and "outside the constraints of any system" (2015, p. 101). Looking for a compromise, there is room for *big* and *bold* ideation that responds on a scale

appropriate to the activities of the designer's research and their chosen (more often than not), pre-defined context. The role of the individual designer, then, working within his/her context, becomes highly valued. As Cheryl Heller suggests, social design is less about solving the world's problems, but instead is primarily about developing "fundamental changes in ourselves: a shift in who we think we are, how we perceive and treat each other, what we believe is possible and can work together to create" (2018). Looking, then, specifically at the role of the individual designer within this process, this fundamental shift can occur when the designer's process is seen to extend "beyond the designer, to include the participants of a product, a system or an experience" (Wood 2013, p. 1).

2.1.4 The response of design education

If industry is struggling to foster the type of dynamic in which design becomes responsible for societal change, perhaps then, design education can engage or train students in a way that they prioritise the human condition within this construct and that they are open to and ready for this type of engagement (see following section *The Role of Participation*). Design education cannot be seen as merely preparation for a future job, but rather it should play "a vital role in preparing design students to move beyond a purely reactive state to one in which they are actively engaged in shaping the world around them" (Mendoza and Matyok, 2013, p. 215). This requires an adjustment in what it is that students are learning. Graphic Design students, for example, will need to be taught that the elements that make up graphic design (typography, hierarchy, grid structures, symbols, etc.) are a "means of social communication rather than pure visual techniques" (Margolin 2016, p. 14). This moves design away from being a reactionary response to trends and aesthetics to that of design being a heightened level of understanding about the actual function of communication and how it situates itself in the world. The AIGA's whitepaper Designer 2025 specifically focused on this shift, calling out the importance of students to be able to carry out *ongoing* research. Whereas traditional curricula focused on skill sets about message creation and the aesthetic crafting of it for known, passive audiences, the needs of industry (as well as local communities, governments, institutions, etc.) has moved on.:

“People are no longer passive consumers of information in this complex social and technological landscape, but active participants in generating the content and quality of experiences. They value adaptive ecologies of information, products, environments, and services that foster meaningful engagement and grow organically with changes in their wants and needs. This human-centered focus, in contrast to message- or product-centered design approaches of the past, raises the importance of research. Research is not just information retrieval at the beginning of the design process but ongoing feedback and evaluation of the consequences of design action, including across the lifespan of messages, products, environments, and services” (AIGA, 2017).

What is it, then, that design students need to learn? Or rather, what is it that design education should be teaching? Much of what design education continues to do is focus on the creation of artifacts and aesthetics (Resnick 2016). However, as Davis points out: “artifact-driven strategies fall short in addressing problems at this scale, yet most of today’s design education is structured in terms of defining the physical attributes of desired objects and environments not in terms of interacting systems” (2017 p. 43). Shea, on the other hand, touches on the same complexity but focuses on the need for students to have the ability to find and define their own design challenges. Being able to find and articulate this, he suggests, requires getting to the “root of the problem, which is often part of a larger, messier system of issues that need to be dealt with” (Shea 2012, p.10). For Mazé, design education should focus on teaching criticality so that students are less concerned with *problem-solving* than with *problem-finding* (Mazé and Redström, 2009, p.7). Building on this, the Icoграда Design Education Manifesto

Table 1: A snapshot in time of traditional and emerging design practices
(Sanders and Stappers 2008, p. 17).

The traditional design disciplines focus on the designing of “products”. while the emerging design disciplines focus on designing for a purpose
visual communication design interior space design product design information design architecture planning	design for experiencing design for emotion design for interacting design for sustainability design for serving design for transforming

calls on design educators to shift from being the source of knowledge to the mediator who *inspires* and *facilitates* students in developing a more meaningful and socially relevant design practice (2011, p.10).

Though the previous design educators focus on the complexity of the design challenge, Burdick turns his attention to the design student themselves: they need to be motivated enough to be authors and makers, yet open enough in their process to allow for participation (Burdick interviewed by McCarthy, 2013, p. 92). Equally Macdonald and MacLeod identified risk as being important within design education. Students should be supported in risk taking and encouraged to experiment as both help students develop an “appetite for enquiry” (Macdonald and MacLeod 2018, p. 215). Finally, for co-design flag bearers Sanders and Stappers, who define design as both an end result as well as a process, they suggest that design education move beyond *individualised expression* and instead focus on teaching designers to become design mediators who are adept at the “the creation and construction of the new tools” (Sanders 2002, p. 6). Although initially controversial in the early to mid-90s, Mitchell (cited in Redström, 2006, p. 126) argued in favour of “a redefinition of design in terms of user experience, not physical form”. He suggested that there was a disassociation between the “design community’s criteria for successful design” and how these good designs failed when put into use (Redström, 2006, p.126). In other words, design itself (thus design education as well) needed “to be redefined in terms of people’s experiences, instead of in terms of objects” (Redström, 2006, p.126). Much like Mitchell’s call for a focus on experiences, Drenttel’s suggestion that design must involve people, and Ehn’s suggestion that design should focus on relationships instead of artefacts, Sanders and Stappers propose a shift in practices that moves from a focus on the *designing of products* to that of *designing for purpose* (Table. 1).

Despite the notion that designers possess the potential to address these complex issues, the question remains as to whether design students are adequately equipped to deal with them or how to equip them through their studies to be the active participants this sort of engagement requires (Nussbaum 2010; Kiem 2013; Armstrong et al., 2014, p. 20). For Margolin and Margolin, this equipping requires a rethink of the skills acquired in education. They believe that the education of designers should not solely focus on jobs in the creative industry, but rather “prepare them to design for populations in need rather than for the market alone” (2002, p.24). Specifically, they call on skills in

relating to “vulnerable or marginalized populations” as well as skills in generating briefs for clients that have social design embedded in them (Margolin and Margolin, 2002, p.29). Nousala et al, however, turn their focus to the design educators, arguing that they should be encouraged to adapt their pedagogy. They specifically call on education to be *responsive* enough that it allows for an uncertain future that drives “a pedagogy of continuous learning and adaptation” (Nousala et al. 2018 p. 8), resulting in designers that are able to create and participate with organisations that are perpetually “redesigning themselves” (Flach 2015, p. 98).

Besides these inherent social leanings, part of this need to rethink design education stems from technology’s influence. In her recent article about the decline of design, design educator Rebecca Kelly called out technology’s role in the fragmentation of design education. How is it that design education still places such value on outcome and creation-tool program mastery when it is juxtaposed against such a rapidly shifting landscape? Designers are no longer gatekeepers of designed products; no more than design educators are gatekeepers of becoming makers. “Stock photography, stock illustration, website templates, business cards, billboards, banners, packaging, presentations, publications, animation, logos, layouts—practically all of the responsibilities ascribed to designers can be obtained cheaply and easily by anyone with Internet access” (Kelly 2019, p. 42). Next to accessibility, AI (artificial intelligence) is tapped to eventually master the role (currently filled by designers) of making aesthetic choices and will be able to create dynamic, personalised experiences for every user (Labarre, 2016). As with others in this area, Kelly does not offer a solution but offers touchpoints for educators to consider in curriculum development, which seem to both confirm and summarise many of the points raised above: “Include project components and requirements targeted toward building a student's ability to adapt, innovate, empathize, persevere, and succeed through possible failures, solving problems through design thinking and critical analysis” (2019, p.44).

From content to methodology to adaptability, these changes also face practical problems. The idea of the *studio* is revered within design education and continues to play a fundamental and protected role within design education (Wilson and Zamberlan 2017, p. 110). Comparable to the artist’s studio, the *design studio* is often referred to conceptually as a place of freedom and exploration. However, Wilson and Zamberlan’s critique its seemingly impermeable status, calling for review and renewal of the *studio*

considering the “evolution of the design landscape in the twenty-first century” (Wilson and Zamberlan 2017, p. 110). Even the semester, weekly/bi-weekly class structure can be seen to hinder a student’s ability to learn/experience working in this new way. Although Pal suggests that students can now anticipate having exposure to social and non-commercial themes within their time at school, the semester structure provides a false sense of expertise: “students are used to starting, delving deep into, and imagining they have gained reasonable expertise in a topic by the end of a semester” (2017, p. 66). For Pal, this dipping in and out of a context is seen to be insufficient and artificial. On the one hand Pal suggest that it is unrealistic for designers to embed themselves in social domains or populations as it might cause difficulty in transference to new areas, “designers cannot be expected to spend several years gaining deep appreciation of some social domain or population, and if they did do that, it is not clear that the learnings from one setting would translate well to others” but on the other hand “people with careers dedicated to work on these issues, or communities that deal with these issues as part of their lives, have experiences that are difficult to transfer into the frames of bounded engagement involved in short-term design endeavors.” (Pal, 2017, p. 67). How then, can design education ensure it is not paying lip service to socially *wicked* problems? How can design education respect fringed, marginalised communities with its limited engagement that is, in turn, meant to build their design capabilities as well as their contextual awareness and sensitivity? How can it meet the needs of industry in its current state while preparing students for future scenarios? Social design still seems to be a way forward.

Although focusing primarily on the challenges designing for good and/or social design faces within design education, Pal offers suggestions for what social designing offers design students:

It offers breadth:

Working with diverse users provides designers with a design contract that causes design students to examine the needs of the design against the range of stakeholders; broadening their “exposure to design thinking, which extends beyond an artifact to an understanding of the ecosystems in which technologies exist” (Pal 2017, p. 67).

It introduces the relevance of methodology

“Engaging populations who may communicate differently or have difficulty articulating their needs requires that design students engage, observe, listen, ask... in new ways with a new sense of relevance and purpose that cannot be based on assumptions” (Pal 2017, p. 67).

It requires analytical consideration

Working on larger issues and challenges with diverse users can be used as a means to get design students to be “reflective of their own agency as builders of products that people will sometimes be forced to adjust their practices around, particularly when these products end up defining the industry standard” (Pal 2017, p. 67).

It offers employability benefits.

Working on challenging projects provides students with important skillsets that both corporations, organisations and the creative industries value.”
(Pal 2017, p. 67).

What literature suggests is that embedding social design into the bedrock of design education requires (and thus would result in) affecting an entire industry. Although Drenttel suggested that the creative industry is open to making room for this type of initiatives, he also hinted that it struggles with how to integrate it into its own practice; the *good* and the *purposeful* of Sanders and Stappers run parallel to the economics of commerce. This way of working has remained *emergent* for decades. Design education then, can still play a key role in inciting this change and/or making this the norm; by engaging the community in long-term projects (Armstrong et. al. 2014, p. 19), engaging future designers on the potential their discipline possesses, teaching future designers to value diverse populations through experience (Margolin and Margolin 2002, p. 29), making their positioning within the consumer construct explicit to future designers (Kelly 2019, p.44), developing awareness in future designers that design challenges take place within a systems framework (Davis 2017, p. 124), providing future designers experiences which allow them to adapt and persevere but fail as well (Flach 2015, p. 98), and ultimately prepare them to develop responses to wicked problems (Thorpe and Gamman 2011, p. 219) as a way to nudge the industry itself: a trickle-up effect. Aligning to the work explored in this thesis, does designing for one as it is applied in

design education provide these experiences? As a social-design experience, does it cause students to value design's application in this area?

2.1.5 An awareness of audience

Regardless of the type of design, whether it be (product or interface) and regardless of the medium in which the message is served (screen or paper) and regardless of its scale or which sense it taps into (audible sensations, moving images, etc.), design proposes the same basic construction: “communicate a message in the clearest and most visually compelling way to a specific audience” (Kelly 2019, p. 43). Just as various movements have triggered increased awareness of both *use* as well as of the *people* who use the designs, so too has the design industry become more concerned with audience and users as it looked to increase market share, brand loyalty or minimise the failure of new products.

Although forming only one segment of the design research process (see section 2.2 *The process of designing*), building up an understanding of the user is elemental to the design process and shifting towards a user-centric approach has been identified as having an effect on both the process, development and the designed product. However user-centredness also possesses drawbacks in terms of the effort required and cost, both in development and designed outcome (Abrams et. al 2001, p. 10-11)

Although widely regarded in education as being crucial to the design process, uptake in industry remains scarce. In their 2001 review of user-centred design methods across industry, Mao et. al. identified the iterative design process itself (prototyping, testing and evaluating before final production), use evaluation (testing prototypes with user), user task analysis (setting and evaluating how users complete tasks), expert reviews (feedback and recommendations from experts) and field studies (design ethnographic research in user's own context) as being the most widely used, accepted and identified as being beneficial design methods for building a better understanding of the user and his/her context (2001, p. 11). Nearly 20 years later, there is now a broad consensus that designers should be informed about the needs, emotions and experiences of their user group. “Placing human activity at the center of the design process—as opposed to a set of behaviors that must be controlled or accommodated—has become an instinctive and mandatory process” (Slavin, 2016). According to

Table 2: Advantages and Disadvantages of user-centered design (Abrás et al. 2001, p. 11).

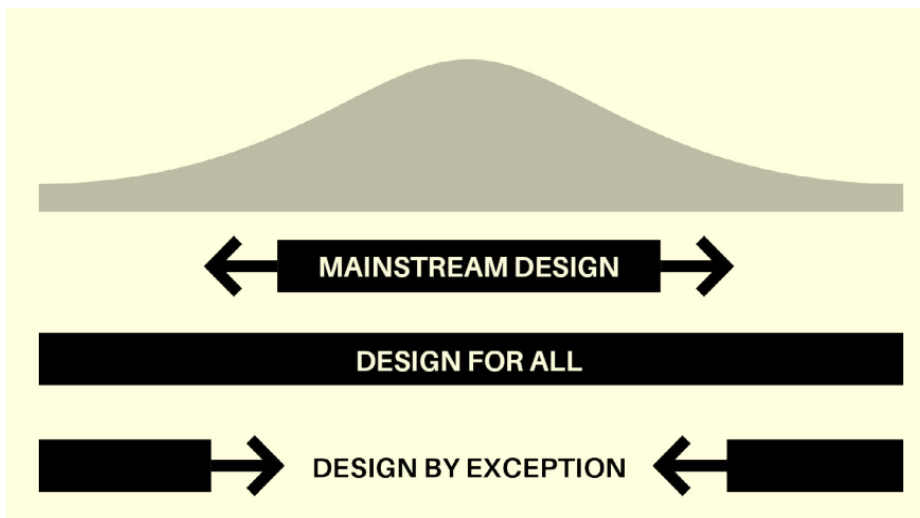
Advantages	Disadvantages
Products are more efficient, effective, and safe	It is more costly.
Assists in managing users' expectations and levels of satisfaction with the product.	It takes more time.
Users develop a sense of ownership for the product	May require the involvement of additional design team members (i. e. ethnographers, usability experts) and wide range of stakeholders
Products require less redesign and integrate into the environment more quickly	May be difficult to translate some types of data into design
The collaborative process generated more creative design solutions to problems.	The product may be too specific for more general use, thus not readily transferable to other clients; thus more costly

Redström, this relationship between maker and person (a human-centred or user-centred approach) is as much about building confidence that the thing will work as it is about quality: “one could use intuition and hope for the best. Alternatively, one can be more principled in deciding which choices to make by basing them on an understanding of the users” (2006 p. 125).

Although technology has enabled audiences to be defined even further, contemporary, commercially driven design is created for a generalized, segmented population. It is a process in which “designers methodically build a case around human behavior to define an ideal median solution that solves the problem for a group of users...and in doing so, they are normalizing their decisions for a group” (Rolston, 2016). Although this may resonate with Redström’s position, normalising designs based on characteristics of users is by nature exclusionary.

A visualisation by Open Lab’s Huynh brings these competing audience characteristics into view. He suggests that designers are designing in/for one of three spaces. In the Mainstream portion, designers focus on the largest pool of users; trying to identify design requirements that will benefit (and be used by) the greatest segment

Figure 16: Design Philosophies (Huynh 2015, p. 11).



(Huynh 2015). Critiques of designing for mainstream use suggest that, as Rolston suggested above, fringe users are not accounted for, and if they are, often the compromises to the design are inappropriate (Pullin and Newell 2007, p. 255)

Huynh, designates the second space as Design For All. It refers to Universal Design's call for "the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design" (Connell et al., 1997). Although the intention of Designing for All is virtuous, realising it in practice remains difficult. The process of understanding users through design research is *difficult enough*, let alone conducting research to identify design requirements with *everyone*: "it can become impossible if the characteristics for which one is designing, in terms of physical, sensory, motor and cognitive abilities, to say nothing of culture, knowledge and motivation, seem to be intended to include the whole population" (Pullin and Newell 2007, p. 255).

Finally, Huynh introduces a third area: Design by Exception. Design by Exception is the explicit move by designers to work with people on the fringes of mainstream. Although their needs are different from each other, they share the commonality of having needs that are noticeably different or require adaptation to mainstream solutions. In his research Huynh identifies three key fringe groups:

1. people with special needs: a design process which hopes to "counteract the shortcomings of mainstream design" (2015 p. 14).

2. extreme users: a design process in which extreme users are observed as a means to identify opportunity because their “needs are amplified and their work-arounds are often more notable” (2015 p. 15).
3. lead users: a design process in which users are identified as innovators because they need and/or seek to create “solutions that do not already exist in the marketplace in order to address their unique needs” (2015 p. 15)

If suggesting that audiences can be placed on a spectrum, identifying and working with the “far ends” of this spectrum has been established as being both beneficial and valued. These users who fall under Design by Exception are precisely valued as users or even co-designers (see section 2.3.14) because they actively struggle and work with “with the inadequacies of existing products and services” (Von Hippel et al. 2009, p. 5). Whereas working with mainstream users to develop mainstream designs can result in improved products and services, working with the exceptional users (those on the fringes) inspires “more radical solutions and lead to designs which are truly innovative” (Pullin and Newell 2007, p. 260).

Magnusson et al. propose taking design by exceptions even further. Their approach *Design for me* is a means to design inclusively. Similar to the designing for one approach investigated in this thesis, their *Design for me* works primarily with *profoundly disabled* people. Like Huynh’s proposition that mainstream design is for groups *en masse* and thus designed so, Magnusson et al. propose a single user approach as a means to combat designs that have been *averaged* (2018, p. 93).

Much as in the way that authors in the previous section have suggested that designers are always *taking sides*, defining audiences, defining design requirements... is one of these moments of side-taking. One example of designer interference in terms of audience definition is the creation of personas. Popularised in the 1990s as “hypothetical archetypes of real users” (Cooper 1999, 124), they are a means to make known, visualise, remember and engage with the extreme qualities of potential users (Grudin and Pruitt, 2002 p. 3). Personas, after they are created, are generalisations or representations of (fictional) users of a product or service; they *stand-in* for a user during the design process (Pruitt and Adlin 2010, p. 32). Often resulting in a poster or power point slide, proponents applaud their ability to translate gathered design research data (from interviews and focus groups to statistics and demographics) into

Figure 17: Top highlighted phrase in the article entitled The Problem with Personas (Peterson 2016).

You do not know your user just because you named her Susan.

useful design touchpoints (Pruitt and Adlin 2010, p. 36). Within design education, they are promoted as a tool for understanding; a way for design students to step outside of themselves and “recognise that different people have different needs and expectations” (Dam and Teo 2020). Next to this, they are seen as a way for students to become more empathetic and user-centered (Jones et al. 2008, p. 1).

But they are not without critique. In use, personas often fail because they are created in *isolation*, without any participation of the user and *imposed* upon the designers and thus not used (Flaherty 2018). Next to these shortcomings, Chapman and Milham suggest that, because they are created from so many data sources (from personal observations to transcribed interviews to photo journals), personas are *impossible to verify* in terms of their accuracy (2006 p. 3). This *impossibility* is seen as being a god-like interference on behalf of the designer who brings the fictional character to life (2010 p. 3). Seen to be one of their strengths, is that they bring into view variance and provide a designer with a reference point that is different than themselves. It is to remind them of a person’s difference; a face and background story as to why they may behave, use or understand a design differently to that of the designer. But as Julie points out, designers cannot leave their own perceptions behind; “we bring certain ways of ordering to the world when we cast ourselves “in here”, looking “out there” (2011 p. 691). In their investigation of how personas work in this space of ‘otherness’ Cabrero et al. identify gross shortcomings: their possessing a lack of *local relevancy*, the people represented were oversimplified and stereotypical, or based on preexisting bias. They conclude that personas are best if created as “self-representation, rather than a representation of ‘the other’”, shifting from a position of “us/you” to that of being a representation of “me/us”. (2016 p. 1).

This idea of achieving ‘us’ is an interesting construct. In a recent speech on this subject, Google creative director Tara McKenty reflected on something Michael Gulf, previously designer at both Microsoft and Adobe, had told her: *you can only innovate for yourself* (Creative Mornings, Sydney, 2019). “It’s really simple,” McKenty went on, “You can’t truly innovate *for* an audience, you need to understand them completely. And unless they’re involved in the design process, no one’s going to be able to innovate as well as that particular audience or demographic or community” (Creative Mornings, Sydney 2019). This idea of audience is radically different than segmented market demographics. It shifts the role of a consumer into someone who is able to articulate their own needs and desires instead of only desiring things made for them. It invites them to create their own persona(s).

A process in and of itself, achieving *understanding a user* asks a designer to make room for participation: a collaboration between designer and audience (see section 2.3). For Fuad-Luke et al., initiating a collaboration between designers and users offers this understanding. For him, the word collaboration implies responsivity. A non-linear approach, it allows for contributions that flow two ways. It shares the goal of information gathering, but also achieves the goal of becoming informed (Fuad-Luke et al. 2015 p. 82). This *understanding a user* also requires an entirely different sort of design process, one in which the focus lies not in artefacts, but in “problem identification, targeting objectives and audiences, immersion into research, implementation of a design thinking and strategy and overall collaborative, multidisciplinary approach to problem solving” (cited in Resnick 2016, p. 16).

This idea of becoming informed through problem solving is what the research component of the design process entails. Design being inherently social is not enough, nor is it enough to simply acknowledge that users are by nature a part of product or service when it is in use. For designers, the question remains where in this process this *understanding of a user* should occur and how? For design education, the question is how can it become a place that promotes and provides the student social and collaborative design experiences? Specifically for this research, how is designing for one facilitating designer-audience collaboration and what is the impact of its inclusion?

2.2 The process of designing

This section looks at the design process; how a designer moves from idea to product and explores the moments in which concepts are materialised. Looking at the connection between a designer's process and design thinking, this section also explores creativity; what are the elements that distinguish creative solutions from solutions? What are factors that contribute to creativity? Looking at creativity theory as a means to disrupt existing design processes, this section also identifies potential strategies for instigating creativity within the design process.

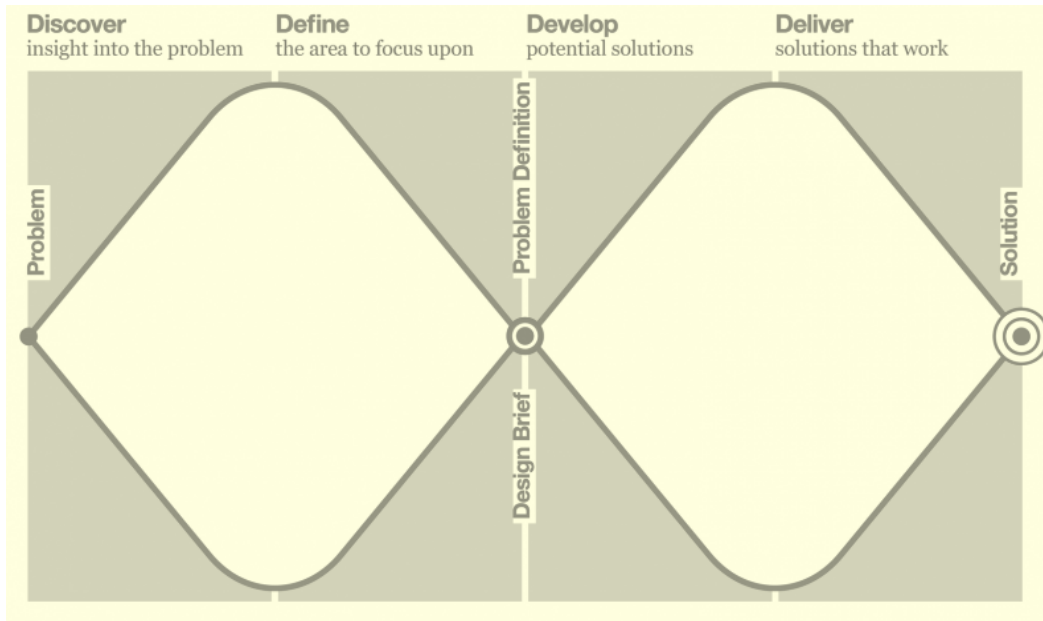
2.2.1 Bridging the gap

Looking to define the space where this *understanding of a user* can take place, a good, if not slightly flippant definition of the design process is “what it is that goes on in designers' heads when they attempt to bridge the gap between design problem and design solution” (Sharp 2007, p. 3). This *going on in the head* leaves a lot of room for influences and there are a lot of different strategies at play in organising them. Divided into types of actions, the process requires *defining* the problem and trying to *solve* it (Buchanan 1992, p.15). For Brown, this process can best be described as *spaces* instead of “a predefined series of orderly steps’ and within each space particular activities occur which “form the continuum of innovation’ (2008, p.4). Although there are hundreds⁵ of visualisations of the design process, the British Design Council's Double Diamond is one of the best known and recognised design process visualisations (Ball 2019, Lipiec 2019, Norman 2013, p. 219).

Although critiques of the Double Diamond Model lament its linear construction (Drew 2019, Gauhman 2017), what it does well is visualise the the design process for both lay people as well as experts. It demystifies the process by providing those that use it as a model a clear goal within each phase. What it promises is that the solution one arrives at will be a solution, not because it simply materialised, but because its design is based on insights gathered and decisions made throughout the entire

⁵ See Dubberly Design Office's catalogue of design process visualisations: http://www.dubberly.com/wp-content/uploads/2008/06/ddo_designprocess.pdf

Figure 18: Double Diamond Model (British Design Council 2005).



process. Next to the phases themselves, the strength of the Double Diamond Model is its bringing into view the “process of exploring an issue more widely or deeply (divergent thinking) and then taking focused action (convergent thinking)” (British Design Council, 2019). Although the Double Diamond has recently been adapted (to be less linear), and has changed its name to “Framework for Innovation⁶”; it remains a means for designers to make their approach understood so that clients and organisations can see the value of investing in the various phases of the process. Next to this, it is a tool for organisations and companies to think in a more strategic, designerly way.

This idea of design as innovation is what underpins *design thinking*. Design Thinking is the application of how “professional designers problem-solve” to the problems that organisations, companies or people groups have (Kimbell 2011, p.285) or as Brown defines further as matching “people’s needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity” (Brown 2008, p. 2). This synthesis of information (data) into ideas and solutions is what some consider to be the magic of design (Kolko 2011, p. 24).

⁶ <https://www.designcouncil.org.uk/news-opinion/what-framework-innovation-design-councils-evolved-double-diamond>

Design thinking then, is a way of working that “emphasises the intangible work done by designers” and attempts to turn this *magic* into a process accessible to those working outside of design (Kimbell 2011, p. 289). Turning this around, design thinking then also provides a way of extending design into new or ‘non-design’ problems, suggesting that “designers can turn their hands to nearly anything” (Kimbell 2011, p. 287).

One advantage that design thinking offers is its freedom from discipline. It is not called *Graphic Design Thinking* or *Product Design Thinking*, instead it is broad; focusing on design as an application instead of a discipline fixated on output. Buchanan notes:

“It is tempting to identify and limit specific design professions within each area- graphic designers with communication, industrial designers and engineers with material objects, designers-cum-managers with activities and services, and architects and urban planners with systems and environments... Properly understood and used, they are also places of invention shared by all designers, places where one discovers the dimensions of design thinking by a reconsideration of problems and solutions” (1992, p. 10).

The design process then, is a filtering exercise, perpetually eliminating ideas which insufficiently offer a solution. Kolko considers this process of synthesis to be “the most critical part of the design process” (Kolko 2011). It is more a challenge to synthesise than a challenge to come up with ideas:

“The path is constantly being molded and re-shaped by events and findings... In time, we face a moment in which a clear path forward unfolds. It is that point in the cycle where synthesis and divergent thinking, analysis and convergent thinking, and the nature of the problem all come together and resolution has been captured” (Plattner et al. 2012, p.1).

This moment of creative insight, or illumination, is where research is transformed into a direction. This revelation is what Nemiro describes as “a sudden change in perception, a new idea combination, or a transformation that produces an acceptable solution to the problem at hand” (2004, p. 8). It is what Jonson describes as an ‘aha’ moment or ‘sudden breakthrough’ (2005, p. 620) and what Warr and O’Niell compare to science’s ‘eureka’ moment (2005, p. 120). These are the rare moments that the design

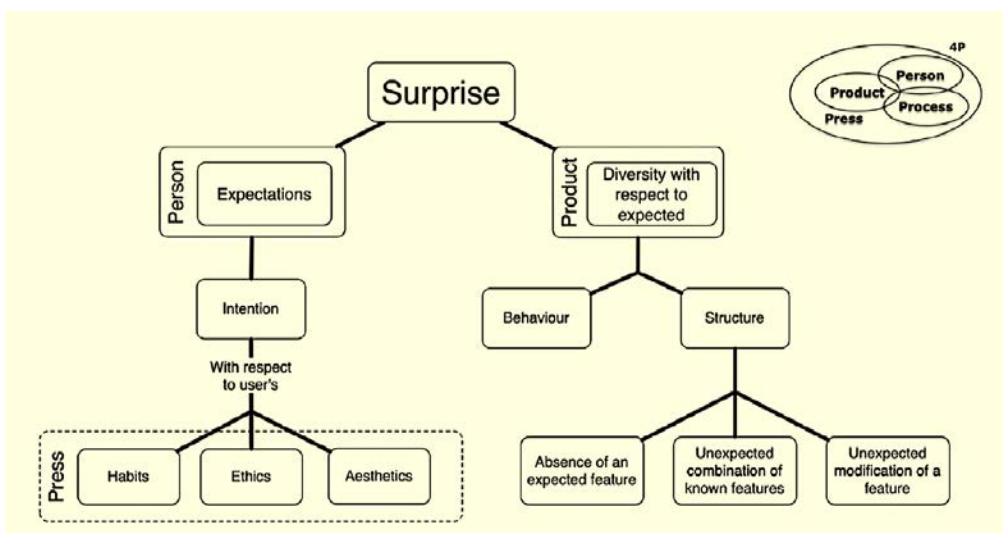
process is supposed to provide; ideas that feel almost spontaneous, but are rooted in process insights.

2.2.2 What unexpectedness offers design

In literature surrounding design creativity, this idea of surprise and unexpectedness is not necessarily exclusively experienced by the designer (maker) but rather by the audience. The designed thing itself (the product, object, design, etc.) is the “embodied form of the concepts originated by a designer’s mind, whatever its form or appearance” (Becattini et al., 2017, p. 33). It is this audience’s reaction to this embodied form (the designed thing) that runs counter to expectations both in terms of their own person expectations of what could have been made as well as expectations of what was made.

Becattini positioned this idea of surprise within Rhode’s seminal text on creativity, relating the origins of surprise directly to the overlapping workings of Rhode’s four dimensions of creativity: a) the person, b) the process (ideas), c) the press (environment) and d) the products (outcome) (Rhodes 1961, p. 307). Having gathered and analysed definitions of imagination and creativity, Rhodes described creativity as the “phenomenon in which a person communicates a new concept” (1961, p. 305). In short, he suggested that these four dimensions were intertwined; this phenomenon (the designed thing), was developed by a person going through a mental process and

Figure 19: N. Becattini et al.’s diagram about the characteristics that potentially trigger the emergence of surprise (2017, p. 34).



refined based on this person's understanding of a given context (environment) (Rhodes 1961, p. 305). In short, these creative dimensions mutually influence each other; the 'tuned in' person is responding to the thought-provoking and inspiring environment, and this person then considers various options before developing a novel concept (Rhodes 1961).

While the dimensions of creativity stop there, Rhodes went on to reflect on the idea of newness. His definition reflected specifically on, "how new the concept must be and to whom it must be new" (Rhodes 1961, p. 305). Clearly for Rhodes, the element of freshness or originality also played a role. At nearly 60 years old, many academics have attempted to further define creativity or add to Rhode's 4 P's across various disciplines. Carrying on within this vein, creativity researchers Runco and Jaeger (2012) as well as Simonton (2016) and Glaveanu (2019) surveyed creativity literature and offered definitions of creativity, through time and across disciplines, identifying a range of values related to creativity.

Table 3. Values (Non-exhaustive) associated with the action or result of creativity summarised from Runco and Jaeger (2012), Simonton (2016) and Glaveanu (2019) and adapted by the author.

Values	Author
"pregnant with truth"	(Bethune 1839, p. 12)
"blending of one's own style with the results of outer stimulus" and "valuable inventiveness."	(Royce 1898, p. 145)
"Practicality" that supports or makes "transformations in the world"	(Hutchinson 1931, p. 393)
provide effective surprise	(Bruner 1962, p. 18)
"Worthwhile" and "compelling"	(Cropley 1967, p. 67, p. 21)
"appropriate"	(Jackson and Messick 1965, p. 313)
"relevant"	(Kneller 1965, p. 7)
Done under "some degree of evaluative restraint"	(Guilford 1950, p. 453)
deviating from the "traditional or status quo", "novel work that is accepted as tenable or useful or satisfying by a group" and "the <i>distance</i> between what he [or she] has done and what has existed is quite marked"	(Stein 1953, p. 94)

“Uncommonness” that is “adaptive to reality”	(Barron 1955 p. 479)
“fit and appropriateness”	(Runco 1988, p. 4)
“relevance and effectiveness”	(Buchanan 1992, p.12)
“surprise” and “unexpectedness” and “value”	(Boden 2007, p. 85)
“intentional novelty”	(Weisberg and Hass 2015, p. 119)

Post analysis, Runco and Jaeger developed their own standard definition of creativity, which stemmed from this range of values. First they articulated what they thought creativity was not: “if something is not unusual, novel, or unique, it is commonplace, mundane, or conventional” (2012) and followed with a definition of creativity that prioritised the *novel* and the *original* and added to it the importance of *effectiveness* (2012):

“Originality is vital for creativity but is not sufficient. Ideas and products that are merely original might very well be useless...A truly random process will often generate something that is merely original. So again, originality is not alone sufficient for creativity. Original things must be effective to be creative.”
(Runco and Jaeger 2012, p.92)

Although Runco and Jaeger’s definition has been widely accepted within the field of creativity as being robust, this particular thesis also draws on an even earlier definition, developed by Stein. Stein (1953) believed that creativity was a combination and an awareness of three contributing factors:

1. Work that is creative tends to be **useful** for some group involving social judgement and appraisal of the usefulness
2. Creative insight includes the reintegration of “existing materials or knowledge, but when it is completed it contains elements that are **new**” (p. 311);
3. Requires an ability to separate internal and external creativity (what Boden later refers to as separating personal from historical)
(Stein 1953, Boden 1994, Runco, 1996)

There is a clear overlap between Runco and Jaeger's and Stein's definitions, with one notable exception. Much like academic disciplines in which peers help to articulate an author's relevancy, this idea of distinguishing internal (personal) from external (historical) creativity draws on the necessity of seeing the relevance of creativity within different contexts. Within education, this distinction is particularly important. Students are expected to be responsive based on what they know and understand. In other words, students build upon competencies. New experiences, environments, problems, tools, etc. can be *personally new* to each student. However, the lecturers, as experts, form a sort of *historically new* litmus test for the student's work. Although the potential for *historically new* work exists, lecturers orchestrate student experiences in order to stimulate and celebrate a student's 'new to them' *personal creativity*. In this thesis, then, a distinction is made between personal vs. historical (contributing knowledge for an entire discipline) creativity. The bulk of the research carried out in this thesis is focusing on the *personal creativity* of students and thus referred to in terms of recognising their experiences as being both *novel* as well as *valuable*.

2.2.3 Creativity as something someone is vs. something someone is paid to do

This idea of describing creativity in terms of outcome was further explored by Guilford. He suggested it was less about external contributing factors, and more about the identity and personality of the *creative* person themselves (1950, p. 12). Stein confirmed this. Creative people, he suggested, had greater sensitivity in identifying "the gaps or the lack of closure that exist in the environment" (Stein 1953, p. 312). These gaps formed problems that these *creative people*, already keen identifiers of problems, could help to solve. Because designers work inherently within problem-spaces, (student designers work to solve problems set about in briefs), they can also be seen to be a collection of *creative*, problem solving people. Because this thesis focuses on designers, it is prudent then to differentiate the creativity of the artist vs. that of the designer.

In their study on how *creatives* see creativity, Glück et al. suggested that *creativity* might actually be "different for persons doing different types of creative work" (2002, p. 56). When they considered the independent artist (painter, sculpture, etc.) vs. the

commissioned designer-maker, this difference was marked, most notably by certain constraints:

“For example, a painter can choose his or her themes of work, style, and time schedule much more freely than a graphic designer, who is doing a similar type of work but on a given topic, often in a predetermined style, within a financial frame, and under time pressure.” (2012, p. 56).

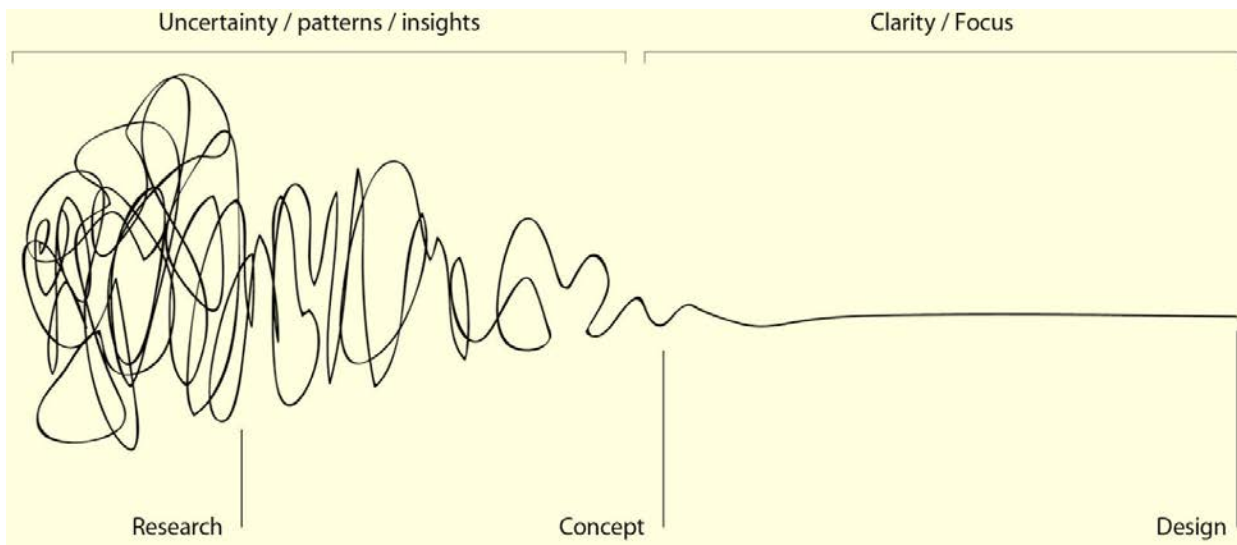
For many, creativity is linked to the idea of freedom; the freedom to work without constraints. However, Glück et al. suggested, that for designers, they fall under the title of *constrained artists*. They work within the “reality of professional creative work”, with “various constraints, such as limited financial resources, technical possibilities, and even external demands regarding the style of the creative product” (2002). Drawing a link, then, to design education, these constraints parallel coursework, which is often prescriptive. It offers predefined outcomes and often imposes documentation requirements on the student designer’s process. It often offers little or no budget for crafting and includes timing that is limited in scope (kept often to a mere hours in a day over a couple of days a week), etc. For the real-world designers in Glück et al.’s study, they regarded function as a priority over originality, valuing instead “creative ideas within a framework of constraints, and the value that creative work has for others” (2002). In saying this, within design, then, relevance has always played an important part in creativity and specifically within designing for one, this idea of relevance, and the value of creativity within constraints will be explored.

2.2.4 Opportunities for creativity in the design process

If creativity within design takes place within restraints, then there is value in analysing design processes and trying to identify areas that contribute to or could be altered to contribute to creativity. The design process (how designs come to be) is specifically made to generate multiple options, and it is this plenitude of options that allows the design process to be riddled with potential missteps.

Whereas the Double Diamond segments the design process into assessing goals of research and intention of a design, another visualisation of the design process that brings the plenitude of design choices into view is Newman’s *Design Squiggle* (2007). Beginning seemingly out of nothing, its chaotic initial design line highlights the

Figure 20: The Design Squiggle (Newman 2007).



messiness and chance related to designing (see Figure 20). This messiness is what many refer to as ‘the fuzzy front end’ of design where “it is often not known whether the deliverable of the design process will be a product, a service, an interface, a building, etc... The goal of the explorations in the front end is to determine what is to be designed, and sometimes what should not be designed” (Sanders and Stappers 2008, p. 1). Within the *designing for one* approach, this fuzziness is important; it leaves questions without answers, gaps that need to be addressed, contact with various influencers and participants for feedback and critique, etc. It is precisely within the fuzziness that creativity takes form. It is here the ideas and contexts are “blended” together as Royce suggested (Royce 1898, p. 145), or are negated or moved forward depending on what Cropley called their being “worthwhile” or “compelling” enough (Cropley 1967, p. 67, p. 21), where ideas are co-created through participation with users and contexts and continually restrained by evaluation (Guilford 1950, p. 453) and adapted to a participant’s reality (Barron 1955 p. 479). In short, any uniqueness does not come by chance, but is shaped by the decision making process, and these decisions are wholly intentional (Weisberg 2015, p. 119). Looking later at designing for one, this intentionality is mirrored by design educators who orchestrate or set up their students’ learning experiences (and thus their students’ intended design processes); these unique experiences, although it is always a risky process in which it is unknown precisely how they will play out, do not come by chance.

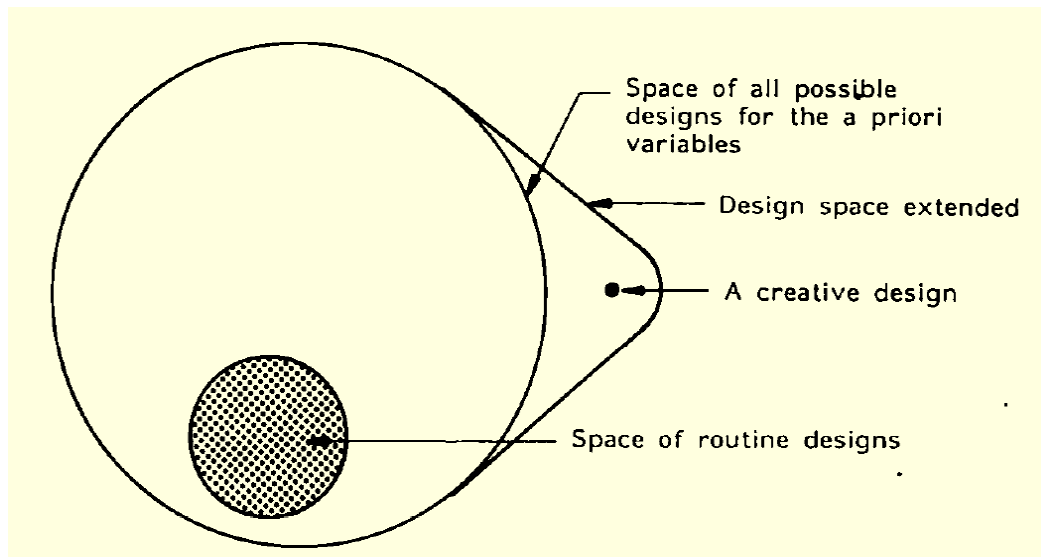
In his seminal text on design process, Lawson proposed that design always involves compromise. There are no “optimal solutions to design problems but rather a whole range of acceptable solutions (if only the designers can think of them), each likely to prove more or less satisfactory in different ways and to different clients or users” (Lawson 2006, p. 121). Referring back to Stein’s factors for creativity, the need for a design to be *useful* fulfills Lawson’s first requirement. Unlike a math equation which leads to one particular result, or a science experiment which leads to an expected result, even the most *beautiful* and *perfectly designed thing* is merely the end-point of a long list of choices that all indirectly/directly or insignificantly/significantly impacted the end result. This re-integration of known or gathered knowledge is a partial fulfillment of Stein’s second point; fully realised when the design offers the users or audience a solution that was previously unknown to them or in some cases inaccessible to them, thus *new*.

2.2.5 Extending the design space

The design squiggle itself alludes to the inherent ‘possibility’ that exists within the design process; the possibility for different influences to lead to alternative directions and therefore other designs. It is precisely these alternatives and new influences (illustrated in the Design Squiggle with lines intersecting and looping back upon themselves) that are central to the *surprise* and *unexpectedness* that creativity requires (Boden 2007) and what creativity counters against *expectations* (Becattini 2017). However, the squiggles and their possibility do not always lead to a *creative* design. They may lead to both suitable and beautiful solutions, but they might not necessarily lead to *unexpected* or *relevant* ones. How then, can students and experienced designers alike who actively and repetitively work within a design squiggle achieve creativity? Whether one sees creativity as an outcome or as a personality trait, the actions within the design squiggle become natural and ordinary. How, then, can designers stave off falling victim to *normality*, in which a design or designing becomes so routine that all of the variables in the decision-making process “are known *a priori*” or already known (Gero and Kumar 1993, p. 220)?

One of the ways in which creativity theorists Gero and Kumar suggest as a means to combat normalcy (the already known and expected solutions) within design is to

Figure 21: Space of routine and creative designs (Gero and Kumar 1993, p. 221).



extend the design space; quite literally moving the action of designing (and thus the designer) into an unfamiliar design space (Gero and Kumar 1993, p. 220). In short, confronting the designer with *otherness*. Boden called this positioning *exploratory creativity*; extending the design space beyond simple *unfamiliar combinations of familiar ideas* (2007, p. 85). For the design educators, this involves creating briefs which bring the unfamiliar into the classroom. It can involve setting briefs that emphasise knowledge gaps or requires understanding user groups that are outside of the students understanding, limiting their ability to design for themselves. Boden went so far as to suggest that bringing unfamiliar variables into the design equation could impact a designer's experience and outcomes so much that it could potentially cause designers to call into question the limitations of their own disciplines or could even over time potentially generate new areas of practice. The unfamiliar, she suggested, enables "someone to see possibilities they hadn't glimpsed before. They may even start to ask just what limits, and just what potential, this style of thinking has" (Boden 2007, p. 87).

To illustrate this, Gero and Kumar's Space of Routine and creative designs (1993) (see Figure 21) sheds light on the impact of an extended design space. Using the graphic design discipline as an example, the standard design problems presented in classes from clients or to students in project briefs fit well within Boden's *unfamiliar combinations of familiar ideas*. Schön compared these student experiences to that of a practitioner specialising in an area of practice. This idea references Schön's theory

about educational contexts in which specialised *practice is being practiced* (2017), enabling an emerging designer to specialise within their discipline by creating a “repertoire of expectations, images and techniques” that they can draw upon when working in similar cases in the future (2017 p. 60). Although responding to a standard graphic communication problem requires a design process, by its nature the process is *routine*. This routine is the practicing of practice, working with Schön’s ‘repertoire’ of known and familiar variables: medium, layout, format, colour palettes, type of imagery, use of language, etc.

For the student working in this space, there is little that is not understood or unfamiliar. To take this example further, if one was to request a poster from a graphic designer, the idea of a poster is understood by both parties. The format, colour, content, typographic alignment, etc. may be unknown, but there is little that will change the fundamental ideas behind what a poster is, its material and its purpose. Related to *practicing practice*, these familiar variables can each be used in unlimited combinations to produce every possible graphical outcome. Whilst experimentation within these familiar variables is still important to the graphic design discipline (and for student designers to be aware of), referring back to both Runco and Jaeger’s as well as Stein’s definition of creativity, this experimentation does not equate to novelty or newness, nor does it deliver the unexpected or extend its function. Rhodes’ 4 P’s of creativity are still intact (a person, a thought process, a context and an outcome) but even as he inquired: how new is the concept and for whom is it new? Continuing with the example of graphic design, there is still room for it to be creative as defined by the aforementioned thinkers, but the experimentation (if any) will nearly always relate back to the parameters and intent of the outcome that was predefined by the brief. For Gero and Kumar and Boden, the newness that is sought after will fall short if the designer’s process is not confronted with elements of unfamiliarity. This notion of unfamiliarity is equally compelling for designing for one. As an approach, how is its application moving design education beyond practicing practice? If it is found to be extending the design space, what is contributing this extension?

2.2.6 Related terminology and constructs

Three additional terms which relate to an extended design space are discursive design, critical design and the idea of defamiliarisation. When design leads to unexpected results, which counter the expectations of the users, the client or the designer, the approach can be considered discursive. Within discursive design, the primary purpose of created products is to *communicate ideas* and to *encourage discourse* (Tharp and Tharp 2013). As with Boden's suggesting that designing within new spaces holds the potential to cause designers to question the limitations of their disciplines, in design processes in which designers become familiar with previously unfamiliar contexts (ie. systemic *wicked* social issues or in contact with marginalised or disadvantaged communities), the designs created can function not only as outcomes, but as tools that spark debate or mediate discussion, even if the discursivity is unintentional. Next to this, by designing in these extended spaces, designers may be *critiquing the norms*, and focusing on "*why we design instead of how and what we design*" (Dunne and Raby 2001 referred to by Johannessen 2017, p. 3.). This idea of critical design challenges assumptions not only in terms of designed objects and *future consequences*, but in terms of users and their complexity as individuals (Critical Design, 2020). As a practice, both discursive and critical design counter the *routine* in design by intending to "slow the interaction with objects and afford meaningful and questioning engagement...challenging the ubiquitous interaction with products" (Malpass 2017, p. 4).

Finally, another concept that resonates with this idea of calling the routine into question is Shklovsky's idea of *defamiliarization* (Shklovsky, 1917, p.16). A technique often referred to within literature, defamiliarization "compels the reader to examine their automated perceptions of that which is so familiar that it seems natural and so unquestionable" (Bell et al. 2005, p. 151). Design can use this shift from familiar to unfamiliar as a means to open the design space; to call things into question. In fact, Bell et al. suggest that places in which there is too much familiarity demand it (2005, p. 149). Not a scientific approach, Bell et. al. suggest it is a lens that designers can use to see design practice in *new light* (2005, p. 154).

This metaphor of a lens by which designers see the world offers the opportunity to suggest that there are other lenses. Design is, in a sense magically making sense of

chaos, and yet it is proposed through the creativity theory above that this chaos can be initiated and the magic can be learned. If designing for one is seen to be one of these lenses, then, how does it, as an approach enable a designer's change in perception or initiate combinations which lead to new ideas? How does it promote unexpectedness within the designer's process? For the students involved, how does it (even inadvertently) call into question the *why* of a design instead of only the *what* is design? If designing for one is identified as an experience, what are the student designers carrying away from this experience?

2.3 The role of participant engagement

In this section, design participation will be further defined and examined from a range of academic perspectives on how users can be involved in the design process and includes a brief history as to the beginnings of user-involvement as a movement. This section will also touch on various methods used within design research to include and involve participants in the design process, as well as critique on their use. Finally, it will also discuss the role of the designer within this new collaborative process.

As identified within the design process, design participation can be an additive to what the designer already knows. Participation moves creativity away from being the "lightbulb moment experienced by individuals" (Wilson and Zamberlun 2017, p.112) to one where creativity is as it is played out "in groups and cultures" Nussbaum (2013, p. 24). User participation not only enables unforeseen questions and answers to be generated, but also provides a sort of filling of the knowledge gaps. This 'topping up' is what Redström referred to as *creating an understanding of users and their situations or contexts*. (Redström 2006, p.127).

This specific form of understanding cannot be done without a designer's occupancy of the user's space. Greenbaum and Loi suggested that this participation moved design away from fiction into real life, bringing the "less predictable trials of daily life" into the design process (2012, p.82, referring to Suchman 1987). Creating this dialogue between user/context, daily life and designer is fundamentally what participation within design is about. In their literature review of participatory design's ambition as an approach, Bratteteig and Wagner identified three specific intentions of PD: it brings the system into view while aiming to add value to the tools being co-

created, it supports change management when a new tool or process is going to be integrated, resulting in participants who are as a result of the participation *loyal* to the cause, and finally it gives users “a voice in changes that concern them” (2016, p. 142). More recently, ideals such as empowerment, which is fundamental to the ideological leanings of participatory design as an approach, has become the priority intent of the approach instead of the intention focusing purely on design outcome (Drain et al., 2018, p. 1).

2.3.1 The rise of participation

Creating space within the design process for external participation requires openness on behalf of the designer as well as facilitation. It goes beyond the positive or negative feedback designers receive from clients after showing a presentation of initial ideas and goes beyond focus groups conversations. In participatory design, participants are seen to be part of the design team. The process is still led by designers who “manage the involvement of users at various stages to inform the process” (Peters et al. 2018, p. 97). Although this provides only a roadmap for inclusion, participatory design specifically has other motivations. In the *Routledge International Handbook of Participatory Design*, participatory design is defined as:

“a process of investigating, understanding, reflecting upon, establishing, developing, and supporting mutual learning between multiple participants in collective ‘reflection-in-action’. The participants typically undertake the two principal roles of users and designers, where the designers strive to learn the realities of the users’ situation while the users strive to articulate their desired aims and learn appropriate technological means to obtain them”
(Simonsen and Robertson 2012, p. 2).

This definition already foreshadows the effort involved in taking up this type of research. There is a forecasting of exertion; those doing the investigating, the reflecting on, etc. (the designers) are *striving* for understanding and the participants equally are *striving* to meet their expectations. This already places participatory design as a way of doing design that is somehow different to how it was done before or how it is still done elsewhere today.

The term participatory design (PD) traces its roots back to 1970s Scandinavia and a socialist, political ideology which sought to empower workers and foster democracy in the workplace (Spinuzzi 2005, p. 164). These socio-political leanings meant that it had idealistic goals such as supporting resource-weak stakeholders, strengthening disempowered groups, equalising power-relations, democratising the design process and giving voice to those who may be invisible or weaker in organisational power structures (Greenbaum and Loi 2012, p. 82; Ehn 2008, p. 2; Muller and Druin 2002, p. 3). Some of this legacy remains in that one of the prevailing goals of PD is "that the people whose activity and experiences will ultimately be affected most directly by a design outcome ought to have a substantive say in what that outcome is" (Carrol and Rosson 2007, p. 243) and to "empower groups of people whose views, opinions and needs might be the most ignored by mainstream society" (Vines et al. 2013, p. 430). Organisations who then choose to work with these goals in mind are often motivated by PD's proposed benefits.

2.3.1.1 Participation taps into the expertise of participants

Schuler and Namioka suggest that participation makes it possible for the existing skills of participants to be made into a resource in the design process; the users are experts (1993 p. 185). A pragmatic benefit, "users are understood as a source of information and having certain types of expertise that should be intersubjectively shared and exchanged" (Vines et al. 2013, p 430). Although this term 'resource' could potentially have negative connotations, the emphasis here is placed on this idea of skills and expertise, what Sanders refer to as an *individual as authority*, or expert, in their own experiences (2008, p. 12). As participation places these 'experts' into a collaborative role, participation provides them with a shared sense of ownership in the design as well as a sense of loyalty to it; a sense that their own situation, opinion and expertise is valued by the organisation (Bratteteig and Wagner 2016, p. 142).

2.3.1.2 Participation looks to access tacit information

Participatory design can give access to information that otherwise would have been inaccessible.

“When we think of knowledge, we often think of explicit forms of knowledge: things that are written down, defined, categorized, systematized, or quantified. But to understand knowledge-making in participatory design, we have to understand that much knowledge tends to be tacit” (Spinuzzi 2005, p. 165).

Evidence of tacit information impacting a design in terms of a cause and effect is not well documented, but when it is present it is clear to see that participation has the potential to provide dramatic impact on the design⁷. For Taffe and Barnes, tacit information goes so far as having shaped the end-result: *the resulting design would not have been designed without the involvement of participants* (2010, p.398). Bratteteig and Wagner agree, suggesting that the participation should be *materialized*; evidenced in the design itself (2016, p. 142).

2.3.1.3 Participation generates empathy between designer and participant

Engaging with users provides the opportunity for designers to empathise with participants. Kouprie and Visser refer to this in the following design situation:

“Consider a multi-disciplinary design team consisting of marketers, engineers, product designers, usability professionals, etc. The team has received a brief to design a communication product for elderly people, but none of them belongs to the user group himself. How does the design team make appropriate design choices for others who are unlike themselves?” (2009, p. 437)

This idea of understanding the user and his/her life space and experience is central to the concept of human/ user-centered design. By designing empathically (see later section on *Empathy as an example of generated knowledge*), “designers attempt to get closer to the lives and experiences of (putative, potential or future) users, in order to increase the likelihood that the product or service designed meets the user’s needs” (Kouprie and Visser, 2009, p. 438). Instead of basing design decisions on assumptions, empathy moves designers away from working to design requirements to that of “personal experiences and private contexts” (Mattelmäki and Battarbee, 2002, p.266). (See section 2.4.6)

⁷ This statement is based on the author’s own experience as a designer-educator when students work directly with participants.

2.3.1.4 *Participation empowers the marginalised*

Today, many practitioners working under a social design banner are “motivated in part by a belief in the value of democracy to civic, educational, and commercial settings – a value that can be seen in the strengthening of disempowered groups” (Muller and Druin 2002, p. 1). This is aligned to Bratteteig and Wagner’s suggesting that participation gives users a voice in managing things that concern them (2016, p. 142) and Ehn’s positing that “those affected by a design should have a say in the design process” (2008, p. 3). But next to future-users or people impacted by change as in the examples above, Star and Ruhleder see participation working for those ‘marginalized by standardized networks’ (Ehn 2008, p. 8 quoting Star and Ruhleder, 1996); the people-groups who are often neglected or on the fringe of the mainstream (Ehn, 2008, p. 8).

Although this definition of marginalisation supposes a type of ‘otherness’, marginalisation is less about defining what is normal and more about working on the accessibility or barriers of what already exists. This marginalisation or neglect is evident in many design problems. Referring specifically to social design, marginalisation can be found in what is referred to as *human needs* by Margolin and Margolin (2002, p.25), *disadvantaged communities* by Lasky (2013, p. 5), or “excluded from both mainstream society and design” by Ho et al. (2011 p. 95-96). These marginalised participants all have expertise in their own experiences (Schuler and Namioka 1993, p. 185; Vines et al. 2013, p 430; Sanders 2008, p. 12; Bratteteig and Wagner 2016, p. 142) and it is precisely these experiences that make designing for groups of people with profiles other than one’s own, always challenging and necessary (Frauenberger et al. 2012, p. 1).

2.3.1.5 *Participation provides insight into real use and context*

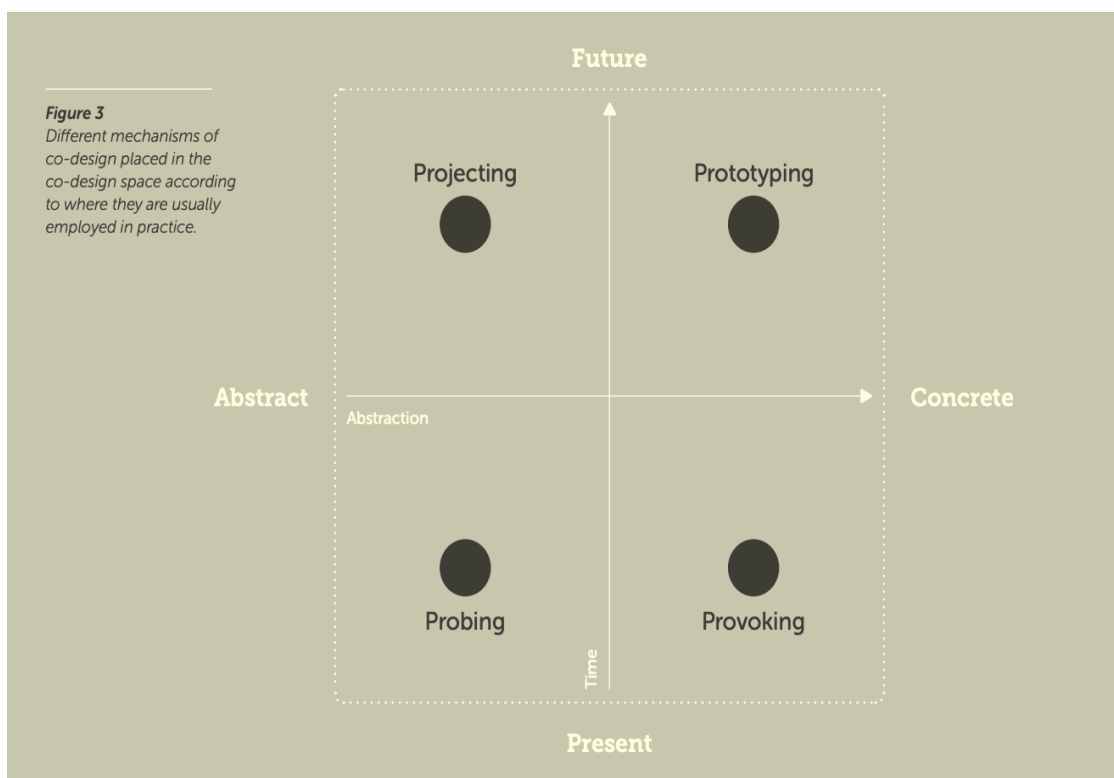
Finally, “participation leads to better informed design” (Taffe and Barnes, 2010, p. 211). For interface and application designers, knowing your ‘user’ is such a dominant theme that it is now accepted as being a critical element in design development (Norman 2005, p. 14). This self-evidence is attributed to the symbiotic relationship between a design and its use. Although Ehn is a proponent of PD, a rigid interpretation of participation, broader ideas about participation are at the core of how designers

approach design and use. There is an urgency for designers to understand not only their audience but also an “increased expectation that it is necessary to understand characteristics of the ‘user’ and the broader situated context of use” (Roth 1999, p. 20).

2.3.2 Processes that enable participation

Next to the proposed benefits of participation is methodology and its tools and approaches that allow designers to gain access to the participant’s own knowledge, experience and opinion. The space in which this methodology functions was referred to by Muller and Druin as being a *third space*; the “practices that take place neither in the users’ domain, nor in the technology developers’ domain, but in an “in-between” region that shares attributes of both spaces...a fertile environment in which participants can combine diverse knowledges into new insights and plans for action” (2002, p. 2). Attempting to articulate the importance of having a framework in which to participate, Muller and Druin said the benefits of participation required more than *just adding users and stirring* (2002, p. 3). Although methods are often viewed as off-the-

Figure 22: Different mechanisms of co-design placed on the co-design space according to where they are usually employed in practice (Zamenopoulos and Alexiou 2018, p. 27).



shelf tools that can immediately be used, methods within PD are seen to be *recipes*, suggesting their adaptability, their responsiveness to localisation and availability. In short, PD methods are *recipes*: simply tools and techniques for doing collaborative design (Simonsen and Robertson 2012, p. 117).

Using the definition of this *third space* as a means to organise the diversity of methods, Muller and Druin identified four major categories of methods for participation: Spaces and Places: *Siting/Context, Workshops*; Narrative Structures: *Stories, Photographs, Dramas and Videos*; Games: *Actions using playfulness as a means of instigating and communicating intent and desire*; and Constructions: *Language, Making Descriptive Artifacts and Prototyping* (Muller and Druin, 2002). In a more recent review of co-design activities, Zamenopoulos and Alexiou map these collaborative practices (what designers do when they engage participants) in relationship to “where they tend to be employed (i.e. what kind of question they typically aim to address)” (2018, p. 27). What is most significant about this visualisation is the idea of participants creating something abstract or concrete while considering their present self and their future self. Design participation facilitates this. Using tools such as cameras, scrapbooks, diaries, logbooks, etc., participants are invited to visualise where they want to go or even prototype it. This diversity allows designer-researchers insights into the participant’s feelings, attitudes, interests, etc.

These insights are evidenced in one of the more influential academic texts on cultural probes. The text examined the use of cultural probes within diverse communities in Oslo, Amsterdam and Pisa. For Gaver et al., cultural probes were selected as a method because they were a way for them to get to know the participants better as well as in turn for participants to get to know them (1999, p. 29). They called their probes ‘gifts’ for participants and each was a package that included area maps, postcards, booklets, etc. as well as other materials. As a designed thing creating Muller’s Third Space, the probes “were designed to provoke inspirational responses” in “diverse communities” (Gaver et al. 1999, p. 22). Having launched the project, they left the probes behind and “waited for them to return fragmentary data over time” (Gaver

Figure 23: A cultural probe package (Gaver et al. 1999, p. 22).



et al. 1999, p. 22). The probes formed a strategy from the position of the designers as a means to better understand the local culture so that the resulting “designs wouldn’t seem irrelevant or arrogant” (Gaver et al. 1999, p. 22). Resulting in a sort of abstract visual understanding, the probes were used to “lead a discussion with the groups toward unexpected ideas without dominating it” (Gaver et al. 1999, p. 22).

What this relatively simple example shows are the basic tenets of what Kensing et al. suggested that every PD approach should possess: an application area (the scope of the approach, what it is that is being explored), a perspective (the role of the participant and the intention of the participation) and some guidelines (the strategy for carrying out the approach, including what activities will be carried out, what tools will

be used to support the activities as well as how the work will be distributed and analysed) (Kensing et al. 1998, p. 1 citing Mathiassen 1984).

Design participation cannot completely shake its intention for bettering products and services, but considering the *perspective* on behalf of the designer orchestrating the participation is a sort of line in the sand. By PD's arguing that *perspective* is important, designers are confronted with defining their ideological positioning between seeing participation as a functional action or its means to empower participants. Drawing an example from Muller and Druin's category of Space and Places, Robins suggests that there are two options for carrying out methods related to locations. "1. Bring the designers to the workplace. 2. Bring the workers to the design room" (Muller and Druin 2002, p. 17 quoting Robins 1999). The seemingly simple decision to carry out research either here in *our space* or there in *their space* can have an impact on not only the results, but also on how the participant feels and the sort of information they will share:

"The selection of site can be a deliberate strategy to introduce new experiences and perspectives to one or more parties in the design process – a de-centering move that can bring people into positions of ambiguity, renegotiation of assumptions, and increased exposure to heterogeneity" (Muller and Druin 2002, p. 19)

Even those working in the field propose their own guiding principles. Mizah Rahman, Executive Director and Co-founder of Participate In Design (PID), an organisation in Singapore that focuses on designing together in public and community space, identifies participation not in terms of designers being able to work with participants, but in reverse: "how can we enable so people can design with *us* and with each other?" (2016, p. 50). More practically worded than the above frameworks, PID's principles, however, resonate with the academic sentiments: "Build relationships, Leverage existing networks, Go to where the people are, Make information accessible, Facilitate (not prescribe), Enlist neutral facilitators, Test and refine, Talk less, do more, Do not present a perfect solution, See people for what they are good at, Build capability over time" (Our Tools, Methods & Principles 2018).

At the heart of participatory design is not a list of methods, but rather a guiding compass such as that above. Those looking to find the names of methods can find any

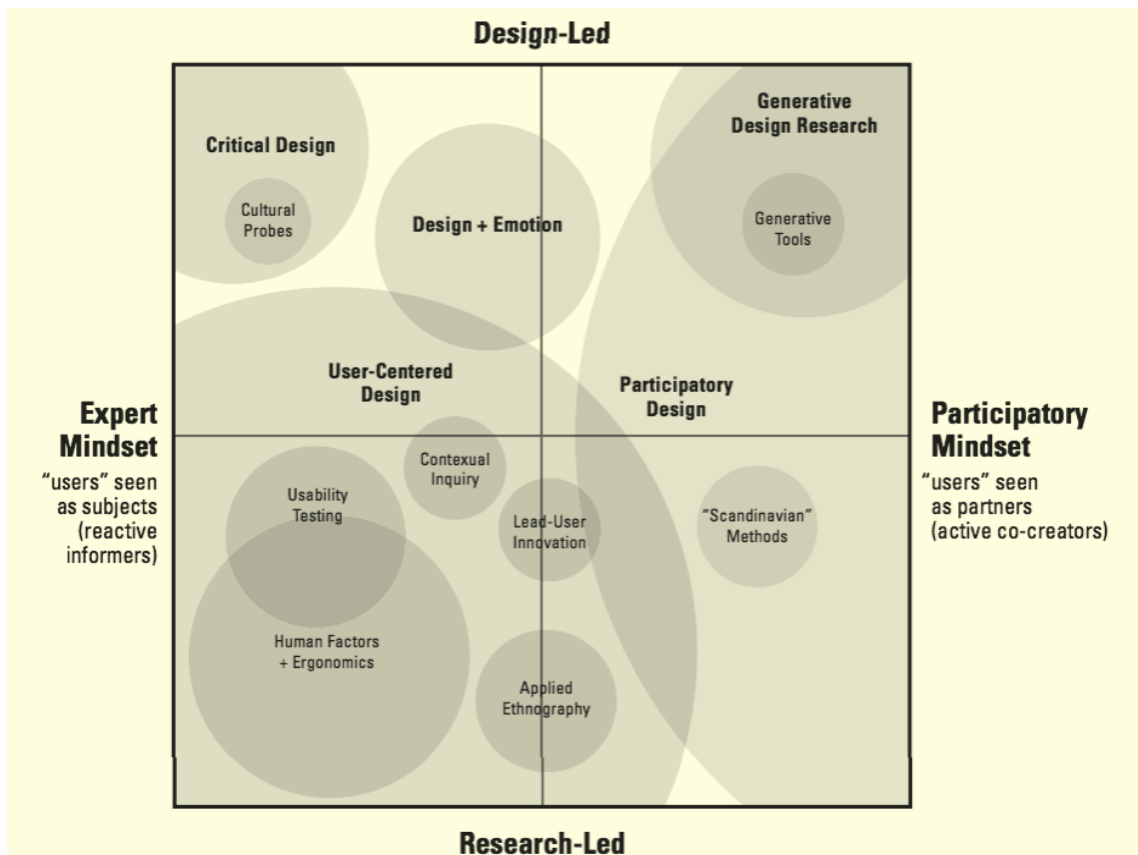
number of approaches online in the form of toolkits and guides, or in literature or books. If the intention is to create the space for users to have a say, to generate mutual learning between all parties and to co-realise whatever it is that is being defined, then designers can adapt the tool accordingly based on their intention (Bratteteig et al., 2012, p. 212).

2.3.3 Mapping the use of participation in design

Although participatory design and co-design each have their own academic following, there are other terms related to design participation that include collaboration in their process but work less from an ideological position. In User-centred design (UCD), the focus is not on the emancipation of a particular user or user-group, but instead it focuses on how a user can contribute to the designed object (the intended result) or what Sanders calls, “the thing being designed (e.g., the object, communication, space, interface, service, etc.), looking for ways to ensure that it meets the needs of the user” (2002, p. 1). In this process, the researcher collects primary data or uses secondary sources to learn about the needs of the user and interprets this information, often in the form of design criteria, which the designer then interprets, typically through concept sketches or scenarios. The focus during this entire process lies on the design development of the thing designed (Sanders 2002, p. 1). Used almost interchangeably with UCD, Human-centered design research involves those who will ultimately use the product or system and strives to bring a social dimension to the design process (Roth 1999, p. 24). Referring specifically to co-creation and co-design, Sanders and Stappers apply these to any act of collective creativity, i.e. “creativity that is shared by two or more people” and “the creativity of designers and people not trained in design working together in the design development process” (2008, p. 6).

To ease the conflict and confusion surrounding the relationship between these various approaches Sanders created a *Map of Design Research-Research Types*, suggesting that the “approaches that, while competing as well as complementary, nonetheless share a common goal: to drive, inspire, and inform the design development process” (2008, p. 1). Divided into two design perspectives, Design-Led on the top and Research-Led on the bottom, Sanders uses this distinction to highlight where the approaches come from (see Figure 24). The research-led perspective is

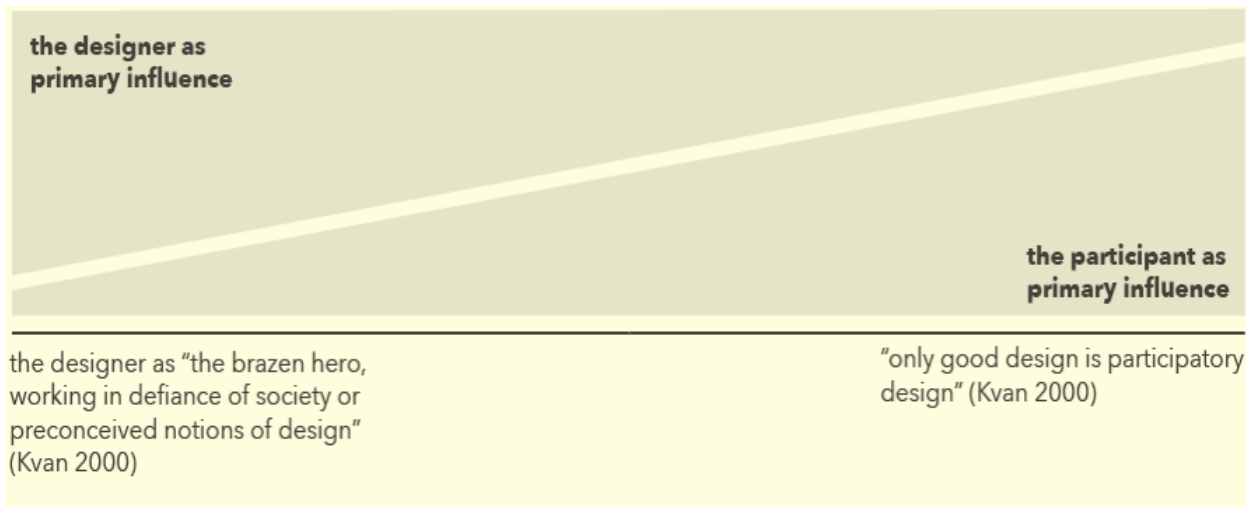
Figure 24: Map of design research-research types (Sanders 2008).



driven by “applied psychologists, anthropologists, sociologists, and engineers” and the design-led perspective from design and the arts (Sanders 2008, p. 1). Horizontally, it is divided into two design cultures, the Expert Mindset on the left and the Participatory Mindset on the right. In terms of the mobility of designers, here Sanders suggests that it is difficult for many people to move from the left to the right side of the map (or vice versa), as this shift entails a significant cultural change (Sanders 2008, p. 2). This may indicate that particular disciplines are more flexible or open to this way of working than others.

Similar to Sander’s *Expert Mindset* and *Participatory Mindset*, Kvan places *participation with others* on a spectrum of ideological positions with one end being those who “hold the belief that the only good design is participatory design” and the other far end being those who champion the idea of the designer as “the brazen hero, working in defiance of society or preconceived notions of design” (2000, p. 411). For Kvan, designing is an action that always involves others on some level (2000, p. 411)

Figure 25: Mapping of Kvan's sliding scale of collaboration (Wilkinson 2016).



and this is illustrated in Figure 25. Between these two extremes Kvan places a sliding scale of collaboration, with “each participant contributing what they can in different domains of expertise at moments when they have the knowledge appropriate to the situation” (2000, p. 411). This sliding scale of collaboration or influence allows room for differing definitions of participatory design, such as those who only recognise studies carried out as being ‘participatory design’ if the end-users are full-participants (Muller and Druin 2002), or those that emphasise “co-research and co-design where researcher-designers must come to conclusions in conjunction with users” (Spinuzzi 2005, p. 167).

This idea of collaboration, giving voice to others in the design process, allows designers to seek support or feedback at any stage from anyone who is deemed to be able to provide support. Kvan’s model makes no distinction between participants who are fellow designers or technical experts or potential users who are co-creating. Participants simply offer influence; at times explicit and at other times less so.

2.3.4 Designer Roles within Design Participation

Just as Kvan suggests that design is by nature participatory, other academics have tried to isolate the different roles that designers take within the design process. Tomico et al. do this by naming the designer perspectives in relationship to the context of the problem space (2012).

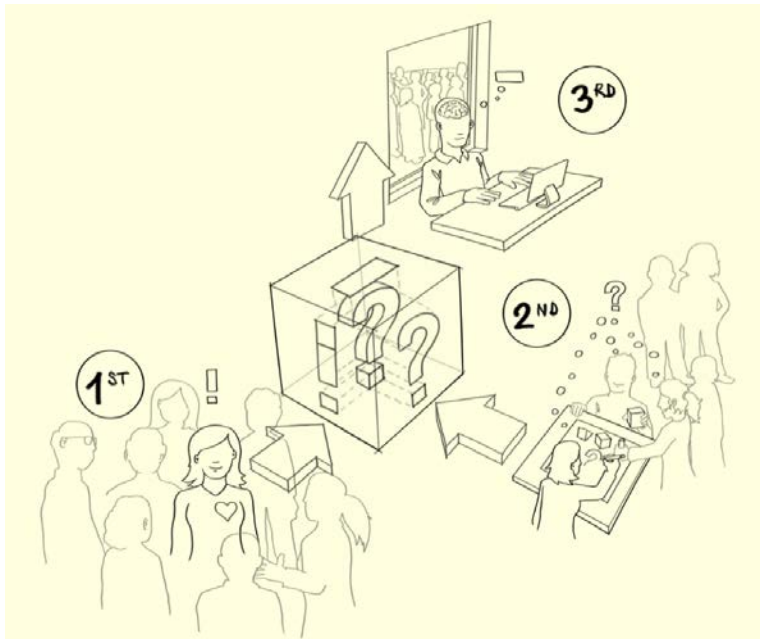
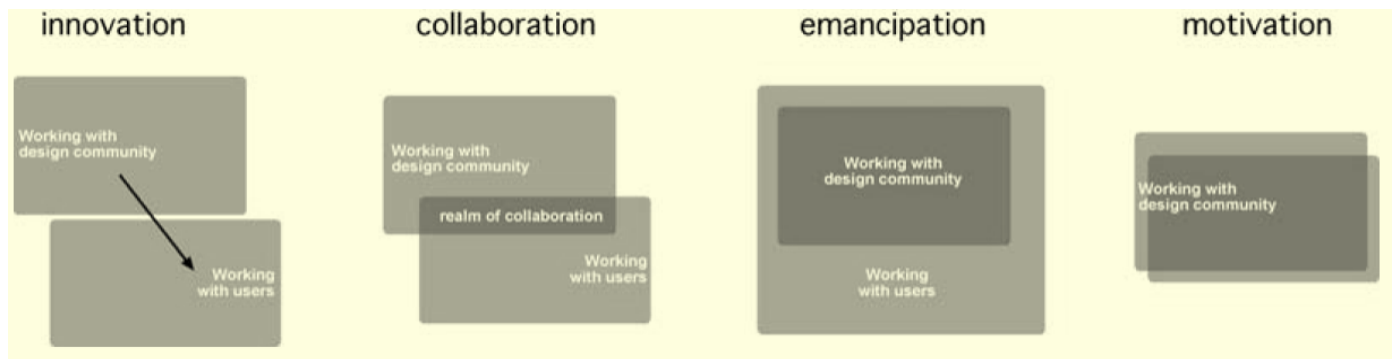


Figure 26: The three basic perspectives in design: the first-person perspective (e.g., own experience in the context), the second-person perspective (e.g., co-design in the context), and the third-person perspective (e.g., desk research detached from the context). (Smeenk et. al 2016, p. 33 referring to Tomico et al. 2012).

In the *first-person perspective*, the designer has his/her own personal experiences and/or knowledge of the context or problem space; it is not something that needs to be discovered. Instead designers create things which are influenced by their own experiences (Smeenk et al. 2016). In the *second-person perspective*, the designer collaborates with others within the context. The designer takes on the role of facilitator and collaborates with users and experts who are active within this context. Finally, in the *third person perspective*, the designer is no longer physically working within the context, but rather carrying out desk research about it. The designers are working and functioning either as experts or as desk researchers and take “an objective view and design *for* people without involving users and professional experts, non-situated” (Smeenk et al. 2016, p. 33).

As with Tomico et al.’s description of design participation, design educator and facilitator Lee also maps four types of design participation in her chart *Four types of Design Participation* (2006, p. 9). In it, she first looks to map where Design Participation happens and identifies this across three areas: the designers’ space (abstract and expert space), the realm of collaboration (a space between designers and people) and users/people’s (concrete or *the people’s world*) space (see Figure 27). Next, she maps the participation’s purpose; to *innovate* (initiated by designer-only), to *collaborate* (driven by the designer), to *emancipate* (driven by the user) or to *motivate* (requested

Figure 27: Four types of Design Participation (Lee 2006, p. 9).



by the user). These four purposes are all instigated by the designers themselves but also involve different types of interaction between the designer and the user (Lee 2006). Lee’s mapping brings the question of designing *for* or designing *with* into view by proposing that designing for innovation or collaboration are *mission-oriented* and are working towards a specific aim. “For them, knowledge is reduced to its instrumental value. They are conducting Design Participation activities only for people, while the ‘emancipation’ practitioners are designing with people” (Lee 2006, p. 9).

Unlike the other forms of collaboration, which are designer-initiated, what is taking place in Lee’s ‘motivation’ category is people designing themselves, or DIY. Here she proposes that the formal design community is not involved. If designers are involved, it is because they are part of the community itself.

Although the terminology Lee uses is not necessarily transparent, the strength of this model is that it reinforces the voices of others who suggested that design is inherently social. For Lee, the notion that designers do not work without some form of participation, even if they work from an expert position (see Figure 27). In the simplified version on the next page (see Figure 28), this overlap (what Lee calls the realm of collaboration) becomes more clear. It specifically sheds light on how a designer working without direct participation is still impacted by the context of the thing being designed, through a sort of shadowing that could be further defined as secondary research sources (literature, demographics, etc.). This proposes that not all design needs to be created in direct participation, but rather shifts importance to understanding the context, or what Lee refers to as the “space in which we (the user/participant) lives” (2006, p. 2).

Figure 28: Types of Design Participation based on Lee 2008 (Wilkinson 2016).



2.3.5 Participatory methods and critique

In order to welcome participation in the design process, the challenge is how to engage and motivate people to participate and allow for this engagement in a way that is appropriate and inclusive for participants (Sanders et. al 2010, p. 1). For designers hoping to work in this area but with limited experience, there is no shortage of resources available. Card-sets such as IDEO method pack⁸ (see Figure 29), Designing with Intent⁹ or SILK cards (Social Innovation Lab for Kent)¹⁰ offer a tool-per-card approach on how to collaborate with people. Conceived as a research tool for human factors specialists and their clients, the IDEO cards are “to be used by researchers, designers, and engineers to evaluate and select the empathic research methods that best inform specific design initiatives” (IDEO 2002). The range is diverse and the titles are welcoming and familiar such as: *Fly on the Wall* (unobtrusive observation in situ), *Shadowing* (following someone throughout their day) or *Quick and Dirty Prototyping* (using everyday objects to create a prototype of a potential product), etc.

There are also many websites and toolkits relating to design thinking, social design, human-centered or participatory design. The kits are often a downloadable pdf booklet (such as in the case of AIGA’s Ethnography Primer¹¹, Frog Design’s Collective

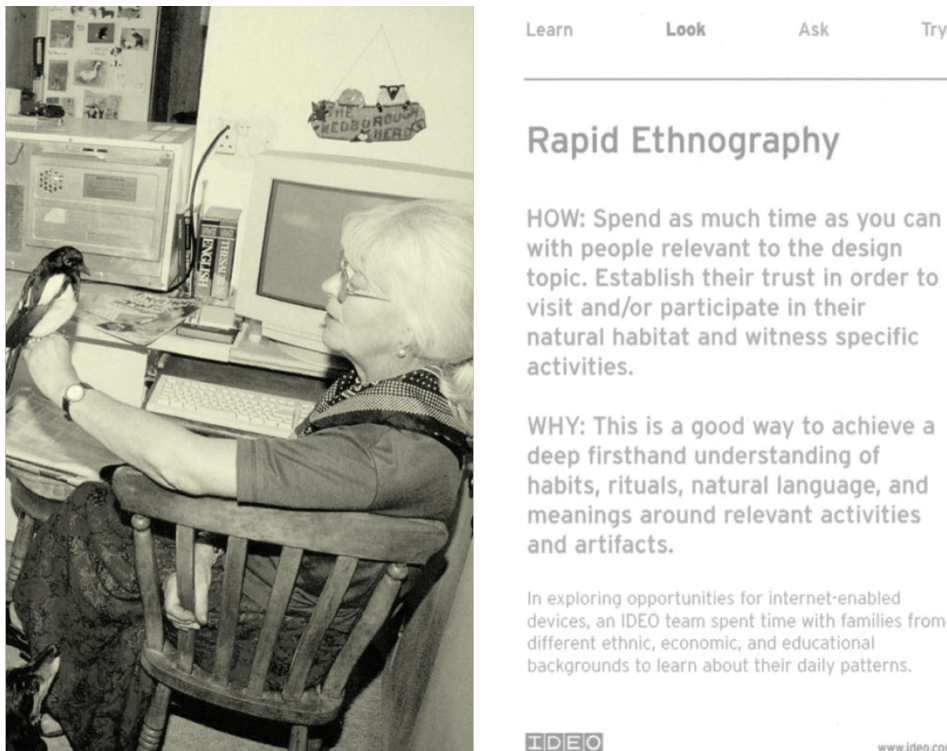
⁸ <https://www.ideo.com/work/method-cards>

⁹ <http://requisitevariety.co.uk/design-with-intent-toolkit>

¹⁰ <http://socialinnovation.typepad.com/silk/silk-method-deck.html>

¹¹ <http://www.aiga.org/ethnography-primer>

Figure 29: Example card, Rapid Ethnography (IDEO 2002).



Action Toolkit¹², or the Finnish co-design manual Return on Giving series¹³). They may be web-based (such as IDEO's Design Kit.org¹⁴, Stanford's d.School Method page¹⁵, Nahman's Service Design toolkit¹⁶, Service Design Tools¹⁷, Medialab Amsterdam's Design Methods Toolkit¹⁸, the Digital Society School's Design Method Toolkit¹⁹, the Swedish website MethodKit²⁰ and Usewell²¹). Each guides a user to a set of methods based on their research needs or intention. Typically, based on the format of a how-to, the user is able to download ready-made packs of materials to facilitate design sessions such as posters, questions, etc.

What these cards, kits and websites point to is diversity in terminology, in context, in 'level' of participation, etc. The tools and techniques are diverse and span "across a

¹² <http://www.frogdesign.com/work/frog-collective-action-toolkit.html>

¹³ <http://muotoilufoorumi.fi/julkaisut>

¹⁴ <http://www.designkit.org/methods>

¹⁵ <http://dschool.stanford.edu/use-our-methods>

¹⁶ <http://www.servicedesigntoolkit.org/downloads.html>

¹⁷ <http://www.servicedesigntools.org>

¹⁸ <http://medialabamsterdam.com/toolkit>

¹⁹ <https://toolkits.dss.cloud/design/>

²⁰ <https://methodkit.com>

²¹ <http://www.usewell.be> (co-developed by the author at the LUCA School of Arts, Belgium)

broad spectrum of domains and make use of a broad repertoire of tools and techniques in both commercial, community oriented and research contexts” (Sanders et al. 2010, p. 1) Because of PD’s openness to adaptation, the tools and techniques are used as a sort of guide; each iteration referencing and adapting to the needs at hand. Different to traditional disciplines that use homogeneous methods which allow for comparing results, PD uses methodologies that are “re-networked or reconfigured to meet the design orientation. The *same* methods can be enacted differently and take rather different shapes as they are attached to different methodologies and paradigms” (Spinuzzi 2005, p. 168).

The first and foremost critique on PD methodology comes from disciplines who see these methods as poaching their way of working without the necessary reflection and rigour. Some social scientists consider such participatory actions to be “do-it-yourself ethnography”:

The results: “may confer the illusion of increased understanding when in fact no such understanding has been achieved...Without addressing basic issues such as the problem of perspective, researchers have no way of knowing whether they have really understood anything of their informants’ world view or have simply projected and then ‘discovered’ their own assumptions in the data” (Spinuzzi 2005 citing Forsythe 1999, p. 136).

The critiques come not only from other disciplines, but also from those potentially paying for its use. Spinuzzi highlights one of the key inhibitors to using these methods, in spite of all of the proposed benefits. Participation “takes an enormous amount of time, resources, and institutional commitment to pull off...From the standpoint of a profit-oriented business, participatory design seems to provide little structure and no deadlines” (Spinuzzi 2005 citing Wood and Silver 1995, p. 322–323). Greenbaum and Loi confirm this: “it is often cumbersome and awkward to design a project and ride it to completion using a participatory approach, as participation is complex, messy and can be slower moving” (2012, p. 81).

Although the guides and kits allow for easy accessibility, they too are not without their critics. In her analysis of such initiatives, Kimbell, herself an author of a toolkit, wonders if they are successful in achieving what they are intending to do (Mapping Social Design Practice 2013). They “set out to be accessible to and be taken up by

people who do not think of themselves as designers” yet they seem to have the impossible task of reducing the “intentional, skilled, reflective work practices of people who think of their activities as designing” into the form of “artefacts such as tools, kits, templates, and card decks” (Mapping Social Design Practice 2013).

It is precisely this low threshold for use which draws commentary from others in the field. Although they are made in a way that is encouraging to those with little experience, there is often a lack of information suggesting how one turns the results of participation into something useful. Kolko is very critical of the absence of support for this synthesis process in toolkits and guides: “without a formal strategy and approach to synthesis, experienced designers rely on their intuition...the discipline of design loses credibility. Worse, younger designers flail and waste precious time, becoming frustrated and ultimately rejecting the ethnographic research methods themselves” (How Do You Transform, 2011). These comments seem to support the idea that PD researchers (who are often not designers) “remain preoccupied with methodology” and thus perhaps see this synthesis as being a design problem instead of a problem in participation (Halskov and Hansen 2015, p. 90). Greenbaum and Loi add additional critique suggesting that the tools are limited in their scope and use and call for an expansion of the practices to become *vehicles for designers* instead of merely *enhancing the process of design* (2012, p. 84).

In Smith et al.’s 2017 editorial in CoDesign, the International Journal of CoCreation in Design and the Arts, they entitled it “Participatory design in an era of participation”. In it, they suggest that “participation is now pervasive” (2017 p. 65). Across disciplines and with different applications, within industry and within the public sector, the idea of participation “cuts across societal issues” (Smith et al. 2017, p. 65). The *idea* of participation may indeed be pervasive, but the challenges presented within design education in terms of future-proofing students, the lack of consensus in terms of skillsets, etc. (see section 2.1.4) means that the take-up of participation has not yet reached saturation point. If participation is seen to be one of the ways in which a routine design (see section 2.2.2.2) can be made unfamiliar, within the context of the subject of this thesis, Designing for one, how is its use of participation challenging the status quo within the design process or within education itself? How is its form of participation impacting not only the designer within their shifting roles but the design itself?

2.4 Learning through meaningful encounters

This section moves from participation and its importance within the context of the design process to the idea of learning. As an approach, designing for one is seen to be a means to co-design with individuals within the context of design education. The benefits and challenges of participation as well as the concept of participatory methodology have been identified, but what about knowledge? How does a designer transform rich design experiences into knowledge?

This section will begin with educational theory describing the process of knowledge transfer and the knowledge creation through making. Much like Gero and Kumar's creativity theory, Problem-based learning is identified as a means to work with undefined problems in which students learn through the re-examination of a problem. To aid in this educational approach, Kolb's Experiential Learning Cycle touches on the concept of reflective practice and the important role that reflection has for designers. An example of learning through reflection is the concept of empathy, identified as the embodiment of reflection and understanding of a participant. Finally, in the last section, relationships within the design process and within participation are identified as a means of facilitating empathy.

From the fuzzy beginnings of the design squiggle, a designer moves from intersection to intersection, making decision after decision based on both previous and new experiences. In his influential text on *Designerly ways of knowing*, Cross suggested that this confidence is the designer's way of *being in the world* (1982 p. 224). This adaptability and the mental constellations that are made enable a designer to "cope with ill-defined problems" and to "define, redefine and change the problem" as it emerges (1982 p. 224). The problem as it emerges and the designers reshaping or moulding of it is what von Glasersfeld defined as *knowledge*: "a kind of compendium of concepts and actions that one has found to be successful, given the purposes one had in mind" (2012 p. 4). The purposes one doesn't have in mind are discarded. Those that remain are continually put under critique relating back to what the designer knows about use, context, cost, expectations, needs, etc. From existing wisdom to drawing on practice based training, it is through these experiences that a designer learns how to operate and how to create meaning out of his/her practice.

2.4.1 Knowledge transfer within education, through making

Specifically for educators, much of how education is organised is related to underlying basic beliefs about knowledge: what it is and how it is shared. Educational theorist, Wilson placed knowledge on a gamut. Within a traditional classroom setting, a teacher or professor could be seen to be a gatekeeper; the teacher has the goods and need only to deliver them (1996, p.4). Students take it and it is assumed to be theirs or is theirs for the taking. On the other end of the spectrum is a form of anthropology; knowledge to be gained is inexplicit, intangible and one is only able to gain access to it through enculturation and becoming part of the community itself. For Wilson, however, knowledge transfer sat in between (1996, p. 4) and relied heavily both on the environment where learning took place and the engagement of the learners. Citing Perkins, Wilson compared the minimalist learning environment to the enriched one. In the minimalist setting, the educators were information banks, and because it offers “few tools for manipulating and observing content” it is difficult for students explore and problem solve on their own (1996 p. 6 and 7 referring to Perkins 1991, p. 20-21). In the *richer* setting, however, students are engaged on many levels and use tools, simulations, experiences... and the educator facilitates and coaches them (1996 p. 6 and 7 referring to Perkins 1991, p. 20-21).

This *experienced* based learning, draws on Piaget’s constructivist theory that humans cannot understand and use information immediately, but rather they must *construct their own knowledge* (Piaget 1954, p. 4). For Piaget this construction happens as the learner organises his/her experiences “in terms of preexisting mental structures or schemes” (Bodner 1986 p. 873 paraphrasing Piaget 1967). Wilson equally believed in the qualities of experience. He focused on the role and importance of the environment. It was not the anthropological viewpoint of total immersion in an environment, but rather a “meaning-construction view of knowledge” (1996, p.3). He believed that learning environments could be created, where people could “draw upon resources to make sense out of things and construct meaningful solutions to problems...authentic activities that help the learner to construct understandings and develop skills relevant to solving problems” (196 p.3).

For designers in particular, knowledge is also created through the making of things. Interwoven into Piaget’s adaptable, individual, experience-based model, and

within Wilson's belief in the importance of environment, Papert's constructionism draws additional value from both. Papert believed in two guiding principles about learning: the first being that one must relate new concepts to existing, known concepts and secondly that this combination (the new combined with the old) should be used to "make something new with it, play with it, build with it" (1993 p. 120). Papert shared constructivism's idea that humans construct their own knowledge within existing schemas, but suggested that knowledge happens particularly aptly "in a context where the learner is consciously engaged in constructing a public entity, whether it's a sand castle on the beach or a theory of the universe" (Harel and Papert 1991, p. 1). Looking at design as a process of making not only sense, but of making artifacts, one sees the idea of objects repeatedly as a manifestation of knowledge; from visualisations that sum up a collection of focus group data to first iteration paper prototypes developed together with a user on the fly. To be a designer then, one must be adept at adapting the information presented into not only mental understandings but physical materialisations.

2.4.2 Problem-based learning in design education

Specifically within design education, the educational model Problem-Based-Learning (PBL) enables a student to have these meaningful encounters. Developed in the 1950s as a model of education within medical schools as a means for medical students to learn-through-experiencing, it moved away from traditional learning

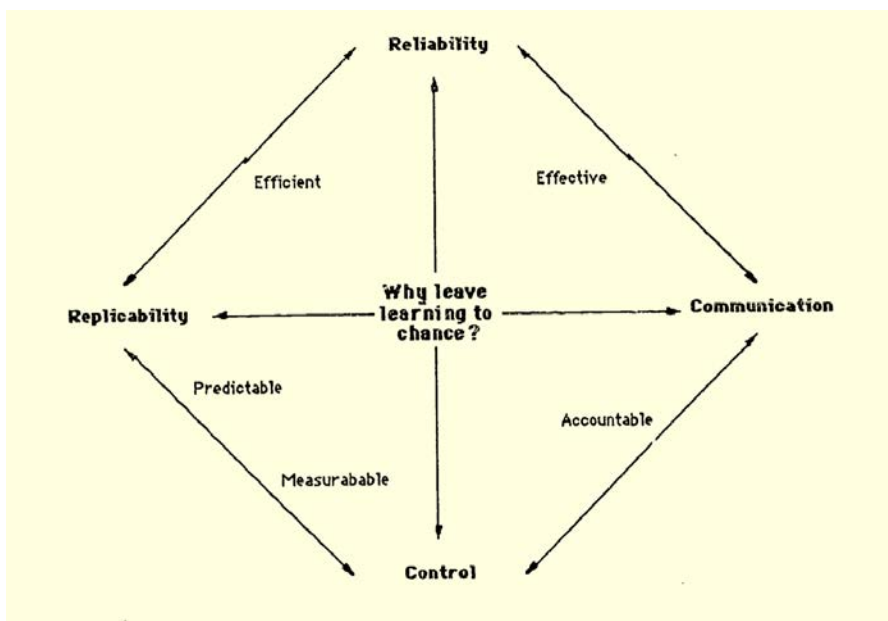


Figure 30: Contemporary values of educational technology as identified by Heinich (1984) as presented by Lebow (1995 p. 317).

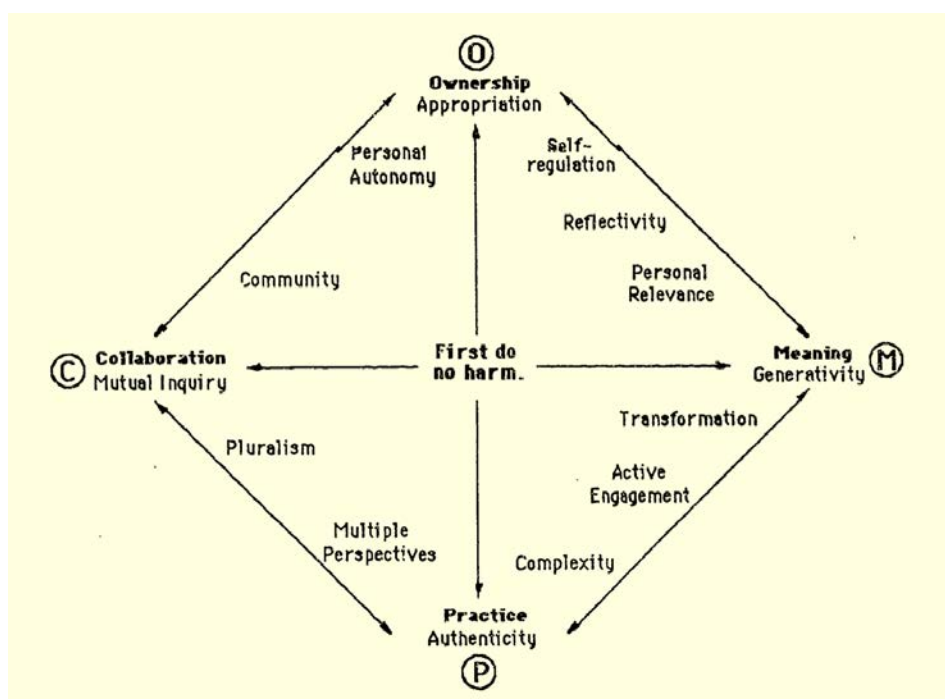


Figure 31: Constructivist values for developing higher-order thinking skills and positive disposition toward learning as proposed by Doll (1989) as presented by Lebow (1995 p. 318).

approaches that valued “replicability, reliability, communication, and control” (Heinich 1984) (see Figure 30). Allowing students to move through a process that was not based on rote knowledge, it replaced the lecture format with agency. Students began working with undefined problems, which in turn required their discussing the characteristics of the problem and their actively searching for ideas of how to approach it based on their own experience and existing knowledge. Supported by consultants (professors), the students “begin by evaluating resources -- what was most useful and what was not so useful. They then begin working on the problem with this new level of understanding... they do not simply tell what they learned. Rather, they use that learning in re-examining the problem” (Savery and Duffery 1996, p. 8).

Based on this sort of working, Lebow identified an altogether different set of constructivist values at work, one rich with confrontation and proximity. These values placed an emphasis on personal responsibility: active engagement; authenticity; collaboration; community; complexity; generativity; multiple perspectives; ownership; personal autonomy; personal relevance; pluralism; reflectivity; self-regulation; and transformation (Doll 1989 presented by Lebow 1995, p. 318) (see Figure 31).

Relating the values of both models to Gero and Kumar's *space of routine designs*, one can see how Lebow's constructivist values lend themselves to extensions of the design space. The lecturer/audience approach (what Henrich identified as reliability, predictability, control...) leaves nothing to chance. On the other hand, considering the problem-based learning approach in which the student is actively attempting to find the solution, the values that Lebow identified extend the space by moving through concepts that cannot be pinned down on the forehand. The learner has to generate meaning because the meaning has not been provided. The learner must consider multiple perspectives because the process is collaborative. The learner has to practice with authentic positioning because the context requires it.

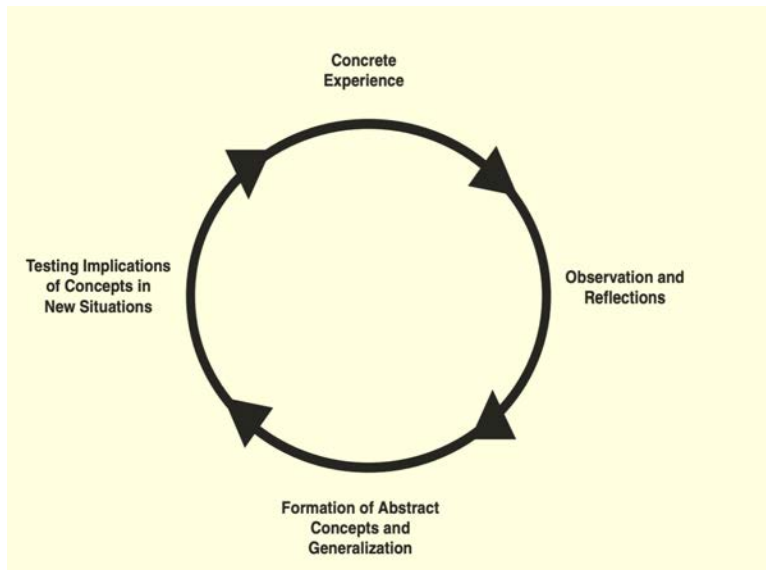
2.4.3 The experiential educator

What the educational theorist Kolb added to this approach was reflection. Each of the above constructi(on)vist educational positionings can find themselves rooted in Kolb's educational philosophy: *Experiential Learning*. When faced with these sorts of learning experiences, Kolb established that students go through the following, cyclical phases: 1) they have real, sensory experiences, 2) they reflect and observe, and continue to carry on "experimenting" through conceptualising based on what they have experienced and seen, 3) they develop these into ideas and 4) they test these ideas in practice (van Dooren et. al 2014, p. 55 referencing Kolb 1984). Mapping this against the design process, there is a sort of mirroring; both are cyclical, iterative processes in which concepts are analysed and iterated.

Effectively, this places the design process itself as an experiential learning process; the 'experiencing' aspects of the learning diagram place emphasis on actioning and doing and the outcome is articulated as 'learning' instead of being part of the process that leads to a designed object. This distinction is important. Design is defined not only as an action but also as an outcome and the two are inextricably linked.

Settings such as Problem-Based Learning require not only a different educational environment for students, but also require that educators shift their own approach. Instead of the educator being the one who possesses knowledge, the student's experience facilitates the knowledge acquisition, thus the educator must have intent to facilitate student experience. Looking at the role of the educator, more recently Kolb et

Figure 32: The experiential learning cycle (Kolb and Kolb 2005, p. 3).



al. suggested that shifting the role of the educator from *directing* students to learn to that of *facilitation* enables learners to “take responsibility for their own learning” (2014, p. 207). They also identified an educator’s responsibility to create a learning climate that is “psychologically safe”, “non-judgmental”, “patient” and “values and respects the learner’s and their contributions” (2014, p. 207). Finally, Kolb et al. raise the role of reflection. As within the previous example of medical students identifying their own problems and carrying out their own path to understanding, Kolb et al. identify reflection as playing a significant role. Not only in terms of the student *making sense of* but the educator in terms of listening reflectively to the students; listening to the student’s own articulation of what they have learned, directions they are going, decisions they have made, etc. in order to follow the student’s understanding and meaning making. (2014, p. 207)

2.4.4 Reflective practice as knowledge

To learn experientially then, is to continually reflect on what one is doing, and to have these experiences *without reflection* “leaves learning to happenstance” (Wurdinger and Alison 2017, p. 29). For Wurdinger and Alison, Kolb’s learning theory is not something left to chance. It is intentional and orchestrated. This idea of reflection, specifically within education, stems in a large part from the educational philosopher John Dewey’s own ideas about education. Inquiry, he suggested, was the combination of mental reasoning and action in the world: *thinking* and *doing* (Wurdinger and Alison

2017, p. 28).). Difficult theories could be difficult to understand, he posited, however the essence of what they were about always took place within a relatively normal context: the world. More specifically, Dewey identified reflection as the culmination of the two, or rather reflection furthered both thinking and doing. In a summary of Dewey's work, Rodgers reduced Dewey's thoughts on reflection into four points;

1. Reflection is a meaning-making process that moves a learner from one experience into the next with deeper understanding of its relationships with and connections to other experiences and ideas. It is the thread that makes continuity of learning possible, and ensures the progress of the individual and, ultimately, society. It is a means to essentially moral ends.
2. Reflection is a systematic, rigorous, disciplined way of thinking, with its roots in scientific inquiry.
3. Reflection needs to happen in community, in interaction with others.
4. Reflection requires attitudes that value the personal and intellectual growth of oneself and of others. (2002, p. 845)

Thus, in Dewey's mind, education should be fundamentally rooted in reflective actions. The educational, physical environment should foster these reflections and teachers should not only lead by doing (be reflective themselves), but cultivate systematic reflection by their learners. Referring back to the idea of decision-making within the design process, Dewey considered reflection a means to gain confidence:

"Reflection emancipates us from merely impulsive and merely routine activity, it enables us to direct our activities with foresight and to plan according to ends-in-view or purposes of which we are aware, to act in deliberate and intentional fashion, to know what we are about when we act" (1933, p. 17).

Schon, who continued the practice of championing reflection within practice, similarly combined thinking and action. He placed it into two areas: *during* the action as well as *afterwards* (1983, p. 50). Reflection *in* action is dynamic, and includes the idea of *experiencing*, *thinking on your feet*, the moments when one thinks about *what to do next*, as well as when one responds to something *straight away* (1983, p. 54). Reflection *on* action happens after the fact: when one thinks about *something that has happened* when one considers what one *would do differently next time* as well as when

someone specifically takes time out to specifically consider following steps. (1983, p. 280). Continuing to build on Dewey's idea of reflection, Schon defined the potential of reflective practice even further. To reflect on practice is to make "tacit knowledge explicit" (1992, p. 123); a means to articulate or evaluate and move forward. In order to engage others (specifically teachers engaging with students through reflection), reflection becomes a "self-reflective practice of reciprocal inquiry" (1992 p. 123).

If one looks specifically at reflection within the construction of participation, reflection takes on a new level of importance. It is no longer a designer reflecting on their own process, but rather it is what Markham and Bride called *multilayered* (2006, p. 12). The challenge is the designer's ability to manage the information flow; constantly reflecting on the (experience) knowledge being gathered, the experiences of participants, making adaptations, changing methodology making the necessary mental connections in order to make decisions on what to do next. (2006, p.46).

2.4.5 The designer's experience

For Schon, these experiences (the ongoing positioning and decision making, the collaboration with others, the coming into understanding of the user, the time spent in a particular context) is part of a designer's *modus operandi*. He describes the designer as being constantly processing and reflecting; always "actively constructing a view of the world based on his/her experiences" (Valkenburg and Dorst 1998, p. 251 referring to Schon). Although experience is often thought of as a singular entity or referred to as something that can be pointed to for reference, it is linked to other experiences: it "has within it judgement, thought and connectedness with other experience - it is not isolated sensing." (Boud et al., 1993).

For student designers working with individuals, this connectedness may become even more explicit. A designer is then stepping into a person's world expressly. They are *experiencing* it, as a means to become *aware* of it. For Boud et al., experiences like this are: "not simply an event which happens, it is an event with meaning... an experience is a meaningful encounter. It is not just an observation, a passive undergoing of something, but an active engagement with the environment, of which the learner is an important part" (1993, p. 6). In the moments themselves, knowledge is being built through these experiences: the mental linking of one experience to the

other. These reflective actions are implicit. In turn, when this research is transformed into insights (dissemination) in power point presentations to other members of a design team, in board rooms for clients, or in coaching sessions with lecturers..., these reflective actions are made explicit. This is Papert and Harel's idea of being *conscientiously engaged*; creating something new from the combination of previous knowledge and new understanding (Harel and Papert 1993 p. 120).

2.4.6 Empathy as an example of generated knowledge

Specifically for designers, an example of this materialisation and learning-through-experience is the process of acquiring empathy. As defined in design literature, empathy is not only a mental state achieved by the designer, but a quality of design itself. It is considered a skill, but also an attitude; drawing on the ability to “identify with other people’s thoughts and feelings – their motivations, emotional and mental models, values, priorities, preferences, and inner conflicts” (Fulton Suri 2003, p. 52).

For designers who have the intention of making better or more relevant products, empathy is seen to be a “necessary quality for developing products that meet customer needs” (Kouprie and Visser 2009, p. 438). For those wanting to achieve empathy, literature suggests it can only be achieved by “emotional engagement, not just intellectual understanding” (Stepien and Baernstein 2006, p. 524). Organisations too have identified that empathy can impact staff motivation. Getting employees to empathise with customers provides employees “a sense of clarity and purpose—and they do better work” (Battarbee et al., 2014, p. 4). The concept of empathy, then, can be seen to predicate the entire design process and the services surrounding it if one is designing for people.

Empathy, however, is not something to be simply ‘learned’. It cannot be fully understood without some sort of *experience* on behalf of the designer. As identified later in Kouprie and Visser’s *Techniques to enhance Empathy in Design*, there are techniques that designers can use initiate empathy. Ranging in depth and proximity to the user/participant, some of them require immersion on behalf of the designer and face to face contact with the user. In other techniques the experience is mediated by documentation and storytelling. Finally, Kouprie and Visser suggest techniques in

which the experience of the user can be simulated by the designer, who attempts to build understanding by physically experiencing what the user experiences (2009).

On the fringes of the traditional learning values identified by Heinich, the intent of designing with empathy is not to “seek solutions for recognized problems, but rather to look for design opportunities as well as develop a holistic understanding of the users” (Mattelmäki 2006, p. 143). As with the decision to open up a design practice to collaboration with others, so too empathy requires a practice that is calculated and deliberate (Walther et al. 2017). This intentionality on behalf of the designer (or from the position of the educator who facilitates this intentionality) requires designers to “connect with people in meaningful ways and to set aside reactions and behaviors that will interfere with it” (Battarbee et al., 2014 p. 3).

Although many elements of the design process are able to be understood as information or facts, the process of gaining empathy is not only information or facts, but rather forms an impetus for further inspiration and consideration. For Wright and McCarthy, “empathy marks a commitment to forming relationships and accountabilities (not just understandings)” (Bennet and Rosner 2019, p. 3 referring to Write and McCarthy 2008). These formed relationships enable designers to become aware of both participant and context specific insights that move the design requirements “from rational and practical issues to personal experiences and private contexts” (Mattelmäki and Battarbee 2002, p. 266).

The concept of empathy being an attitude, or a way of working is in line with co-design’s sentiment that designers open up their design processes to others. For designers who are new to this collaborative approach, this ‘losing control’ over the design process may be painful or frustrating. In their recent article on how designers prepare for participation, Akama and Light identify the idea of *readiness* as being an important characteristic of designers working in this way. Designers must possess “a state of openness to what emerges” and a sense of “responsiveness” that enables them to collaborate with participants and be open to their own shifting perspectives (Akama and Light 2018, p.3). The designer is *ready* “to draw on who (they) are and what (they) are doing in situ...deep undercurrents of personal history and experience can surface...according to the situation in which (they) are immersed” (2018, p.3).

Although designers still ultimately make the design choices, they share ownership of the thing co-created. Battarbee places this sharing ownership further within the context of empathy, suggesting that co-design isn't merely about a design process that is open to collaboration, but rather that designers themselves must be open. According to her, empathy requires designers to leave *leaving the design office* and become "immersed in the lives, environments, attitudes, experiences and dreams of the future users" (2002, p. 243). This idea of immersion requires designers to not only be comfortable enough to immerse, but also able to process all that immersion offers. They must sort through it and be able to transform experiences (knowledge) into "the requirements of the users" (Battarbee 2002, p. 243). Although they have opened up their design practice and self to risk, the result is that these empathetic designers become advocates for the users they are designing for. Aided by this participation, immersion and empathy for a participant, they are what Kouprie and Visser call "releasing their own view" and merging their view with that of the users (2009, p. 438).

2.4.7 Models for understanding empathy and empathetic approaches

If empathy is such a beneficial component for designers, the "key for understanding others' experiences and emotions" (Devecchi and Guerrini 2017, p. S4359), then what constitutes empathy within design? Can an empathetic or empathic design (outcome) be differentiated from a design process that builds empathy within the designer themselves? Finally, what is required or evidenced in a designer's way of working to show that they have achieved empathy?

To address these initial questions involves first understanding how empathy and design is referenced within literature. In literature, empathy and design is often discussed in terms of empathy being established through the designer's emotional understanding of the needs of a user and the designer's reflection or analysis of this need which in turn results in a designed object that is responsive to the needs or context of use (Kouprie and Visser 2009; Postma et al. 2012). However, empathy is also discussed as a result of particular methods and processes that are experienced by the designer in direct involvement with participants or users (Kouprie and Visser 2009; Battarbee et al. 2014). Finally, empathy is also explored in terms of its ability to be

transferred to others through the use of objects and experiences (Suri 2003; Moggridge, 2007; Kouprie and Visser 2009; Fulton; Smeenk et al. 2019).

Looking further at how empathy is evidenced, based on an analysis of eight empathy scales used across different disciplines, Baldner and McGinley looked to identify common underlying factors across the scales (2014, p. 736). The six factors they identified were emotional interest (a person's taking interest in how another person feels), perceived other awareness (the ability to predict how someone else would feel in a given context), emotion/fictitious characters (being emotionally involved with a fictitious character), personal distress (a person's ability to control their emotions when dealing with another person's stressors), perspective taking (being able to consider another person's perspective) and sensitivity (being aware of how someone else might feel in a specific situation). Possessing these factors suggests that empathy is being achieved, and the more the factors are present in a person, the greater the empathy one possesses. Although Baldner and McGinley also identified problems in the study, ie. pre-existing experience changes the way in which empathy manifests, these factors provide a baseline for assessing empathetic engagement.

For designers specifically, in terms of their design practice, what can designers as well as the educators who are teaching designers do to bring these factors into research practice or module course structure? As part of their work on empathetic design, Kouprie and Visser classified empathetic techniques that designers could use within various stages of the design process to gain empathetic insights. In their model, *Techniques to enhance Empathy in Design*, the intention is to align proximity of designer and participant to end result (design) as a means to better understand users, and as a result enhance or increase empathy in the designer (2009).

Table 4: Techniques to enhance Empathy in Design, Kouprie and Visser (2009).

Type of technique	Method	Intended Result
<i>Direct Contact</i>	Observation, interviews, participation in their activities	The designers see through their own eyes the user's situation, condition, behaviours, feelings, emotions and needs.

<i>Communication mediated by user researchers</i>	Personas, literature and videos	The researcher uses special communication tools to convey the stories of users to the designers
<i>Imagination</i>	Performing role-playing, experience prototyping	The designer steps into parts of the user's experience by simulating the users' condition

Other researchers, such as Van Rijn and her work within the context of design education, have used this model to specifically explore the differences between the various types of techniques, comparing direct contact with users versus contact through secondary sources (Van Rijn et al. 2012). Looking to see if there was a correlation between the type of contact and the relevance of designs created, Van Rijn's primary takeaway was an assertion based on Kouprie and Visser's model; engaging students directly with participants led to increased empathy in students, as well as more design outcomes that were identified to be more empathetic to the user's abilities and context.

This too is found in industry. Since this thesis began, designing for individual needs has been popularized in television programmes such as the BBC's *The Big Life Fix* in which a team of designer/makers/inventors tackle very bespoke problems of individuals; namely people who have encountered drastic life changes through sudden disability. Although reviews of the programs question its motivation in terms of whether the shows are "driven by a desire to help people or by a desire to make entertaining feel-good television" the reviewer does suggest that although the participants are not necessarily *fixed*, "their lives are improved" (Wollaston 2018). For the designers involved, they seem moved. In her reflection on working with one of the participants, Steel said that spending time with the participant and getting to know him "created a connection between us that went further than the traditional designer/user relationship. This behaviour is a lot closer to that of a friend or family member. I feel we were better able to empathise because of this and therefore better able to create a more meaningful solution" (Graham 2018). Reflecting on her own experiences, empathy is seen to be one of the benefits of this intimate, direct relating. Much like van Rijn identified, the designer's relating was based on *personal experiences* within *private contexts* (2011).

Figure 33: Key points from Helma van Rijn et al.'s 2011 article comparing different modes of coming into contact with user needs.

Moving towards *personal experiences* and *private context*, a case for direct contact

"Although many design researchers state their conviction that direct contact is a prime and irreplaceable source for obtaining empathy with users" (Mattelmanki and Battarbee 2002, van Rijn et al. 2009) direct participation is often limited because it is deemed to be "larger and messier than traditional forms of design and research" and invariably time consuming (Greenbaum 2012, p. 84). However for designers looking to go beyond being *informed and inspired by users*, the path towards empathy enables them to "observe and feel" for those they are designing for (Ho et. al, 2011, p. 96).

Based on experiments conducted by Rijn et al. with industrial design students, direct contact with users was shown to be superior to other common forms of research (referred to in the study as *information sources*). The results of this experiment suggested that direct contact, supported by other types of information, affects a "designer's' empathy and the quality of the product concepts they produce" (van Rijn et al. 2011, p. 66).

Van Rijn et al.'s study was limited; it was a comparative analysis of a non-obligatory workshop that ran for 2 weeks and was made up of 6 teams of 2 to 3 students. However even these limited findings suggest that direct contact leads to better or enriched ideas. "Direct contact brings the most inspiring and lively discussion about the user group within the design teams and leads to product concepts fitting the user group's needs and preferences" (van Rijn et al. 2011, p. 76). Because of the small scale of this study, van Rijn suggests that the results should only be used as indicators. To verify these results, further research should be done in this area, not only in industrial design, but in other disciplines in order to investigate the effect of empathy on quality of outcome (van Rijn et al. 2011, p. 75).

Besides *Techniques for Achieving Empathy*, Kouiprie and Visser also looked to create a model that defined how empathy could be achieved within design; the factors necessary to achieve it, how much effort it required, etc. Here their work centered around the philosophical work of Stein, who suggested that empathy was "an intentional intersubjective act, through which *foreign experience is comprehended*" (Stein 1917, p. 6). Stein herself broke empathy down into three phases: (1) the emergence of the experience; (2) 'the fulfilling explication' (analysis) of the experience; and (3) the 'comprehensive objectification' of the experience. (Stein 1917, p. 10 cited in

Nilsson 2003, p. 74, Kouiprie and Visser 2009, p. 443). Applying this to how an individual experiences gaining empathy, Kouiprie and Visser described Stein's phases further:

“in the first phase you perceive a past experience of somebody else; in the second phase you get pulled into this experience, you stand next to the person facing the object of his emotion; and in the third phase you withdraw from the other's experience and you are back in the first state, though with a richer understanding of the experience of the other” (2009, p. 443).

There are notable parallels here with design processes. Designers familiarise themselves with the situation, dive into the research to gain a better understanding, step out of the research to make sense of it, and then begin this process again as an act of refinement. Koiurpie and Visser saw this correlation as well, but within the context of gaining empathy for users: “The stepping in is needed for deep understanding, the stepping back for competent action...Therefore, in empathic design, this stepping into and stepping out of the user's world are important phases to distinguish and to achieve.” (2009, p. 444)

Empathy in particular calls on Schon's view of reflection and how it plays a significant role in translating experience to understanding. In a recent study, Smeenk et al. placed additional value on not only the action of gaining empathy for the participant/user, but also on the designer's own experience of this empathetic process. Literature on 'designing together' (see previous section) focuses almost entirely on the experience of the participant and how their participation through methodology can inform design decisions. However, “design can (and implicitly does) also build on designers' own personal experiences, feelings, and emotions from within the design context” (2016, p. 31). As seen within the experience as knowledge section, gaining empathy is the result of a designer reflecting and networking his/her own personal experiences, feelings and emotions into this shared, interwoven, collaborative space.

Reworking Stein's phases of empathy specifically for design, Kouiprie and Visser's *Four stages of empathy* provides a framework for achieving empathy; a designer *willingly* enters a user's world as an act of *discovery*, *immerses* themselves in the lives of the participants, makes a *connection* and then *detaches* themselves from the experience, leaving this space with newly found ability to design with perspective.

Table 5: Four stages of Empathy, Koiurprie and Visser (2009).

Discovery	<p>Entering the user's world</p> <p>Achieve willingness</p> <p>The process starts with the designer approaching the user.</p>	<p>The designer makes a first contact with the user, either in person or by studying provoking material from user studies.</p> <p>The designer's curiosity is raised, resulting in his/her willingness to explore and discover the user, his/her situation and experience</p>
Immersion	<p>Wandering around in the user's world</p> <p>Taking user's point of reference</p>	<p>After the first encounter with the user's experience, the designer takes an active role by leaving the design office and wandering around in the user's world (data from qualitative user research).</p> <p>The designer expands his/her knowledge about the user and is surprised by various aspects that influence the user's experience.</p> <p>The designer is open-minded, interested in the user's point of reference. He/she is being pulled into the user's world, and absorbs without judging</p>
Connection	<p>Resonating with the user</p> <p>Achieve emotional resonance and find meaning</p>	<p>In this phase, the designer connects with the user by recalling explicitly upon his/her own memories and experiences in order to reflect and be able to create an understanding. He/she makes a connection on an emotional level with the user by recalling his/her own feelings and resonates with the user's experience.</p> <p>At this phase both affective and cognitive components are important; the affective to understand feelings, the cognitive to understand meanings</p>
Detachment	<p>Leaving the user's world</p> <p>Design with user perspective</p>	<p>The designer detaches from the emotional connection in order to become 'in the helpful mode' with increased understanding.</p> <p>The designer steps back into the role of designer and makes sense of the user's world. By stepping back out to reflect, he/she can deploy the new insights for ideation</p>

More recently, Hess and Fila (2016) focused specifically on how to make empathy a reality for students. They suggested that previous literature surrounding empathy and design, such as Van Rijn and Kouprie, and Visser's work, focused specifically on "how

empathy can or ought to inform design approaches” instead of “how empathy naturally manifests throughout real-world design processes” (2016, p. 94). In their writing, they relate empathetic techniques to what should manifest from these techniques in the experience of the student. Mirroring the same stages of the design process of that of Kouprie and Visser, the techniques are deemed ‘natural’ design actions carried out by students in which a level of empathy (either real or presumed) evolves.

Table 6: Description of empathic techniques utilised by student designers in Hess and Fila (2016).

Design ‘step’	Empathic technique	Pattern description
<i>Developing Empathic Understanding</i>	Direct Observation Empathy by Proxy Interaction Projection Simulation	Designer watching user(s) within a real-world context Discourse between designer and an individual close to user(s) Discourse between designer and user(s) Imagining designer’s self in a user’s position Imagining the user’s self in the user’s own position
<i>Identifying User-Centred Criteria</i>	Empathic Concern Synthesise Empathic Knowledge	Specifying criteria (e.g. safety) based on a concern for the user’s well-being Synthesising multiple patterns described above to designate design criteria
<i>Generating Design Concepts</i>	Design for User-Centred Criteria Integration Refine User Suggestion	Designing towards criteria generated from empathic understanding of the user Integrating empathic understanding with technical requirements Refining gathered information from user based on an empathic understanding of the user
<i>Evaluating Design Concepts</i>	Check with User Imagined Use	Directly presenting a concept to a user Evaluating a design concept through projection and/or simulation

Contrasting Fila and Hess’s work with that of Koiurprie and Visser’s model and that of Stein’s original description of empathy, all place value on the designer and participant exchange as being integral to the process of attaining empathy. What Stein

referred to as experience, Fila and Hess referred to as *interaction* and *observation* and Kouriprie and Visser described as *discovery*, *immersion* and *connection*. Stein suggested it was this relationship between designer and participant that defined the level of empathy. From the position of the participant, this relationship defines the level of access to his/her life that is made available to the designer within the participation, and on the part of the designer, it defines both the possible depth of their inquiry as well as how much access to information through participation is possible.

2.4.8 The importance of relationships

There are a wide variety of tools and techniques promoted as means to gain empathy and come closer to the user, “from observations and interviews, to narrative resources comprising diaries and art pieces, to roleplaying with simulations and personas” (Bennet and Rosner 2019, p. 298 referring to Wright and McCarthy 2008). However a recent critique on these methods calls out design’s seeing empathy as an achievement.

“For example, a designer navigating a food buffet while steering a wheelchair for the first time may foreground a beginner wheelchair operator’s experience but does little to reveal nuances of different contexts, experiences over time, and the myriad factors that impact disability including greater cultural, institutional, and social influences” (Bennet and Rosner 2019, p. 4; Nario-Redmond et al. 2017, p. 3; Kafer 2013).

For Bennet and Rosner, they do not discredit the intention of designers wanting to better understand their users, but rather call for a new positioning: calling for designers to focus on trying to achieve *being with* someone instead of *being like* someone and shifting away from *transferred experiences* to *shared* ones (Bennet and Rosner 2019, p. 1-2).

This idea of shared experiences calls for relationship-building. Originally referring to the creation of a relationship between a therapist and a client, Barret-Lennard suggested it was the perception of the participant (client) and their feeling of being understood that was evidence of empathy, and that this understanding always stemmed from the establishment of a relationship (1981). In terms of relating, they described the process of achieving empathy:

“Empathy on this system level entails seeing relationship as having life, and in tuning-in to this life; on listening to communication in and from established relationships (we's, us's, you's, they's, etc., embracing two persons or more)-- listening to such communication not only as the voice of one person to another, but as having its own source in the emergent multi-person whole” (Barret-Lennard 1981, p.16).

To paraphrase, the designer doing research (or student designer) goes into the participatory experience with a view that there is value in the participant's life experience and, by fostering a relationship with this person, both participant and designer become part of the same information source or what Barret-Lennard referred to as this *multi-person whole* (Barret-Lennard 1981, p. 16).

Looking further at this idea of relationships, although participation within the construct of participatory design (as discussed in the previous section) takes place as part of a strategy, the strategy is applied in order to better understand and define a design challenge. For educators specifically, who hope to bring empathy into the classroom, their focus is more on promoting empathy's potential to lead to successful and meaningful product design or design communication, but for the student, empathetic assimilation is about understanding, enabling and empowering people (Stroble et al. 2013). To better understand requires engaging real people within his/her real contexts, requiring interaction that is relation-based.

Looking further at the dynamics of participatory design, Dindler and Iversen suggested that these orchestrated relationships be counted as objects of design. The relationships are “a phenomenon that is malleable and within the professional agency of the designer...relational expertise that designers exert in working consciously with the establishment and transformation of personal and professional relationships” (2014, p. 43). They suggest that these meaningful relationships sustain not only the research, but the end result as well. They are the “relationships between people that may eventually prove crucial to the success of the design” (2014, p. 43). This idea of authentic relationships that are formed in function of design is related to the concept of back stage participatory infrastructuring. Infrastructuring is understood to be a *designerly effort* of engaging participants, aligning their activities and sharing the load amongst them (Seravalli 2018, p. 3). When working with participants, the designer

moves in and out of different functions; there is the ‘non design’ work in which he/she finds the right participants or organisation to work with, as well as making authentic first contact, that form the basis of a working relationship. This backstage work establishes the designer-participant relationship and is crucial to the success of the following design process. “Whereas the back stage is often hidden chaos of conflict and turmoil” this is contrasted against what Bødker et al. describe as the formal and often well documented design activities which offer the “pretty image of success” (2017, p. 250). It is this often unstructured, relationship-based backstage where Star suggests that designers will find *the mess* they are actually looking for, beyond the *boring sameness* that methods sometimes lead to (2002 p. 120). It is here that “important requirements are discovered’ (Star 2002, p. 120).

Whether one identifies with empathy as being something achieved through methodology or through the formation of relationships that are orchestrated through participation, both result in acquired understanding on behalf of the designer; both result in learning and knowledge. Because this research is looking at designing for one within the context of design education, how then are students demonstrating this knowledge through their making? In terms of experience-based learning, what knowledge are the students ‘taking away’ from the participation and from the module itself? As a lecturer, are these ‘key takeaways’ related to the act of designing or are they altogether different outcomes?

2.5 Participation in Practice; Related Case Studies

With the benefits of participation ranging from pragmatic to ideological, the intent of this final section of the literature review looks specifically at designer/researchers and to identify what participation looks like in actual practice, as well as identifying what participation delivered to design practitioners. A selection of academic cases were selected based on the following criteria: those who authored the cases were designers themselves, they thus wrote from a designer or artist’s perspective; the cases took place in a design-education setting; the participation focused on creating/designing with individuals; or the cases represented disciplines where designing together with users was not seen to be an expected way of working. No case answers to all criteria, but each is relevant to at least two or more categories.

The following chart gives a brief overview of the selected cases. It is followed by short summaries which highlight key aspects and benefits as experienced in each case. *More detailed reviews of the cases are included in the Appendix.*

Table 7: Co-designing with individuals in design and arts practice.

Authors	Title	Domain	Location	Tools for Participation	Participants (including designers)
Nicholas, et. al.	Using participatory design methods to engage the uninterested	Service and interface design, mental health/youth work	AUS	Co-design workshops using social media persona development and scenarios	18 young people, social workers and interaction designers
De Couvreur and Goossens	Design for (every)one: co-creation as a bridge between universal design and rehabilitation engineering	Industrial engineering and design	BE	Co-designing prototyping sessions with caregiver/person with disability	1 design student, 1 student from healthcare, 1 caregiver, 1 person with disability
Taffe and Barnes	Outcomes we didn't expect: participatory's shifting investment in graphic design	Graphic design, Children's Wellbeing and Care	AUS	Co-design workshops, brainstorming sessions, Mockups and paper prototypes	Student designers with children's healthcare workers
Padfield	'Representing' the pain of others.	Photography and Healthcare	UK	Co-creation, interviews	10 participants with chronic pain, photographer (with additional support of therapist and health care workers)

Design Practice / Nicholas, et al.: Inspire; engaging the 'uninterested' in mental health for young people²² focused on a not-for-profit organisation's use of participatory practices to reflect and engage with their target group. The Inspire Foundation's (Inspire) companion website required a new strategy that responded to the "changing technological landscape, shifts in mental health priorities and the evolution of youth culture" (Nicholas et al. 2012, p. 121). As well as this new focus,

²² Nicholas, M., Hagen, P., Rahilly, K. and Swainston, N. 2012. Using participatory design methods to engage the uninterested In: PDC 2012 Embracing New Territories of Participation, Proceedings of the 12th Participatory Design Conference, August 12-16, 2012. Roskilde University, Denmark: ACM.

Inspire faced challenges linked to the disinterest of the user-group and the personal and uncomfortable subject matter.

Highlights:

1. The choice to use participatory design was explicit: This project used participatory design in order to give a voice to a group of people previously unheard.
2. Working with users doesn't guarantee success: The authors established that the organisation had been doing design 'participation' together with 'young people' for years, however upon further reflection they realized that the participating young people did not reflect the actual users.
3. Participation doesn't always go as planned: The authors admitted that the second workshop did not deliver on the expectation of success as the first one had. This suggests that although great thought and planning can go into preparing for participation, it remains a risky process; participation does not always lead to something usable.

Benefits:

1. Participation brought a sense of ownership: Authors identified that because participants were paid for their time and because the participating staff members were reminded of the value of the contribution of the young people participating, the participants of the first workshop felt ownership and were strongly motivated.
2. The involvement of 'authentic' participants led to new insights: As soon as 'real' users began being involved, the authors (who were members of the organization) could better see where their current strategy was failing and suggested changes that could be used to approach a redesign.

Design Practice / De Couvreur and Goossens: Design for (every)one²³ looked to use co-creation as a means to bridge the space between universal design and rehabilitation engineering (2011, p. 1). In this case, industrial design students carried out co-design sessions together with people with disabilities. The student designers

²³ De Couvreur, L. and Goossens, R. 2011. Design for (every)one: co-creation as a bridge between universal design and rehabilitation engineering. CoDesign. 7(2), pp.107–121.

held design sessions which looked to create, improve or modify personal assistive devices linked to the particular needs/wants set out by the caregiver/therapist together with the person with a disability.

Highlights:

1. Their design process challenged an entire discipline: According to the authors, this project pushed against the status quo of industrial engineering design, which the authors described as very linear and inflexible, by creating a course module that resulted in standardised end-products that were focused on cost-efficiency.
2. The goal was open-ended: The authors organized the course module to have no specific goal from the outset. Unlike research projects which are looking to implement a particular technology, here participation facilitated discussions between design partners and contributed to discovering where design could add value.
3. The users group was not a group, but individuals: The author's intention was to specifically try to empower individual users by targeting and designing for these needs instead of creating standardised designs which cater to many.
4. The importance of iterative physical prototyping: The authors identified physical prototypes as communication tools within the team, as they revealed both explicit and latent needs.

Benefits:

1. The participation led to empowerment: The authors suggested that participating in the project led to an increased level of commitment by the person with a disability and that they became ambassadors of their own needs.
2. The involvement of participants motivated student designers: The authors expressed that the students who were involved in the project, working in teams of one or two with caregivers, resulted in increased motivation

Design Practice / Taffe & Barnes: Outcomes we didn't expect: participation's shifting investment in graphic design²⁴ discusses not only a specific case in which participation was coupled with the development of a communications strategy, but also reflects on the use (or lack thereof) of participatory design within graphic design as a discipline. The purpose of this community-focused graphic communications project was to design a communication tool that addressed workers' resistance to scientific advice that soapy water produced clean, hygienic surfaces (Taffe and Barnes 2010).

Highlights:

1. The case presents challenges of using PD in the field of Graphic Design: The authors suggested that, as a discipline, Graphic Design is hesitant to include user-involvement because of what it potentially is 'losing' through the process.
2. It openly discusses the complexity of participation: The authors suggested that the student-designers, as well as the design-lectures involved had difficulty at times managing the participation.
3. It shed light on the importance of context: The authors indicated that there was an increased awareness of environment and use, and that participation increased the necessity for the design needing to fit in the particular context. Without this fit, they asserted, it was clear that the design would fail in its role of communicating.
4. Participants assumed unexpected roles: The authors reflected on the participants' assumed role: that of designers who were 'designing for someone else' instead of 'designing for themselves'.

Benefits:

1. Participants were empowered: Though not initially considered in the planning of the participation, the authors proposed that the participants felt disempowered by their low-paid job and wanted autonomy. The participation made them feel valued and this enabled them to voice their opinions.

²⁴ Taffe, S. and Barnes, C. 2010. Outcomes we didn't expect: participant's shifting investment in graphic design In: Proceedings of the 11th Biennial Participatory Design Conference [Online]. ACM, pp.211-214.

2. The participation dramatically impacted end design: The authors noted that the participation provided knowledge about contextual information that the design team would have never known without the participation; this knowledge caused the end design to be something other than what was originally planned or expected.

Arts Practice / Padfield: ‘Representing’ the pain of others²⁵ discussed Padfield’s work Perceptions of Pain and the project face2face which attempted to level the understanding of pain (an abstract and individually experienced concept) through imagery. Arising out of her own experience of pain, Padfield initially developed a series of photographs looking at the “isolation of pain and/or the pain of isolation” (2011 p. 242). In consultation with her pain consultant, he suggested that communicating pain was as “frustrating for doctors as it was for patients” (2011 p. 242) and that this lack of ability to communicate created a frustrating feeling by both parties of being ‘stuck’. Through workshops and time spent with individuals, Padfield created a series of images which “represented as closely as possible their unique experience of pain” (2011 p. 242) which were then in turn used by participants during consultation.

Highlights:

1. The work was individually based: According to the author, the project’s intention was not to categorise pain ‘in general’ but rather to visually communicate the pain of an individual.
2. The audience for this case is Social Health, not participatory practitioners: Unlike the other cases presented, this case does not come from a journal related to participatory practices. Instead, this article was published in the Sage Publications journal Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine.
3. The case shows communication as part of healthcare: The individual images created by the author through a collaborative process became a real

²⁵ Padfield, D. 2011. ‘Representing’ the pain of others. Health:. 15(3), pp.241–257.

communication tool for use between doctor and patient. As discussed in this article, the tool facilitates the discussion of pain and in some cases provided clarity where there had previously been misunderstanding between patient and doctor.

4. The results of the project were significant: The result of the work of the author was found to be so successful, it was put into a nationwide feasibility study resulting in both quantitative and qualitative data.

Benefits:

1. Participants were empowered: Through all aspects of the project, the author's idea of empowering the participant was suggested and reinforced. In the interview process this was shown through the reflection of the participants; *someone is acknowledging my pain by asking me to participate*. Within the co-creation moments; *I am visualising my own, very personal situation*. And finally through actual use of the resulting visualisations within a care setting; *I am now able to use this tool (an image) in helping me discuss my chronic pain*.
2. The participation led to new understanding: According to the author, this project enabled sufferers of chronic pain, who previously were unable to clearly share how the subjective feeling of pain felt, to communicate this to others. This led to a better understanding of how to treat their pain, as well as an increased level of understanding by others both in and out of health care.

2.5.1 What these cases demonstrate; looking for the notable

Because of the nature of how participation empowers, each of the projects remains true to the moral ideals of PD; working with and empowering marginalised user groups. Although some of the cases acknowledge that working with marginalised groups can be difficult: ie. because there is difficulty in communication (De Couvreur and Goossens 2010, p. 115) or because of the disinterest of users or the sensitive subject matter (Nicholas et al. 2012, p. 121), none suggest that the risk of failure doesn't outweigh the benefits. In the cases of student designers, these cases also highlight a strategy for how design education can bring social topics into the classroom, as well as bringing actual needs of marginalised users into view. In saying this, the cases working within design education do not offer any insight into how the participatory tools were

adapted or what guidance or briefing the students were given in order to work successfully in a participatory manner. Besides reflecting on the benefits, there is little discussion about what changes would be made if the project was repeated; this might be in part due to the audience of the papers, who were not design educators, but rather PD research academics.

Looking at how these cases support creativity, the extension of the design space (adding new variables through the addition of participants and a change of environment) enabled designers in these cases to see possibilities that were previously unknown. Specifically in the cases where the designers worked with individuals, these cases suggest that there are benefits for both designer and user; ie. the motivation to contribute increased. It is unclear however, whether this benefit was temporary (linked only to this particular design exchange) or remains a motivating factor in their design practice.

2.5.2 Room for further research based on these cases

Taffe and Barnes, and Nicholas et al. both highlight the importance of designers being able to access authentic user-voices. Their case stresses the potential that participation can have in creating communication tools that are both context aware and user-focused. Looking at designer's fear to collaborate, Taffe and Barnes identified graphic design as a discipline whose central intention is to influence attributes or motivate actions, yet they identified graphic designers as being resistant to "sharing the creative process with non-designers as risking mediocre design" (2010, p. 211 referring to Drucker and McVarish, 2009). This fear that allowing non-designers into the design process would result in a design being unremarkable, is affirmed by Frascara's suggestion that designers have a fear that collaboration "will 'give away' some perceived competitive edge" (Taffe and Barnes 2010, p. 211; Frascara, 2002, p. 60). Considering that literature argues end-user inclusion provides "access to authentic socio-cultural rationales for design" (Taffe and Barnes 2010; p. 213), these two cases specifically support the notion that participation can be relevant for design students and their understanding of audience. This also suggests that there are design disciplines which remain on the fringes of this approach, and further research into the possibilities of participation within these design disciplines are needed.

The second call to action based on these cases stems from the work of both De Couvreur and Goossens, and Padfield. In these two cases, the participatory process leads to individual designs (designer creating for participant) instead of generalised designs for others (participant as ‘example user’ from user-group). The intent is not to design for a greater whole, but rather to create bespoke designs. In the other cases highlighted, the participants were representatives; representatives of child-care workers, young people who might suffer from mental health issues, etc. Placing even further emphasis on what Sander and Stappers’ call the ‘individual authority’ of a person, this way of working implies that designing for individuals has the prospect of offering novel design problems as well as delivering the potential for bespoke design solutions (Sanders and Stappers, 2008). Because the design is bespoke and made in collaboration with individuals, the validation of the design (the *appropriateness*) is embedded in its design process (Warr and O’Neil 2005, p. 120). Linking this individual and unique appropriateness to creativity (see section 2.2.2) aligns this types of bespoke participatory designing to Runco and Jaeger’s definition of creativity and its requiring *effectiveness* (Runco and Jaeger 2012, p.92). Further research, then is required that looks into how designing for one facilitates this creativity; how it incites the ‘unknown’ and ‘unexpected’ within the design process.

2.6 Designing for one in the age of participation; researching within the gaps

Moving towards designers being a part of solutions instead of merely the creators of artefacts, the future of design finds designers who are no longer “in the center of the system” but rather participants who are “shaping the systems that interact with other forces, ideas, events and other designers” (Slavin, 2016). Having identified design’s interest to *do good* and *add value* and having identified design’s interest in considering its role in much larger systemic wicked problems, the participation framework (regardless of which umbrella term it falls under) was found to provide designers invaluable insight into the needs, contexts and uses of future or adapted designs. The literature reviewed positioning design as an inherently social construct and participation as a means to inform the design process. Participation was found to possess potential that results in designs that are more relevant or more appropriate

(needs, context, and environment -aware) than designs created without user-participation. This improved relevance was the result of participation itself (the involvement of the user) or as the result of the designer gaining empathy (a result of participation).

Within this literature survey, participants within design participation are found not only to be representing themselves as experts but also seen to be representatives of much larger user-groups. Looking specifically at the cases highlighted (Taffe and Barnes, and Nicholas et al.), participants were selected based on their credibility in representing user-populations. In what Huynh identified as a Mainstream Design process, the knowledge a designer gains through collaboration with users is worked into the following iteration of the design and ultimately arrives at a design that is used by a much larger user-population. As Magnusson et al. suggest, designing for a larger group leads to designs which are ok for a group of users but “may not fit anyone perfectly” (2018 p.94). Fringe needs are excluded; even if they were identified by the participant as being valuable. For the research carried out for this thesis, there are no fringe needs. Designing for One falls under Huynh’s Design by Exception, where individual needs are seen to have just as much value as those which are generalizable: no distinction is made. Except for the two example cases from literature in which it was suggested that working with an individual builds empathy and generates motivation in the designer (De Couvreur and Goossens and Padfield), there is no literature that suggests that designing for an individual is a *way of working* that designers can use in order to achieve empathy, or that it results in empathetic designs. Nor is there evidence in academia that this singular approach has been explored for its potential with groups of individuals who aren’t marginalised and find themselves in the mainstream.

In addition to this, the literature reviewed highlights the impact participation (ie. empowerment) has on the participant and articulates how this participation informs the design process. There is little research however, that brings the impact of participation on the designer into view. In terms of Van Rijn’s experiment with direct user contact, her work suggests that direct user contact builds empathy in the designer and leads to the generation of better designs. But van Rijn stopped there. She called for further research in this area to be done, for it to be verified and explored in other disciplines. The chapter on empathetic relationships (see Chapter 6) should be seen to be a continuation of this area of research.

Finally, there are disciplines such as Human-Computer Interaction or Service Design, where user participation is regarded as the accepted norm, however based on the cases from literature that were reviewed (Taffe and Barnes 2010), a particular discipline which lags behind in this regard is Graphic Design. Literature here suggests that for graphic designers, working directly with potential users is not encouraged. In fact, the literature suggested that there is resistance by graphic designers to the idea of ‘opening up’ the decision making design process to non-designers, as it takes away the designer’s role as creative authority/design expert. Although this thesis does not limit itself to graphic design in its focus, three of the four student projects highlighted in this thesis are situated under the umbrella of graphic design or visual communication. This research therefore builds upon the work of Taffe and Barnes; looking to identify how designing for one can facilitate graphic design students in the collaborative design processes and the added value it may offer students in terms of the things they are making, the knowledge that is being generated or even the sensitivity that is being produced as byproduct of the participation.

Although educational literature praises the role of student experience and exposure, design education (for reasons such as scheduling conflict, the importance of studio-practice, the focus of techniques within the discipline, etc.) has not systematically synthesised experience into curricula. There is literature calling for a radical rethink of design education, and design organisations have identified skills that designers in the future should possess. However, there are no published approaches that engage with these skills using the strategy proposed by Gero and Kumar: purposefully disrupting or shifting the design space as a means to initiate creativity in the classroom while building on skills required for the future. The findings chapter on *learning through experience* will specifically explore this area further (see Chapter 5).

Moving away from designing for generic user groups and wider demographics, the research in this thesis investigated how designing for one opens the design process by adding unknown and challenging factors within a student’s design process. In this way, the research explored how participation impacts the student designer; their experience, process and understanding of their discipline. It looked at how this approach impacts motivation and engages student designers. Referring specifically to the call within literature for design to address problems beyond issues of marketing or commerce, the research in this thesis positioned itself ideologically with participatory

design's support of the underprivileged. Matching design students with underserved (design-*arm*²⁶) user-populations, the research furthered the idea of how design education can be a catalyst for changes not only within industry but within designers themselves.

²⁶ Design-*arm* (literally design-poor) is a term coined in this thesis based on the Dutch term 'kansarm' which literally means 'chance-poor' that refers to people who, through their situation, have little chance to succeed because various opportunities are not available to them. In this context it refers to those who, through their situation (demographic, disability, impairment, etc) have little access to design innovation.

Chapter 3.

Methods; designing, framing and analysing the research

In this chapter, the methodology used in the research will be discussed. It references literature that informed the methodological paradigm, provides a grounding of the methodology within a philosophical context, outlines the approaches used and provides a theoretical framework for both gathering and analysing the collected data, and the ethical concerns applied to each. The following illustration (Figure 34) provides an overview of how each informs the rest.

The methods were selected based on their ability to provide insight into the research questions. The first research question required methods which would support

Figure 34: Methodological framework for research carried out.

METHODOLOGICAL FRAMEWORK

Interpretative/Interpretivist Paradigm

Phenomenography

METHODS

4 Student Module
Case Studies

Expert
Workshop

CONTEXT SPECIFIC METHODS

Interviews

Thick Descriptions

Observations

Interviews

Mapping

ANALYSIS

Coding + Thematic Analysis

FINDINGS

Characteristics of empathetic
relationships

Variables that disrupt the
routine design space

Establishing the residue of
Interaction

the discovery of insights that designing for one was providing students. This required methods that would allow for collecting and analysing student experiences. To support this investigation, the primary method used was Case Study. This was selected as a means to compare and contrast student experiences across four different designing for one contexts. Next to this, interviews and observations allowed for the collection of data that provided insight into student experiences across these individual cases, but also enabled inquiry into the relationship between student designer, participant and design output. Next to this, these methods enabled analysis into establishing how empathy was being developed and allowed for the voice of students to articulate and define the individual student take-aways. The second research question looked to define how designing for one was impacting the traditional design space within design education. A workshop method was selected as a means to allow for identifying through a collective voice, critical reflection on the use of designing for one within an educational context. Supplemented by the method interview, it allowed the research to go to into further detail with design educators regarding the workshop and the topics covered. The following table gives an overview of how the methods selected support answering the research questions.

Table 8: Overview of research methods and how they relate to research questions.

Methods	Case Study	Workshop	Interview	Observations	Mapping	Thick Description
To explore the specific <u>insights</u> that designing for one provides the designer:			x			x
1. What were student designers taking away from the designing for one experience?	x	x	x			
2. How was empathy being established?	x		x	x		x

To identify how designing for one was <u>extending the design space</u>²⁷ within design education:	x	x	x		x	
1. What was happening within the designing for one approach that was challenging expectations about coursework and the design process?	x	x	x	x	x	
2. How was designing for one creating spaces in which the ‘unknown’ and ‘unexpected’ could take place?	x	x	x	x	x	x

3.1 The design of the research: grounding the study in a paradigm

The research carried out in this thesis is based in phenomena; the student’s experience of working closely with an individual within the context of design. Relationship-based, the working *with* adds a new dimension to the student’s working process. Thus, this study is informed by an interpretative/interpretivist paradigm, which suggests that reality is socially constructed and there is no one single reality, and that people’s experiences are “contaminated by their worldviews, concepts, backgrounds, etc.” (Rehman and Alharthi, 2016, p. 55). Because the research is being carried out by a lecturer who works both as a design researcher and as a designer-lecturer, previous experiences also contribute to the reading and interpretation of situation within the research. Thus, all involved elements are inextricably part of the *social reality* being researched and complete detachment from the subject being studied is not possible (Grix 2004, p. 83). Next to this, an interpretivist paradigm recognises that it is the role of the researcher to make sense of the research participant’s reality, and acknowledges that individuals have their own unique view of the world (Radnor 2002, p. 30).

Grix’s idea of being ‘inextricably part’ of the research is further defined by Blaikie as shaping not only the researcher’s lens through which they observe and carry out research, but also shaping the form the research takes:

²⁷ See Chapter 2.4

“Researchers can only collect data from some point of view, by making ‘observations’ through spectacles with lenses that are shaped and colored by the researcher’s language, culture, discipline-based knowledge, past experiences (professional and lay), and experiences that follow from these... Therefore, there will always be a gap of some kind between the data that are collected and the reality that they are supposed to represent” (2000, p. 120).

Recognising that a gap exists, that the gap is formed in part by the limitations of the researcher acting within an interpretivist paradigm, relates directly to the breadth of methods being used. Although the methods will never fill this gap completely, the individual methods selected enable knowledge/patterns/findings to be drawn from the data. Next to this, these methods also allow readers to understand the social construct in which the data was gathered and the space in which the research took place - in a sense being able to derive their own meaning from the research.

For Tilden, who provided guidelines for interpretive meaning-making, information (data) is not interpretation; “interpretation is revelation based upon information” and “should aim to present a whole rather than a part” (1967, p. 9). Aligned to the intentions of the research in this thesis, Tilden also suggested that the “chief aim of interpretation is not instruction, but provocation”; it allows a researcher to make sense of her practice and stimulate others to action (1967, p. 32). This paradigm also allows for the creation of interventions and in the context of this thesis, these interventions are within educational practice as well as student design practice. Thus, this ontological framework provides the means to critically look at the actions that have been orchestrated and to look for what Tilden calls *revelations* (1967, p. 18). Attempting to offer transparency to the lived reality of where/how and with whom these actions took place, these judgements can remain true to the lenses of the researcher; to provoke interest or action in other educators and designers.

3.2 Phenomenography

Next to the interpretative/interpretivist paradigm, the research in this thesis draws from phenomenography. Much like participatory design’s suggestion that designers should better know and understand a user’s perspective, phenomenography’s objective is to see the world from the student’s own perspective. Marton defined the

approach as the “study of the limited number of qualitatively different ways in which various phenomena in, and aspects of, the world around us are experienced, conceptualized, understood, perceived and apprehended” (Marton 1994, p. 4424). Trying to identify what Marton and Booth refer to as “structures of awareness” (1997, p. 83), in phenomenography, a particular phenomenon is studied by categorising the various experiences of participants. These “categories of description” relate to each other logically and form natural hierarchies in relationship “called the ‘outcome space’ of the phenomenon concept in question” (Marton, 1994 p. 4424)

These *categories of description*, however, cannot come from the researchers themselves. A holistic approach instead of a step by step method, what phenomenography brings to this thesis’s methodological framework is this specific focus and intent: to bring the student’s particular experience into view. As with Stake and Merriam’s interpretivist leanings, the entomology founding phenomenography also centres on the importance of the individual’s lived experience:

“The categories of description must depend upon an earlier evocation of students’ very own descriptions of their relevant experience. It is, therefore, a paramount requirement for phenomenography to be sensitive to the individuality of conceptions of the world, it must be grounded in the lived experience of its research participants” (Ashworth and Lucas 2010, p. 297).

As Merriam suggested that the results of a case study should be self-evident for the reader of the results, phenomenography requires transparency and ‘bracketing’ the researchers’ presupposition. The researchers must make an attempt to be transparent, or ‘bracket’ their own preconceptions and viewpoints in order to not *marginalise* relevant student insights (Ashworth and Lucas, 2010, p. 299). They go on to suggest that the researcher must create an “attitude of empathy with the student”, in order to find the student’s views and factual claims (factual because they are the students’ own) which are of *immense interest* (quoting Wertz, 1983).

3.2.1 Guidelines for Phenomenographic Research

Ashworth and Lucas provide guidelines for carrying out phenomenographic research. What follows is a summary. These guidelines are referred to in later chapters and were used to help structure the sharing of both the context of the research in this

thesis, the organisation of the student module cases, as well as the findings. Although the guidelines are from Ashworth and Lucas (2010, p. 300), the text in italics clarifies how these guidelines relate to the research carried out in this thesis:

1. The researcher should tentatively identify the broad objectives of the research study, the phenomenon under investigation, recognising that the meaning of this area may be quite different for the research participant.

The primary investigation of the research carried out centered on the act of designing for one and its impact on the student designer's experience. The phenomenon in question was this action of designing for one, which was, for each participant, a wholly individualised experience; each different from the next.

2. The selection of participants should avoid presuppositions about the nature of the phenomenon or the nature of conceptions held by particular 'types' of individual while observing common-sense precautions about maintaining 'variety' of experience.

The selection of the participants held no specific presuppositions except that the students were novice creators; able to, with support, go through a creative process and arrive at a design concept. Although a Yin case-study approach would have required a homogenous group of participants, this study welcomed variety in terms of student level, timeframe and design discipline. This variation provided, as Åkerlind suggests, a "full range of possible ways of experiencing the phenomenon in question, at this particular point in time, for the population represented by the sample group collectively" (2012, p. 116).

3. The most appropriate means of obtaining an account should be identified, allowing maximum freedom for the research participants to describe their experience.

There was no interference with the lead lecturer's assignment structure, nor was there a request to add additional forms of documentation from the student (such as weekly reflective journaling). To maintain consistency across the various cases, interviewing was used as the primary method of data collection, supplemented by verbal student reflections in the weekly coaching sessions and the student's own reflection process documents. Regarding the interviews,

although there was a list of questions consisting of various topics related to the study to allow for cross comparison, students were not under any specific time restraint and were encouraged to discuss topics that related to the study.

4. In obtaining experiential accounts, the participant should be given the maximum opportunity to reflect, and the questions posed should not be based on researcher presumptions about the phenomenon or the participant, but should emerge out of the interest to make clear their experience.

In addition to the interviews, the interviews were supplemented with written questionnaires in which students were invited to further elaborate on the topics of the interview. Where students used journaling or self-reflection as part of their own process which were found to contain relevant insights, these were referenced in the study. (See section 6.3.1, p. 202).

5. The researcher's interviewing skills should be subject to an ongoing review and changes made to interview practice if necessary. For instance, stylistic traits which tend to foreclose description should be minimised.

There is a notable evolution of how the researcher carries out the interview process. An example of this is from the first case, in which the students were invited to participate in the interview after the module was complete. The students were at this point already in a different semester. This led to a large group of students not participating in the interview due to time issues. This was changed in later cases to keep the interview moment attached to the module itself. The lead lecturer made the interview not part of the grading, but part of the project's conclusion.

6. The transcription of the interview should be aimed at accurately reflecting the emotions and emphases of the participant.

Because three of the cases required transcriptions that were translated, when coding the transcriptions, going back to the original audio file was often required to assess the student's original text as well as the text's emotive qualities to ensure that the translations were accurate.

7. The analysis should continue to be aware of the importation of presuppositions, and be carried out with the maximum exercise of empathic understanding.

Although structured, the interview process allowed for tangents and storytelling on behalf of both the participant and the researcher as a means to build empathetic relating.

8. Analysis should avoid premature closure for the sake of producing logically and hierarchically-related categories of description.

Although there was pre-existing expertise in supporting students in designing for one which was bracketed (see Chapter 1), the analysis led to a range of categories of impact, categories of experience, categories of difference, etc. This was open enough to allow for unexpected categories to emerge that were not initially defined as an expected area of result. An example of this would be students identifying that designing for one required them to use soft skills such as listening or patience in their design practice, or a student suggesting that this was an example of theory being applied in practice. This followed Marton's process for transcription analysis: "utterances are brought together into categories on the basis of their similarities. Categories are differentiated from one another in terms of their differences...In this way, the groups of quotes are arranged and rearranged, are narrowed into categories, and finally are defined" (Marton 1986, pp. 42–43).

9. The process of analysis should be sufficiently clearly described to allow the reader to evaluate the attempt to achieve bracketing and empathy and trace the process by which findings have emerged.

Because the research is linked to student experience, wherever possible, the research findings are brought to light through categorised collections of the student's own voice.

These above guidelines formed the basis for identifying what methods and forms of analysis and dissemination would be best for the research. Accompanying each method description below is a rationale as to why the approach was relevant for this particular research.

3.2.2 A summary of the research carried out and its ethical compliance

In short, the research that was carried out took place across four different student modules over the span of two years. Collectively, these Student Module Cases formed the backbone of the research. As this research was carried out prior to the enactment of GDPR, each student who was participating in the module (and thus the research) was protected by their school's ethical commitment to safeguard their privacy and rights (see Appendix for lead lecturer submissions). In addition to existing institutional ethical safeguards, the following ethical considerations model was used based on Chang et al.'s *Ethical issues for teaching staff of research into practice* and referencing interview informed consent models of both the University of Leeds and the KU Leuven (2005, p. 97).

Research participants (students and design educators) were informed of the following:

1. The research's intent and purpose;
2. The researcher's role in to module;
3. The procedures for data collection (ie. audio/video recording, photo documentation);
4. The student's engagement and what it meant to be involved; the duration of the research, advantages or disadvantages;
5. Issues regarding privacy and data protection (ie., extent of confidentiality regarding the coaching sessions, individual reflection documentation and interviews, the use of images and photographs within the context of research publications);
6. How the results will be used (anonymity and dissemination of results);
7. How the data collected will be stored during the research and destroyed post analysis;
8. The ability for a student or workshop participant to withdraw from participation;
9. The contact information of the researcher.

In order to maintain ethical standards, this verbal informed consent was repeated at the beginning of each interview. Specifically for this study, a clear distinction is made regarding participation. The study did not study the participants but rather the students within this participation. Ethical consideration for participants themselves fell under the jurisdiction of the organisations that sourced the participants; the City of Ghent and their Division of Social Work, The City of Genk and their Department of Culture together, and the Brooking Park Skilled Nursing Facility, part of St. Andrew's Management Services in Chesterfield, Missouri. For students participating with residents of Brooking Park, their participation with people with dementia fell under the ethical jurisdiction of the care facility. Here the student participation required that the students enroll as volunteers and thus the students were held accountable to the guidelines for volunteers at the care facility. Next to requiring students to sign in each time they arrived and their wearing a name badge, it also required students to agree to a criminal background check and tuberculosis test, both paid for by the care facility. For participants at the workshop, they provided written approval for the use of their photos and workshop collaboration results. Finally, for all student and lecturer participants, those who were interviewed gave verbal approval for the analysis, use and dissemination of their contribution. Excluding the lecturer participation, all students and participants referred to in this thesis have been anonymized.

3.3 Student Module Case Studies

Four existing modules were selected to be used to test the designing for one approach. These four modules differed in terms of student numbers, location, design discipline, length of time and the context in which the approach would be used (see Chapter 4). These four modules formed the Student Module Cases explored in this thesis, forming the backbone of the findings. Because case studies are defined as “a contemporary phenomenon within its real life context” (Yin 2003, p. 13), the Student Module Cases looked to identify the value (or lack thereof) of the designing for one approach within diverse contexts and diverse design educational settings. Cases require boundaries so that they can be seen to be objects rather than processes (Merriam 1998, p. 27). For the Student Module Cases, the common ‘boundary’ which both distinguish them from each other yet make them applicable for study, is the shared approach of designing for one. Drawing on Merriam’s definition, these cases

focus on a particular situation or phenomenon (they are Particularistic); the resulting product of the case is a rich, thick description of the phenomenon under study (Descriptive); and the case illuminates the reader's understanding of the phenomenon being studied (Heuristic) (Merriam 2009, p. 43). These three elements come across in the following chapters. The particular situations are well defined within Chapter 4 and the phenomena under investigation are illuminated within the descriptions and tone of voice presented in the findings chapters (see Chapters 5-7).

The diversity between the Student Module Cases places them further within an interpretivist, constructivist paradigm; there is no single, common reality. For Merriam, this forms a "key philosophical assumption upon which all types of qualitative research are based is the view that reality is constructed by individuals interacting with their social worlds" (Merriam, 1998, p. 6). For both Stake and Merriam, the underlying meaning of the events taking place require interpretation. In the case of the Student Module Cases, the event is the process of designing for one: what does it mean for students, how does it impact their process and/or position as student and/or designer? The reason case study was used as a method within this research is that it requires making sense of the data. It involves a process of meaning-making that includes "consolidating, reducing, and interpreting what people have said and what the researcher has seen and read" (Merriam, 1998, p. 178). The researcher becomes an interpreter, gathering others' interpretations "require them to report their rendition or construction of the constructed reality or knowledge that they gather through their investigation" (Yazan 2015, p. 137).

Although there are some case study academics who suggest that case studies can be orchestrated and analysed in an almost empirical way (Lin), Merriam is transparent about a case study's complexity:

"The researcher brings a construction of reality to the research situation, which interacts with other people's constructions or interpretations of the phenomenon being studied. The final product of this type of study is yet another interpretation by the researcher of others' views filtered through his or her own." (Merriam, 1998, p. 22)

This complexity is furthered in Stake's suggestion that case studies inform our understanding of experiences and that these *vicarious instances*, often revealed

through narrative, can also report that the inquiry simply reinforces an already established belief or it can range so far that it explodes a generalization into incomprehensibility (1995). For the Student Module Cases presented, narratives support first-person student reflections in order to *illuminate* the reader's understanding of the student experience.

Finally, for Stake and for Merriam, case studies require flexibility. For Stake, his position drew on the work of Parelett and Hamilton, whose notion of “progressive focusing” stemmed from their belief that the course of a case study “cannot be charted in advance” (1972, p. 18). They saw the study itself as being in a constant state of transition; moving from stage to stage as the investigation unfolds and taking place as areas of interest or problem areas “become progressively clarified and redefined” (Parelett and Hamilton 1972, p. 18). Because the Student Module Cases did not run parallel and instead, ran consecutively, the charting of the direction of the modules could not be graphed in advance. An example is each module's taking on a different type of participant. The potential risks involved with each iteration of the Student Module Case proved to be distinct. Precursing Lin's suggestion that cases should have pre-defined strict and empirical restraints that can be duplicated (a type of standardisation), Parlett and Hamilton suggested that this sort of imposed, artificial control *rendered it irrelevant*. “Rarely can 'tidy' results be generalized to an 'untidy' reality”... this sort of control “divorces the study from the real world” (1972, p. 6). The real world they speak of, is vital to the Student Module Cases presented in this thesis. Although by nature a designer's presence alters aspects of the realness of the world they are hoping to understand, there is dynamiscism requiring researchers to adapt to the “changed circumstances that so frequently arise” (Parlett and Hamilton 1972, p.6). This dynamiscism and lack of standardisation does not render them un-duplicatable, which academic rigour requires, rather it renders them authentic; able to be duplicated in diverse but boundaried settings.

3.3.1 Case studies in practice

Whereas Stake does not define a moment when the research starts, he did define characteristics and techniques that could be used in quality case study research. He proposed having well-defined research questions that “help structure the observation,

interviews, and document review” (1995, p. 20). Merriam flavors this list with call-to-action additions: conduct *effective* interviews, be a *careful* observer, *mine* data from documents created (Merriam 1998). These characteristics contributed to the development of the Student Module Case analysis and documentation. As suggested by both Stake and Merriam, analysing data does not happen once all of the data has been gathered, but rather it is ongoing; happening simultaneously. This simultaneous analysis is part of the freedom that their approach to case studies offers and what Yazen suggests distinguishes it from positivistic epistemology; “is not to say that the analysis is finished when all the data have been collected. Quite the opposite. Analysis becomes more intensive as the study progresses, and once all the data are in” (Yazin 2015 citing Merriam 1998, p. 155). As the Student Module Cases form one part of the methodology, the analysis of them as individual cases and as a collective data set, was ongoing throughout their various editions. Unlike Yin’s cookie-cutter approach in which various aspects of the study must be kept homogenous, the Student Module cases welcomed Stake and Merriam’s unexpectedness and sought authentic and variable contexts.

Finally, in terms of offering and sharing case research results, qualitative research like the Student Module Cases is “holistic, multidimensional, and ever-changing; it is not a single, fixed, objective phenomenon waiting to be discovered, observed, and measured” (Merriam 1998, p. 202). Unlike quantitative research, which leans on validity of studies and reliability of statistics, qualitative research is a natural progression; the research is responsible for leading the reader to the same conclusion. As Merriam puts it, the researcher must provide the reader “with a depiction in enough detail to show that the author’s conclusion ‘makes sense’” (Merriam 1998, p. 199). In other words, the case research is presented in a way that the reader draws their own similar conclusion.

3.3.2 The classes: Size and Location

The following shows an overview of the Student Module Cases and the classes in which they took place. Next to this, it gives an overview of the number of students that participated, the various data collection methods, as well as how the cases were documented. Each case is further detailed in the following chapter. (See Chapter 4.)

Table 9: Overview of the data collection strategy for the Designing for One Student Module Cases.

Location	Ghent, Belgium	Ghent, Belgium Advertising	St. Louis, MO, USA Graphic Design	Genk, Belgium Interaction
Design Course	Graphic; Digital	Graphic; Advertising	Graphic	Interaction
Participants	17 students	13 students	5 students	6 students
<i>Ongoing observations throughout (researcher as participant-observer)</i>				
Case Overview Documentation	Film + publication	Film + poster series	Radio Interview	Film + postcard series
Pre/Post Questionnaire Participation	15/8	12/11	5/3	6/5
Interview (optional)	5 students audio	12 students audio	5 students audio	6 students audio

3.4 Interviews: Giving voice to the participants

In their book on Interviews as an action method within a qualitative research practice, Kvale and Brinkmann separate out the word interview into two distinct words: Inter and View. Situated between conversations of daily life and professional conversations (2009, p. 2) interviews are an “inter-change of views between two persons conversing about a theme of mutual interest” (2009, p. 2). In the case of the four Student Module Cases, the interviews allowed the homogenous group of participants (even though they are interviewed individually) and shared common experiences to be compared against each other. Collectively, these interviews from the four Student Module Cases created a data set. Different to that of structured or unstructured interviews, the semi-structured interview format utilised in this thesis research required participants to answer preset, open-ended questions. The freedom of this form of interviewing allowed the flexibility for conversation to take unexpected turns and for seemingly unrelated topics to be discussed. Although semi-structured interviews can be conversational, spontaneous, and lack the rigidity of formal

questioning, they must also possess structure and purpose with the goal of “obtaining thoroughly tested knowledge” (Kvale Brinkmann, 2009, p. 3). Because the intent of the research was to answer research questions pertaining to the design student’s reflection on their own experience, the decision to use interviews as a conversational form of inquiry is rooted in what Seidman identified as “interest in understanding the lived experience of other people and the meaning they make of that experience” (2006, p. 9).

In order to capture the data effectively, the interviews of this thesis were recorded with the permission of the participant and no additional notes were made during the interview process.

The interviews were each recorded digitally and were transcribed verbatim. Because three of the four Student Module Cases were in Dutch, a native Dutch speaker was hired to make the translated transcriptions directly from Dutch to English. The names of the participants (except in the case of the participating design educators) have been anonymized in the text.

3.4.1 Analysis: Participant Sampling

In a project of this size, sampling was important. As stated above, the Student Module Cases are diverse, but this diversity was explicit. The goal of the research of this thesis was to investigate the use the designing for one approach within a diverse range of design educational contexts in order to understand the impact of designing for one on the student designer. Jansen proposes that orchestrating this sort of diverse sample is logical as it covers “all existing relevant varieties of the phenomenon” and allows for *saturation*; enough *relevant varieties of the phenomenon* can be gathered from the selected sample (2010, p. 8). Regarding the samples for the Student Module Cases, the research centered on capturing student experiences. Interviewing as many students as possible resulted in a data set that required a *sampling filter* or lens with which to view the data generated.

3.4.2 Maximum variation sampling

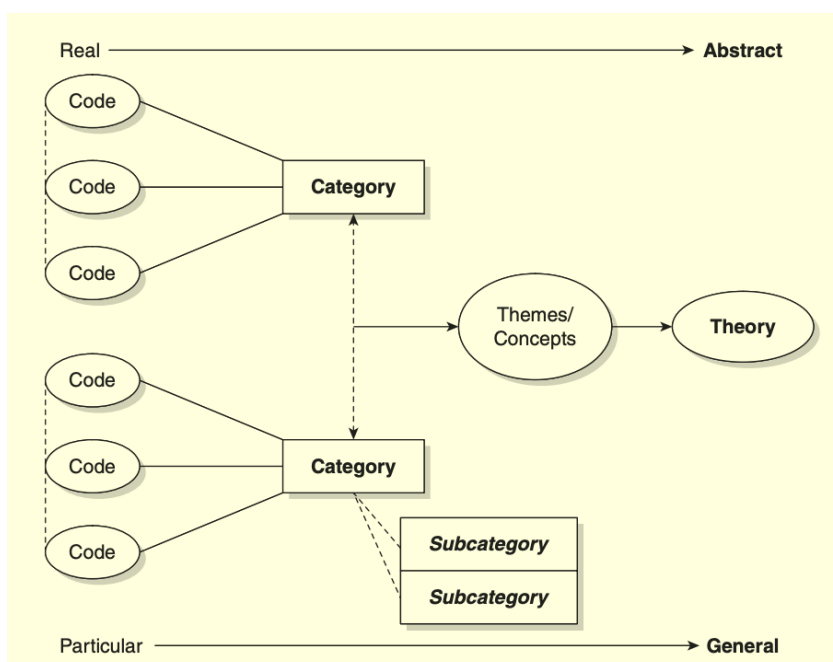
The analysis of the data generated from the interviews used maximum variation sampling. Patton suggested that this type of sampling yields: “important shared

patterns that cut across cases and derive their significance from having emerged out of heterogeneity” (Patton 2002, p. 235). These patterns were specifically what this research wanted to identify and the reason the designing for one approach was used across four divergent contexts. The approach was the same, but the Student Module Cases differed from each other. Challenges that one student faced differed from the challenges students in other cases faced, simply because the context in which they were working was different. Yet, the students were both coming into contact with this challenge through the use of the same approach. Although additional Student Module Cases could have been implemented within this study, the resulting size (4) was based on generating an amount of data and its included variation that would “be sufficient to answer the research question” (Paterson et al., 2001, p. 37).

3.4.3 Analysis: Coding and identifying patterns

Analysis of the data gathered through the interviews and their respective transcripts included coding the resulting data. Coding is the mediator between data and its analysis (Saldaña 2009, p. 5). It is the process that enables data to be “segregated, grouped, regrouped and relinked in order to consolidate meaning and explanation” (Grbich 2007, p. 21). The initial coding was carried out within each Student Module Case; coding the student’s individual responses to the interview. In the

Figure 35: A streamlined codes-to-theory model for qualitative inquiry (Saldaña 2009, p. 12).



second round of coding, these coded data points were further grouped into themed categories, which resulted in grounded theories surrounding the designing for one student experiences (see Chapter 5). Based on the empathy models presented in the literature study, the data was again coded and grouped according to the student's reflections on their design process and the formed student-participant relationship, resulting in grounded theories about the formation of empathetic relationships within design participation (see chapter 6). Finally, the data was further mined for passive student reflections on the variables identified in the workshop (see chapter 7).

3.5 Supporting the cases: observational reflections and thick descriptions

In support of the Case Study method and the data gathered from interviews, observations contributed to the research data. In research revolving around experiences and phenomena, observational research requires researchers to “go beyond the spoken word” (Flick 2014, p. 293). In this thesis, the observations supplemented the theories that were arising from the coded student reflections. Rooted in anthropology and fieldwork, observation is a refinement of a process used in everyday life and is often regarded as being self-evident because it is part of what humans do (Bogdewic 1999, p. 47). True to this research's phenomenographic, interpretivist leanings, the observations were grounded in the realities of the students' experiences. These “realities of daily existence” were in turn then used to “generate practical and theoretical truths about human life” (Jorgensen 1989, p. 14). Used in this way, observations filled in the gaps surrounding the phenomena being investigated and supplement the data; giving substance to the insights generated. Next to this, the observational insights gathered during the study were used to inform the ‘thick’ descriptions of the Student Module Cases themselves (see Chapter 4) as well as the thick description which supplements the student's journal in Chapter 6.

Used within academic literature to inform the reader, *thick descriptions* go beyond “surface appearances to include the context, detail, emotion, and webs of social relationships. It presents the significance of an observation, event or behaviour. Thick description includes voices, feelings, actions and meanings” (Ponterotto 2006, p. 539). Part analysis, part information and part dissemination, in Geertz's seminal text, thick

descriptions were described as a type of knowledge formed. Knowledge may be the result of research actions, he professed, but knowledge is not the methods themselves, it is not “establishing rapport, selecting informants, transcribing text... that define the enterprise” but rather it “is the kind of intellectual effort... a *thick description*” (Geertz 1973, p. 6). This intellectual effort is what Schwandt suggested was laden with interpretation: “it is this interpretive characteristic of description rather than detail per se that makes it thick” (2007, p. 296).

Finally, within an educational context, Badenhorst applied Bloom’s Taxonomy as a way to consider thick descriptions as a form of learning:

“provide information which gives the reader *knowledge*, and then explain so that the reader can *comprehend*. Give examples so that the reader can see how this information has been *applied*. Then pull it all apart to analyse it for the reader, put it back together with *interpretation*, insight and new knowledge through *synthesis*. Finally, step back and *evaluate* your interpretation.”
(Badenhorst, 2015)

Within the texts describing the cases as well as within the findings themselves, when possible and where identified as a benefit to the reader, thick descriptions accompany the texts. The use of thick descriptions within the Student Module Case descriptions and the chapters revolving around the research findings work specifically as a means to provide illumination for the reader; to aid in their understanding of the phenomenon (Merriam 2009, p. 43).

3.6. Educator Workshop

The final two methods highlighted focus specifically on collaborative activities (workshop and mapping) that took place as part of the AIGA Decipher Design Education Conference at the Penny W. Stamps School of Art & Design at the University of Michigan. The Residue of Interaction workshop was created and facilitated by the researcher as a means to validate and reflect upon the initial findings of the research together with peers from design education research. The participants were each critically engaged designer/lecturer researchers, and were informed verbally when they arrived to the workshop location that the process was going to be filmed and that the

results would contribute to research. Each participant signed the mapping document, agreeing to be part of both the workshop and the research, and giving the right to take and publish photos as part of the research results.

As an activity, workshops are intended to engage participants to act, respond and participate. Referencing the historical context of the word, Brooks-Harris and Stock-Ward define a workshop as “a place where work occurs, where tools are used to accomplish this work, where things may be repaired and where the work may result in a particular product or outcome” (1999, p. 3). Always goal-orientated, workshop design leads participants to an intended outcome. As the term workshop has evolved and become a standard tool of research across domains and specifically within design research practice, the contemporary definition of workshop is described as: “an arrangement whereby a group of people learn, acquire new knowledge, perform creative problem-solving, or innovate in relation to a domain-specific issue” (Ørngreen and Levinsen, 2017, p. 71). Participatory in nature, workshops have “become a part of our everyday language and requires no further explanation” (Ørngreen and Levinsen, 2017, p. 71).

Workshops are laden with intention and their structure, buildup and orchestrated engagement of participants all lead to a specified outcome. Brooks-Harris and Stock-Ward suggested that the intention of workshops (the emphases) could fall into 5 areas:

- Problem Solving (bringing a diverse group of knowledgeable people together so that they can share and find solutions to problems);
- Skill Building (equipping participants with skills that they can use in their own professional or personal lives);
- Increasing Knowledge (increasing knowledge in a particular area through hands-on practice);
- Systemic Change (stimulating a change of attitude or behaviour by building awareness);
- Personal Awareness/Self-improvement (helping participants become aware of their own thoughts, attitudes or feelings and supporting them in making a positive change) (1999, p. 5)

Although workshops can be seen to be a means of experience or practice, the emphasis of the Residue of Interaction workshop looked at both increasing knowledge of the participants, as well as instigating participant self-reflection. Besides functioning as a tool, the workshop also became a form of investigation and turned into a *research method* itself. Because workshops are specific moments in time, they also present a challenge in terms of documentation and data capture. Because of this, it is suggested that workshop moments be documented by tangible artefacts; photos, physical mind maps, video recordings and artefacts produced in the workshop (Ørngreen and Levinsen, 2017 referring to Darsø 2001, p.220).

3.6.1 The workshop: Size and Location

The following shows an overview of the workshop and its participants. Next to this, it gives an overview of the content used within the workshop in terms of the Student Project Summaries. Next to this, it gives an overview of the number of students who participated, the various data collection methods as well as how the cases were documented.

Table 10: Overview of workshop content, participants and results.

Location	DEC, Design Educators Conference; Decipher: Penny Stamps School of Design, University of Michigan, An Arbour, Michigan, USA			
Participants	21 design educators/academics			
Workshop Documentation	5 group Mappings + Film			
Maximum variation sampling used within workshop	SMC1: Ghent Digital 2 students showcased	SMC2: Ghent Advertising 3 students showcased	SMC3: St. Louis Graphic Design 3 students showcased	SMC4: Genk Interaction 5 students showcased
Interview (optional)	7 educators film			

3.6.2 Workshop mapping; visualising workshop discussions

The workshop utilised a visualisation process called mapping, in which participants create a workshop artefact while they participate. This artefact in turn becomes evidence of the discussions and findings of the participants.

The idea of ‘mapping’ is a tool widely used within participatory and co-creation research because it is the result of collaboration between workshop participants. The map is a mediation tool that becomes a talking point between designers and participants. Through a process of discussion, those using the map are able to discuss abstract concepts and visualise ideas by responding to a basic common visual language (map). The mapping facilitates “participants’ exchanges and disagreements” (Schepers et al. 2013). The results from workshop-based research is different than the other methods such as interviews and observations. Mappings can be a:

“constructively provocative and liberating activity where knowledge is explicated. While observations provide first-hand evidence of what people do and interviews offer access to inner thoughts and the reasons for actions, workshops combine a little of both without being either... Through this, workshops bring us close to practice without being in practice.” (Ørngreen and Levinsen 2017, p. 77).

Seeing these differences as a point of added value, the artefacts from the workshop as well as the participant interviews add another dimension to the data gathered. Next to the visualisation of the conversations held within the workshop, seven participants were interviewed. These interviews followed the same guidelines as above (see section 3.2.2) and utilised the same sampling and coding structure in order to identify patterns in the participants’ and interviewees’ contribution.

3.7 Assessing quality: trustworthiness and validity

As with any academic research, the study itself, the data collection techniques and the findings must possess rigour; research that strives to be high quality, carried out in a systematic way, and results that can be repeated. Because the data in this study draws on interpretation, phenomenographic validity calls for specific forms of legitimacy. In communicative validity, the researcher’s interpretation must be

defensible and deemed appropriate by the research community as well as the intended audience. The researcher must deliver a sound argument and communicate it well; the validity “emerges from the interaction between readers and the reported research” (Lankshear and Knobel 2004, p. 363). In terms of pragmatic validity, the research is validated by its usefulness and meaningfulness to its intended audience (Åkerlind, 2005 p. 331).

For researchers specifically working within higher education, the “the test is generally not the research’s theoretical purity, but its value in producing useful insights into teaching and learning” (Åkerlind 2005, p. 331, quoting Entwistle 1997, p. 129). From screening a Student Module Case film at a Cumulus Design Education Conference to presenting early findings regarding designing for one and creativity at the Design Society’s Design Creativity Conference to being selected to facilitate an exploratory workshop with peers at the AIGA Design Education Conference, the research has been undergoing validation even while under investigation. Through the decisions made in terms of what methods would suit the investigation to the management and analysis of the collected data, this thesis has intended to be transparent, accessible and relevant.

3.8 A summary: methodology as foundation for research

The methods in this chapter were selected precisely because of their ability to support a phenomenographical approach in answering the research questions central in this study: **exploring insights that designing for one was providing students and identifying how designing for one was impacting the traditional design space.**

Discovering student insights required methods that allowed for collecting data - data regarding student experiences. The use of Case Study coupled with Interviews allowed for a complete student story to be captured, resulting in over 200 pages of transcripts; from how students experienced the participation to their identifying how they experienced designing for one as being different to other modules. Although other reflective documentation methods could have been used requiring the student to reflect on their process on a weekly basis (such as journaling), the use of post-module interviews required the least adaptation of the pre-existing module structure and required the least modification of module outcome requirements. In this way, designing for one was applied as an approach within an existing module and thereby

further supported the second research question which looked to distinguish it from existing modules.

Identifying the impact of designing for one on the traditional design space required identifying points of difference between existing module processes within design education and that of the processes within designing for one. Gathering design education experts together under the method of a Workshop provided a well-structured process that enabled the identification of these points of difference, giving the individual workshop participants the chance to compare their *modus operandi* with that of designing for one. Coupled with the post-workshop Interviews with experts and Student Case Module, lead lecturers allowed for further insight into the differences identified. Although not specifically identified as a method, the use of film as a means to further document and disseminate the Case Study and expert Interview stories further support the intention of working within a phenomenographical framework; bringing the phenomena (the designing for one approach and the experience or impact of it on design practice) into view, thus enabling viewers and readers to draw their own conclusions from the research, data and analysis presented.

Chapter 4.

Description of Student Module Cases

This chapter provides the reader with insight into the four designing for one Student Module Cases and provides an overview of: the schools involved, a description of their programmes and departments in which they took place, the module setup and length, which students were involved, the role of researcher in the modules, the intent of the brief and how the module outcomes were disseminated. Next to this, each section provides an in-depth look into the school and programme, background information in terms of how the case came to be (from informal idea to execution), a summary of the brief the students were provided, and insights and challenges that presented during the case. This chapter is derived from qualitative notes, observations and conversations between participating teachers and students, which took place during and post-project.

Because the cases ran sequentially, these insights and challenges were able to directly impact following iterations of the designing for one application. The insights and challenges brought up questions relating to process, difficult or unexpected situations that arose, processes that could potentially be adapted in future iterations, etc. Portions of this chapter are not written in an academic style, but are reflective and come directly from the researcher's own experiences participating as a guest lecturer within the modules. Over the course of the two years in which these Student Module Cases took place, these reflections form a prequel to the findings chapters as they ground the findings in terms of how the projects were set up, how they were linked to each other and how using the approach required adaptation to accommodate each context. Following each Student Module Case overview is a section entitled *Strengths and Weaknesses* which, based on reflections and notes kept by the lecturer during the modules, provides an overview of problems, potential issues, etc. that were made during and directly after the module in question finished and are included as a means to add further transparency to the research process.

4.1 Case 1:

Digital Studio Ghent

Table 11: Overview of Student Module Case 1.

School	LUCA School of Arts, Ghent, Belgium
Programme	Digital Studio of Visual Communication, 2nd year of 3 years
Student makeup	13 students; 3 female, 10 male
Lead lecturer(s)	<p>The module was led by a domain-specific Lecturer and Researcher who coached students throughout the module.</p> <p>The module was assisted by a Professor in Art and Design Theory, who supported students in the first 6 weeks regarding the role of design in society and the formation of culture.</p>
Proxy participation	This module was supported by the City of Ghent and local social workers responsible for the neighbourhood in which the module took place. Support included providing space, contact with participants and feedback on the projects.
Course Length	1 Semester (14 weeks)
Location of module	First 6 weeks took place off-campus and used the community center of the neighborhood, Muide-Mulendeste in the North of Ghent as a base. The students were required to meet their participants during this time and meet regularly with the module lecturers in order to discuss project development. When the students began developing prototypes, the classes were based on-campus, with the students returning to the neighborhood to test their prototypes and to meet with participants.
Researcher's role	The researcher provided an initial briefing about designing for one approach which included the ethical considerations for participation for the students and contributed to ongoing coaching sessions during the first half of project
Intent of the brief	The intention of the brief was that students must create “app prototypes aimed at involving a larger and wider group of citizens in a participatory democratic process”.
Dissemination	A film ²⁸ was created with funding from the PWO project as well as from this thesis research. It was submitted to the REDO biannual Cumulus 2017 conference in

²⁸ See: <http://www.designingforone.com/?section=case-digital-access>

4.1.1 The school and the programme

The LUCA School of Arts, Campus Ghent is part of the wider LUCA School of Arts, the largest Art School in Flanders, Belgium. In Ghent, and within the professional bachelor's of Visual Communications bachelor's degree course, a collection of studios is offered, allowing students to specialise in their second and third year of a three year programme within the areas of Graphics, Advertising, Digital or Still (Illustration). Students who study within the Digital studio explore graphic design from the perspective of screen based and 'new media' and create everything from title sequences to UX design to information graphics to 3D animations and sound design.

4.1.2 How the case came to be

The research coordinator within the LUCA School of Arts Social Spaces research group knew that the coordinator of LUCA's professional bachelor's graphic design programme in Ghent was interested in looking at graphic design in a much broader context than pure form or commercial output. Next to this, she had a group of researchers that were interested in trying out new methods and approaches within design education and were working on a research project together with the City of Ghent regarding reaching marginalised user groups and Digital Democracy. The student project was part of an internally funded research grant called a PWO, a form of research that is rooted in professional practice and that contributes to the improvement and innovation of the professional field in which graduate professional bachelors are active. This takes place by generating knowledge and insights, but also



Figure 36 and 37: Digital Design Studio Promotion images (LUCA School of Arts 2018).



by providing usable products, designs or concrete solutions for practical problems²⁹. This particular research project explored the role of digital designers and their co-designing participatory democracy. Led by Wio D'Hespeel, a Digital Design Lecturer/Researcher and Frank Maek, a professor of Art Philosophy, the project wanted to target marginalised individuals; those who the City of Ghent was not currently reaching with their digital communications. Using the designing for one approach was seen to be a good match.

From their proposal (translated from Dutch):

“Although the concept of 'democracy' is seen as a favorable governance model worldwide, it seems to be in the doldrums. Democracy has ended up in a legitimacy and efficiency crisis: support and decisiveness are dwindling. Theorists propose a new model to the 19th-century model of representative democracy, which should make democracy more participatory, inclusive and human. At the same time, there are also more and more bottom-up initiatives in which citizens spontaneously group together to think along with policy about small and large societal challenges. Governments are starting to notice

²⁹ <https://associatie.kuleuven.be/onderzoek/welk-onderzoek#arts>

Figure 38: Examples of the neighborhood's frustration; "Hipsters, Yuppies, Rich People: Assholes" (Wilkinson 2017).



that such initiatives are 'yielding' and are increasingly supporting these initiatives.”

In this research project, we focus on how digital designers contribute to the development of participative democracy. Their expertise is crucial in the development of online and offline tools, communication tools and also the entire 'service chain'. Our objective is to deepen the role of the digital designer within the model of participative democracy and to develop tools that respond to the challenges that an e-democracy entails. Just think of the digital divide, or the fact that within participative work, mainly citizens participate who are already committed ... Concretely, we will embark on a concept study within the Ghent district Muide-Meulestede which was completed in February 2016 and which the initiators will now translate into concrete actions in collaboration with the City of Ghent. Together with a small group of residents, we investigate through a one-to-one design process how very different individuals can be involved more closely in the participatory process in order to obtain increased and, above all, broader support for local policy.”

4.1.3 A summary of the brief

The ‘assignment’ for the student was defined as (translated from Dutch):

“This assignment should result in a series of *app prototypes aimed at involving a larger and wider group of citizens in a participatory democratic process*. In addition to the app design itself, documenting the (one-to-one) design process is also extremely important. In other words, it is also expected that a visual report is made in the form of a one-page website where you can in ‘one-minute’ describe your process.”

It was also described as being ‘difficult’ and/or challenging:

“This assignment is quite difficult(!) ... You are not just designing for a company or organization, it is not just about conveying a message. No, you are designing for people. In this process you are not only designing for people, but also (and especially!) with them: it’s called co-design, or co-creation, or participatory design ...”

4.1.4 Strengths and Weaknesses of Student Module Case 1

Participant access

Based on experience with the projects preceding this first case, initiating a relationship between student and individual by means of an organisation makes it easier for students to begin researching directly from day one. One of the potential weaknesses of this case was that students were required in this case to initiate these relationships on their own. They received a number from the neighbourhood social worker who was supporting the project, and had to make a cold call. Unlike other applications of designing for one previous to this case, in which participants were also volunteers, students in this module had to ‘convince’ the potential participant on the other end of the line that it was an of value to them to participate. Also, unlike other cases, participants in this case received 100 Euro for their participation. Although this potentially ‘helped’ students convince people to participate, putting pressure on the students to speak for the project after only a few hours of presentations and introduction proved difficult. Based on this experience, it is suggested that linking

students to people who were already briefed about the project, eager to participate, available in terms of time, etc. adds speed and clarity to the project. However, some of these suggestions might also potentially limit who could or would participate.

Be Safe

In Belgium students have a lot of freedom in terms of how they can participate in research, as well as working off site. Student Learning Contracts, which students fill out at the start of each academic year, cover their participation within research carried out by their school (see Appendix) and lecturers are able to shift campus-insurances (covering students in case of injury both on their way to as well as once they get there) with a simple web-form. Previous instances of the designing for one approach explored these grey areas and helped to define the guidelines and potential risks for using designing for one as design participation. In an edition of *Designing the Personal* previous to the research carried out in this thesis, a young female student worked together with a young male refugee, and she often, as part of the project, went to his home. This riskiness was discussed with her. She followed protocol for field work; registered and reflected on what work was being done and why it was necessary,

Figure 39: A vacant lot in the neighbourhood (Wilkinson 2017).

Figure 40: Two new, architecturally designed homes (Wilkinson 2017).



logging where and when meetings took place and when they were expected to finished, and always had the contact details of the lecturers at hand. The student found these to be exaggerated, if not overbearing. She suggested it all went with her feeling as a designer. (If you felt safe, it didn't matter; just don't be stupid.) This awareness and sensitivity to risk was again highlighted in the first Student Module Case. In the first week, a female student made an appointment to meet at a man's camper. When she began telling the story and showing photos, it became clear to the lead lecturer that the situation was risky and that, although protocols had been set in place, further risk assessment needed to be done specifically for this case. The man she had been visiting was homeless (in Belgium you cannot live in a caravan), was unemployed, had issues with paranoia (he was concerned that other people would steal things from his 'compound' area by his caravan), terminally ill (but declining treatment), etc. This was discussed with her and she suggested that the protocols that had been set in place were sufficient, however that she had added her own additional level of protection; one of her friends waited around the corner for her.

Potentially seen as both a strength and a weakness, within this thesis designing for one in various contexts was looking to be explored. Looking to work on the fringes of society, future iterations of the designing for one approach addressed these concerns even more explicitly. Seen as a weakness, the model can never fully encompass all potential participants. Seen to be a strength, the model for designing for one can be adapted based on the participation at hand. In Case 1, these issues were discussed with the lead lecturer on the forehand, highlighted in introduction presentations, and discussed with students during the course of their work. Depending on the context in which students were working, these experiences caused an adaptation of the way in which 'meeting participants in their space' was spoken about. What is it meant by life-space of a participant? How important is understanding their living situation? How can designers gain access to what is necessary to work without adding additional risks? Although it is important to deep-dive into their world, students in following iterations were asked to make appointments with people in public spaces, not in areas where it might be considered questionable in terms of the situations/locations/times that they might find themselves in. If students could argue for adapting this protocol, this was done on a case by case basis.

The length of the module

This module ran for 4 months (semester long). Because the students and participants were not always able to find time to meet, the experience for some of the students was not optimal. For students who were able to engage weekly with their participants, this length of time was seen to be a strength, for students who struggled to find their participants, this was found to be a weakness in the development of the module; students were impeded in moving forward based on their lack of participant involvement. In discussing with the lead lecturer, the students struggled with their lacking a concrete expectation to work towards. They found defining their own 'brief' to be difficult. This was compounded by some of them having 'too much time' on their hands; they weren't used to this type of 'slow design' process. What could be actioned in the other cases to reduce this issue? Did this have to do with its running across an entire semester? As the other cases will vary in length, this is something that continued to be evaluated.

4.1 Case 2:

Advertising Studio Ghent

Table 12: Overview of Student Module Case 2.

School	LUCA School of Arts, Ghent, Belgium
Programme	3 weeks (Intensive workshop week followed by two weeks of working and final presentation)
Student makeup	First week took place off-campus in the community center of the neighbourhood, Muide-Mulensstede in the North of Ghent. The remaining coaching sessions (one-on-ones) were held on campus and students were responsible for communicating with their individual participants.
Lead lecturer(s)	Inge Ferwerda, a domain-specific lecturer from Advertising who coached students throughout
Proxy participation	There was initial support from the social workers responsible for this neighbourhood.
Course Length	1 month (Intensive workshop week followed by three weeks of working and final presentation)
Location of module	First week took place off-campus in the community center of the neighbourhood, Muide-Mulensstede in the North of Ghent. The remaining coaching sessions (one on ones) were held on campus and students were responsible for communicating with their individual participants.
Researcher's role	The researcher provided an initial briefing about the designing for one approach, which included the ethical considerations for participation for the students and contributed to ongoing coaching sessions on location throughout the project.
Intent of the brief	The intention of the brief was that students would create human-centered design solutions that supported individual residents with daily challenges.
Dissemination	Project process Film and neighbourhood party for project participants in which each project was shared in poster-format and on display for residents of the neighbourhood who came to the monthly neighbourhood dinner hosted in the community center. For this edition, the students prepared and served the meal.

Studio Reclame

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communicatie / concept
/ campagne / actualiteit
/ copywriting / art
direction / virale marketing
/ social, mobile en
andere media / idee /
maatschappelijke relevantie

Advertising is een ware uitdaging. De studenten leren begrijpen hoe sterk communicatie zich naar een doelgroep kan wenden, hoe snel media evolueren, hoe strategisch inzicht aan belang wint. Dat vraagt creativiteit in zowel beeld als taal. De studenten leren sterke ideeën genereren. Het ontwikkelen van innovatieve en verrassende concepten staat centraal. Naast opdrachten zoals productontwikkeling, merk en maatschappelijke relevantie, radio, lancering nieuw product, 360° campagne, staan er bijzondere activiteiten op het programma. Gastdocenten komen opdrachten begeleiden, hun ervaring delen of een workshop geven. De studenten bezoeken topbureaus en lopen er stage. Om het contact met het werkveld te versterken nemen de studenten deel aan nationale en internationale wedstrijden waar hun voorgangers jaarlijks in de prijzen vielen. Nieuwe generaties studenten zetten hiermee het succesvolle verhaal van Studio Reclame verder.

Figure 41 and 42: Advertising Studio Promotional images (LUCA School of Arts 2018).



4.2.1 The school and the programme

As stated above, the LUCA School of Arts, Campus Ghent is part of the wider LUCA School of Arts School. In Ghent, within the professional bachelor's of Visual Communications bachelor's degree course, they offer a collection of studios for students to specialise in their second of the three year programme within the areas of Graphics, Advertising, Digital or Still (Illustration). Students for this case were part of the Advertising studio, which looks to prepare students to enter the advertising industry and develop concepts for print, screen and radio.

4.2.2 How the case came to be

Each autumn, the organisation CERA puts out a call for students called the Arts in Society Award. The award funds projects that have social relevance and builds upon existing student projects, linking design researchers to student projects. Building on the success of the project in the Muide, Inge Ferwerde (researcher in social design) submitted a project to further this approach with Advertising students. The funds covered the costs of the film, printing material, and the food that the students prepared in the final project presentation which centered around preparing, cooking and serving a meal for the neighbourhood in general as well as for their participants

from the neighbourhood. The project proposal was successful and representatives of CERA also participated in the project. As part of the submission to CERA, my role was specifically noted as support 'researcher'.

4.2.3 A summary of the brief

In short, brief was defined as (translated from Dutch):

“This participation brings students from the second year graphic design, advertising stream together with residents from the Muide Meulestede neighborhood. Because this neighborhood is so diverse, students will work in an individual way rather than for the usual 'target group'. In this way, the student will be directly confronted with the problems, dreams, wishes, etc. of the local residents and those involved. This project builds on the workshops on participatory democracy of our colleagues Ingwio D'Hespeel and Frank Maet, in which they asked the residents what the role could be for a digital designer as a co-designer of participatory democracy. This project, which took place in the autumn of 2016, focused on the communication between the city and the hard-to-reach citizen. This new proposal focuses on the communication of one citizen *to* his fellow citizens. Thanks to the expertise in graphic one-to-one design (Andrea) and Social Communication Design (Inge), the students can be supported in this way of working. The individuals will work in close contact with one student. These people are not the same people who were already involved in other projects, but rather residents who 'represent' others, but whose voices are perhaps not heard. The barriers to this can be language, poverty, age, technology use, location, transport etc.... Our students will get to know someone better through the process of 'active listening' and find out what is important for this person; what change they would like to see in their neighborhood, what their dreams are, what they need, what means of communication they use, etc. Based on these insights, the students will develop a creative proposal in which these issues are communicated with others. The format of the end result is open, so that the students can choose which medium best suits

their project proposal. As an example, this could be a series of giant posters, a short documentary, flags, physical objects, an event, etc. ”

4.2.4 Strengths and Weaknesses of Student Module Case 2

A starting event and a closing event

One of the strenghts of this assignment was its embedded nature within the neighbourhood. The module came full-circle. Students began with a sort of deep dive into the community and ended with a celebration of sharing. Although unintentional, the course began on the same day as the neighbourhood’s annual two-day neighborhood celebration. The students recieved a tour of the area as part of the introduction by the social worker responsible for the neighbourhood during the day and by the end, they went off ‘into the neighbourhood’ and got to know it on their own terms and mostly in small groups. This happened organically and was self-imposed by the students. Entire streets were sectioned off for the party and many residents brought out chairs, tables and benches, creating mini sidewalk bars; sharing food, drink and conversation. For the students who participated, this formed part of their primary research. Next to this, as the students needed to find their own participants for this project, the neighbourhood party created a positive atmosphere in which the

Figure 43: Lead lecturer, Inge (in the middle), talking with CERA representative and neighbourhood social worker at one of the neighbourhood pop-up cafes (Wilkinson 2017).



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Figure 44: Post project community dinner (Wilkinson 2017).

Figure 45: Students serving the neighbourhood residents dinner (Wilkinson 2017).



students were able to easily come into contact with residents and most found their participant through this passive participation.

As the project had started with a party in the community, it seemed fitting to end with one. Each month, the community center hosts a dinner put on by one of the local organisations. This brings in a diverse group of participants; some residents come every month, others come only when their organisation hosts the party. The students used this moment as a platform to share their project proposals as well as a moment to ‘give back’ to the community as a way to thank them for the hospitality they had been shown.

Finding participants

One of the weaknesses with this edition was not having a list of participants to draw from. Students were required to source their own participants. Although the neighbourhood party was a great way to meet the locals, it also meant that students who were unsuccessful in finding a participant while at the neighbourhood party were soon behind.

4.3 Case 3:

Graphic Design St. Louis

Table 13: Overview of Student Module Case 3.

School	University of Missouri - St. Louis (UMSL), St. Louis, Missouri, USA
Programme	Graphic Design, summer school module was open to all bachelor students from year 1-4 (Graphic Design was required as declared major)
Student makeup	5 students; 4 female, 1 male
Lead lecturer(s)	The module was led by a domain-specific lecturer who coached students throughout
Proxy participation	This module was supported by the long-term, skilled nursing facility in which it took place. Students were supported by nurses, the activity manager and family members of the participants. These proxy participants all provided ongoing feedback to the students on their projects.
Course Length	1 Summer Semester (semester-length module taught over 5 weeks)
Location of module	Each class moment took place off-campus in the care facility. The care facility provided a room for the students to work in, which shifted daily from the chapel to the activities room, etc. The two days prior to the final presentation were considered 'work days' and the students worked on-campus with available production materials.
Researcher's role	The researcher provided an initial briefing about the designing for one approach, which included the ethical considerations for participation for the students and contributed to ongoing coaching sessions throughout the project.
Intent of the brief	The intention of the brief was that students would create human-centered design solutions that supported individual residents with daily challenges.
Dissemination	After the module was completed, the lead lecturer, the researcher and one student were featured in an interview ³⁰ on the local National Public Radio station, detailing the process and highlighting some of the student outcomes.

³⁰ Radio interview can be found at <http://www.designingforone.com>



Figure 46, 47 and 48: UMSL Studio Art (with Graphic Design emphasis) Promotional images (UMSL, Studio Art 2017).



4.3.1 The school and the programme

The programme at UMSL is liberal arts based with students doing 1-2 years of general education and then formalising their intended major/minor in years 3-4. The programme is studio arts based, which results in a Bachelor of Fine Arts Degree and a concentration in Graphic Design. This means that a student is also well versed in other areas such as drawing, painting, photography, printmaking, etc.

4.3.2 How the case came to be

The lead lecturer, Jennifer McKnight, a well-respected printmaker and typographer, had participated in two previous book projects the researcher had created. As McKnight brings a group of students to Amsterdam every two years, she wanted to touch base. After meeting in Breda at the Graphic Design Museum, we discussed potential cross-over, trans-Atlantic projects. Once the PhD research planning took shape, McKnight was approached to see if she would be interested in having one of her classes be one of the Student Module Cases. As her mother had just been

Figure 49: The interior of the care facility (Wilkinson 2017).



diagnosed with dementia and moved into in a skilled nursing facility, she was enthusiastic about what design might mean for her mom.

McKnight managed the organisation and the logistics, working directly with the skilled nursing facility, and followed the ethical guidelines and risk assessments imparted by her school and department. Next to this, she liaised directly with the care facility to identify the best credentials for student participation; that they would work as volunteers, which would enable them to move freely around the facility without any issue. A summer school session was selected because it enabled working ‘intensely’ on a topic and could easily be organised off campus. On the forehand, the activities manager pre-selected a group of participants and received confirmation from the family members that they could work with the students in this capacity and gave permission for being contacted for further information/appointments by the students. Although UMSL’s programme is more formally linked to material, typography and technical aspects of graphic design, McKnight was open to and interested in the idea of testing out co-designing and having her students work with real people in a demanding context. The fact that her mother, an artist, would also benefit from the student’s involvement was also a contributing driver.

4.3.3 A summary of the brief

The 'objective' for the student was defined as:

“Design for Dementia is a cause-based design class, pairing UMSL designers with dementia patients one-on-one at a local retirement center to create human-centered design solutions for daily challenges. Students will be paired with a patient or caregivers, conduct interviews, interact, identify problems, and propose and design life-improving solutions for these patients.”

“There is an emphasis on applying design principles to human-centered design problems. In the course of 4 weeks, we will complete 1-2 assignments where you will apply and finesse the investigations we are making in class into design solutions. Depending on the class, assignments may be substituted or altered.”

4.3.4 Strengths and Weaknesses of Student Module Case 3

The effort

One of the things that distinguishes this case from the others, was the effort involved on behalf of the students participating in the module. In order to qualify as a volunteer, students had to be subjected to background checks as well as a tuberculosis test; the later requiring a 'shot' in the care facility. The costs of both were covered by the care facility and showed an element of investment on their part. These strange, but understandable requirements, were dismissed by the students as simply being 'part of the module requirements. Equally, the lecturer and researcher involved had to fulfill these requirements. When considering these additional requirements, the lead lecturer suggested that these were quite invasive for its being 'just another graphic design class'. As per strengths and weaknesses identified in Case 1, this can be seen to be a strength or a weakness. As a strength, the extra effort required on behalf of the students could result in highly-motivated students. As a weakness, this additional effort required by students in order to participate could keep some students from participating.



Figure 50: Jennifer, the lead lecturer, talking to one of the participants (Wilkinson 2017).

Student level

The students' level ranged from beginning student (beginner designer) to nearly expert level (postgraduate level with advanced design skills). This range included one student who had just been medically discharged from the Army and another who had a PhD in Clinical Psychology who was coming back to school to add graphic design to her skillset. The rest of the students were going into their final year of school and were adept and confident at using their graphic design crafting skills. This range in skill level was one of the weaknesses in this module setup. Although in the other cases the student level also varied (within any student population there is variation between students), the student in this case who had had only one graphic design class was often lost in the process and required additional support. The class size was small enough that this didn't prove to be an issue, but in larger class sizes this would need to be considered, otherwise it would impede the progress of other students.

Motivation of lead lecturer

One of the strengths of Case 3 was the motivation of the lead lecturer. McKnight was highly motivated and had very good rapport with her students. Because UMSL is a small school, and because several of the students had made the trip to Amsterdam in the month leading up to the module, McKnight knew them very well and could adapt and tailor feedback sessions specifically to their needs. Next to this, McKnight's mother was living in the care facility, which contributed to her motivation. However, this being

highly motivated on behalf of the lecturer could also be seen to be a weakness, as it cannot always be duplicated, nor can it be expected from designers working in this way. Additionally, McKnight had a personal investment in the success of the project. Her close proximity to the project meant she had an existing relationship to other care facility residents and participants. This often meant that she was present, not in the role of a teacher visiting with a group of students, but rather as Jennifer, the daughter of resident Emily, who had stopped by to 'visit with friends'. Because McKnight's mother was an artist, she wanted to support her mother via her students. She discussed this as a means to circumvent direct confrontation with those responsible for organising the activities at the facility, activities that she felt were too elementary for her mother's abilities. This was a precarious position, and McKnight was aware of it. Activities ranged from making butterflies out of pipe cleaners to card games; an attempt to reach a broad audience with basic social activities. The question was, however, how could the activities meet her mother's needs? Although it would have been easy for McKnight to steer the student working with her mother in this direction, the student arrived at this design problem space on her own through designing for one and the particular needs that Emily had.

4.4 Case 4:

Interaction Design Genk

Table 14: Overview of Student Module Case 4.

School	LUCA School of Arts, Genk, Belgium
Programme	Interaction Design, 3rd year of 3 year Bachelor programme
Student makeup	6 students; 4 female, 2 male
Lead lecturer(s)	Niels Hendriks (lead) and Andrea Wilkinson; role for both lecturers was to support the student in their project planning and development
Proxy participation	Project was supported by the City of Genk and the Department of Culture, the social workers responsible for the city centre.
Course Length	9 weeks (2 days a week)
Location of module	First week took place off-campus in the community center of the neighbourhood, Muide-Mulensede in the North of Ghent. The remaining coaching sessions (one on ones) were held on campus and students were responsible for communicating and selecting meeting location and times with their individual participants.
Researcher's role	The researcher provided an initial briefing about the designing for one approach, which included the ethical considerations for participation for the students, design anthropology, and contributed to ongoing coaching sessions on location throughout the project.
Intent of the brief	The intention of the brief was that students would 'work' for the City of Genk, looking to discover what needs existed in the city-centre, what support the residents wanted to see happening. The student had to create a design project that responded to this person's individual need.
Dissemination	Project overview Film (funded in part by the City of Genk) was launched with together with the participants in an exclusive screening party. A short-version was also created as a means to disseminate the approach.



Figure 51: Campus C-Mine (LUCA School of Arts 2017).

Figure 52: The campus is located on the old Winterslag mining site (Visit Genk 2019).

Figure 53: Example of an interaction design project from Masters student Kathelijne Put (LUCA School of Arts 2018).



4.4.1 The school and the programme

As with the school in Ghent mentioned above, the LUCA School of Arts, Campus C-Mine is part of the wider LUCA School of Arts School. The programme Interaction Design is a bachelor/master's course, which is to say it is a programme in which students enter a master's programme when they enroll at bachelor's level. It is a three year academic bachelor's degree immediately followed by a one year master's. The degree covers Interaction Design with a broad stroke, from interface development to domotica to fabrication techniques and sensor-based micro-computing, and includes a substantial research component. Students for this case were third-year students. Regarding location, LUCA School of Arts, Campus C-mine is located on a former coal-mining site in Winterslag, Belgium which is transforming into one of the creative-hubs for arts and culture for the region.

4.4.2 How the case came to be

A long-standing module within the Interaction Design degree programme, since its inception the module Designing the Personal has always sought to see how design can

support the individual needs of users. From interface designs to working with migrants, the goal has always been to work off site and with users. When the City of Genk approached the lecturers looking for a way to find out more information about the city centre and what ideas individual city centre residents could suggest, Designing the Personal seemed to be the right module to do this exploration. The fourth and final Student Module Case, Designing the Personal integrated the designing for one approach into its setup.

4.4.3 A summary of the brief

In short, brief was defined as (translated from Dutch):

“This module is about designing in a participatory manner together with individuals instead of working with or designing for generalised user-groups. The focus of the module this year will be on working together with people who live and work in the centre of Genk; trying to find what they want to change/love/want to celebrate, and to support them in doing something about this through design. This project will take place in Genk and will include a collection of presentations, lectures and coaching sessions. Because of the nature of the module, work time has been scheduled into the weekly planning, which means it is possible for students to use module time to work on module material. We encourage you to consider projects created in this module as springboards for your master’s project.”

4.4.4 Strengths and Weaknesses of Student Module Case 4

Need to have backup plan (for students)

Because the city wanted to target a particular region of the city, they provided a list of possible potential residents who they thought would be open to participating. This was provided by the local community social worker who had long standing relationships with this list of participants. Starting from a list of ‘trusted partners’ enabled this project to get off the ground rather quickly. Although the students still ‘cold called’ participants, they were able to explain the project and the level of



Figure 54: Screening of the project documentary (Boudra 2017).

Figure 55: One of the participants, An, brought her children to the screening, in the rain on their bicycles (Wilkinson 2017).

Figure 56: The screening brought together different types of people (Wilkinson 2017).



engagement required in their own words and on their own terms. Having a list of participants was seen to be one of the strengths within this setup; it kept students from starting at zero. Next to this, when one of the participants dropped out several weeks after the start of the project, having a list of participants allowed the student to quickly get back on track; she simply built more ‘getting to know’ this new participant into her schedule so that she could be on par with the rest of the module.

A closing celebration together with participants (and how it has nothing to do with the design)

One of the strengths of Case 4 was the closing screening. The inclusion of a ‘party’ at the end brought this project to an appropriate conclusion. Serving as both exhibition and thank you, the screening of the film provided a chance for participants to see what their student-partner had learned, as well as to find out more about what other

students had made. Next to this, it provided a chance for the Department of Culture to view the results, provide feedback to the students and meet the participants as well. Next to this, students invited their partners, flatmates, parents, etc. and participants brought their families. This closing party seemed to ‘fill in the gaps’ for everyone involved. As part of the project that had nearly nothing to do with design *per se*, it formed a relevant touchpoint within the design process and allowed participants to be acknowledged and thanked for their participation. Moreover, it created a closed community of those engaged in the topic: the city, the students, the lecturers, and a wide swathe of other people that the project somehow touched upon.

A long documentary

Finally, like the Digital Designers as Digital Innovators Film (Student Module Case 1), this long-play film of nearly 15 minutes allowed the viewer to go in depth into the designing for one process, the student’s experience as well as touch on the participant’s experience. One of the strengths of this case, this move into a small documentary film was a significant move away from being a short documentary as in Student Module Case 3 (Advertising Studio). Utilising film as a means to disseminate the research and the outcomes was found to be a good way to showcase what research was being done by the proxy partners as well as a means to share the initial research findings.

4.5: The challenge of managing difference

As seen above, there are challenges in drawing comparisons from such diverse data sources which differ in terms of student participants, level of study, type of learning context, amount of time with participant, discipline, etc. But, as noted as one of the strengths, the approach designing for one is adaptable enough to cater to these differences. At its core, the designing for one approach as seen through these Student Module Cases shares common goals and common characteristics.

Table 15: Overview of common cross-student module case traits.

Goals	<ul style="list-style-type: none">to bring students into contact with usersto work for specific users instead of user groupsto work in the fringes of mainstream designto develop a project based on one person's needsto support the organisation
Characteristics	<ul style="list-style-type: none">each student group is defined as designerseach module is led by a domain-specific lecturereach module is supported by a proxy participant/organizationeach module was documented by an external party either through film or audio interview

As a whole, the methodological challenges exist not in the cases themselves, but in their analysis. How does the researcher move from gathering case data to findings? Since the intent is to analyse the student's experience, the interviews formed a vital piece of this puzzle. Recorded on site, those students who wanted to participate in this part of the research were interviewed. These interviews were recorded, transcribed, translated where necessary, coded (and recoded) and analysed. Patterns were identified in what the students were saying across the 4 cases: how were students describing their experiences and describing what they were learning? How were they suggesting what this process was like and how did it difference from other modules they had had before? How was empathy being evidenced in how they talked about participants? How was participation evidenced in the students' designs? Likewise, the

workshop and educator interviews drew a similar analysis: how were they suggesting that the approach might be used within design education? How were they articulating its value? What were they collectively identifying as being aspects within otherwise common design modules that was causing these rich experiences and these moments of unexpectedness? Looking to draw patterns from the data, the results from this analysis are found in the following three chapters.

Chapter 5.

Findings / Investigating designer experiences in order to understand what students find to be of particular value and noteworthy from the designing for one approach

One of the primary research questions for this thesis looked to uncover the insights that designing for one provides the designer and more specifically, the design student. This chapter looks particularly at two of its sub-questions: what student designers were taking away from the designing for one experience and what impact was the experience having on their design process (RQ 1.1). Through analysis of the data sets from the Student Module Cases looking specifically at the interview responses, the analysis homed in on these areas: key takeaways, impact on process and influence of participation.

5.1 An introduction: identifying memorable impressions

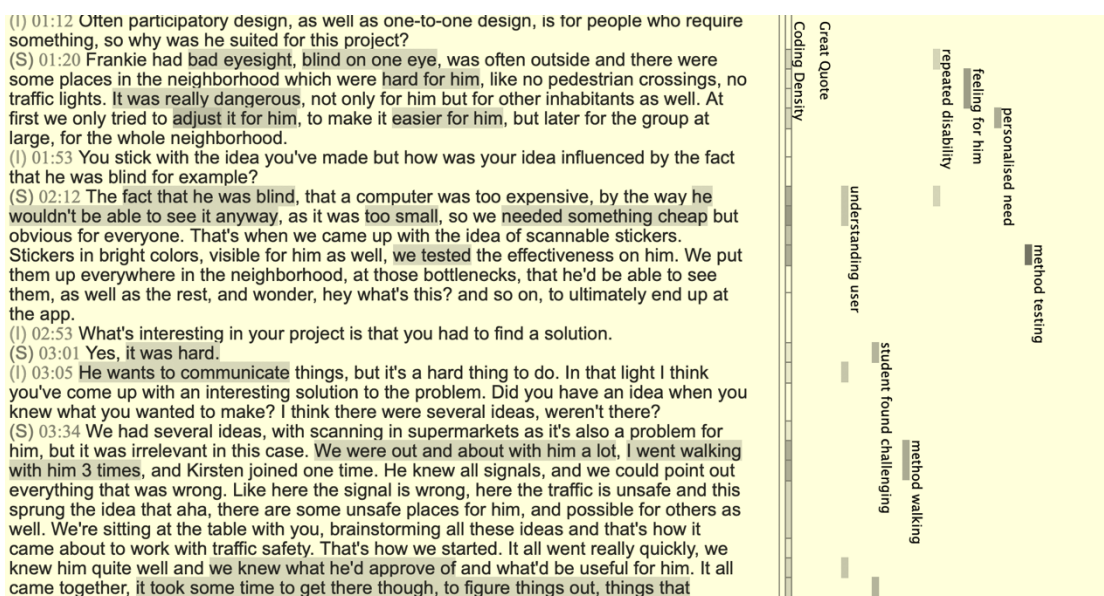
The findings in this chapter focus specifically on the student experiences and the mapping of their experiences through their own words. What were the experiences that were they having? Was there evidence of learning to be found through what students were becoming aware of and through what they themselves were establishing through reflection? What was the designing for one experience teaching them? Experiential learning places value on experiences that are memorable. Less focused on “passive, curriculum-based learning... They are about things like scale, sensuality, beauty, awe and amazement.” (Balch quoting Digby, 2012). What then, were these insights that students were having? What unintentional and memorable, experienced-based learning was taking place? In Experiential Learning, Kolb proposes that “knowledge results from the combination of grasping and transforming experience” (Kolb 1984, p.

41). His use of the word grasping suggests both a sort of struggle, as in getting something under control, as well as realising a degree of understanding. How were students transforming these experiences and impressions into this unintentional knowledge? Knowledge that will inform design decisions they will make in the future? Concretely, what were students saying they learned or took away from this experience?

5.1.1 Methodology and structure of the results

Referring back to the methodology section, students were recruited within the context of the Student Case Module and participation in the post-module interview was done voluntarily after the module was complete. In total, 28 students across the four Student Module Cases participated, 78% of the total students who participated within the modules. As part of the post-design interview, students were asked to reflect on their experiences. Some of the questions dealt with formal questions about the module and who they were working with: why they took the module, who their participant was, how they would describe the ‘design problem’ that they were designing with or how they defined what the person ‘needed’ them to design and what did they make? Other questions looked specifically at the designer’s thoughts on the relationship between process, participation and outcome: how could one tell that the thing they made was for their participant, how did their participant influence the design or idea, what were

Figure 57: Round one of coding; going through the transcripts highlighting the texts related to takeaways, participation and understanding.



key moments of decision during the design process and how did they maintain their motivation during the module. Finally, other questions pertained to the module and its relevance, what were they taking away: could they envision using the one to one design approach in the future and how?, what was different or the same about this module to other modules in their discipline?, what were the moments they might they still recall or refer to in five years time?, how could the module be adapted to make it better?, and finally, did they think the module was relevant for their design programme and if so, why? These were informal, one on one interviews which took place in the same location where the module took place. The students were encouraged to answer the set questions but were also free to discuss related topics. As three of the student cases were in a Dutch speaking course, these interviews were translated as well as transcribed. These transcripts were then analysed and coded for common categories and patterns (see Figure 57).

In the first round, the coding referred back to the research questions. Looking at the excerpt above as an example, the transcript was coded for passages identifying student insights or key takeaways: passages in which the student suggests they understand the participant, phrases in which the student speaks as an authority for the participant and passages when the student shows sensitivity to the participant's situation. The texts were coded for passages in which the student discussed process: moments when they recalled particular methods they used, or details which they found challenging or exciting. Finally, it was coded for participant influence; the student's repeating and restating the participant's needs or impairments, the restrictions inexplicitly imposed on the design, which guided its direction, passages in which the student identified particular methods as being activity done *with* the participant and not *to* the participant. Once these were completed, these passages were pulled out of the 28 individual transcripts and grouped thematically. Although the original coding was done in Nvivo, the analysis that followed was done manually. This was due in a large part because of the nature of the texts. Because 23 of the interviews were carried out in Dutch or Flemish, the texts included colloquial as well as regional references and, once translated, these nuances remained. Although one native speaker was used to translate the entire collection (to retain a consistent tone of voice in the texts) quantitative analysis looking for word patterns or particular phrases was not possible.

Finally, similar themes were grouped together and resulted in the following categories identified in Table 16.

5.2 The results: articulating the designing for one *experience* through student reflections

When considering their experiences, students talked about a range of topics; from specific things they would take with them in future design processes to specific challenges they faced during the interaction with the participant to changes they would like to see implemented if the module were to run again, to discussing how much they had enjoyed it. As a part of the analysis of the data, student comments were grouped together under the following subcategories with the top four being further elaborated upon in this chapter, using the student's own voice as the main driver. In this way, the research into the phenomena of a design student experiencing designing for one is grounded in their *lived experience* (Ashworth and Lucas 2010, p. 297) and provides the reader with enough information to draw their *own* conclusions from the analysis presented (Merriam, 1998, p. 199). Because the interviews ranged from 30 minutes to 1 hour, student reflections can be found across category types. As the first section showcases Process experiences, individual quotes from individual students are grouped together as a means to discuss processes over time. In the sections that follow, however, individual, anonymous quotes are used to support the reflection definitions. Any names or defining characteristics referred to in the texts have been changed to protect anonymity but maintain the narrative. As the focus was on gathering language around experiences, the focus was not on the student's design orientation or an attempt to make a correlation between experiences and module length or module structure.

Table 16: Categorised experiences students have when designing for one.

Type of experience	Definition
Process experiences	Process experiences consider steps or specific research carried out either through the use of research methods or processes related to a

	design discipline. Next to this, it also includes feelings that are attributed to specific phases of the design process.
Learning design skills experiences	Learning design skills experiences focuses on what students say they learned. This specifically includes references to design-related skills or design research and how the research relates to the project's development.
Learning non-design (soft) skills experiences	Learning non-design (soft) skills experiences takes into account the use of and reliance on what students identify as being 'non-design skills', such as the idea of building trust or drawing on their social skills or self-reliance. Next to this, it also includes feelings related to overcoming fears of stepping out of their comfort zone.
Interaction experiences	Interaction experiences looks at what students share with participants and how they regard this intimate relationship. It includes reflections about a participant's satisfaction and enthusiasm for a project and discussions on the value surrounding the participant's input. Next to this, these experiences were identified as being 'authentic' and reflect on working directly with a participant and how this adds value to the project; what this 'realness' means in terms of a student's own shifting perspectives or how it is related to a discipline.
Feedback experiences ³¹	Feedback experiences look at notable experiences related to feedback or coaching sessions.
Challenging experiences	Challenging experiences identify challenges within the participation as well as supposing what could have been better or what could have done differently.
Module experiences	Course experiences compared this module to others and noted points of difference.

5.3 Process experiences

This section highlights quotes that show a breadth of reflections on process. Utilising direct student quotes from six students and drawing from across the four Student Module Cases, the students reflect on their designing for one design processes. These range from the practical steps required to come into contact with their

³¹ These three experiences are covered in more detail in chapter 8

participant to questioning their design directions to aha moments where they knew which direction they should take to applying design research activities, these process reflections break the process of designing into moments the students themselves deemed important and feelings about these moments they deemed relevant enough to share.

On one hand, Jasper's reflection below focused on **practicalities**. In the first section, he talked about how his fellow student Kristen joined his project. Kristen's own participant stopped mid-project, so she was placed with Jasper and they became a team. Jasper reflected on this specific change and how he felt it had shifted the project but added value. In the second quote, Jasper focused on methodology and action and linked these experiences directly to their project's direction even suggesting that although Frank was the source of inspiration, that this was a common problem. In the third quote, Jasper is describing a coaching session in which, through discussion, their idea solidified. He shows a confidence that, *because they know Frank so well, they know* that he will approve of the direction. This quote also reveals a sort of relief in making a design decision and identifying how their digital design work will bridge the gap between the tools their participant has and their own skillset. In the final quote, Jasper suggests that the actual experience (or process) was more interesting than the design he created. He grapples with the idea of 'what had it not worked', and how he would have been disappointed. He ends feeling satisfied about his design achievement.

Jasper and Rita worked together with Frank, an unemployed 55 year old man on a disability benefit who was legally blind.

"I started out by myself and it became easier because Rita joined. But in the beginning I had more room to think by myself, and that was easier. As an individual designer, you think within your own limits, so with more people it's easier to put ideas on the table. That definitely helped. In the beginning it was more social service, instead of design, as we had to figure out the link, the connection.... It was just like, go there and get to know him.

...

We were out and about with him a lot, I went walking with him three times, and Rita joined one time. He knew all of the traffic signals, and we could point out everything that was wrong. Like here the signal is wrong, here the traffic is

unsafe and this started the idea that, aha! There are some unsafe places for him, and it's possible that it is unsafe for others as well.

...

We're sitting at the table with you, brainstorming all these ideas and that's how it came about to work with traffic safety. That's how we started. It all went really quickly, we knew him quite well and we knew what he'd approve of and what would be useful for him. It all came together, it took some time to get there though, to figure things out; things that weren't possible. But with this we thought, that's something to work on, that's something to continue with. We can bridge the digital and non-digital.

...

It was complicated, I cursed a lot, but I learned a lot. That small design might really help him and that you can translate that to a larger audience. The experience itself, was something special, something you don't do every day. It was a challenge but we succeeded and that was the great thing about it. If it hadn't worked out I would have thought: a pity, it took me a lot of effort ... But now I'm quite content about what we were able to achieve. I liked the story better than the end result.”

— Jasper (second-year, Digital Studio)

For students Sofie as well as Julie, their reflections on the process focused on **anxieties** concerning the process. For Sofie, her reflection shifts from the logistics of making contact (texting, biking to the house, going in...thus her orchestrating the actions) to being there and her participant orchestrating the actions (tour of mosque, tour of house, discussion about project...). Her anxiety was as much related to the participant and her own expectations or preconceptions about what to expect from the participation as to the environment itself.

Sofie worked together with Ilber, an imam from Bosnia, in Eastern Europe, who had moved to Belgium 5 years prior and was building a mosque for his local congregation.

“The first step was a bit odd for me. You had to contact someone of which you knew only the phone number. No idea what he looked like, what kind of person he



Figure 58: The location of Ilber's Islamic Organisation Ensarija (his house on the right, the gathering place on the left) (Google Street View 2019).



Figure 59: Ilber and worshipers (Ensarija 2017).

was. Why did he want to participate in the project, what did he know about it? I sent a text message to him. I biked to his house and went in. He gave me a tour, told me about his mosque. At first we didn't really talk about the project but more about himself and he gave me a tour of what he's been building. He's renovating that house by himself, with the help of family and friends and he's making it his very own place. That was cool to see. After that we entered his small office and from that moment on he got serious and asked about the intention of the project.”

— Sofie (second-year, Graphic Design, Digital Studio student, Ghent, BE)

In the reflection below, Julie shares Sofie's anxiety, but it is focused not on the environment (Julie had previously worked in a hospital, so was very comfortable in the care facility) but on the seemingly important function of the design; its being for one person. Next to this, Julie is reflecting on **a designer's authority and informed decision making**. She suggests that, unlike other design situations in which her teacher can provide critical feedback based on her expertise on design, in this project she felt that her teacher was unable to have the same level of criticality or authority

regarding the bespoke designed product, because her teacher didn't know her participant as well as she did.

Julie worked together with Bob, a 93 year old resident of a skilled nursing facility who had early stages of dementia.

"I freaked out because I knew what I wanted to do but I had no clue on how to direct something like that with a person. I don't make things for specific people. I make things for groups or for businesses or whatever. I'm making it for my teacher or the project. I've never made anything that's supposed to be so special to somebody and help somebody. And that freaked me out because I'm just like I've done design for good projects but this is for Bob. This isn't like a charity. This is like for him. So, it scared me a little bit and it scared me to ask for help because I didn't— because it's like I'm interviewing this person. My teacher doesn't really know him."

— Julie (final-year, Graphic Design)



Figure 60: For the project, Julie visited the house Bob grew up in and took pictures, including his former home (Ray 2017).

Figure 61: Julie also visited his former tennis club (Ray 2017).

Figure 62: Because of the interest she took in Bob, Bob's family shared family photos with Julie (Unknown, provided by Bob's family).



For Evelien, a reflection on process led to a discussion about how the experience shifted her thinking about **design's function** and **what it means for a design to be successful**. Already possessing a PhD in Clinical Psychology, in her reflection she made links between how she used her experiences as a therapist and how she was operating as a designer. She noted that, because she was keenly aware of her participant's limitations, she focused more on useability instead of aesthetics. She wanted, above all, for the thing she was designing to work for her participant. She wanted it to have a purpose and to be successful. For it to be successful, she realised she had to *test* it, something she had previously not had to do before.

Evelien worked together with Virginia, a resident of a skilled nursing facility who had early stages of dementia.

"I will take away a lot from it but I think the thing I'll take away from it most and I haven't really talk too much about yet is the idea of designing for a function as opposed to just it looks nice. And I think that was a little bit different about my process too as I spent far less time thinking about color or I thought about typeface because that's part of function to be able to read it but I thought far less about...alignment or color or what little icons or graphics I might use or picking the pictures. And so, I was kind of at the end really feeling pressed for time to get that part of it done. Because I had just been thinking so much more about function and tossing these ideas around.

...

So– but it kind of encourages me to think about that in the future too not just does this look nice but does this do anything? Is this going to work the way I think it's going to work? And this notion of testing things was really cool to me too. And I had never done this before with this any other design projects. And given my background being really research-oriented in my PhD it's like well, testing and experimentation is important and how do we know it works?"

— Evelien (second-year, Graphic Design)

For David, his reflection touched on the **relevance and importance of need** within his design process. He goes so far as even questioning whether his participants are actually his customers. He later identifies the relationship as their giving him *a chance* and in reverse his giving them a chance, so he suggests that there is some sort of

mutual relevance to each other. He takes this complementary binary further by suggesting that he could use it with “someone from my street” because he is “from my neighbourhood”. This could mean that he sees designing for one as being something that offers not only the participant a levelling up, but as being something that benefits the community with a knock-on effect; a sense of becoming more engaged himself.

David worked together with Jean and Sabrina, a couple who owned a struggling artisan bakery in Muide-Molenstede, a neighbourhood in Gent.

“First I got in contact with Peter and Evelien. They live next to the bakery and they gave me the contact details because they worked in the bakery sometimes in the weekend. It turned out (the owners) live in Oostakker. So, I just visited them and afterwards we only had contact via telephone. She was always available, always very friendly, always very hospitable so that turned out very well I was lucky with that.”

“For me, it was completely new to talk to people on the street, strangers actually. It was also in a neighborhood I didn't know at all. We were briefed about it properly, though, and it was a challenge to talk to those people. It was a bit out of our own comfort zone, to break the ice, and start chatting with them. I tried to do it in a natural fashion, in the snack bar, just talking to people, talk to them about all kinds of stuff. In this project we talk directly to our



Figure 63: The bakery (Google Maps 2019).

Figure 64: Michel talking with the bakery's owner, Sabrina (Barinckx 2017).



customer, if I can even call it like that, so that was rather special. I learned a lot from it, the effect is surprising.”

...

“I might apply this one-to-one technique when it's more personal, you can use it more; also in the design field, really in the working space. Learning how to communicate turned out to be useful...I was thinking more in regard to friends or people around me, where I can use it. For example someone from my street, whom I know a bit, who also has a similar problem. I might do it because he is also from my neighborhood, he lives in my street.”

...

“I think they were also enthusiastic, Peter and Sabrina, because I was a student they wanted to help me as well, they knew I was fresh inside my head that I maybe could think of a genius idea...they immediately said it could be a win-win situation.”

— David (second-year, Advertising Studio)

Eric's reflection identified the designing for one process as being challenging but something he expects designers to be able to deal with. He distinguished it from other classes he had taken. The amount of effort required for him to build an authentic relationship with An and the actual testing he was given time to do within the module provided him with a sense that this design process **involved something real** for the first time in his student experience. He saw possibilities for crossover in terms of using the approach within socially relevant settings in which the process is transferred to designing for others through the process of designing for one.

Eric worked together with An, one of the city of Genk's two church-tower carrilloneurs. Playing live twice a week, An was wanting to find a way to connect with her audience and make her music relevant.

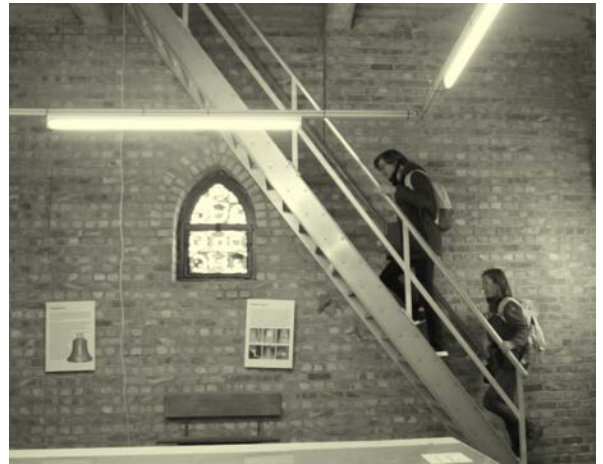
“Very close contact with the person you are providing the product for is great. That you have to be socially capable enough, as a designer, to ask questions, to test things, to meet with them, those are all valuable things...You might have these cases, like in hospitals, where you could use it for lots of people. Those are examples of when many people need it or could use it.”



Figure 65: The location of the church tower in relationship to the city centre where An plays the carillon (Ciranni 2017).

Figure 66: Eric and An ascending the church tower (Ciranni 2017).

Figure 67: An playing the carillon (Ciranni 2017).



“The other modules allow you to think about a concept for two weeks and work on it for four weeks. This has been quite the opposite, it required many weeks of research, of listening, of testing and only in the end decide on what to make and work hard to finish it. Because of the different working method, mainly. it's slower, more thoughtful, with more research, I liked it. You'll also get the possibility to try these design tools on which you've studied for two years, which is also nice. Other modules won't have that testing component to the same extent.”

— Eric (second-year, Interaction Design)

5.3.1 Process experiences: a summary

What these process experiences highlight is both a disparity between student design processes as well as a commonality within them. What one student found challenging, another described as relevant. What one student suggested was scary, another student described as being ‘necessary things designers should be able to do’. What some students found liberating caused other students to struggle with what to do

next. These findings highlight the imperfections of methods (no two experiences are the same even though students shared similar approaches and methods) but the importance of reflection. In the following section, these reflections move away from statements of *what took place* to translating these experiences into *things they learned* through designing for one.

5.4 Learning experiences

This section looks specifically at how the students focused on learning; their translating experiences into knowledge. Some students identified design-related skills (new knowledge or achievement related to a design activity) and others identified softer, more personal development. Although the design insights might be expected as part of the curriculum, both categories are discussed as something the students had now experienced, understood, and now knew more about. The following table is a summary of these skills they identified.

Table 17: Learning (skills) identified by students as being acquired through designing for one.

Insights into designing design skills	Insights into Personal development non-design (soft) skills
<ul style="list-style-type: none"> • design research and methodology • transferable design • importance of design research • real vs. fictional users • design thinking • design functionality • usability • understanding users • identifying user/target groups • mapping • designing for others vs. self • computer skills • contextual observations • design ethnography 	<ul style="list-style-type: none"> • time management • setting boundaries • benefit of starting outside of computer • confronting prejudice • communication • social skills • the value of working independently • identifying a passion or interest • creating interaction • patience • becoming a good listener • issues around control • realising a need to ask for help • compassion

<ul style="list-style-type: none"> • real-world design processes • user exclusion³² • co-design • ... 	<ul style="list-style-type: none"> • self-determination • the importance of trust • social skills • initiative • working through challenges • working outside of comfort zones • responsibility • sharing • valuing cooperation • ...
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5.4.1 Learning design skills experiences

Students reflecting on what they learned in terms of design skills, articulated this as being newfound relevance. This ‘learning’ was something they would take away with them in terms of design insights, realisations, etc. It was described as part of the design process that had become necessary (to them). Many students described how they would *now* carry this knowledge into their design practice. If they didn’t articulate these as being key takeaways, they spoke about design skills as being something they would now be able to use with authority and confidence. Using phrases such as *definitely, I will remember* and *I now realise*, they were linking their experience to how they understand design.

“Yes for sure **the techniques I mastered** in this module, like how to design one-on-one. I think participatory design is very interesting, I've read a lot about it but never applied it myself. That was a fun aspect I'll take with me.”

— Sebastian (second-year, Interaction Design)

“Well, I definitely learned that working **one-on-one really gets you a lot more research and information** that can be used towards design projects, which is really something that I haven’t done in the past for projects. So, if I can use that

³² Design exclusion is the idea that when designing for a user-segment, designers are consciously making a decision to not design for other parts of the population; excluding others by means of access, ability, etc.

The image shows a hand-drawn timeline titled "6 mader" (6 weeks). The timeline starts at "Nu" (Now) and ends at "Jahresende" (Year-end). The timeline is marked with a horizontal arrow and various handwritten notes on sticky notes. The notes describe the progress of a project, including the development of a "Facebook thing", the creation of a "Facebook thing", the development of a "Facebook thing", and the creation of a "Facebook thing". The timeline ends with a checkered box labeled "Jahresende".

— Eric (second-year, Interaction Design)

— Eric (second-year, Interaction Design)

— Stefanie (second-year, Advertising Design)

— Edward (second-year, Interaction Design)

“I don't need to focus on a problem. I did that way too much in the beginning. I need to **focus on a situation, or to look at it from a wider angle**. In the end I realized that I needed to use his fear of becoming lonely. How can I turn his current situation, with lots of social contacts, into a durable solution? Even though it's not yet a problem, but I shouldn't focus on that, I need to see it from a wider perspective.”

— Elias (second-year, Interaction Design)

Many of these passages also dealt with design research and the idea of understanding an audience as a designer who designs for audience. It did not focus only on a particular method, but rather highlighted the gaps in their previous understanding of what it meant to design for users.

“Not just because it was fun and amazing but I think skill-wise, like it upped my design skills. It definitely has, you know, **you're thinking in a different way** too. I guess just conceptually thinking about creating something for someone. Like, it just encompasses so much, you know? Like sure the computer part, but just that concept and thought and process. Yeah.”

— Nichole (second-year, Interaction Design)

“I will remember **what works for one person may not work for another person**. Because all of us we had different types of partners and I feel like we had to give them different approaches and work based on their liking and what they're comfortable with.”

— Elias (second-year, Interaction Design)

“What I'll take regarding digital design is that there are some people who are completely in the dark about it, for example my grandma. We tend to forget it sometimes. **For us a button is obvious**, it should do this or that, **but for other people it's not clear at all**, it's a different language. It's odd how you can assume something is logical while for others it isn't at all... Ilmer might know, but by talking with other students and listening to their stories you also hear that it's not that simple for everybody. Some of the people are older, some have no computer or smartphone even though we live in a so-called digital world.”

— Sofie (second-year, Digital Design)

“I learned most of all that **you need to research your target audience**. To figure out how your target audience thinks, how they live and behave. that's been important to use in how to design something as a designer. That's a phase easily forgotten, but with assignments like these it shows how useful it actually is to know. ”

— Eddie (second-year, Interaction Design)

“I realise now **you can take it further than that, you can ask deeper**. Get into a subject much deeper. To get to a level of which you can only dream about when you do it via paper, or email or digitally. That one-to-one design is very valuable in terms of depth. I think the results are much better as a result of it, much more personal, well it's customized after all. ”

— Will (second-year, Interaction Design)

“I really saw the benefit of research for the end result. Sometimes I look over things, but with ample research, and by **getting to know someone, it takes up a lot of time, but it might be truly beneficial in your end result**, or in your story. I learned that research is quite important. I did learn something in the end.”

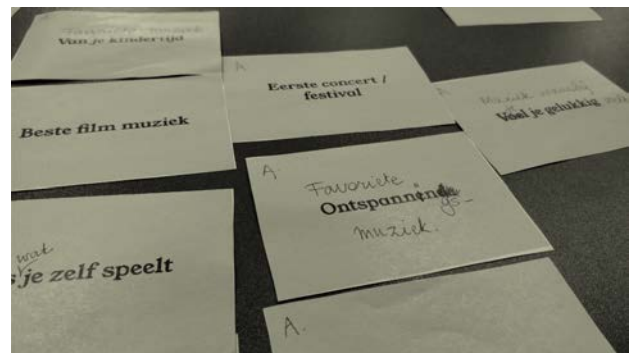
— Edward (second-year, Digital Design)

“Like I said, we learn how to design for a wide target audience but it's also important to learn how to design for just one person. Because you learn **to**



Figure 69: An brainstorming with Eric in An's home (Vanlaere 2017).

Figure 70: An having adapted Eric's prototype (Vanlaere 2017).



design for a real life someone, otherwise it remains very abstract and you'll see yourself in lots of design aspects.”

— Eric (second-year, Interaction Design)

5.4.1.1 Learning design skill experiences; a summary

What these learning experiences highlight in terms of design skills, is the student matching their experience to their discipline. Theoretical concepts such as design research move away from concept into practical approaches to be carried out in practice. Vitally important elements of design practice such as end users are identified as becoming noticeably relevant. This abstract concept of user (the person who will use the design being made) is made tangible. Concepts taken for granted, such as the embedded understanding of functionality, are called into question. These findings reinforce the ideals of Problem-Based-Learning and of Kolb's call to *facilitate* knowledge instead of controlling it.

5.4.2 Learning non-design (soft) skills experiences

Whereas some students discussed new design skills, others spoke of personal development. Much more difficult to regulate in terms of formal learning outcomes, these were students reflecting on themselves not only as designers, but as humans working in design participation settings. What were the skills they needed to use to work collaboratively with the participant? What skills were they drawing upon in order to engage with them? Passive actions such as *listening* and *sharing* were identified as well as complex relational situations such as *trust*.

“I found it hard to **gain their trust**, because I told them I'm a second year student at Sint Lukas... they had heard about it...but that **trust**... They talked a lot about marketing and they showed me the bakery's daily revenue and I thought, that's quite interesting but I can't draw any conclusions from it, from that kind of information. That moment I was thinking, “They do trust me!” That says quite something, that there was trust. I just wanted to **prove myself** to them, and it succeeded.”

— David (second-year, Advertising Studio)

“I don’t know. [Laughter] **Compassion**, I guess...Yeah.”

— Alma (second-year, Interaction Design)

“This module is ... more emotional as well. Because you really **have a connection** with the target audience you're designing for, whereas with other modules you don't have that connection. That's just segmentation and broad target audience design. While now you're designing for just one person with whom you also have a connection with and **build up a relationship**”

— Karen (second-year, Advertising Design)

“I've learned you need to **listen** to your person before you start designing.”

— Eric (second-year, Interaction Design)

“I think the key thing I’m taking away from all of these is being with– I don’t know, like getting to know somebody doesn’t have to be such a chore. It’s not just because they’re older, it doesn’t mean that they don’t have a story. And so, listening to their– actually **listening** to it just makes me realize how much **everybody kind of takes old people for granted** because they’ve done everything before so why not listen to them take from it and try to help them in some way.”

— Eddie (second-year, Interaction Design)

“Her as a person, her hospitality, the fun moments, not just the conversations but **sharing personal experiences** as well.”

— Alma (second-year, Interaction Design)

“At first, I wanted to make something cool for myself. I thought that this year I wanted to make something designfull. But this taught me to **not focus on design alone, but to focus more on the people**. To provide something beneficial for them and not just for myself. What they might like, might not be my taste, to work with someone's personal preferences. In the future, when working for clients you also might not like something and that's what I learned, to **be a chameleon**.”

— Jessica (second-year, Interaction Design)



Figure 71: Jessica identified that the creation of a mini-interactive workshop for Walter and Else really helped her bring their interest in travel into perspective (Boudraa, 2017)

Figure 72: Detail of the map used in the workshops (Boudraa 2017).



“**Patience** around elderly, friendliness. Walter talks more than I do, and I needed to keep my mouth shut.”

— Jessica (second-year, Interaction Design)

As part of these soft-skills, students also spoke of competencies that were required in order to meet the challenges that designing for one was confronting them with. These reflections often began with their speaking of personal shortcomings but ended with a form of resolution or resolve.

“It's been a good push to finally get to **work on my 'anti-social' behavior** and to become more sociable and see where it leads me. That's quite a positive.”

— Jennifer (second-year, Advertising Design)

“I wanted to **challenge myself** to change that. I'm of the opinion that a designer should have that skill. Very close contact with the person you are providing the product for, which is great. That you have to be **socially capable** enough, as a designer, to ask questions, to test things, to meet with them,

those are all valuable things.”

— Eric (second-year, Interaction Design)

“I think a lot of trial and error and just **keep pushing forward** through difficulties and just trying to reach positive outcomes that can be used for the final product.”

— Joris (second-year, Advertising Design)

Finally, some students identified the designing for one approach as requiring their taking responsibility for their own design actions. From practical planning to self-reliance; these formed means of finding their own way in this new design space.

“...you need to arrange a lot of things yourself and it is expected of you to get it done. No-one is holding your hand. You **make your own decisions** and **you decide on the end result** and how far you want to take it. With regular modules it is often expected to stay within the assignment but this one is much more open. You need to go out yourself. You are not being led by your teachers and you have to **discover everything** on your own. that's very different compared to other modules.”

— Manon (second-year, Interaction Design)

“I needed to take a lot of **initiative**, dare to do it, get out of my comfort zone a bit.”

— Eric (second-year, Interaction Design)

“This project definitely helped me. If I'll be doing a project in the future I'll be surely thinking about this project and about how once you make that first step, it's great fun. You just have to get over it, and now I've done it once, so it makes it easier... If next year people ask if they should do this project I'd say that they definitely need to do it, as you learn a lot from it, you learn how to **work independently**. “

— Sebastian (second-year, Graphic Design)

“But then Jen (the lecturer) said, and she made a good point, she said, “Whenever you freak out, you don't ask for help.” And that's problem that I realized I don't do. And I'm just like, “Holy crap, you're right.” So, it kind of woke me up to say, you need to ask for help and **don't be afraid to ask for**

help because that's what she's here for is to help you.”

— Julie (final-year, Graphic Design)

5.4.2.1 Learning non-design (soft) skills experiences; a summary

What these learning experiences highlight in terms of non-design (soft) skills, is the student showing both design agency and ownership. The ability to be able to design (make and execute) becomes insufficient. They experience that their design skills are not enough. The gaps they identify require different abilities; listening, showing compassion, making time for their participant. Next to this, the challenge of designing for one person required new types of vulnerabilities; daring to ask for help, working outside of their comfort zones and working independently. Like the findings relating to design skills, the soft-skills also support the call for design education to facilitate 21st century skills; to be comfortable with risk, to empathize, to “succeed through possible failures” and to persevere (Kelly 2019, p.44).

Figure 73: The students and lecturer from LUCA Gent, Studio Advertising are kicking off their project in a local frituur (Wilkinson 2017).

Figure 74: Students spread out and ‘get to know the locals’; there are many pop-up front stoop informal parties with drinks and snacks (Wilkinson 2017).



5.5 Interaction experiences

This section highlights texts which feature interaction; a student reflecting on how they regard the interaction itself to their reflecting on the participant and his/her experience of the interaction. Both touch on value; the value of the interaction in terms of designer and the value in terms of bond. When describing the experience, some students focused primarily on discussing their interactions with their participant. From personal anecdotes to showing a genuine interest in their participant's wellbeing, the student designers reflected on how they had changed and the depth of engagement they had with their participant and how this added authenticity to their design and design process.

“It was easier to put things on the table. For example, ah we have this idea, what's your opinion? Would you agree, would you mind showing you, or using your name? **There was no need to be careful, we could be open about things.** It was also funny that when I called to arrange to meet, he asked about my girlfriend and funny things like that. The first few weeks I met with him several times, **not just for the assignment, just to get that connection.** I think that if I didn't do that it wouldn't have turned out like this. I just went there to have a coffee. You're not just drinking coffee but you'll have a conversation as well and something useful came out of it all the time.”

— Jasper (second-year, Digital Design)

In this above example, the student discusses how the relationship enabled an open dialogue between them. It also shows that time was spent investing in getting to know the person instead of just focusing on design requirements related to the coursework. It touches on the crossing over of reciprocal sharing; the idea that the design student is not only being an active listener, but also being an active sharer.

In the following quotes, the students suggest that they ‘got to know’ their participants. The design students relate this to the design process by stating that because they knew the person so well, they carry knowledge of this relationship on through the design process and referred to it later on when making design decisions. The students discuss this exchange in terms of its value, its usefulness.

“I found this way of working really good because you really **get to know someone**. And you **really know** who the person is. You always **keep them in your mind** when you are working on the product.”

— Sofie (second-year, Digital Design)

“In the beginning I would get my papers out, and start working right away. Now it's more relaxed... Usually it was an hour or so, but then it became usually longer. Lots of translating, lots of talking, lots of **getting to know** things about her. I think this was useful in determining her target audience for her website. I think it was also important to look at who the user was, how she thinks, how she'd use the website. That was useful information to know. Standard questions, but the deeper you get you'll change the questions regarding substance and you'll get deeper into the matter. It doesn't happen that often, but still, **she sees things that I don't**, that's important to continue looking into those things. I think that's been quite useful.

— Eddie (second-year, Interaction Design)

For some students, the close contact with the participant and his/her design problem led to frustrations. They knew that there was a problem which needed to be addressed but were also aware that their project would remain at prototype level and stood almost no chance for production. This added a degree of urgency to the project but also added an element inadequacy.

“I thought it was an opportunity to make something that could be used in real life. It might go beyond just being a student project, that you're making it for the world out there. Perhaps also because it was about a real someone, Frank, and **I really want to help** him. We had all these great ideas and prototypes, but it didn't help him in the end. It just remains a prototype; it doesn't exist. We've been looking at it (the participant's context) and we really saw there was a problem and truly looked for a solution, but it's still not solved because our product doesn't exist yet. It's kind of **frustrating because there is a real need**.”

— Sofie (second-year, Digital Design)

In some reflections, students described their enjoyment in the friendship they had made. This was both about an increased level of engagement but also about the

authenticity in which both the participant and the design student engaged with each other. In turn, this also caused some of the students to want to extend the friendship beyond the module, so that the engagement (this was specifically a position held by students working with elderly) could last longer and taper off instead of ending abruptly.

“I enjoyed her as a person, her hospitality, the fun moments, not just the conversations but **sharing personal experiences** as well. We were having a coffee and she asked me about my hobbies, my parents, my sisters and stuff like that. We more or less turned into **friends**. ”

— Alma (second-year, Interaction Design)

“Really working with them **makes an impression** on your personal life as well. I'll **never forget** those two, they **turned into kind of my friends**, even though they are old. It's a contact that will stay.”

— Jessica (second-year, Interaction Design)

“I don't think I'm going to (say goodbye). **I want to keep saying hello– seeing him**. If it's not every single day maybe once every two weeks because when I did work in the hospital, it sucked when people didn't make it or people left. And so– and you don't get to say goodbye because you don't work every day. And so... He's cool and I like him and I'd love to see Katie (his wife) again, so I don't think I'm going to say full on bye, I might let it drift. Let's say see him once a week and then twice a– once every two weeks and then just...”

— Julie (final-year, Graphic Design)

“What I'll definitely take is that I've been working together with Ilmer for a few months... Not that I'll meet him again per se, but **his ideas regarding Belgium**, about the environment he's in, about Muiden, I won't forget those, as I worked fairly close with him. I'll remember **his opinions**; I think not everybody can say they talked with an Imam. I thought about these older people, but he was very young, and he had a very fresh outlook on the world and what happens in the world. It's not necessarily about the project but still something I'll remember, as he was a fascinating man.”

— Sofie (second-year, Interaction Design)

Although nearly all of the students indicated in other areas of the post-design interview that their end design was impacted by their interaction with their participant, some students specifically articulated the impact of this on their process; they describe the project as being made together. The student sees not only value in the participation in terms of resource but offers the participant shared ownership.

“Because you **develop a bond** with your contact person. If you are going to make something for a company, like an advertisement, it’s a bit like, first a presentation...it's much more detached. But here, **everything was done together**. We made it together. We talked about it together and if they had ideas, they were always welcome.

— c (second-year, Advertising Design)

5.5.1 Interaction experiences: a summary

What these experiences about interaction highlight is the intimate nature of participation. Instead of a formal recognition of participation that functions solely as a means to develop a design outcome, students highlighted their enjoyment of the exchange. They discussed how it motivated them, how they, in some instances,

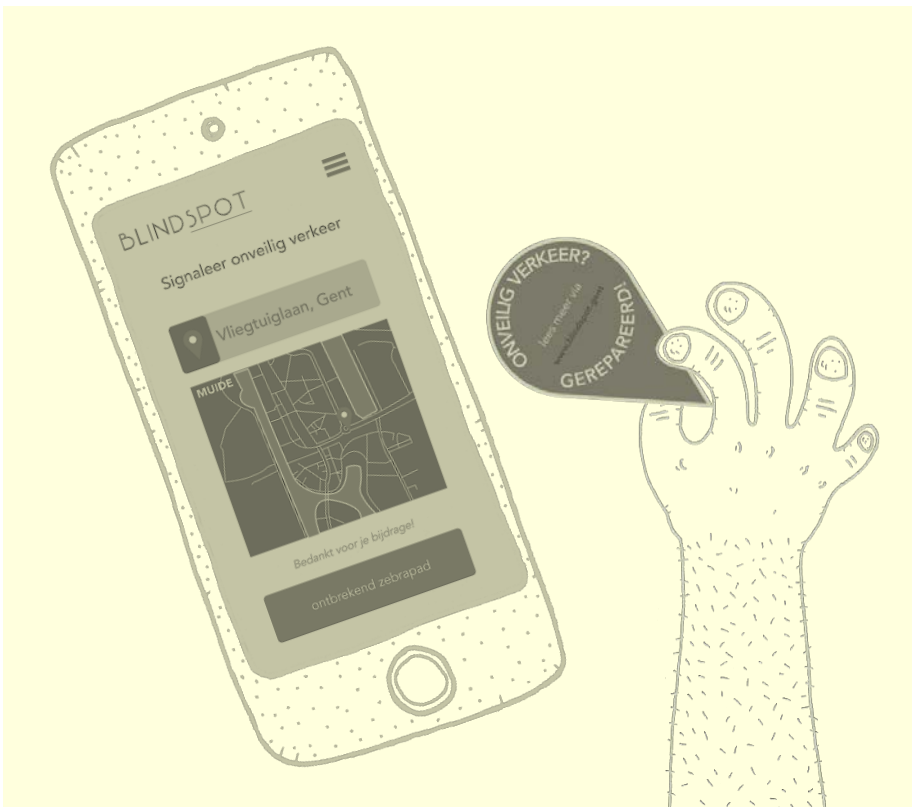


Figure 75: The mockup of the app for the individual who was legally blind. The project involved his sticking stickers on areas where he felt the traffic was unsafe and users could ‘agree’ with him by scanning his placed stickers; thus closing the loop between his lack of technology and location-based, crowd-sourced data (Van der Cruyssen 2017).

Figure 76: Alma worked together with Karin, and Alma commented in her reflection that they had both had fun, that she had acquired a friend (Ciranni, 2017).



became a team with their participant; designing together. For some this facilitated a sense of urgency (they wanted to design something that resolved the need that their participant had) whereas others found the it facilitated a type of friendship.

5.6 The importance of experiences: meaningful encounters

In summarising the findings, although the idea of experience is often thought of as a singular entity or referred to as something that can be pointed to for reference, experiences are not “isolated sensing.” (Boud et al., 1993 p. 6). In other words, moments being experienced ‘at present’ are linked to other experiences. For designers, experiences inform how they view, interpret and create. For student designers working with people, this connectedness becomes even more explicit. They are stepping into a person’s world *expressly* to experience. Because it is taking place within education, the lecturer too is *expressly* orchestrating this experience. The student is asked to *experience* it, as a means to become aware of it. Schön referred to these types of experiences (the ongoing positioning and decision making, the collaboration with others, the coming into understanding of the user, the time spent in a particular context, ...) as being part of a designer’s *modus operandi*. He saw these experiences as an ongoing *dialogue* between the situation and the designer (Hatleskog 2014, p. 144).

In the findings identified in this chapter, this dialogue between student and situation is not simply an event which happens, but rather the dialogue is laden with meaning. For Boud et. al , these are what they call meaningful encounters, not “just an observation, a passive undergoing of something, but an active engagement with the environment, of which the learner is an important part” (1993, p. 6). Without the interview process in these cases, many of these meaningful encounters would have remained tacit. They might have been discussed when the student’s work needed to be disseminated (in power point presentations, in coaching sessions with lecturers, in portfolio texts...) but they might not have been celebrated as experiential knowledge.

The analysis of this chapter looked specifically at key takeaways, impact on process and influence of participation. A significant finding in the analysis, was that the participant was central to almost every student’s reflection. Instead of discussing the participant as ‘the user’ or being merely part of a specific phase of the design process; their influence was pervasive. One hears and sees evidence of the interaction between designer and participant in nearly every quote above. This held across the cases, regardless of the length of the module, regardless of the extremeness of the marginality of the participant, regardless of the student’s year of study and regardless of the student’s design orientation.

On the surface, the cases were similar standard discipline design modules. The student designers working on the briefs presented within the cases were required to create outcomes that were design-centric. The modules included deliverables such as pitches and presentations, prototypes or concept films as design-related outcomes. Theories covered in the modules ranged from participatory practices to lectures on e-inclusion to methodologies for working with users. In terms of learning, the physical (or even digital) outcomes did not equate to learning per se, but were assessed as evidence that design skills (from research to crafting to testing) had been improved upon, utilised, achieved or carried out to varying degrees. It is only through the analysis of the interviews, that the value of the experiences was articulated.

Considering for a moment that the experiences above were removed from the Student Design Modules, what would be left? Students would still be able to hand in the deliverables, listen to the lecturers and still be assessed on the quality of their outcomes. Previous, experiences would still inform the student’s design process but it

would be limited to being self-generated, based on prejudices, literature reviews (the experiences of others), visual culture, intuition, expertise, the limitations of a brief, etc. The findings of this chapter, therefore, articulated the advantages of the designing for one approach as a means to facilitate student designer experiences.

Chapter 6.

Findings / It wasn't what they made, but the relationships that were formed; understanding how or if empathy is developed during the designing for one approach

Continuing to focus on investigating the insights that designing for one provides the design student, this chapter focuses specifically on the research questions regarding empathy and how it manifests or is established in the student designer (RQ 1.2). Off campus, with participants, sometimes even in their own home, the contexts and close involvement of the participant enabled student designers to have encounters that generated empathy. Rooting the analysis and subsequent coding of the data sets from the Student Module Cases in literature that suggests that empathy is the result of interaction and participation, the analysed data identified factors that both influenced and evidenced the empathetic relationships between student and participant.

6.1 An introduction: articulating the relationship of empathy and designing for one

Based on the literature presented, because each student designer went through Stein's empathetic paradigm, Kouprie and Visser's stages of empathy, and carried out design actions highlighted in Fila and Hess's overview, designing for one is an empathetic model of participation. What designing for one adds to this research space is a focus specifically on the interaction. Empathy is identified to be the result of interaction and participation. It is based on building a relationship between designer and participant and both suggest that this relating feeds into the process and ultimately the outcome.

Critique on the above models would suggest that empathy is the accepted conclusion; that the actions *result* in empathy. Because of this qualitative and encounter-based experience, both provide a 'how to', but do not provide ways to validate or qualify the relationships that move the designer towards empathy. In these models, empathy is a given, provided the process is followed through. Although this may, indeed, be the case, they do not place any responsibility on the participant or explain a designer's rules of engagement. Kouipre and Visser, for example, suggest that, as part of 'immersion' designers should go "wandering around in the user's world" and suggest that this requires that they take an "active role by leaving the design office" (2009, p. 444). This does not define what this engagement should entail, who this wandering should involve. Although perhaps not an attempt to provide a methodology or list of techniques to engage empathetically (rather to say that empathy-creating techniques are already a part of design practice), Fila and Hess leave the engagement open, without gradation: from knowledge gleaned from direct observation to proxy informants to interaction to imagined self and role playing; what do designers need to get out of a contextual observation? Who are these proxy informants and what value are they bringing to the table?

6.2 Methodology and structure of the results

Using Baldner and McGinley's six underlying factors that are currently used to measure empathy as a guide (2014), the transcripts were coded for texts evidencing these forms of empathy. Of the six factors, three were evidenced in the texts³³: 1. emotional interest, a person's taking interest in another's feelings; 2. perceived other awareness, understanding how someone else feels, and 3. Perspective taking; taking another person's perspective. Once the transcripts were coded, the quotes were grouped together according to similarity. When did students show emotional interest in their participants or sensitivity regarding the participant's feelings? How was their understanding of the other person's feelings manifesting in their reflections and where in this relating to the participant was this understanding taking place? These text

³³ The remaining three forms of empathy, *sensitivity*, *personal distress* and *emotion with fictitious characters* were less relevant to this study because of their referring to particular contexts which existed either outside of the scope of the data sets or was unrelated to the research being carried out..

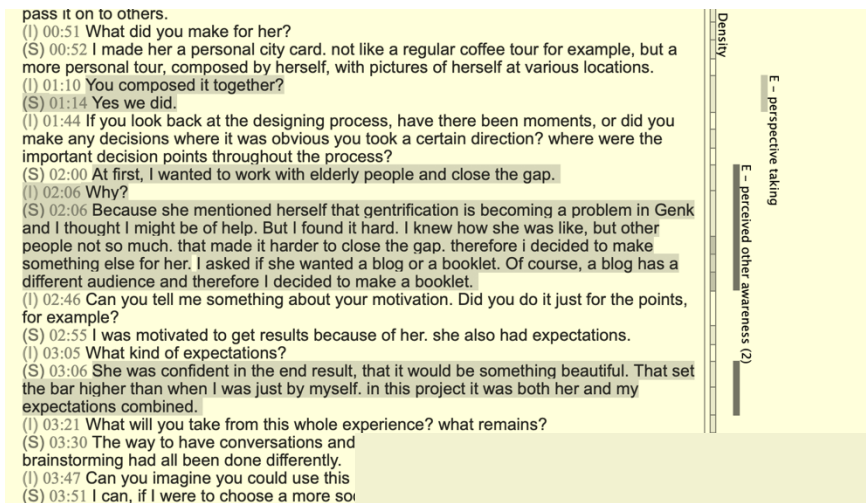


Figure 77: Example coding for evidence of a student's emotional interest, their perceived other awareness and for perspective taking (Wilkinson 2019).

Figure 78: Portion of grouping quotes and identifying empathetic relationship factors based on the student quotes (Wilkinson 2019).



fragments were collated together and categorised according to where or how they manifested in the relating between participant and student designer. Next to this, reflections gathered from observations supplemented the categories. Grouped together, this list forms a list of factors that contributed to empathy being evidenced in the student's designing for one experience. Next to this, it highlights factors which contribute (or can potentially hinder) the empathetic relationship between designer and participant. In addition to this, and to give a more contextual overview of a student's empathetic experience, a 'thick description' has been included, based on a model presented by Denzin (1989), in which a detailed, narrative description is created which provides insight into observations that were made, events that took place or behaviors. Next to this, Clough also suggests narrative as a means to expose an audience to "a deeper view of life in familiar contexts...a means by which those truths,

which cannot be otherwise told, are uncovered” (2002, p. 8). This particular narrative-based, thick description exposes how empathy is embedded in the designing for one student experience.

6.3 The results: defining the characteristics of empathetic relationships

If the results begin from the position that the design students were designing empathetically because they were engaging with a participant and this relationship with the participant is seen to be key in attaining empathy, then the focus can shift to what actions were fostering the relationships between participant and designer. Through post-module reflection interviews and observations made during the module of the four Student Module Cases, specific focus was placed on the relating between participant and student. How were they communicating with each other? What happens when something doesn’t go as planned? How is the student showing that they value the interaction? These relationships were, as Dindler and Iversen suggested, ‘designed things’ that held incredible value (2014, p.43). These *created* relationships contributed to not only a project’s success, but to the level of empathy experienced in the student and their motivation. In some cases, it even impacted a student’s sense of self, impacting their design confidence. Above all, these *created* relationships influenced their designs. Designers were stepping in and out of relating to their participant both as designers and as young people. These findings suggest that the approach designing for one can facilitate constructed, but meaningful relationships.

Table 18: Factors that influence the forming of an empathetic relationship between designer and individual participant

Factors Identified	Observed and noted qualities	Examples from the student interviews
Means of communication	<ul style="list-style-type: none"> Both parties are proactive Preferred communication form is chosen by participant (from Whatsapp to phone calls to face to face meetings in a community centre...) Appointment times are clear 	<p>“I still kept meeting and talking with Luca and after a while he loosened up. We had our weekly coffee in the morning where we just chitchatted and I got to know Luca.” – Manon</p> <p>“it was hard communicating with her, but the contents were clear, we understood each other, our ideas were more or less aligned. It was difficult communication in terms of timing. I would call and she couldn’t talk. She</p>

	<ul style="list-style-type: none"> • There is an openness in responding to questions • Designer takes time to explain design aspects to non-designer • When communication is difficult, designer searches for alternative ways to communicate 	<p>would want to meet, but the timing was bad. So we emailed a lot and the contents of said communication was swift and clear.” – Stefanie</p> <p>Well, it was still hard because he'd been given a cheap phone to keep in contact but it was hard to meet because the phone was mostly at home while he was mostly outside. We were always hoping that he was at home, we called in the evenings to increase chances to get him on the phone. We also knew his daily routine, like ok now he's in the community center outside. When I was by myself I knew, ok Tuesdays I'll go to Muiden and I'll know he'll be there, that was the convenient part of it.</p> <p>– Jasper</p> <p>“Well, I feel like he was kind of just going through the motions of everyday, just getting up, getting coffee, going to activities, going lunch. And I felt like he needed to get off rail with that because it was just kind of starting to bore him. Of course, he's a team player, he's a great guy. But just me bringing in different things for him to do with kind of like, OK, now I can get away from– there's a lot of women in the class then maybe I can get away from the women and just kind of talk about my past and my history. So I kind of just kind of problem solved, trying to see what exactly like you do for him on a personal level, not just for the whole community center but just him.” – Julie</p>
Integration of the design	<ul style="list-style-type: none"> • Consideration for existing organisations or proxy participants that will maintain the design once it is finished • Funds to extend prototypes are actively sought • Project is built upon existing routines that support sustainability 	<p>“I'll try to make it happen. I want to meet with the City of Ghent to discuss...I want something that lasts.” – Clara</p> <p>“I talked to her daughter which is– her name is also Cathy. Well, she actually introduced the idea to me. Because she told me that her mom really liked to play scrabble. So, I know she had a scrabble game in her room but I don't think she ever played it. I think– I actually she forgot she had it. So, it's just something that we tried out.” – Dana</p>
Preferences	<ul style="list-style-type: none"> • Design outcome takes into account a person's expressed preferences • Design responds to participant's particular needs and the tools he/she has available 	<p>“I think when we talked about how she likes to help people, how she sees herself as a bridgebuilder, that was something which stuck with me. I should make something which makes it easier for her to help people. That's how it got into that direction and how we got working with it... I have her number now, and when she has questions regarding how the project went down, I'll be happy to drop by.” – Eddie</p>
Interaction is seen as added value	<ul style="list-style-type: none"> • The moments of participation are enjoyed by 	<p>“We got along well together. I brought her a bouquet of flowers to celebrate the opening.” – Joris</p>

	<p>both designer and participant</p> <ul style="list-style-type: none"> • They tell others that they are enjoying each other's company (ie. coffee, walks, ...) • A lot of time is spent investing in the participant by the designer and in the designer by the participant • Both show forms of gratitude (giving each other gifts, making time for each other specifically, having things on hand (ie. coca cola,) 'just for her'. 	<p>I then called Else and she picked up and immediately said, "Yes, yes, stop by! We're waiting for you." Mostly, yeah, I would come by for school. But there were also two days that I stopped by and actually, I didn't have anything to do for school. I just wanted to come and talk." – Jessica</p> <p>"At the neighborhood party she joined in with a bottle of wine and said something like: "I don't know you, I've never been outside, but I am looking for contact", so she is the kind of person who initiates something like that. By cooperating, by making it her card game, I think she'll be positive." – Stefanie</p> <p>"I sometimes wish I had more testing time with Virginia especially towards the end of it. I was making changes without being like, "Well, I'm changing the type size a little bit, is that going to be OK?" – Evelien</p> <p>"They told me a lot about the bakery, how it was founded and how it went, it interested me, but got very attached to it as well to put it in their words, they called me a 'gift from heaven" – David</p>
Engagement	<ul style="list-style-type: none"> • Involves participants family, friends and community • There is a sense of enthusiasm or generosity in both the student and the participant in terms of time, effort, etc. • A concern is seen for each other through comments that are continued from week to week (ie. a mother is sick, the following week this is asked about...) • There is an attempt by either party to draw each other into conversation 	<p>"She didn't expect me to approach her with something like this, but when she listened to the idea she was like: "indeed, good idea, when a child at school talks about it, it will spread!" Any kid will want to join a world record attempt, regardless. She really thought it was a solid idea...it's great if you have someone who is excited about it, you'll get excited yourself and you'll gladly help. she really helped, by explaining everything, explaining the issue." – Karen</p> <p>"The book is tailored specifically to her...I looked at what artwork she had in her room. I talked to her sister about what art she liked. And I also brought in a lot of materials for her to go through to see what she kind of gravitated towards." – Sebastian</p> <p>"I had some hunches about things that might be problems for her but then I got a lot of information from her daughter and from her nurses that really filled in some gaps." – Evelien</p>
Roles in participation	<ul style="list-style-type: none"> • There is an overlap between when the student is being a design researcher and when the student is being a 'friend' • Participant is seen as a key partner 	<p>"I wanted to take her outside but I didn't want it to be too bad because of the heat... sometimes we will walk past like windows and she would see other people outside and I feel like she wanted to join them but maybe she didn't know if she could or not." – Dana</p>

Power dynamic	<ul style="list-style-type: none"> • Effort is put into reducing the power dynamic between designer and participant (they are seen to be equals) 	I told him beforehand: "I know nothing, just make a tour, it's fine with me, as long as I have a tour to work with". – Robyn
Reciprocal exchange	<ul style="list-style-type: none"> • Topics of conversation go beyond design related discussions to personal storytelling • Student shares own personal reflections • The designer is not only taking data away, but sharing his/her own 'data' with the participant 	<p>"We were having a coffee and she asked me about my hobbies, my parents, my sisters and stuff like that. we more or less turned into friends." – Manon</p> <p>"It was also funny that when I called to arrange to meet, he asked about my girlfriend. and funny things like that. The first few weeks I met with him several times, not just for the assignment, just to get that connection. I think that if I didn't do that it wouldn't have turned out like this. I just went there to have a coffee. You're not just drinking coffee, but you'll have a conversation as well and something useful came out of it all the time." – Jasper</p> <p>"I went to his house. The first day I visited him I brought a piece of cake. Getting to know him, I think that at least half of the time I wasn't busy with the project at all and that I just talked with him." – Oliver</p>
Respect	<ul style="list-style-type: none"> • There is a mutual appreciation of the participant on behalf of the designer and/or vice versa regarding the relationship 	<p>"people forget like these are your grandparents. These are other people's family members, friends, wife, husband or whatever. And they're still people." – Julie</p> <p>"I talked to a woman there and she told me that he was quite excited and happy about it. On the telephone he sounded happy and thought it as was great how I picked it up. If it wasn't the case, I also think he would say it." – Kathleen</p> <p>Frank was suited because he had an obvious hindrance, an obvious obstacle preventing him from participating, namely his bad eyesight. At the same time, he had plenty of ideas on how to improve. he provided lots of input and put a lot of energy in it. That was quite useful." – Rita</p> <p>"Walter is an old guy from Genk, who lived his whole life here and knows heaps about the city. He talks a lot and he's really friendly, a true gentleman. When you come in he'll take your jacket, he'll prepare the chair for you, he'll escort you to the elevator, he'll open the door for you, a rarely seen gentleman. Else is a friendly woman who's usually in the background but once you get to know her and her personality, you'll feel the patience she has in her. Compared to Walter, who always talks, she is more thoughtful. She like to keep her thoughts to herself but when she exposes them, you'll have the feeling that you can come close to her." – Jessica</p>

		<p>“Through talking with her, I felt that she gives a lot to Genk and that she has a lot of experience. I thought it would be a good idea if she could give this knowledge to others.” – Alma</p>
Location	<ul style="list-style-type: none"> • Participation happens in locations that the participant or designer has chosen which have significance to him/her (ie. workplace, community center, cafe, home, etc.) • The locations add to the story the participant wants to share and the designer wants to know 	<p>“At first we didn't really talk about the project but more about himself and he gave me a tour through what he's been building. He's renovating that house by himself, with the help of family and friends and he's making it his very own place.” – Sofie</p> <p>“The last time I talked with him I was also at his house; I was invited into the mosque. I got tea from a woman, and she offered me cookies. I wasn't afraid but there was a small barrier I had to take. We had to contact someone unknown to us, who knows who they coupled with me.” – Sofie</p>
Continuation	<ul style="list-style-type: none"> • Participant and designer extend the relationship beyond the needs requirements of the design research (ie. impromptu visits, checking in with each other, friending each other on facebook, etc.) 	<p>“I don't think I'm going to (say goodbye to him). I want to keep saying hello– seeing him. If it's not every single day maybe once every two weeks because when I did work in the hospital, it sucked when people didn't make it or people left. And so– and you don't get to say goodbye because you don't work every day. And so...” – Julie</p>
Authenticity	<ul style="list-style-type: none"> • The exchange happens in real life instead of lab setting 	<p>“We always met in the community center, and you get free coffee there, but I don't drink coffee at all. Probably he saw that I didn't drink coffee, so he told Jasper that he bought tea especially for when Rita drops by.” – Rita</p> <p>“I think it's the little successes that really motivated me. At one point, one of the staff members there said that she told her that she was looking forward to seeing us. And she just in general, every day she seemed like she was more and more comfortable with us.” – Sebastian</p>
Outcome	<ul style="list-style-type: none"> • Participant sees themselves reflected in the design • Participant and designer refer to the result as being a shared endeavour 	<p>“It was with her, when I was talking with her, when she mentioned the vegetable gardens. I thought to myself that might be a great idea for the kids and then she said: "that's super fun!" Subsequently we thought of also selling it to the neighborhood, in order for you to get to know the neighborhood, that was something we came up with together.” – Katia.</p> <p>“We started a movement in which actually all the residents of Muide can join... In this way we want to encourage the residents to create more music in Muide.” – Dana</p> <p>“It's all about Bob and his family. When I interviewed him, he lit up when he talk about certain topics. I wanted</p>

		<p>to make sure that the war was in there, tennis was in there, a lot about Saint Louis was in there, as lot about Vegas was in there. Just the adventures he and Katie took together and just kind of the things that he did by himself.” – Julie</p> <p>“My project has a subtitle, namely: 'Chantal's dream', and in this way I want to really involve her in the project. it also ensures more interaction between customer and shop owner, because no-one knew her name and now they do. it really turns into a personal story. she really appreciated being part of the project.’ – Joris</p>
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Not meant as a checklist, these factors can be referred to as *things to consider* when assessing the quality of an empathetic relationship or when considering how to improve a relationship when co-designing together with individuals. Next to this, this list could be referred to when considering how to begin the research process in terms of best practices. The list should be seen as a starting point and can be adapted or extended depending on the type of project, the type of method of participation, the types of participants, etc.

6.3.1 Sharing the experience, describing the relationship

Those interested in these factors will be equally interested in knowing more about how such a relationship manifests in the experience of a design student. To support this, a thick description (Geertz 1973) has been made which describes the experience of one of the students working through the process in fine detail, supplementing the description with the student’s own words. Although a long supplement to this chapter, it not only paints a portrait of the approach designing for one, but it sheds light on the sense of urgency that relation-based designing offers, as well as highlighting the importance of back-stage relational expertise with not only the end-user (participant) but their proxy participants (family, carers, etc.).

The following thick description is based on observations which took place during the Student Design Module Case 3, Graphic Design St. Louis. Having an extensive background in designing together and for people with dementia, this allowed the researcher to coach the students and draw parallels to her own design practice as well

as relate experiences from other students in previous design and dementia modules to them. Although the following description focuses on a design student who has an existing amount of skills in the area of empathising due to her background in psychology, her experience is not unique. Her experience was selected because she kept a text-based journal as part of her own documentation process and referred to this during the interview. The entries she wrote at various stages of the process shed light on her feelings, her thinking process, the links she made between observation and design problems, the ways in which she related to her participant and her participant's family, how she internalised the experience and related it to her own lived experience, and her growing empathy, etc. Next to this, it identifies how the factors identified in Table 18 above influence the relationship being formed.

Summer school, by nature, involves a different level of commitment from a student. Summer school classes are intensive, with classes running longer each day over a consecutive length of days. (in this case 4 hours a day, 4 days a week for 5 weeks). Except for two days of in-school work, the module students were following was offered on **location** within a skilled nursing facility. Most students taking summer school were fitting this around full or part-time summer jobs and this module was no exception. Students enrolled in the module for various reasons; from the fact this would lighten their school load in their final year to interest in the topic to enjoying taking modules from the lecturer who was leading it. Because the module was off-site, this also required students to commute further, with some of the participating students commuting up to 45 minutes one way. Additional requirements that were imposed by the care facility included each student agreeing to a background check and each participating student was required to have a Tuberculosis test (an injection-based test conducted on-site at the care facility).

The care facility itself was relatively new and was situated within a larger group of skilled and age-care facilities within a retirement community on a sprawling campus on the outskirts of St. Louis, a city in the American Midwest with a metropolitan population of nearly 3 million. Taking place in summer, this limited the type of activities that the design students could do with their participants as the residents only went outside if accompanied by a family

member because the temperature outside (certainly during the afternoon) was around 35+ degrees Celsius. Most of the participants lived in single rooms, with lavishly decorated, homely spaces. One participant lived in a shared room, and her half of the room had little or no customisation or personalisation. The participants were selected by the activities manager based on who she thought would best be open to working with students, as well as who she thought 'needed' this sort of activity. Family was informed and gave permission for their family member to participate. They also agreed to be contacted by the student for more information. The mother of the lead lecturer leading the module lived in the facility and was one of the participants. This was a motivating factor for her to offer the module. She suggested that this module was a bit of a risk as the approach was unlike any of the other modules that were taught within the classroom.

Based on the care facility itself and its cost, the residents all appeared to be financially 'well off' and could afford the facility. This included, for example, a dining area for residents who didn't have cognitive impairments, which was set up as a restaurant with a changing menu and cloth napkins. In saying this, the area of the skilled nursing centre where most of the participants were living shared attributes of care facilities that are common in the western world; residents who are occasionally in distress (ie. crying or screaming, etc.), residents not actively engaged in an activity and unable to move themselves are placed in the communal living room by the television, the pervasive and occasional strong smell of urine, an ever changing landscape of physical therapists doing exercises with residents in hallways, activity calendars posted on the wall, caregivers wearing different uniforms which suggest specific roles depending on their skillset or hierarchy, groups of care workers on break chatting about their weekends, a chapel for faith-based activities and a rather structured daily routine. This list of commonalities were all items that student participants had to get used to as part of working within an **authentic** setting. In the first debriefing session, students shared that they were intimidated, nervous, etc., but these feelings dissipated after the first session.

On the first day, students participated in a group activity set up by the care facilities activity manager, a motivated but underappreciated staff member (she said this herself) who had had no formal schooling in this role. Around a dozen people with mild to medium range cognitive impairments (most notably dementia) participated. Residents introduced themselves, followed by an introduction by the students. The students were paired up with participants but were also encouraged to pair up with other residents based on shared interests. At the end of the day, the students and lecturers had a debriefing in which students discussed their experiences and impressions of the day. This is the model that was used for the rest of the module; students would spend time with their resident from 9:30 until around 11:30 and then they would meet up with the lecturers to reflect on next steps. Lecturers would check in with the students in the first half of the day and would help out where necessary. In this initial meeting, students selected their participants based on their brief (but in some instances intense) meeting with the residents. From this very first moment they were also provided the contact details for family members wanting to participate as proxy participants and were encouraged to reach out and **engage** with them immediately. Students were shown presentations about the module's timeline and expectations for research. They were also shown a presentation about the design process, with its focus on building up an idea of their participant. Together, the home lecturer and I decided to use the model of personas; encouraging the students to, over time, build a non-fictional person profile which they could continually add to, trying to identify the person's: personal early history, things they miss, a description of their core Identity, important aspects of their previous life, perceived difficulties (observed by the student) and difficulties suggested by others (proxy participants), what personal objects are present, items the person takes pride in (shows others), etc., which we referred to each week in the coaching sessions.

Evelien was a student in her mid-twenties who already had a PhD in Psychology and worked in a group practice as a therapist. She had a very keen eye for observation, and kept a thorough journal about her experiences, her reflections and her design process. She had always been interested in the arts and had recently decided to go back to school part time and was currently

studying at the local university to become a graphic designer. Only a second-year student (of four years), Evelien had taken the summer school specifically because the module offered her a chance to combine her knowledge and expertise in working with the elderly with psychiatric problems with her interest in design.

Evelien chose Virginia. Or perhaps Virginia chose Evelien. During the informal meeting, Evelien had enjoyed Virginia's company and vice versa. Although she was initially hesitant that they had differing personalities (Evelien was a self-described introvert and saw Virginia as a social butterfly) the mutual interest in each other carried the project, the **interaction** they had with each other. Already in her first journal entry, Evelien was making connections between the interactions they were having and the **role that Evelien could play as a designer and that Virginia could play as participant**. As suggested in the first debriefing, she brought with her props that she could use to facilitate conversations or activities they could do together.

“Virginia liked to keep the door open so she could people watch, as though she didn’t want to miss any excitement going on outside her door. I had brought some music on my phone and colored pencils in case we needed an activity to do to keep the conversation going, but I didn’t end up pulling it out at all because the conversation continued and seemed to be really enjoyable just by itself to Virginia. It seems to me that conversation and social interaction is what invigorates her most. Some problems I noticed were with wandering—she went the wrong direction leading me to her room and then didn’t know where to go for lunch when I walked her out, so it’s probably good that her room is very close to the main/common space.”

Moving from the **role** of designer into visitor or volunteer, Evelien also made a connection between Virginia and her own grandmother³⁴:

“My first meeting with Virginia brought up some memories of my grandmother when she lived in a place like this. She was pleasant and liked

³⁴ According to Battarbee and Koskinen, making a relationship between participant and own lived experience is one of the marked traits of empathetic understanding (2005, p. 6)

to talk too, like Virginia, but she was more of a worrier and got depressed at times as well, asking to go home and asking about her husband. It often made me sad and made it challenging to go and visit her. I am left feeling hopeful that Virginia's family doesn't feel that way about coming to visit her since she seems so happy and pleasant and is still able to engage in meaningful conversation. It will be interesting to see what her family feels are her challenges and what their difficulties are, if any, with her being in this setting."

Looking for a problem space to work from, Evelien started trying to identify possible areas that she could work on and that would add value for Virginia.

"She couldn't remember what her favorite foods were when I asked her that and also didn't seem to remember me or that I was there to visit her the day before. She seemed very pleasantly surprised that I would want to come and "hang out" with her at the facility.

"During the activity, there was music playing and at one point, she started singing the words to the song, and was getting them right. Music seems to be something that activates her. She had mentioned to me yesterday that she likes country western music but was not able to tell me her favorite songs. I thought it might be helpful for me to find out some of her old favorites from her family when I speak to them and include that somehow in my design solution for her. She seems to enjoy music but her memory problems limit how much she can request things. She said that the staff come around and ask her for requests for things to do or listen to and she doesn't make any requests. She said that's because she just enjoys everything but it may be because she cannot recall enough of her own preferences to make specific requests."

Even with her first initial ideas (which would ultimately factor into the thing she designed) Evelien was working empathetically; she was empathising with Virginia and suggesting a design that would ease strain by providing access to Virginia's personal **preferences**. In a specific move to **equalise** the dynamics of participation, Evelien decides to focus her design on supporting Virginia without emphasising the issues she has with accessing memory.



Figure 79: Evelien and other students receiving a coaching session from the main lecturer. Before they started working on their own individual projects, the students were involved in the sessions with their classmates to give feedback and also to help ideate solutions to issues their fellow students were having in terms of communicating with the person with dementia, etc. (Wilkinson 2017).

“Perhaps I could create a design that she could use when the staff asks for requests... She wouldn’t be faced with an overwhelming decision since she would be drawing something at random and she wouldn’t have to remember things that are her favorite things.”

This process for designing for one saw Evelien and her fellow students spend time with their participants and then unpack this time with the lecturers. Students found these debriefings helpful. Because of the intensity of the module, it ensured that students did not get stuck and that they could be prepared for the following day. For Evelien, still building confidence as a designer, these coaching sessions were an opportunity to expand upon her ideas but also strengthen the links she was making between her experience and design. These debriefings, which took place in the chapel, in the communal space, in the activities room, etc, were done together in group so that the other students could give feedback, share ideas and listen to the experiences the others were having.

“We had a chance to share our initial ideas with the class today and get some feedback...which was really helpful. At first, I was thinking my brainstorming ideas were too simple but I got good feedback.”

It’s not only Evelien who is enjoying the time together, but through Evelien’s writing it is clear that Virginia is also enjoying herself, a **reciprocal** exchange. Virginia jokes with her. In the following passage Evelien is listing the

activities carried out together, but also actively reflecting on what Virginia's responses might mean. She is making associations but also trying to articulate what Virginia can do; her abilities and the tools Virginia can easily use and that she can then in turn use to **communicate** with Virginia as an act of co-design.

"My visit with Virginia was really enjoyable again today. I picked her up from activities, and she was playing some type of game that resembled bingo. She said she was glad that I came to get her because the task wasn't her "cup of tea". I wonder how often that happens for her that she just goes along with the activity provided because she craves socialization and would rather do something rather than nothing...She continues to have a hard time with identifying her favorites. We went to her room, and she said she was thankful that she had made her bed because she rarely has visitors in her room and hadn't "cleaned up"...

"We listened to music together and I tried to select some things I thought she might like-we tried Johnny Cash, Dolly Parton, the bicycle built for two song, and the KU fight song. She responded well to Johnny Cash, the bicycle song, and the KU fight song the best, dancing in her chair and singing along. She said she doesn't listen to music in her room because she has no way to play it and doesn't spend much time in there, but the common spaces don't have much opportunity to listen to music except for in activities. She said she would not like to use headphones because she has trouble with them. She was fascinated by the iPhone but had trouble using it herself. So it would be good to brainstorm ways to help her listen to music more frequently in her room when she is in there getting dressed in the mornings because she said she liked to listen to music while she did housework in the past. It might be nice to have some music of her preference that plays automatically for her when she does "work" or self-care in her room as well as incorporate some music into the card grab bag of activities idea that I had before. Perhaps care staff could push a certain button when they come into her room to play her "morning" songs or there could be a motion detector that begins when she walks by."

In the final sentence above, Evelien is referring to ideas that are outside of her own design practice. This phenomenon is often seen when students are designing for one. They often do not limit their ideas to their own discipline, but rather place focus on the problem. In her case, Evelien's course is print-based graphic communications and yet as a designer, she considers linking the idea to medium.

Students were encouraged to **engage** with care staff as well as family or friends of their participants. Some students were able to have several meetings with family members and others discussed ideas with them on the phone. Students able to meet face to face with family members were able to create a working relationship with the family member as well. In Evelien's case, she was able to meet with Virginia's daughter and reach out to her via phone when she had additional questions. She used this time with Virginia's daughter to verify the information that Virginia was telling her but also to confirm some of the assumptions she had been formulating based on her exchanges with Virginia.

"I had the opportunity to visit with one of Virginia's daughters today, which was incredibly helpful. It was interesting how many things I learned about Virginia that did not match with things Virginia told me about herself. For instance, Virginia had told me that she liked country western music, and her daughter told me that this was not at all true about Virginia's preferences. So my theory that Virginia does not remember her favorites and preferences was more accurate than I thought. It's not just that she is going with the flow and doesn't want to speak up about her needs, she also does not remember her preferences well. I remember that my grandmother used to do things like this—she would tell people things as if it was fact but really, she didn't remember. I think that phenomenon is called confabulation when people being fabricating or discussing memories that are not really true. I'd like to look more into that topic to learn more about how it may impact Virginia's day to day experiences."

Virginia's daughter also engaged with Evelien in a very **respectful** manner. She was appreciative of Evelien's investment in her mother and in return offered Evelien access into her own take on her mother's history, personality,

the real problems she was facing, etc. Ranging from musical preference to issues with incontinence, the subjects alone show a level of respect between designer and participant.

“While I did get a great deal of differing information from Virginia’s daughter, I also got some information that was consistent with what I already knew about Virginia and confirmed some thoughts I already had about her personality. Her daughter told me that she was a very go with the flow person, very passive, and rarely spoke up about her own needs. This personality trait was so strong that she even neglected to speak up about her own needs when something really serious was going on. For instance, when she was bleeding from her colon extensively a few years ago but didn’t ‘tell anyone about’ it until she needed to be hospitalized. She said that Virginia was stubborn in her passivity and dug in her heels when anyone encouraged her to speak up about herself. This tells me that coming up with a design solution for activities for Virginia would not be very effective if we were encouraging her to make choices or decide what she wanted to do—it needs to be masked and appear as though she is not making a choice or picking something for herself, even though that is ultimately what will be happening... Virginia’s daughter confirmed that Virginia does not really like many of the activities that are offered here, especially bingo, but attends to get social interaction and to please others.”

Although Evelien is already working towards an idea, the family also makes design suggestions. In the coaching sessions with the lecturers, Evelien struggled with what to do with these problems and suggestions. She felt very much that she had already identified a problem area but also wanted to support the family in areas they felt were important. Here Evelien also has a conflict because some of the family’s concerns do not parallel the experience Evelien has had. Here, she reflects on the fact that she needs more information and wants to supplement her research by talking to other proxy participants, namely care staff.

“Virginia’s daughter also listed some other problems that they notice in Virginia and that they as a family have. They struggle with what to do with

her when they visit to keep busy and they are also struggling with having more holidays at home without Virginia due to it being too difficult to bring her in the car anymore to come home... They also mentioned some problems they are having with Virginia's activities of daily life. They said that Virginia has significant toileting problems, such that she will forget where the bathroom is, thinks she has to knock on the door of her private restroom as if it was a public restroom, sometimes tries to wash her hands in the toilet, and this weekend defecated on her walker because she thought it was the toilet. They have tried putting signs on the bathroom door but have not yet tried other interventions, because they said that "dementia signs" for restrooms they have seen online are expensive and sometimes require that you buy them in bulk, which doesn't meet their needs. They also mentioned that she often forgets her walker when she leaves her room or other places. When I have met with Virginia, I have not observed either of these problems with toileting or forgetting her walker.... At one point, she was even able to point



Figure 80: Evelien's first ideas centered around problems the family had identified; potentially labelling objects in the bathroom to reinforce their function (Ridolfi 2017).

Figure 81: Virginia's family and carers began leaving 'reminders' throughout her room; a second idea from Evelien was to make these reminders aesthetic (Ridolfi 2017).



out to me that I had retrieved the wrong walker—I had someone else’s walker instead of hers and she noticed that the color was wrong and that the items inside it were not hers... I also need to learn more from Joyce about Virginia’s problems with using the restroom and what interventions they have already attempted for that.”

Evelien placed importance on getting to know Virginia from various viewpoints, not only because the individuals all had different ways of relating to her, but also to confirm her own design direction and the level of **personalisation** she wants to offer Virginia. She was keenly aware that she only had access to Virginia in the moments they were together but wanted to get the full picture of who Virginia was as a person. In order to access what was most relevant in terms of a design for Virginia, Evelien continued speaking with proxy participants such as the charge nurse and the chaplain.

“Joyce seemed to think that it would be reasonable to try out photos or graphic signs to tell Virginia where the restroom is and what to do when she gets into the restroom. We also discussed the potential benefits of creating a sign on her door to remind her of the items that she needs to take with her



Figure 82: Evelien testing her design with Virginia to assess type size as well as testing the themes that would be covered in her design (Ridolfi 2017).

when she leaves her room, like eyeglasses, walker, etc. Joyce is not sure if this would help or not but thinks it would be worth trying and said that picture boards have helped other residents who have had strokes to identify items they need, even when they can't speak. The only way we would know for sure if this would work for Virginia is to test it out."

"I also got to meet with Jacob, the chaplain. It was really interesting to hear more about what he does for the residents. He described his main purpose as helping people with "meaning making" in the midst of difficult circumstances, or in other words, to answer the questions of "why is this happening to me" etc. He said that Virginia attends weekly bible study and spiritual support group/prayer group and tends to be pretty agreeable about coming, but she occasionally does decline when she isn't feeling well... I was glad to hear that she sometimes can prioritize her own needs and stay home when she needs to... He isn't sure if she has Bible verses that are her favorites, but knows that there is a verse from Psalms framed in her room... I need to follow up on these ideas by asking Virginia's family if she has any favorite bible verses, poems, or spiritual books that I could pull small activities from for my activity cards."

With a week left to go, Evelien started creating prototypes to test. She was testing the card themes but also considering how the cards could be used by staff in order to provide an activity that Virginia liked, but also how it could be used on a daily basis to generate conversations between carers and Virginia and **integrate** into Virginia's daily life. Next to this, Evelien has also decided to respond to one of the needs presented by the family members and creates signage tools that the family hopes will help with Virginia's spatial awareness. In the following passage we also see that Evelien is responsive to how Virginia feels and does not prioritise testing design solutions over her wellbeing.

"The music tests went well, and Virginia knew all of the songs that I played and began singing along with them. The only song she didn't seem to know as well was Let Me Call You Sweetheart, but although she did not seem to know the lyrics, she had a personal story to share about the song and mentioned that her father sang that song to his girlfriend, who eventually

Figure 83: Evelien's final design; supporting Virginia in stating her own preferences and talking about her favourite things, even if she no longer knows for certain what these preferences might be (Ridolfi 2017).



became his wife. So perhaps the song triggered a positive memory for her even if it was not a favorite song to her. We also tested out the visual movie prompts. I am considering using still photos from movies to show her or movie posters for the “movie cards” to prompt conversation and reminiscing so I showed her a few of those photos to see what worked best. She seemed to be familiar with at least the movie or the actor/actress with all the photos I showed her except The Thin Man. Her daughter had told me this was a favorite of hers, but she did not seem to recognize it as well. When I asked her if she could recall some of her favorite movies, she said “I like them all” but did mention she likes Claudette Colbert, who is an actress who starred in several films. Given that Virginia was not feeling her best today, we did not test out any of the activity cards that recommend walking somewhere or talking to people outside of her room. It is good that there are enough card ideas though to accommodate her needs if she does not feel like leaving her room at all.”

“The photographs I took today were of Virginia’s walker and eyeglasses since those are both items that she forgets frequently. There were already some signs put up by either staff or family last week that remind Virginia to take

her walker with her, but her daughter emailed some feedback to me that she thinks the signs could be significantly improved upon. I will see about adding some photos to the signs and change the typeface and color of the sign...She said she would prefer the sign to be pink, so perhaps I can incorporate some pink, although I would like the sign to be pretty free of distractions, and if she likes pink, she may get more fixated on the color as opposed to the message of the sign. These are all tests that I will need to do if I go forward with the idea for signage in addition to the activity cards. I am hopeful that I will be able to do a good job of both interventions.”

In her journal entry, Evelien reflects on her final prototype test with Virginia; how they enable conversations with strangers, how the image selection and type size seems to be appropriate and she looks for areas she could improve in the final design.

“I met today with Virginia for about an hour to test out cards from the activity deck of cards I am creating for her. Nichole came with me and photographed our interaction. Virginia was laying down resting but invited us to come in anyway. She said she was up all night last night due to her allergies and so was trying to catch up on a bit of sleep before lunch. It speaks to how important social interaction is to her that she was willing to forego sleep in order to visit with us. It was good to see how she responded to the intervention with a lower energy level and to see how she can manipulate the cards from a supine position. She responded well to the card samples I showed her, recognizing the images from her favorite movies and engaging in conversation about them or singing the song in question.

It was interesting to see how the presence of another person in the room, Nichole, impacted things as well. Virginia would often ask Nichole about the conversation prompt as well and pull her into the conversation, indicating that the activity cards work well with someone Virginia is familiar with as well as relative strangers, which had particular value given that caregivers and staff change frequently for Virginia. Virginia was able to read the text of the cards with little difficulty but seemed to have some difficulty reading longer more complex words and would read those words more slowly. I should take care to

avoid words that are too long or complex so that she can read the content easily. The typeface and size seem to be working though, as well as the overall size of the cards as she was able to hold them in her hand and manipulate them easily. At this point, I feel ready to finalize the cards and have them laminated after final proofreading and slight rewording of some cards to reduce word complexity.”

Ultimately Evelien’s design was a pack of ‘favourite’ cards. Created for family members and staff, it enabled access to Virginia’s interests without focusing on her memory deficit. Ranging from movies to hymns to sing, to Bible verses, Evelien’s design was a result of a design relationship with Virginia that took into account not only her **preferences**, but her abilities, her interests, her loved ones, her daily routine, etc.. The cards provided conversation tips but also provided links to YouTube videos that the carer/visitor could watch with her, taking into consideration how the cards could **continue** to be used even in Evelien’s absence. Virginia’s family appreciated Evelien’s wanting to give her a voice. In the final presentation moment, the family shared in this idea that in her ‘last years’ she had earned the right to ‘enjoy more’ as she had always been passive and had taken care of other people. The design **outcome**, the cards, held together with a ring were colour-coded with different categories and placed on a hook by her door ready to be used for anyone who entered. At the market, Virginia’s daughter hugged Evelien.

6.4 Empathy is the result of empathetic relating

In summarising these findings, what each of these factors reveal and what Evelien’s story brings to view, is that there is a relationship between the research environment and the formation of empathy. In the literature presented (see Chapter 2.4.7), empathy referred to the establishing of an understanding: an object’s inherent *understanding* of its future user or context of use as well as a designer achieving an *understanding* of a participant’s situation. Therefore, the establishing of an ‘empathetic relationship’ suggests a relationship created through the understanding (either explicit or implicit) between the designer and the participant. Underpinning this type of manifestation of empathy is the interaction between designer and participant. The

focus here is not on the methods themselves, formal methods such as interviews or informal methods such as going for walks, but the relating that happens within them: the discussions about shared interests, the lively conversation about unexpected topics, the enthusiasm of a participant who has an idea and wants to tell the designer more about it, the cake brought as a gesture or the tears cried at an end presentation. Perhaps more closely aligned to reflective practice than design process or methodology, it is establishing and navigating the relationships that lead to or provides access to empathy: an “intellectual or imaginative apprehension of another’s condition or state of mind” (Hogan 1969, p. 308).

In her research on navigating empathy within design, Smeenk identified several strengths of second-person co-designing³⁵ as a means to foster empathy. She suggested that it allows for “detailed, nuanced and personal insights that give information about innovation necessity and acceptance” (2019, p. 64). Because this was seen to be so valuable, Smeenk’s research went on to specifically try to create a method to hand over the experience to others; to transfer empathy from one designer to another. How could one remove the need to interact with a participant? How could a designer become informed enough to design empathetically without entering into a relationship? Focusing specifically on themes (mourning and dementia), in which finding participants might be difficult, her study did not negate the importance of acquiring second-person perspectives (Tomico et al., 2012), in fact, in order to create this empathetic handover, it requires designers to source these rich experiences, to build these relationships and engage with participants.

Although the findings do not focus on outcome, it builds upon the work of Van Rijn et al. who suggested that designs created in close liaison with participants (where one would expect empathy of a designer to be high) were judged to be ‘better’ and were considered more ‘empathetic’ designs (2011, p. 76). These findings draw a direct correlation between the research context and proximity to the participant and the creation of an empathic understanding of the user and how this is evidenced within the design. What the research in this thesis identifies, then, are factors to consider when establishing this research context and defining the proximity the designer to the

³⁵ Perhaps a bit counter-intuitive, Tomico et al.’s second-person point of view is in fact a designer carrying out primary research involving themselves and at least one participant.

participant; where participation takes place, situations which present themselves, how the relationship is initiated and how the limitations of the relationship are articulated. These findings are factors to consider in order to have quality, meaningful empathetic relationships with participants. These findings establish designing for one as an approach to design research in which empathy manifests through the relating instead of designing for one being a method of design research in which empathy is valued in the outcome.

When looking at the individual factors in Table 18, one might also consider how the opposing versions of these factors could potentially influence the relationship. Even with the best intentions, sometimes the relationship stalls, the participant quits, the designer lacks motivation, external circumstances impede the process etc. What these factors offer the designer/researcher is a list of things to consider when organising research, that designers should consider the implications on empathy if the location is in a constructed space, consider the effect on the relationship (and therefore knock-on effect on the project) if the interaction is not seen to be reciprocal, consider the importance of choosing a communication form that suits the participant and his/her abilities, consider the effect of showing gratefulness, not only in the end of a project where a designer might thank a person for their participation, but throughout. These are perhaps not qualities that normally factor into a design practice when considering design research, but when working with individuals, perhaps they should.

Chapter 7.

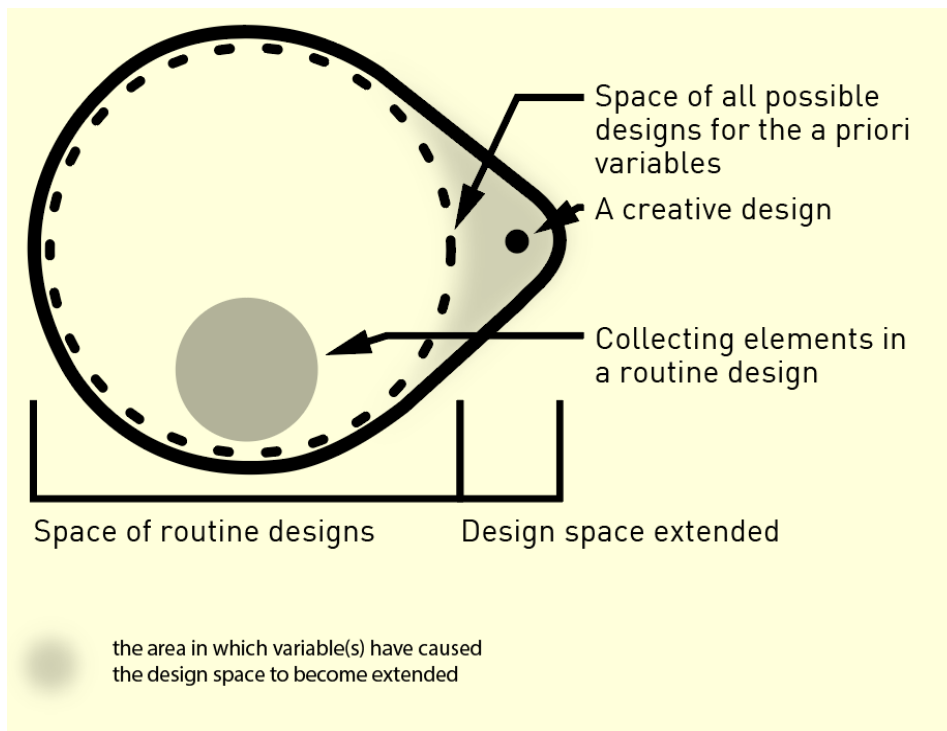
Findings / Shifting the design space; understanding the variables within the process that were particularly different from conventional design modules and why they were useful to the design process

One of the main questions the research carried out in this thesis looked to identify how designing for one was *extending* the design space. Within the designing for one approach itself, what was it about its setup or implementation that was challenging expectations about coursework and the design process (RQ 2.1)? How was it creating room for the ‘unknown’ and ‘unexpected’ to take place (RQ 2.2)? The analysis in this chapter did not focus on the creativity of the outcomes, but rather focused on identifying what was causing friction within this routine space.

7.1 An introduction: creativity needs the unfamiliar

Based on the theoretical framework of Gero and Kumar (1993), the findings in this chapter draw on their work around creativity. Their creativity theory suggested that in order for creativity to be achieved (both personal as well as historical or ground-breaking) designs must be influenced by elements that are external to what is already known. Looking back at their illustration as a model (see Figure 84), they suggested that these new influences (or what is later referred to as variables) could be harnessed. Purposefully adding variables, they suggested, would allow designers to produce “solutions where feasible solutions do not exist in the current solution space” or “improve on solutions already found” (Gero & Kumar 1993, p. 219). What these

Figure 84: Adapted “Space of routine and creative designs” to show area in which research was carried out (Gero and Kumar 1993, adapted by Wilkinson (2019).



variables do, then, is extend the design space into new or unknown territories, paving the way for creativity.

In the illustration below, the variables are seen to also play a role in the idea of disrupting the *routine*. For the designer, routine is the embedded qualities and expectations surrounding a design; its medium, its format, the designer’s pre-existing expertise, as well as their use of design elements that remain consistent across different media. Boden called this routine the use of *unfamiliar combinations of familiar ideas* and called for processes that *surprise* or ideas that are *unfamiliar* (2007, p. 85). What the findings of this chapter looked to address, then, was how designing for one as applied within the four Student Module Cases was disrupting this *routine space of design* and bringing student designers in contact with the unfamiliar (Gero & Kumar 1993 p. 211).

7.1.1 Methodology and structure of the results

Referring back to the methodology section, this chapter focuses not only on analysing the Student Module Cases results further and drawing insights from the 38

individual transcription documents and their nearly 100,000 words, but adding to it a new lens by utilising data generated from the Residue of Interaction workshop that took place at Decipher 2018, the AIGA Design Education Conference at the Penny Stamps School of Design at the University of Michigan, Ann Arbor, Michigan, USA. In this workshop, 21 international design educators, working in five small groups analysed the initial research findings using the research method mapping. The mapping focused on six key areas: the ‘residue’ of the workshop participant’s own experience of co-design, unpacking a Student Module Case student experience as per the Student Information Summary (see Appendix for example Student Information Summaries), identifying what this student might potentially take away from the experience, identifying points of difference between the designing for one approach as applied to the Student Module Cases and their own modules at their own institution, organizations and people-groups which might best utilise this individualized approach, and finally they attempted to match this approach to the skills and competences identified by the AIGA whitepaper Designer 2025³⁶.

Figure 85: Workshop participants discussing how designing for one could be applied in different contexts (Wilkinson 2018).

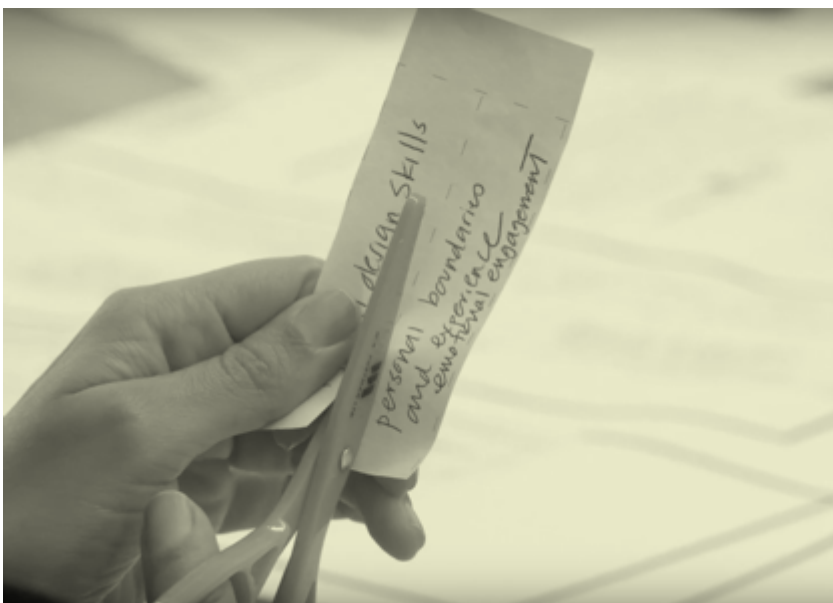


³⁶ <https://educators.aiga.org/aiga-designer-2025/>

The educators were recruited for participation in the workshop based on their backgrounds. Each was a critically engaged design educator; ranging from heads of design departments (and thus curriculum) to well-published design education academics. The group also included emeritus design professors at some of the country's top design programmes, to design educators serving on the AIGA's Design Education Committee's Steering Board. Participants were informed beforehand that the results of the workshop would contribute to ongoing research and those participating in the workshop provided the necessary approval for the use of their photos, the collected workshop results, and those who participated in post-workshop interviews provided permission to use their image and voice (see Appendix for example release document).

Resulting in a physical *map* of their collective responses (see Appendix for example resulting maps), the findings were transcribed and collated together. Two rounds of maximum variation sampling were used as a means to find patterns that “cut across cases” (Palinkas et al. 2015, p. 535). In the first instance, the design educators who participated in the workshop as well as those further interviewed after the workshop identified points of difference between the designing for one Student Module Cases presented in this thesis to that of their own modules in their own home universities. Next to the workshop participants, reflections from the Student Module Case lead

Figure 86: Workshop participant cutting out their contribution to place on the mapping document (Wilkinson 2018).



lecturers was also integrated into this data set. Finally, because the cases used the same approach but differed in class size, location, user-group, design discipline, etc., the individual cases were assessed on how the students' creative experience differed from each other, as well as what they intrinsically had in common. This included points of difference regarding processes, execution or expectations as well as trying to identify characteristics that distinguished the cases from each other or unified them within the approach (see Appendix for itemized differences between Student Module Cases).

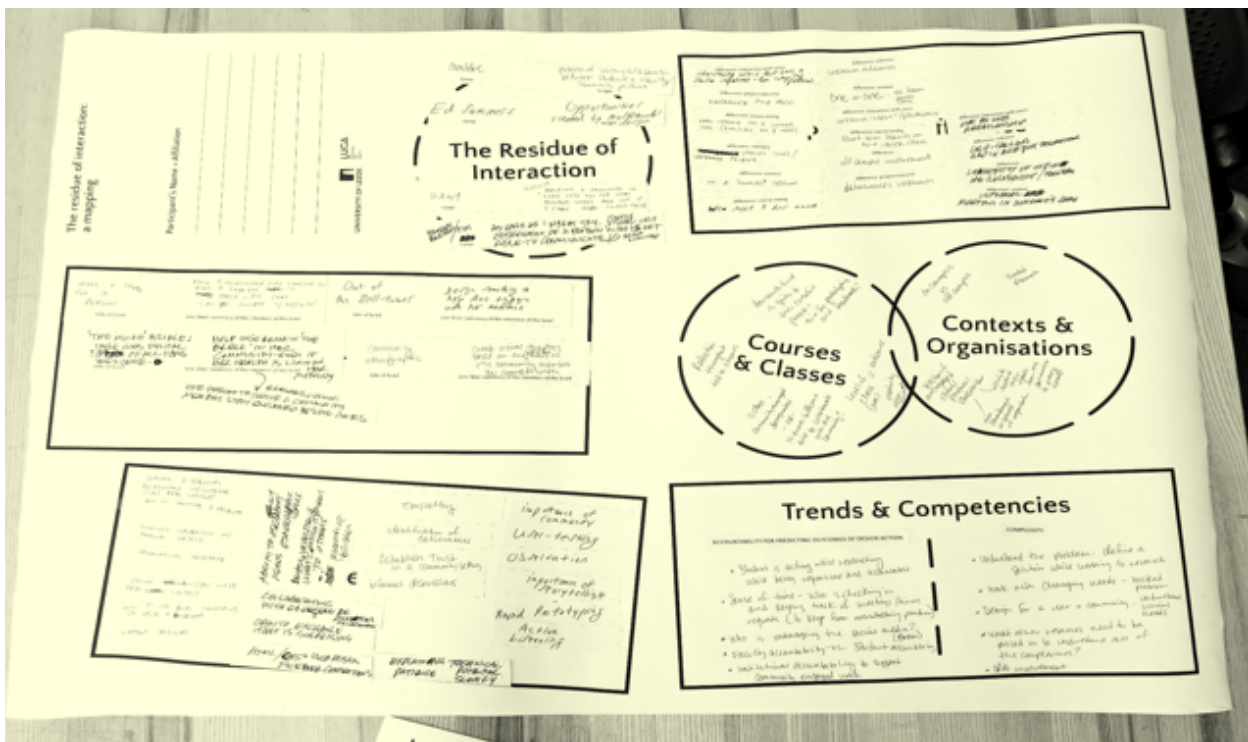
Collated together, these data points make up identified points of difference. This was followed by grouping these points of difference thematically into categories; differences relating to the participation of the user, differences identified relating to the research methodology, differences relating to the context or environment, etc. Using these categories as a reference point, the student interviews were coded for phrases that specifically referred back to these categories; looking to identify how the students implicitly reflected on their experience of these points of difference.

7.1.2 The results; embedding participants in the designing for one space

Beginning with the self, participants in the Residue of Interaction workshop shared personal stories about the impact of individuals on their own design practice. One participant, for instance, shared that her brother with learning difficulties had caused her to actively problem-solve and design forms of communication from an early age, and another suggested that working with a local blind person within a class project had radically changed her perception of empathy and prejudice.

When participants moved from their own personal experiences to the experiences of students who had already designed for one (the student project stories), they suggested that the students had taken away more than skills; they had taken away experiences and real insights into designing for people. One suggested that her student appeared to develop a relationship with the user and that this relationship allowed for the student to work with real design constraints. Another suggested it revealed to her student the power of storytelling. One participant indicated that her student had learned the importance of primary research and another expressed that his student had experienced the value of showing a deep interest in another person. Finally,

Figure 87: One of the resulting workshop mapping documents/worksheets (Wilkinson 2018).

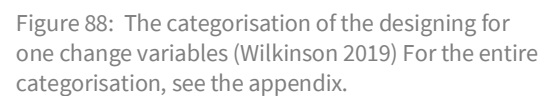


another participant suggested that her student had realised that the computer was not the answer, but rather just a tool.

The design of the mapping included time for groups to discuss the designing for one approach and welcomed reflections on the riskiness of it. In some cases, participants suggested that their own school curriculum wasn't open enough for projects to fail, and that in projects such as some of the examples within the workshop, the possibility for failure was real. Another group discussed student maturity and that working individually with people outside of the student's own life-context could be challenging. One group exchanged views about working within a user's own private home and how this held all sorts of risks but also offered high rewards and richness for the student experience.

Although not explicitly intended within the workshop structure, initial reflection on the workshop suggested that one of the primary discussion points was context; how contextual understanding can add value to a design proposition and how this grounds a student designer's confidence to make decisions. While discussing riskiness, participants also related the students' experience to that of their own students. Were

Within the context of writing up the workshop results as part of the conference proceedings, the key takeaway—as well as from the interviews post-workshop—was



the relevancy of bringing students in contact with diversity, challenges, the needs of real people, and how these confines allow design to be an action instead of an outcome. Although participants were enthusiastic, they suggested that planning for such a student experience within rigid curricula structures would be difficult, and that the effort involved in prepping for this level of interaction, (ie. the logistics of moving students from one place to the next, as well as the ethical concerns of working with marginalised people groups) was challenging in and of itself. Challenging, but not impossible. Armed with new information about what it offered students, many participants suggested it was worth an attempt to make it happen.

7.2 The results: identifying variables that disrupt standard educational design practice

The intent of this chapter is to focus further specifically on the key findings related to difference: differences identified between the designing for one Student Module Cases and the workshop participant's own modules, differences identified by the lecturers leading the Student Module Cases as well as the differences identified across the four Student Module Cases themselves. Looking at the collated points of difference as one data set, these were further analysed and grouped together thematically. It was not that the Student Module Cases were fundamentally different to other modules the workshop participants and the lead lecturers taught, but there were elements that made them feel radically disparate; aspects of what were seemingly familiar course modules had been altered or changed for not only the student, but the lecturer as well. As a collection, these points of difference started to reveal how the process of designing for one might be disrupting standard practice.

Table 19: Identified points of difference in designing for one as applied with design education; potential variables for extending the design space through designing for one.

Point of difference	Elements this included
Participation of real users	aspects related to interacting with the participant

Dissemination	documentation of the process, reflection and dissemination (audience) of results
Student's proximity to theme/topic/users	previous knowledge about and awareness of the project's focus
Limitations	restrictions relating to module setup and the design process
Module expectations and student responsibility	role of specified media, definition of brief and their relationship to student's discipline
The module setup	characteristics of the educational module that have been changed
Design participation research methodology	design research methods used by students
Module situation	the location and context of the teaching and researching
Module outcomes	undefined or open outcomes
Risk	elements of riskiness both embedded in the project and considered in the module's development
External interest and participation	the results are important to external parties

7.2.1 Difference: Participation of real user

Not surprisingly, participants noted that the hyper-focused working with one user/participant was different to many of their course modules that focused on designing for user groups or demographics. For one participant, the participation of an individual meant that “it’s a very individualized solution for one person - and not for a group/community like our courses are generally focused on”. One participant noted that direct participation with an individual user led to “more interpersonal impact than my typical classes” and another workshop participant added that this interpersonal impact would aid a student’s motivation through their own “self-experience”. One of the workshop participants described this further, describing the proximity as being a

form of attentiveness: “I think it’s really important to offer students this ability to design in a way they are attending to other’s experiences”.

For one of the lecturers of the Student Module Cases, participation of a user meant that student reflections were “more considered” and the students had “a different sort of awareness” for their project and its design. Another proposed that designing for one required students to be *present*, a chance “to have students realize that they are taking the pulse of an interaction in time”. Other educators discussed it in terms of authenticity: “this is all real person to real person” one participant noted. Participants offered up examples from their own classes in order to show the difference. Whereas in designing for one the students meet with individual users, in their classes students are limited to going to “other students’ for their participants/feedback”. Finally, one workshop participant reflected on the potential of participation, even if it was small, the interaction between designer and participant possessed a lot of possibility: “I still feel at the same time a huge accountability in a way...I think breaking things down into small pieces. Just a small exchange with somebody can change things, being impactful in ways that are overlooked”.

7.2.2 Difference: Dissemination

Specifically for the lecturers participating in the Student Module Cases, the module’s dissemination was voiced as being different to other modules. When compared to other modules, the documentation of a student’s project often stops at their progress journals, final power point pitch presentations and the mockups handed in. In three of the Student Module Cases, case movies were made that summarised the student’s experience and one other case included a 20-minute radio interview on a local radio station. Because the cases were part of the thesis research, these extra elements of dissemination brought with them an extra layer of reflection.

“Documenting the student project in this way allowed for others to understand what we do and what we value in our discipline” one lecturer suggested. Another added, “the student and their process is on display instead of only focusing on the end result”.

One of these longer films, Digital Designers as Democratic Innovators was submitted and presented at REDO 2017 as part of the Cumulus Design Education Conference in Kolding, Denmark. Next to this, the longest of the films, Designing the Personal, also

served as the conclusion to the project. Screened in a local bar owned by one of the participants, the film partially sponsored by the City of Genk's Department of Culture, the screening formally ended the students' participation in a way that was a form of what the lecturer considered "giving back to the participants" as a means of thanking them for their contribution to the project. This idea of *giving back* was also mirrored in the other cases. In Student Module Case 2, Advertising Ghent, the students organised, cooked and served a meal to the local neighbourhood, taking over one of the monthly neighbourhood meals as their final moment of participation with the neighbourhood. This "students putting in extra effort" provided time for them to engage with the neighbourhood and share the visions of their projects.

7.2.3 Difference: Student's proximity to theme/topic/users

For workshop participants who said their students did have contact with clients or participants, in comparison to designing for one, the educators said that the contact their students had was minimal; there was "much more interaction with users than my students" in designing for one and another suggested that there was "more interpersonal impact than my typical classes". For one of the lead lecturers, she saw this proximity as a means for her students to critically reflect on their understanding of the participant group: "And there's this lovely marriage of the graphic design students in their 20s– that what for the graphic design students was effortless was very hard for the senior citizens and what was easy for the senior citizens was really hard for the graphic design students. And there was this lovely give and take of skills that none of them expected. And I didn't expect. I didn't know it was happening."

This point of difference by one of the Student Module Case lecturers was in stark contrast to one of the points of difference outlined by one of the workshop participants who suggested that at their school "the users are all the same type in nearly every class" suggesting that there was little or no diversity in terms of demographics. One of the workshop participants suggested that students need to feel this uncertainty because the uncertainty requires engagement, "when you're a designer, it's already about not knowing... designing for one puts them in even more of a position of not knowing until they engage deeply". Two participants voiced similar distinctions regarding frequency of participation, suggesting that their students typically only met

participants or clients 2 or 3 times across a whole semester: “This has much more onsite interaction, not just one/two meetings/visits” and “there is much more interaction - from class to class - not just two - three times per semester”.

7.2.4 Difference: Limitations

Perhaps different to some of the other points of difference, both workshop participants as well as Student Module Case lecturers identified designing for one as requiring the ability to work within limitations or restrictions. One lecturer suggested that designing for one asked a lot from students: “class organization, relies on flexibility of student” whilst another suggested that “having something off campus complicates things.” Many of the workshop participants identified things that couldn’t be changed in their own institutions: locations of coursework, scheduling, module descriptions and learning outcomes defined in ECTS³⁷ documents, etc. In teams, the workshop participants discussed these limitations. While one lecturer suggested getting her peers on board would be difficult to manage, another suggested that her department head “could be convinced”.

7.2.5 Difference: Module expectations and student responsibility

For the workshop participants, several identified *responsibility* as being one of the key points of difference; the responsibility placed on students. From students in designing for one not having a predetermined participant to their having in some cases to cold-call their participants, the educators found this a lot to place on the shoulders of the students. Some suggested that they specifically “would not require our students to do cold-calling”, where others praised a student’s needing to “find their ‘one’”. One workshop participant suggested that “creative problem solving” might be “too hard” for undergraduate students, yet one case lecture suggested that placing more responsibility on the student to find their own design problem caused students to have “vested interest in results”. For one of the lead lecturers, she suggested that the module filled in a gap in their expectations surrounding their own discipline.

³⁷ European Credit Transfer and Accumulation System (ECTS)

“Design students struggle with being overwhelmed and wondering what they’re doing it for or who they’re doing it for. So, this project, what was fascinating, is when my students could see whose life they were impacting and watch their experiments positively impacting the life of an individual, it was heartbreaking for them. They were so moved by the fact that they were truly helping them with very small things.”

Next to this, participants suggested that students had expectations about their own modules and designing for one might not fit into their expectations about what a design module should be or what would be required of them for a module. In the cases presented the students seemed “free in their use of their discipline”, which at least one participant felt risky if it were applied to a module in which there were particular skills students were supposed to be learning. For lead lecturers, they too suggested that working in this way asked a lot from students, suggesting in some cases that “students were not prepared for” this format or approach that in fact the challenge was perhaps in some instances “too complex for them, too multidimensional”, yet this same lead lecturer suggested that this is the direction that design education should go: “The designers of the future must dare and be able to tackle wicked problems. Design education should be a bit more ambitious in that regard”.

7.2.6 Difference: The module setup

Many of the participants, both workshop educators as well as the lead lecturers of the case studies, found difference within the module itself: its setup and its execution. Some remarked on the intensity of two of the cases: “very intensive for a shorter time vs our ‘intensive’ modules which is 8 hrs/week for 5 weeks” and others called out the location as being a point of difference; “the amount of time offsite”. One of the participants suggested the module’s format in which students were given time to create relationships with participants during class time as being distinct: “the longevity of the one to one relationship is not something that would come up in our courses”. One workshop participant called the designing for one approach “very daring” simply because of the “things that could go wrong”; what another participant called the “unexpected issues”. These complexities were mirrored by lead lecturers in the cases. One distinguished his case module from other modules he taught in terms of the types

of projects the two locations offered. Off campus projects could deal with “wicked problems and complex social challenges” and projects on campus were more controlled; “simpler, so that you can zoom in more specifically on certain skills”. For the lecturers who had taught the case modules, they too identified difference within the set up. One found the work that it required in terms of set-up and management “a lot more intensive” than a standard discipline module, yet he also suggested that because it was different “you learn a lot from it” as an educator.

“What I didn’t expect was how much I got to grow personally as a person and as an academic. Because what I didn’t expect is, I went in there with this assumption that I knew how to handle this situation. And I got it all wrong over and over again. I approached the residents at Brooking Park and I did it all wrong. I talked too fast. I didn’t lean down. I didn’t– I got everything wrong. And I watched my stu– first of all, I watched my students say, after watching the residents, they told me what I was doing wrong, number one, which remember who you’re supposed to be learning from, you know.”

7.2.7 Difference: Design Participation research methodology

The educators within these collated data sets also identified research methodology as a key point of difference. Although many asserted to teaching research methods within their own modules or within their own departments, some saw this as the application of research: “This seems appropriate and controlled in terms of what we would do at our design school but this allows students to have an opportunity for primary research”. Another participant also voiced distinction between the two by stating what methods they rely on: “Our students interview users and then compile personas”. For the lead teachers from the case studies, they identified designing for one as an approach which required students to “use new methods or put methods into practice”. In some cases, what students were calling activities became their primary methods: “students just respond to the needs of the moment”.

7.2.8 Difference: Module situation

Many of the participants identified the environment as being one of the most distinctive differences between their own modules and those defined in the Student

Module Cases. Some specifically pointed to the difference in the idea of classroom: “At our school, classes are within a ‘clinical’ setting” whereas others pitched the designing for one module as being “real world non-studio based” module. Some participants found these *real-world* contexts lacking the formality of design research, as they taught in their own schools suggesting that “informal meeting in someone’s home” was different. They compared their course modules to the designing for one module in terms of its experience: “my courses are concrete design versus this multi-packed object learning experience” of which the context played an important part. One described the designing for one module as “actual immersion in context and learning from it about the nature of the problem itself”. Likewise, the case lead lecturers agreed. In their experience, in the designing for one approach “learning happens in the world, rather than within the school walls”.

7.2.9 Difference: Open outcomes

Outcome was equally a topic many responded to, with most suggesting that providing open-ended outcomes, particularly for bachelor students, was unusual. Some even suggested the themes being discussed (such as healthcare or digital literacy) were perhaps too difficult for undergraduate students to deal with. This individualised approach meant that the lecturers too, had to be flexible, requiring them to be flexible enough to allow for “non-traditional outcomes” and be less rigid in their expectations and “use of their discipline” for the students. One of the workshop participants contrasted the designing for one approach against the “old school way of thinking” in which students would fashion portfolios that were how employers evaluated their worth. She saw the designing for one approach in terms of “the process that you take that makes you get there. I think that it’s about highlighting – allowing students to kind of pay attention to that as much as they pay attention to that end piece”.

One participant suggested that a safer option would be to have student designers “arrive at functional tools”. Whereas most participant educators made a direct comparison to their own modules, others used this as a reflection on their own practice. If designing for one bachelor students needed to define their own problems and find their own participants, then one participant reflected that her “students are

facilitated perhaps too much!” Related to student responsibility, one workshop participant suggested that the students themselves had to be open to possibility: to “see what they can do for the context that they are working within”.

7.2.10 Difference: Risk

One of the other participants reflected on whether or not this approach could be used within her own institution but suggested it would face potential ethical board issues. This was not insurmountable, but the planning of such a project “would take time”. When reflecting on their own classes and how much they allowed for unpredictability, one said: “my classes have a very low element of risk” and another said of the designing for one module, it has a “high level of risk beyond my typical course module”. Focusing mostly on the ethical matters relating to their institution’s Institutional Review Board (IRB), one workshop participant linked this riskiness to the ability of the lecturer. A module such as this requires a lecturer that can *steer* and *guide* the project well, one that plans and manages for risks - on the forehand. For one of the lead lectures, the riskiness carried on through the project, but the risk-taking led to reward:

“I got to a point of crisis. My student was in crisis about how to solve a problem that we couldn’t find a solution to. And I got to a point of crisis as a teacher, where I didn’t know how to solve the problem either. And we were right there together trying to solve the problem. And as an academic to get back to that point where you’re learning new material, how to create a better interaction, how to watch more closely, what are we missing, how else can we frame the problem. That’s academic gold. That is– that fills your soul. That is food for an academic who has been teaching for 15 years, a real learning experience, brand new information”

For one of the workshop participants, she found risk embedded in the project’s wanting to help people; that designers would need to be held *accountable* but also supported in their intent. Another participant suggested that there was a risk embedded in working with vulnerable or marginalised groups. Like the above called for accountability, this educator called for authenticity: “I think it is in the way that you frame it and the way that you welcome them and the way that you bring communities into a conversation and that there is an authenticity to the conversation you’re having

with them...that you're really looking to help them and not tell them what they need". Finally, one of the workshop participants suggested that the process itself was risky, not in execution, but because the "processes that happen in between are not very visible. They are intangible", thus motivating others to work in this way or to get buy-in from colleagues might be difficult.

7.2.11 Difference: External interest

Another point of difference that workshop participants identified to their own modules was the inclusion of organisations and guest speakers. They found that the inclusion of organisations added value by "contributing external feedback", which supplemented the expertise of the lecturers. For the lead lecturers in the module, they also identified guest speakers and organisational contacts as adding value for the students: "A good guest speaker can help substantiate the relevance of a research challenge...guest speakers know their subject through and through". Next to this, one lead lecturer suggested that compared to his other course modules, working with off-campus organisations often means that students have to face "time and project management challenges" which they wouldn't otherwise have to deal with. For some of the workshop participants, they pitched the point of difference in terms of what function these external parties had: "our external partners are nearly always seen as 'clients'" with another participant adding "clients are not always users".

7.2.12 Points of difference or variables: a summary

Motivated educators actively work to improve and change their modules from semester to semester. As individual reference points, these one-off quotes and reflections offer little more than a mirror to them; how do you do it at your school vs. how it is done in another. However, when analysed and grouped together, a different picture emerges, one in which these differences become variables; variables that shift the design space as a means to initiate creativity, that encourage design educational practice to take risks, that shift the experience of students into unknown territory causing them to respond in ways they wouldn't or couldn't otherwise. As variables, they are calls to action. They become guidelines for disrupting standard design educational practice through designing for one. They become tools for developing

engaging designing for one student experiences. A point of difference regarding the participation of a user becomes *include real participation of the user*. A point of difference regarding research methodology becomes *apply research methodology*. A point of difference regarding limitations calls for *work within the limitations*; in other words, find a way.

This portion of the research was looking specifically at how designing for one was extending the design space within design education, however, identifying the variables through the lens of the educator provides only half of the story. How were students responding to these variables? How were these variables challenging their expectations about coursework and design processes? How were they experiencing the influence of these variables that was confronting the students design practice with ‘unknown’ and ‘unexpected’ elements?

7.3 The results: establishing the impact of these changed variables on student designers

In Chapters 5 and 6, the impact of the designing for one module on student designers is well documented: from building empathetic relationships, motivated by the needs of the participant to the use and acquisition of non-traditional design skills and a newly formed recognition of the relevance of working directly with local



Figure 89: Emily was an artist and none of the art lessons at the care facility were engaging for her. Nichole created a lesson book for non-artists to teach and engage Emily (as well as other residents) in a variety of projects (Barton 2017).

Figure 90 and 91: Nichole adapted tools that would allow Emily to participate (Barton 2017).



communities, etc. The following findings were based on transcriptions of interviews and reflective texts the students submitted. The variables that surfaced from the analysis above had not been explicitly discussed with students. Students had not been asked, for example, in a post-design interview about the specific role of proxy participants, the role of location in their experience or issues related to documenting the project's story. Next to this, although this chapter is, in a sense about creativity, the designed artefacts the students made were not evaluated for their creativity. Instead this research looked to see how the designing for one approach was *shifting* the design space, how it was *orchestrating* and *enabling* creativity to take place.

Thus, to validate the variable's contribution to this extension of the design space (Bodon's idea of the *territory of the unfamiliar*, Stein's ideas around *usefulness* and *newness* and Shklovsky's idea of *defamiliarization*) the 28 transcripts of the student interviews as well as the transcripts from the three short films and one radio interview were coded against these designing for one change variables. Going beyond the interview questions which asked how the designing for one module was different than other modules, the coding took place across the texts, specifically coding passages in which students discussed and reflected on these variables, not explicitly, but latently; how were they reflecting on the taking on of more responsibility, how did they feel about off-campus classes, how did they feel about open-ended outcomes?, etc. The following summary uses the student's own voice to both articulate the value of these variables, as well as validate the variable's contribution to extending the design space. It is not an attempt to quantify or rank which variables are seen to be more important than the other, that would involve a new study, but rather look at these variables through the lens of the students to give an idea of how these shifts manifested in their processes and validate them as influential to their student experience.

7.3.1 Variable: Including participation of real user

When students discussed working together with their individual participants, they discussed the importance of relating their design to the person, drawing on this idea of usefulness and relevance. They didn't mind if the end design worked for others, but they negated the importance of other users. **One student went so far as to say designing for one was necessary. He saw his participant's needs as being so niche**

Figure 92: Ingeborg and Eddie (Ciranni 2017).



that it required close proximity. Many used phrases that talked about exclusivity, referring to the end design being “just for him”, “it wouldn’t be relevant to anyone but her” or “it’s her dream”. Participants who were enthusiastic led to students who were engaged. One student referred to the enthusiasm of her participant and how much it “fired her up”. Students discussed the close proximity of working with their participant and referred to it as being “intimate”, and that **this sort of bond became a factor that motivated them in terms of their wanting the project to be a success.** This also contributed in terms of the additional effort the students were willing to put in: “once you get started... and also the people you are doing it for, they like it as well, that gives of a positive vibe and it doesn’t matter how long it takes.” And another suggesting: “It’s a bit more personal. That motivates you, for sure. Because you actually have a purpose before your eyes that you *both* want to achieve.”

Next to the engagement with the participant, some students said that it was the fact that the design had real purpose for their participant, that it had potential to *improve someone’s life and really help them* that increased their motivation. The majority of students described this participatory or co-creation process as a cooperation. They referred to the process as *working together with*; with few students referring to the process as *designing for*. For many students, **there was a shared sense of ownership in the end design.** They used phrases such as *our ideas* and said their ideas had *merged* with those of their co-creator. Students recalled this togetherness as a contributing factor to heightened sense of determination; working together with

someone as a designer led to there being expectations on behalf of the participant. One student suggested that this “set the bar higher” than if she had been working on it alone. This was not without the challenge of managing their feedback, with one student recalling that she had enthusiastically told her participant what her idea was but that the response was simply that it “wouldn’t work.”

This working with real participants also caused the students to reflect on processes within their discipline. One student found that designing for one enabled her to take the person into the design: “I found this way of working really good because you really get to know someone and you know, really, who the person is. You keep them always in your mind when you are working on the product.” Another linked this understanding to being able to better problem solve: “as a designer, it opens your eyes. You learn about your user: you directly meet them, and you know, through working with them, where the problem really is”.

They saw the relevance of understanding future users but at the same time also understood that that involving users in the design process was a choice; a design decision that designers make. Where did they now stand on this issue? In future settings would they advocate for contact or not? One student reflecting on this, spoke of the participant in terms of their being *the* target audience; and suggested that **a designer could design for an audience without meeting them, but how knowing the audience would *improve* the design.**

Involving proxy participants (those close to the primary participant who were sometimes involved in filling in the gaps on behalf of the participant when they could not do so themselves) also made an impression on the students. Across the cases, proxy participants included social workers, who sourced a participant for a student when their participant quit, and family members of participants in the skilled nursing facility, who provided the students details on their mother or father’s interests, physical ailments and tips and tricks on how to best work with them. The students were, in a sense, outsiders looking at the environment, participant, etc. Through this different lens, they were able to challenge the status quo. In the case of the care facility, one student received skepticism about her concept; “no one is going to come to this workshop and I thought well, OK, that’s great. [Laughter] But there were 14 people that showed up. So I was kind of like, ‘Yeah, see?’” The student was able to engage her

participant in ways that were different than what the proxy participant was able to offer, and this difference enabled the student to move with confidence in her project, in turn offering the proxy participant a new way of looking at the *routine*. In this particular case, the results surprised the proxy participant who was “thrilled that there were so many people” and she reconsidered her previous stance.

7.3.2 Variable: Exploring other forms of dissemination

Unlike the participant educators who focused primarily on the documentation and dissemination of the results in terms of case movies, the radio interview and the various activates such as the students serving the community dinner or the screening party (comparing these to the dissemination of *their* process as educators), the students focused on documenting *their* personal dissemination, their portfolio. For many, one of the intentions of their studies is to build their portfolio, filled with a selection of assignments which reflect their interests, expertise and subject area. As seen in Chapter 5, for some students, the outcome of designing for one felt outside of their subject expertise and students questioned how best to showcase their research experience and outcome within the context of such design-focused portfolios. What many students fell back on, is the idea of storytelling. In their own reflections, students too discussed this aspect, that although the objects themselves didn’t perhaps fit into their portfolio in terms of medium, they fit in well in terms of process; **“you need to add the story behind it to the portfolio, not just the end result”**. Others found this challenging but rewarding. The research aspect of the project contributed to their design story. That the weight of it, the fact that they actually got to know someone within the project and that this **getting to know took a lot of time... this needed to be represented in their portfolio** and could be “truly beneficial in your end result, or in your story”.

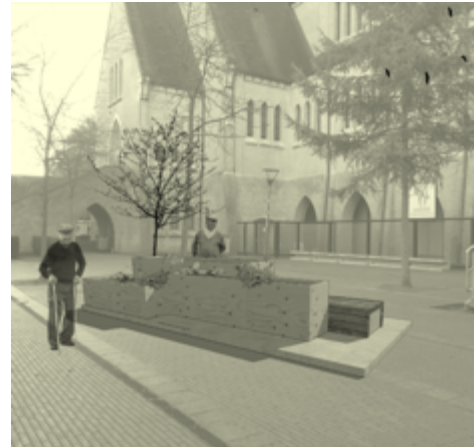
However, some students did reflect on sharing the project results in formats that differed from traditional exhibition settings; “like yesterday with that BBQ...it's great to get those reactions from people. They told me that they liked it and you get to see the positive reactions”.

7.3.3 Variable: Changing the Student's Proximity to theme/topic/user



Figure 93: Elias and Guido (participant) discussing the final design (Ciranni 2017).

Figure 94: Guido's 'city gardens' were based on his own love of gardening and his empathy for the lonely people he saw living around him. The design hoped to bring people leaving the countryside and moving to apartments together for a common goal (Ciranni 2017).



One of the initial presuppositions of designing for one is that it could be used as a means to bring students in contact with marginalised user groups, groups overlooked by design or individuals on the fringes of user groups. By nature, focusing on participants who were outside of the student's own age bracket, for instance, already challenged the student in terms of their knowing or understanding a person's life-world. **They could make assumptions, but they could not rely on their own experiences.** In the case of working with individuals with dementia, this increased the challenge. Some students had little to no personal experience of visiting care facilities or an awareness of how dementia impacted a person's daily life. This, combined with age, failing health and reliance on new ways of communicating, challenged the student's starting point; there were noticeable gaps in their knowledge and they could no longer rely on their own experience as a baseline for designing. Regarding dementia, one student defined that gap by saying that she *needed* to know "what goes on ...what's the everyday life of somebody who's going through that?" Other students described this as bringing people *into their designs* and **learning to design for "people and not just for myself"**. Others described this *otherness* as a form of reality. This challenged the idea of designing for abstract, conceptual users in which it was much easier to "see yourself in a lot of the design aspects."

For other students, they reflected on how they had previously taken for granted that users were more homogenous. As designers, they had rooted their expectations based on their own knowledge and abilities. In one example, a student reflected that she and her fellow students had the expectation that people were able to readily use and understand technology, as well as the expectation that they would have access to it, but that working with her participant had not only challenged this preconception, but had changed her understanding of her discipline.

“There are some people who don’t know anything about it (technology). For example, my grandma. We tend to forget it sometimes. For us a button is obvious, it should do this or that, but for other people it's not clear at all, it's a different language. It's odd how you can assume something is logical while for others it isn't at all...talking with other students and listening to their stories



Figure 95: Sylvia’s painting. Sebastian worked together with Sylvia. They did not communicate in the same way as other students worked with their participants with dementia, but they communicated with each other through spending time together and painting. This is how Sebastian (who stated in his post-design interview that he was really good at flat-based vector drawing) built a relationship with Sylvia. (McKnight 2017).

Figure 96: Sebastian’s and Sylvia working together (McKnight 2017).

Figure 97: Sebastian’s still-life (McKnight 2017).



you also hear that it's not that simple for everybody. Some of the people are older, some have no computer or smartphone even though we live in a so-called digital world.”

In this way, designing together with a participant who wasn't able to understand, use or have access to tools in the same way as the students themselves led to the creation of a heightened awareness on behalf of the student designer. Specifically for the digital students in Ghent, this was philosophically underpinned in the intention of the module to articulate this as a designer's moral positioning; that **when they are designing, they are explicitly including or excluding users in their designs** (see Digital Designers as Democratic Innovators³⁸).

7.3.4 Variable: Working within the limitations

Similar to the students' pre-existing understanding or proximity to the user, students reflected on the restrictions placed upon their design. Some students suggested this was different to other modules they had taken because their participant restricted their design. This restriction was not seen as a negative, but rather as a positive. For some students, this made them reconsider what they had done in other modules. One student referred to personas and how she had previously considered them very helpful when making an app in another class. However, when faced with working with a real person, she saw flaws in personas as a method as the persona *remains made up...you build on your own assumptions without checking it against reality*. **The student defined the value in working with an individual as being the person's input and their reality**. She suggested that even if she returned to using a persona instead of her participant, at least her fantasy would now be based in this *reality*. Another student recalled working on other school projects in which they had to create designs “without any real input. Basically you're making things up. You think it's like that, but you don't know...With this we start with someone real. He talks for real,

38 See Wilkinson, A., D'hespeel, I. and Maet, F. 2017. Digital Designers as Democratic Innovators; Using a Designing for one Approach to Challenge Digital Natives In: Cumulus REDO Conference Proceedings [Online]. Design School Kolding and Cumulus International Association of Universities and Colleges of Art, Design and Media. [Accessed 26 June 2017]. Available from: <https://www.youtube.com/watch?v=F9t857nnC38&t=298s>.

he provides input. Instead of making it up you now get input from a real person, all kinds of info straight from someone”. Another student echoed this balance between theory and reality: “With other subjects, you are just provided with the theory and you need to work and design around an imaginary person. That allows you to generalize, but **in real life, it's not imaginary, that person really has an opinion and need of his own.** He or she will tell you if they like it or not”.

Although students in general appreciated the coaching sessions and the input from various sources (ie. guest speakers, lecturers and proxy participants), one student suggested that working with an individual had shifted this dynamic. In normal circumstances, she could rely on her lecturer as an expert, but in this instance she herself had become the expert on her participant. She had to filter her lecturer’s feedback and suggestions based on her knowledge of her participant: “it scared me a



Figure 98: Jessica had wanted to work digitally; to digitise the collection of artefacts that Walter and Else had accumulated during all of their travels, but they had very limited use of technology, a mobile phone to call and an ipad to occasionally look at websites because they had no computer (Boudraa, 2017).

Figure 99: Not a photographer, Jessica looked up online how to build a light-box for taking photos and set up a photo studio in their living room (Boudraa, 2017).



little bit and it scared me to ask for help because I didn't- because it's like I'm with this person. My teacher doesn't really know him."

For this student in particular, this shift in responsibility was appreciated. She talked of its **forcing her to be confident in her decisions** and led to different types of discussions with her lecturer. She was not alone in recognising this shift. Others mentioned that the lecturers took on a problem solving and support role instead of only focusing on aspects of design.

This idea of limitations was not limited to the participant themselves, but also the context itself provided a set of limitations that restricted the design. One student in particular created a design for her participant, but was aware that the design would need to be able to be used by others who had little or no skill in the tasks the designs were hoping to create. The imposed restrictions were catered not to the participant, but for the context. This idea of sustainability was shared by others. **Students created designs that were not closed and finished, but rather open enough that the participants could edit them**, continue to use them and modify them themselves for use over time.

7.3.5 Variable: Changing the expectations of the module and the responsibility of the student

For students who were used to modules with defined expectations related to their discipline (print-based graphic design, screen-based user interface design, etc.), designing for one shifted the focus from the medium to the individual. Some students discussed this in relationship to their own emotions, that **they were emotionally involved with their design instead of working on it as a mere assignment**. Others discussed this in terms of its shift in target groups, a distinction between theory and practice, moving away from a sort of design fiction to a level of authenticity. Students said they were comfortable designing for demographics but less sure about designing for real people. This required them to *dig deep* and do what some of them called *real research*.

"I freaked out because I knew what I wanted to do but I had no clue on how to direct something like that with a person. I don't make things for specific people. I make things **for groups or for businesses** or whatever. I'm making it

for my teacher... I've never made anything that's supposed to be so special to somebody and help somebody."

Other students confirmed this; other modules kept them *quite distant* from users and students often didn't have any contact with their target audience or an organisation's customers. Their experience in designing for one, however, was different because **they knew the target audience; "You're constantly working with the people you are working for.** Really working with them and that it makes an impression on your personal lives as well. I'll never forget those two, they turned into two kinds of friends, even though they are older." - Jessica

Other students reflected on their discipline's relationship to consumerism, and regarded their designing for one assignment as being more focused on social design instead of being *purely for commerce*: "What I've learned is that something exists, Social Design. That I had never heard of. I find that a really interesting job. I've also learned that you can, with very small things, get a lot done."

This shift from discipline to participant was, for some students, unexpected. Students studying the digital graphic design module in Ghent expected to do only modules within this specialization and learn more about a range of design programs (3D, web design, VR, etc.). Next to this, the students suggested that they expected to make similar projects to those of their peers; a means to compare their work to each other. Within this designing for one approach, however, there was diversity. Instead of



Figure 100: Once Kathleen found her participant (the manager of the neighbourhood social restaurant) she would visit even if she didn't have a specific need related to her design (Google Maps 2019).

defining a single problem on the forehand and the students offering several versions of the same solution, the student designers were all working with different problems:

“The benefit is that you have several kinds of problems. For example, you had Mustapha, who had a language problem, he didn't understand Dutch. Everybody had a different kind of problem. If you're looking for the same profiles, you'll end up with just a single problem and a single solution.”

This feeling of unexpectedness led to uncertainty for the students regarding their end-of-year juries³⁹ as some students feared that the jury would be expecting work in this digital area, with specific outcomes related to their digital trajectory.

7.3.6 Variable: Varying the module setup

In their reflections, many students called out routine elements of the module that had been changed or differed from other modules they had taken. Most notable was the student designer's requirement to make contact with their participant. Although this ranged from selecting a participant based on informal discussions in an activity room in a care facility to that of cold calling, students identified this as contributing to their learning experience:

“With this one you needed to find a contact person, make the assignment, contact the people yourself, arrange everything yourself. Quite a challenge but if it all works out it twice as great.”

This was distinguished from module assignments in which *everything is done for them* and where students are *given an assignment and told to execute it* to a list of particular demands. Students found this challenging, but rewarding. For some, **this was the first time they felt that they had full control of their project's direction and they found it fun, but also nerve wracking and challenging**. The idea of reward was linked to not only the relationship they built with their participant, but also they had to draw on self-reliance. They made their own decisions and defined their own design problems. Although confrontational, this space gave them room to make mistakes,

³⁹ In the school in Ghent, the students in their second and third (final) bachelors years they gather they put together a portfolio of work which they have to defend to external invited jury members to 'approve' their move to the next year and/or graduation.

which some students defined as adding value to the learning experience and something that they will *remember*.

The pace of the class also was a point of conversation. **Students suggested that the timing was different to other classes they had taken**; in other classes they would come up with an idea rather quickly and then refine the idea for weeks on end. In this module, however, “This has been quite the opposite, it required many weeks of research, of listening, of testing and only in the end decide on what to make and work hard to finish it”. Another student suggested that designing for one changed how she worked;

“The fact that this time I wasn't glued to my computer all the time and that I was working on the assignment, exploring, experiencing, is something I will take with me. It was fun, I got a different kind of input regarding ideas and such. it was great you're not constantly behind your computer working but that you are able to explore and work from there. This idea of going to a location, to people at home, to a cafe. I think sometimes we forget that that's possible. I also worked a couple of years for an agency. It's very creative, with fancy computers, nice stuff, soft drinks, but going outside? We never went outside.”

This was a slower process. For students used to modules that ran for a few hours a couple of times a week, the intense process of being off campus, and working on location every day all day was a positive change and allowed them, as in the quote above, to have a different type of focus .

7.3.7 Variable: Applying design participation research methodology

Although every student prioritised meeting their participant in person, the methods the students used in order to get to know their participant, define their design problem and work toward a design outcome included new processes. They used interviews, catalogued participants' communication tools, noted their agendas and daily routines, brainstormed around topics relevant to the project, received guided tours of homes and cities...

By and large, **students identified talking as being the most important research method** they used; from informal chit-chatting to their *constructing conversations* as a

means to hone in on their area of concern. They suggested that they were doing and learning how to do things *differently*; “the way to have conversations and the method of asking questions”.

Students commented that **they were *hanging out*** with their participants. Two took cake as a means of an ice breaker when they went into their participant’s home. Both context and routine were suggested to play a role. Although they didn’t define them as research methods⁴⁰, meeting at the participants’ work for a *weekly coffee* and going with a participant to their *favourite places in the city* were all forms of context exploration and research and the student saw these exchanges as contributing to their process.

For many students, **this relationship-based way of working moved them in and out of formal research space**: *I think that at least half of the time I wasn't busy with the project at all and that I just talked with him.* As with many students, there was the suggestion that initial meetings with the participant had little direct relevance to their project’s direction, but rather set the stage for their way of working.

“The first few weeks I met with him several times, not just for the assignment, just to get that connection. I think that if I didn't do that it wouldn't have turned out like this. I just went there to have a coffee. You're not just drinking coffee but you'll have a conversation as well and something useful came out of it all the time.”

In terms of more formal design research methods, many students saw this as an opportunity to apply theory learned in the classroom (ie. research methodology) in the field. Because of the module’s setup, it provided for **a slower, more thoughtful process that included more research**. “You get the possibility to try these design tools which you've studied for two years...Other modules won't have that testing component to the same extent”. Regarding mapping⁴¹, one student suggested that working with his participant caused him to see the problem from a much wider angle. Mapping the person’s life brought several areas of his participant’s life into focus. This enabled him

⁴⁰ See IDEO; day in the life, walking tour, etc.

⁴¹ See <http://www.map-it.be>

to work with people who were *not used to thinking in this way or dealing with problems or situations creatively*.

Others used research methods that allowed them to better identify with their participant's struggles. One participant had problems with vision, and the student was able to find examples that allowed him to better understand and experience his participant's lived reality. The student defined this particular experience as being beneficial:

"In the beginning it was shocking, but afterwards we had a better understanding and respect towards to him... I really learned from it, because it was complicated, but fun because it was different than just designing for advertisement. Now it was just one person, with those conditions."

Finally, students used their experience to better understand research methodology and its inherent faults. **Students had time to try different methods and adapt and alter them based on their experience.** It was clear to students that *what worked for one didn't work for others* and they had to work *based on their liking and what they were comfortable with*.

7.3.8 Variable: Changing the module situation

Several students identified the environment as being valuable to their process, simply because it was different to their day-to-day student experience. They suggested this created part of the design challenge; the surroundings provided stimulus and inspiration in and of itself. One student suggested it made them aware of how **the classroom environment was indifferent or sterile to real use contexts** but yet resourceful in terms of providing design and aesthetic inspiration. For some, this difference was a beneficial challenge; the physical characteristics of the environment (for example, the care facility itself) altered the creative process and tapped into the five senses, leading to a fundamentally different process and encounter:

"It's not easy working in a retirement home because you don't have the creative outlets, you don't have images of art on the walls. It's kind of... it's just hard. It's like you want to take notes all day. Notes like just the everyday look of the place,

the people you would see, what you've experienced, the five senses maybe. Just—it's very different."

One student said that being in the environment, **getting to know the place better, changed their perceptions about the place itself; going so far as to suggest that it changed her prejudices** about the place and the people who lived there:



Figure 101: An advertisement for new apartments and penthouses being developed in the neighbourhood. This was Will's starting point (Wilkinson 2017).

"In the beginning ... I thought that Muiden was kind of a slum, because I didn't know anything about it, but actually it's quite the opposite, it's a great neighbourhood. They undertake a lot, they have several organizations, so actually it's quite a cool neighbourhood."

Finally, the locations made one student question the sincerity of his participant. Saddled with a participant who did not live in the neighbourhood the project was taking place with/in, but rather working there as a city employee managing projects there, the student was frustrated with what seemed to be the participant's apathy.

Because the student himself was experiencing (as well as seeing it in his fellow students) the benefit of being at 'ground zero', his meeting elsewhere felt strange:

"I made an appointment with Wannes, regarding the project. His project is called "Muiden-Meulestede Morgen", and they refer to it as a neighbourhood renovation project. So I had a meeting with him and I was given an address somewhere in the south of Ghent. I found that to be a bit odd, because Muiden is in the north of Ghent. I went there and we had a bit of a businesslike conversation. I believe he has an interest in the neighborhood and invests a lot in it as well, but he doesn't work or live there so he's personally not really involved in the neighborhood."

In this excerpt, it also shows the student's shift in perception. As a designer, he would not have found it strange to meet with the manager and have a formal conversation about a neighbourhood renovation project. However because the designing for one module placed importance on environment, it in fact defamiliarized the 'normal design process' for the student.

7.3.9 Variable: Opening the outcomes

For many students, having a brief with an undefined outcome was a challenge.

They understood how to manage a design process, but some struggled with developing a plan of how to design together with a participant: "I freaked out because I knew what I wanted to do but I had no clue on how to direct something like that with a person". They found this frustrating: "It was hard for me to come up with an idea and I got irritated as a result".

Others found it difficult to identify the problem space; what was the value they could offer the participant beyond the expectations of what their participant had regarding their discipline. One of the advertising students knew she wanted to *improve something* but didn't know where to begin. Her participant suggested that she "could make an annual report or write a newsletter but that wasn't really the assignment". In her own words, she had a "difficult start. I was focused on an issue to solve and that's why I thought it was hard in the beginning, because there wasn't anything to solve. I was doubting a long time about what to do and in the end I looked at it from a positive angle and tried to solve something with that in mind". Instead of focusing on a

problem, the project with her participant shifted to what her participant was proud of and that's what she focused on communicating.

Speaking for her peers, one student suggested that identifying the problem was what her classmates found the most challenging; “usually we just receive a very tangible problem to work with. We should design an app or a website, even that is already set, that part of the solution. Now everything was open in the beginning, basically we only had a name. We had to figure out who it was, what his needs were, what is the problem and how can we solve it. That quest was difficult for a lot of people in my opinion”.

For some students this ‘freedom’ was seen as a positive. It allowed them to **make decisions that would otherwise have been made for them** in terms of methodology or approaches. It allowed them to **choose and accommodate their own path**. For the students, this changed the role of the lecturers who then became coaches who made suggestions instead of making demands. “We were supported at a high level, but the lecturers pushed us and said, ‘Go do it!’. And we had to see for ourselves what worked best for our person and for us. They were a help-line and steered us, but didn't say that we couldn't do this or that”.

7.3.10 Variable: Taking risk into consideration

Whereas many of the educators related to risk in terms of ethical approval or suggested that it had a high potential for things to go wrong, students responded to this risky space⁴² differently. For some students, **the openness mentioned above and the learn-by-doing approach led to uncertainty**. This uncertainty caused one student to be fearful that the method he was going to carry out wasn't going to be up to scratch, not *proper* enough. Next to this, the student was leaning on the expectations of education, wanting to see an example: “It's all like: do it. Maybe a little more support would have ensured it would turn out like a proper mapping... It would be great to see

⁴² The attempt here is to find and identify ‘acceptable risk’, which implies that some level of risk can be tolerated and is even desirable (Eckberg 2007).

how you are doing it, to see how to approach it, just a bit more guidance...Now you're just let loose”.

In and of itself this ‘letting loose’ was the risky area. Similar to the reflections of students above responding to variables regarding the opening the outcomes, the ‘letting loose’ was also seen as a positive. “You are thrown in the deep more or less. Because you need to find your own problem, you need to go looking... very different than just being given an assignment and execute it. With this one you need to find a contact person, make the assignment, contact the people yourself, arrange everything yourself. Quite a challenge but if it all works out it twice as great”.

Other students were frank about how they were starting from a position of unknown, and defined it in terms of its being a sort of *personal* risk: “I just needed one credit and I got permission for it to be one credit hour. But designing for dementia was kind of like ‘Whaaat?’ It sounded super interesting and I had no idea how I was going to be able to pull this class off, so I kind of wanted to take it as a personal challenge”. In this quote, the student encapsulates this riskiness on various levels; she makes sure that the module (usually worth 3 credits) isn’t going to be worth more than 1 in case it *doesn’t work out*, she’s clear about the fact that she doesn’t know how she will be able to manage it and yet she responds to this risk with a challenge to herself.

For another student, risk could be seen in the inability for students to compare themselves or simply duplicate what their peers were doing; “what works for one person may not work for another person. Because all of us, we had different types of partners and I feel like we *had* to give them different approaches.” Likewise another student suggested that the designing for one module was the “the project with the least certainty throughout the year, we didn't know if it was going to be ok, because it was vague for so long; before we knew what we were going to do” but also links challenge to reward suggesting “in the end, this is the project we got the best feedback on from the jury”.

7.3.11 Variable: Engaging External Interest

Although much of the above suggests that physical context and interaction are two primary factors, the modules in which external parties participated (mostly in the form

of guest lectures or presentations) were identified as possessing added value. It was not so much their direct relationship to what the students were making, but rather how they thought about the process. In Ghent, the students gained different perspectives from the Department of Policy Participation from the city of Ghent, the local social worker responsible for the entire neighbourhood, and from an academic specialising in digital in/exclusion. This triangulation of perspectives, combined with the team of lecturers on hand **enabled students to have a broader understanding of the context in which they were working** and the context in which their participant was living.

A form of proxy participant, people and organisations from outside the school were regarded for their expertise and some students referred specifically to the lecture on e-inclusion repeatedly: “after the lecture I thought, wow, Frank (his participant) is who she was talking about!”. For the organisations who had vested interest in the outcomes, students regarded them as a form of secondary clients. Specifically for the students in the two projects in Ghent, the social worker’s involvement was identified as being important and forming their first impressions: “it was a good thing that we sat down here (in the neighbourhood community centre) in the first week and that Pieter (the neighbourhood social worker) spoke with us and explained the makeup of the neighbourhood, then took us on the walk through Muiden (the neighbourhood), and then he took us to eat down at Old Post (the neighbourhood social restaurant), just to get an impression of the neighborhood”. Likewise in Genk, the social worker responsible for the town centre’s walk on the first day allowed students to orient themselves in terms of the challenges the city centre was facing, goals the city had for the future and prior initiatives.

The idea of secondary client held true for all of the primary organisations. In all but three of the cases, the organisations were responsible for providing participants and in the fourth project, they provided a list of backup-participants if needed. For the three city projects, the organisation was interested in outcome as a means to engage their own organisation in discussion and ideation. They did not provide feedback during the project, but rather were interested in the results; which had promise of generalisation. What touchpoints sounded promising? Much like the city projects, the care facility too was noticeably absent. They were engaged to manage ethical approval and provide the guidelines so that students could participate, but only the ‘people on the ground’ could

step into the proxy-participant role and provide feedback that informed and shaped individual student projects.

7.3.12 Summarising the student's experiences of the extended design space

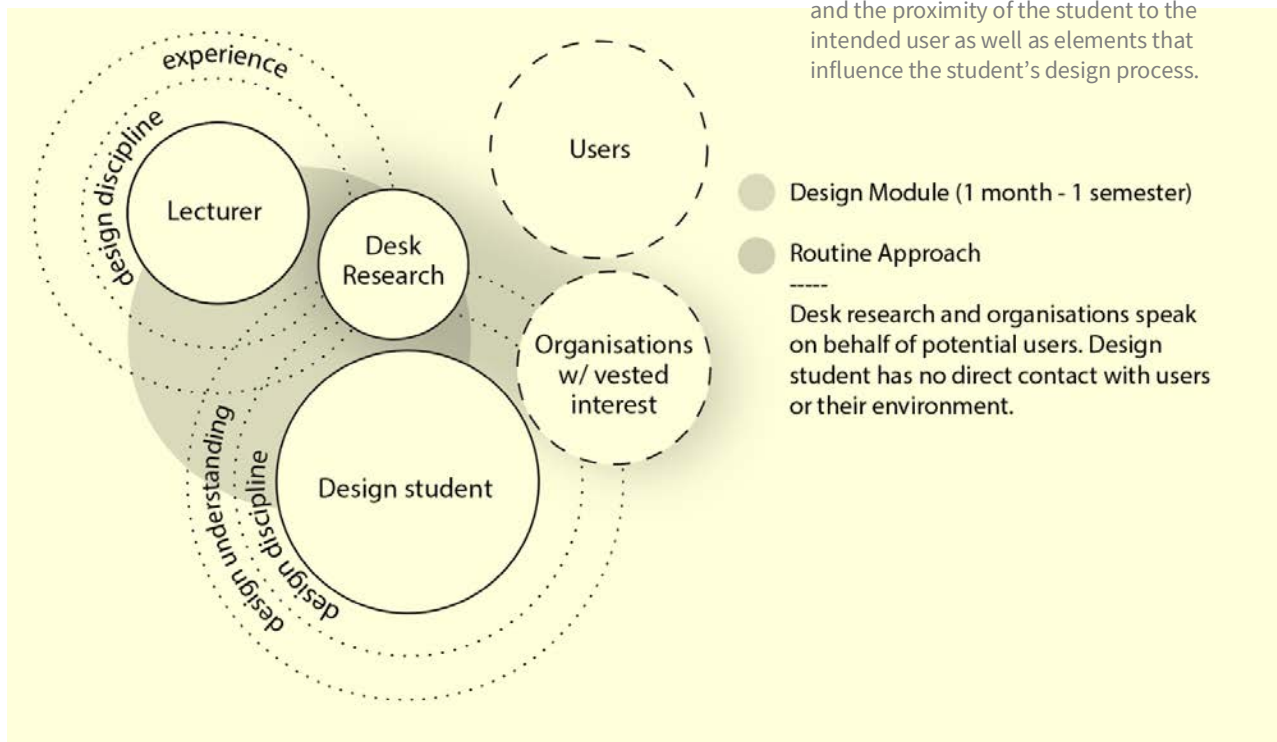
What these student reflections suggest is that these *designing for one change variables* impacted the student's overall experience. Although not explicitly identified and not always without their own specific challenges, the students identified them as being variables of importance and more often than not identified them, as the educators had done, as being different to their previous student experience. Students discussed this space in terms of both restrictions and openness (if not at times too much freedom). A few hinted that the brief and process was difficult, but often they related these challenges to its being rewarding. They were appreciative for the chance to try to create a bespoke design without universally suggesting this was the way they were going to continue to work. Some identified designing for one as being a strangely light and almost cheerful way of designing, though nearly all, even those who worked in a more formal setting, suggested this added an additional layer of responsibility.

Finally, these reflections help to validate these variables in terms of how the approach pushed against the student's expectations of their discipline. From how they *usually* approached research to how they *normally* responded to briefs to who they *typically* identified as their users to where they *nearly always* had their lessons. The students identified these variables as contributing factors which made the routine design module and its approaches unfamiliar.

7.4 Integrating variables to disrupt the routine; enabling creativity

Although this research did not focus specifically on creativity in terms of outcomes, it did look to uncover elements in the designing for one approach that aided creativity within a design education context; extending the design space. Central to the research focus were two questions: how was the approach challenging expectations about coursework and the design process and how was it creating room for the 'unknown' and 'unexpected' to take place? Even prior to this study, as an approach for co-

Figure 102: Visualisation of a routine module and the proximity of the student to the intended user as well as elements that influence the student's design process.



designing or designing-with, *designing for one* had been identified as a source of difference. Lecturers had suggested that it was enabling students to work differently, students were choosing the module specifically because of this difference and carers in particular (on the occasions where the module placed design students together with individuals with dementia) referred to the design outcomes the students were making as being *surprising*; even in one instance moving a carer to tears.

What then were the contributing elements that were causing friction within this otherwise routine design space? Although this chapter focuses primarily on variables, embedded in the designing for one approach is the inclusion of participants and how this informs design practice. The benefits of design participation (see section 2.3) are equally embedded into these variables. Both valuing and placing user involvement into the routine design space has a trickle up effect, impacting nearly all of the other variables identified. The variable *working within the limitations*, for example, refers to a lecturer's valuing participation enough to put in the effort required by an institution to realise or enable the participation for their students. The variable *opening the outcomes* refers to a lecturer understanding that participation is a discovery process and thus she creates space in the module planning for students to hear and respond to the voice of the participant, not just working towards realising the outcomes of a brief. The variable

Figure 103: Visualisation of a Student Module Case

Case where students are designing for one, showing the variables that influence the student's design process.

Legend:

- Design Module (1 month - 1 semester)
- Designing for One Approach
- Change variables that extend the design space

Variables:

- RU** Participation of real users
- D** Dissemination
- SP** Student's proximity to theme/topic/users
- L** Limitations
- MER** Module expectations and student responsibility
- MS** The module setup
- DPR** Design participation research methodology
- S** Module situation
- O** Module outcomes
- R** Risk
- EIP** External interest and participation

changing the module setup requires adapting existing educational structures, schedules, the 'routine' elements and adapting them to include participation.

Contrasting the models in Figure 102 and Figure 103, one can immediately see the influence of the designing for one approach and these variables. In the routine module, Figure 102, the student and his/ her user remain disconnected. Relying primarily on secondary sources and external organisations with vested interest (clients), the design student is the central source of knowledge and decision making regarding the design. However in the second model, Figure 103, the student and the participant touch; the student sphere enters into the environment of the participant. The additional variables, identified in the second section of this chapter inundate the design space. For the lecturer, variables such as Outcome, Module Setup, Dissemination and Risk place themselves within the Design Module and position themselves within the design discipline and the experience of the lecturer. The variables such as Context, Participation of real users, Design participation research methodology, Limitations,

Student's proximity to theme/topic/users mediate the space between the student and the User (now referred to as individual Participant) as well as the Proxy Participants. The variable External interest and participation inform the student's understanding whereas the variable Module expectations and student responsibility situates itself within the module itself, the student's design discipline and the lecturer. Working together, these variables act as instigators; creating new experiences for both lecturer and student, as well as resulting in the asking of new question. This new designing for one form of design participation, then, is rooted in Kolb's ideas around inquiry. It instigates the combination of mental reasoning and action in the student as well as the participant's world. They are not only *thinking* but also *doing* (Wurdinger and Alison 2017, p. 28).

Referring back to Gero and Kumar's 1993 theory of creativity (see section 2.2.2), these variables, as mentioned above, create the space for designing for one participation; in turn extending the design space. In a routine design (see Figure 104), the student design process remains closed, both to participation as well as to elements which factor into creativity; no *territory of the unfamiliar*, which Bodon identified as being crucial to creativity (2004) or Becattini's *surprise or newness* (2017), which Stein, in her definition of creativity suggested was one of the key elements of creative solutions (1953). In the student's going about collecting a priori variables (self-evident design elements) there is little opportunity for them to become *defamiliar* with the routine, this would require external factors that make it defamiliar or strange

Figure 104: The space of routine designs, based on Gero and Kumar's Space of routine and creative designs (1993).

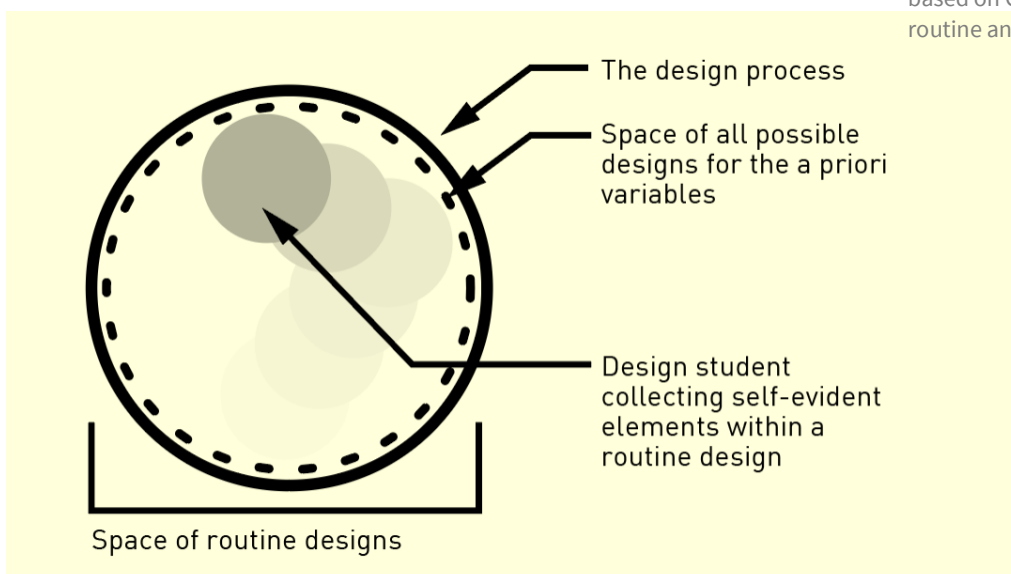
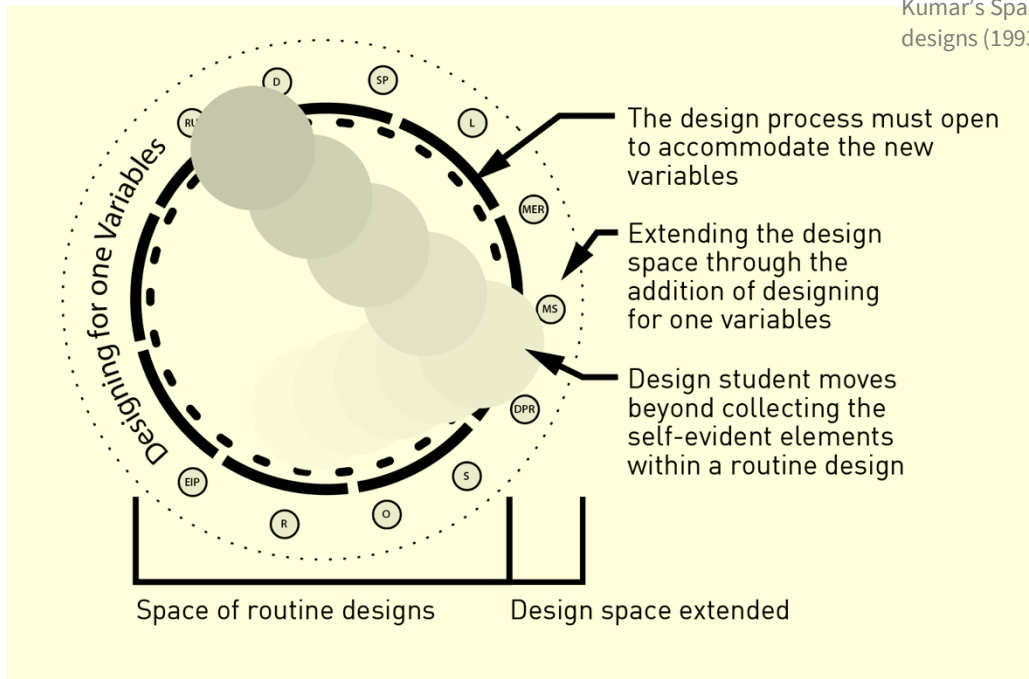


Figure 105: Extending the design space through the addition of designing for one change variables. Based on Gero and Kumar's Space of routine and creative designs (1993).



(Shklovsky 1917, p.16). Contrasted against fig 105. However, one can see the transformative effect of adding designing for one change variables. In this model, the variables have been added, requiring the design process of the student to accommodate these new, unknown variables. It does not limit their use of routine design elements, but rather adds to them.

Design Education can use this shift from familiar to unfamiliar as a means to open up the routine design space; to call not only design practice into question, but design's relevance, its contribution, its existing expectation of a medium or a skillset. Bell et al. went so far to suggest that where there is too much familiarity, *demand* this shift (2005, p. 149), suggesting that designers can use unfamiliarity as a lens to see design practice in a *new light* (2005, p. 154). The result of this coming into contact with the unfamiliar and this handling of the unfamiliar is an extended design space; creating potential for creativity in design spaces in which theoretically, creativity was no longer found.

Chapter 8.

Discussion / The application of designing for one within design education

The aim of this chapter is to make a clear association between the aim of the research and the findings. It will address these goals and discuss the key findings in relation to each research question; drawing on insights from both the literature review and the original findings outlined in the previous three chapters. The aim of this research was to employ design participation through the use of the designing for one approach within a diverse range of design educational contexts in order to better understand and analyse the impact of designing for one on the student designer and their process. The intent of the research revolved around two key points: exploring the specific insights that designing for one was providing the designer and how it was, as an approach, initiating the unexpected; *disrupting routine design* by extending the design space. More specifically, this research examined: 1. what were student designers valuing in the designing for one experience, 2. how was empathy being established, 3. what was happening within the designing for one approach that was challenging expectations about coursework and the design process and 4. how was designing for one creating spaces within the module that enabled or confronted student designers with the ‘unknown’ and ‘unexpected’?

8.1 A recap: framing the inquiry

In the literature review, specific gaps were identified, calling on the need for design students in particular to have access to authentic experiences; to ready them for different design futures that would require them to possess alternative skills sets than what traditional design education was offering. Next to this, educators were called to adapt their modules to these new societal needs. What is it then, that design education is teaching, or rather, what shift should be happening in order to better prepare

students? Regarding the *routine state* of design education, Davis, an academic well-versed in higher education design curriculum development suggests that “most of today’s design education is structured in terms of defining the physical attributes of desired objects and environments not in terms of interacting systems” (2017 p. 43). Sanders and Stappers, too, have called for a similar shift, a move away from the design of *products* to the design of *purpose* (Sanders and Stappers 2008, p. 17). Instead of describing design in terms of functionality (visual communication design, interior space design, etc.) Sanders and Stappers called for a focus on *needs*; entirely new design disciplines focusing on *experiencing, emotion, interacting, sustainability, serving and transforming* (2008, p. 17).

Similar to these purpose-based emerging disciplines, Mendoza and Matyok call for a new kind of design student entirely, one that is “actively engaged in shaping the world around them” instead of “purely reactive” to what is going on in the world (2013, p. 215). But a new type of design student requires a new form of education. Turning his focus to the educators, Flach argues that educators are being reactive to the needs of the creative industries instead of being engaged in shaping the industry itself (2015, p. 98). He goes on to call for flexible, adaptable curricula that can be responsive to ever-changing societal needs. Following in these lines, Kelly, shares in this call for radical curriculum redevelopment, calling for curricula that are less focused on rote discipline and more targeted toward “building a student's ability to adapt, innovate, empathize, persevere, and succeed through possible failures, solving problems through design thinking and critical analysis” as a means to prepare students for design jobs yet to be defined (2019, p.44).

For Pal, social design is seen as the perfect context for the integration of these elements into the curriculum, as it requires: “exposure to design thinking, which extends beyond an artifact to an understanding of the ecosystems in which technologies exist” (Pal 2017, p. 67) and it requires “that design students engage, observe, listen, ask... in new ways with a new sense of relevance and purpose that cannot be based on assumptions” (Pal 2017, p. 67). In summary, integrating social design would require students to *understand users* and to see their participation not only as relevant to their process, but necessary. However, if achieving *understanding* of a user is prioritized, this requires the designer to make room in their design process for the user. For Fuad-Luke et al., this understanding comes in the form of collaboration

between designers and users (2015 p. 82). For academics and practitioners, managing this collaboration comes in the form of participation; it is the space in which designers “come to conclusions in conjunction with users” (Spinuzzi 2005, p. 167).

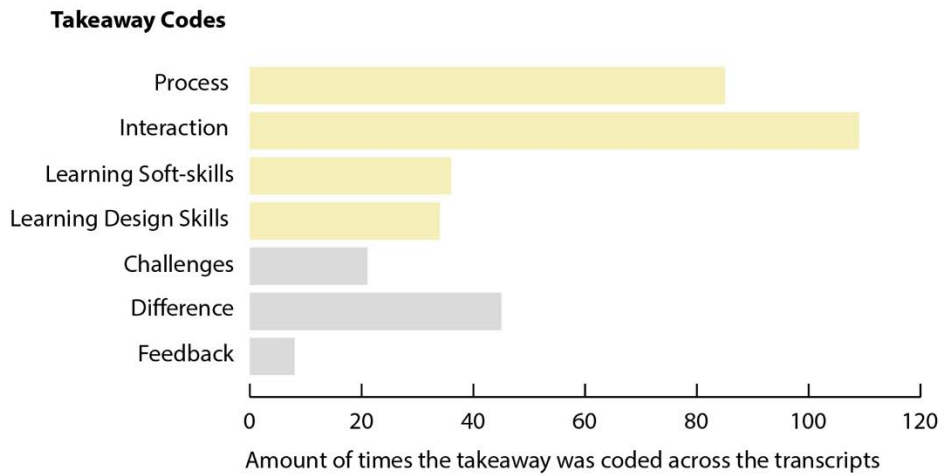
One of the key elements to working in this participatory, social design space is empathy. Although there was existing work regarding methods that could be used to establish empathy, there was little or no research into how these relationships between designer and participant should manifest or what they entailed. As noted above, design education was identified as potentially perpetuating routine design (practicing practice) with a focus on artefact creation instead of experience-based knowledge acquisition. For those looking to make the shift, creativity theory provides the promise that shifting variables within the design process can disrupt the routine and increase the potential for creative outcomes. Applied within education, these shifting variables expose students to *unexpected* elements in their design process, with the result that the students have new types of learning experiences. In light of the insights and patterns identified in the previous chapters, what do these findings really mean and where do we go from here?

8.2 What the findings mean: what students found to be valuable and noteworthy within the designing for one experience

By coding and grouping post-module interviews, the research isolated what students valued most from the experience. Although some students found value across several different aspects of the module, the four experiences most prevalent were: experiences relating to the design **process**, experiences that led to learning related to **design skills**, experiences in which they used or gained **non-design (soft) skills** and the experiences in which they **interacted** with their participant. Nearly every student suggested that the experience was ‘different’ than other modules and this, together with the two other experiences identified during the coding, (challenges and feedback) were covered in further detail in Chapter 7.

For **experiences relating to the design process**, students repeatedly discussed the steps of their design process and the relationship between making and

Figure 106: Prevalence of identified experiences based on coding what students ‘took away’ from the designing for one experience.



understanding their participant. For some this began with the anxiety of a cold call, or getting in touch with a stranger, followed by a period of getting to understand their life space, interests and context, before moving on to what the students called “designing”. For some, this initial phase was a sort of “social service” instead of “designing”. They had to invest time and energy in “all kinds of stuff; many weeks of research, of listening”. They focused on non-design aspects of their participant in order to *get to know them*. Only after this process were they able to “make the link” between this non-designing and the function that it served in terms of identifying a design direction and moving forward in the design process. Within these reflections, students identified aspects of the design process which had taken on new importance; they balanced their need for aesthetics with that of function and identified testing as a valued part of their process. Their designs could no longer just “look nice” but also had to “do something and work”. Finally, through the reflections of the designers, it was also possible to occasionally hear the participants’ experience too. Students told of their participants bringing them up to speed on their lives before getting “serious” about the project and what the design could mean to them. This suggested that both students and participants saw design as an entity that exists apart from the user and his/her world.

For **experiences that led to acquired learning**, students identified both insights into design (the use of design methods, design thinking, usability, co-design, etc.) as well as insights into their own personal development as a designer as being important

takeaways. Using phrases such as “I will remember”, “I definitely learned”, “I’ll take this away”, “I realised”, “I saw the benefit”, “I’ll use again...” students married their actions to knowledge by reflecting and acknowledging what they had learned. In terms of design insights, the responses were diverse with an understanding of the *relevance of research* being one of the most frequently mentioned, closely followed by the application or *doing* of methodology, instead of learning about its use *in theory*. Students framed the relevance of research in terms of how their fellow students’ participants were all “dealing with different things” and that each required “different approaches”. For others, they framed the relevance of research in terms of its having reflected their own assumptions about users that were either wrong or incomplete. Students referred to research as offering “depth”, providing a level of understanding that, without the research, one can “only dream about”. They saw research as a form of making something *concrete* out of an abstract concept. In terms of methodology-in-use, many suggested it was something they had “read a lot about but not something they had done” before. Methods became tools “they would use again” because students not only liked the interaction they brought, but because they were deemed to be “necessary”.

In terms of insights into their own personal development as designers and **experiences in which they used or gained Non-design (soft) skills**, students reflected on themselves as designers, but also as humans. They mentioned building *trust* with their participant and *sharing* part of themselves with them. Students spoke openly about their previously held biases towards the user group that participants were part of (ie. the elderly, non-native language speakers, etc.) and how these biases shifted through the enjoyment of the project and *having fun*, some even suggested resulting in their making *a friend*. They said they learned *patience* and compassion. Students said they learned to become *chameleons*, taking a back seat as designers and moving to the front seat of collaboration.

The most prevalent of the student reflections dealt with gumption or drawing on their own self-reliance. The students said that participation required them to “make their own decisions”, “discover on their own” and required them to “direct the direction of the end result”. They said it required them to “go outside” of themselves. To “push-forward” and, some suggested, “to work on themselves”.

For the **experiences in which they interacted with their participant**, students reflected on personal anecdotes of the exchange, showing a genuine interest in their participant's wellbeing, and reflected on the depth of engagement they had had through this exchange. Students reflected on the value of the relationship; that the project prioritised connection. Everything worked in function of the relationship, research, and connection between student and participant, leading students to say there was *an openness* between them, that there was a mutual concern growing between them, with one student saying that his participant had taken an interest in his life outside of the project by asking about his girlfriend. It was "conversation" based instead of being always possessing a clear "function". Students identified the interaction as leading to a heightened level of understanding of their participant and that this led to the students designing with him/her "in mind". Students respected the participation and the person's authority, suggesting that that they *see things that I don't*.

Although rewarding and challenging, the interaction was also frustrating for some students. Some struggled with the expectations that the interaction caused. And next to this, the research often uncovered real problems or issues that impacted the participant's daily life. Students were then confronted by their design or prototype's lack of real agency; *I really want to help*. As with other categories of experiences, nearly all of the students indicated that their end design was a result of interaction; whether they spoke of impact on process or describing the design as being made together.

With its focus on interaction, engagement and participation along with purposeful guided reflections, the catalogued student experiences of designing for one identified not only what students valued in the designing for one approach, but in turn provides a starting point for educators, teachers and organisations looking to **turn experiences from tacit happenings into explicit learning**. What these findings do is **validate the learning** that takes place outside of traditional design related outcomes and demonstrates the value of designer reflections in supporting the transfer of experience into knowledge. Although this research identified reflection as being extremely valuable within this type of design education (PBL) practice, it did not go so far as identify best practices concerning designer reflections.

Specifically for students, when looking further at the idea of experience-as-knowledge, the student experience is found to mirror the design educator experience; how educators share their knowledge within the classroom. As lecturers, as designers, as researchers, incidents, encounters, challenges, confrontations, unexpected outcomes etc. are experienced and mulled over and reflected upon, educators extract meaningful insights from these reflected-upon experiences and in turn, share them with students as design anecdotes: a form of knowledge exchange through storytelling. Often dismissed as minor narratives, anecdotes are a means to disseminate reflections and they possess a powerful performative nature: "the making and enactment of anecdotes is a means of interrogating the research process itself" (Lury and Wakeford, 2012, p. 33). Within design education, then, first hand experiences are made *memorable* and *known* (through storytelling). This is what students take away as part of their own learning experience. Designers can talk about type size and legibility (design-centric information), but if personal stories (personal insights) are shared about how problems with legibility became real through the experience of working with an individual who had difficulty with legibility, the personal experience is shared and recognised as knowledge. In the students' reflections, this distinction was also made: "When he talked about what all the barriers were, I realized that it had a profound impact on people's lives. In all spheres of life, going to the shop, you don't even need to do extraordinary things, in just daily things you experience hindrances". Students in the designing for one modules balanced between design-centric insights vs. personal insights. They attached value to their educational experiences; value as a designer in terms of tools they had been able to apply or things they had been able to make. And they also attached value as individuals; they valued personal realisations and learning: "In fact, they have taught me more than the other way round... like being patient around the elderly, friendliness. Walter talks more than I do, and I needed to keep my mouth shut".

Coaching sessions with students were moments of these anecdotal storytelling; the students sorting through the moments they had with their participants and turning these moments into stories that wove relevant design decisions and insights into a narrative. Within these designing for one Student Module Cases, these experiences happened first hand as part of a primary research experience. Designing for one, then

was an approach that allowed students to reflect on their first-hand knowledge about design, rooted in authentic and real experiences with users.

8.2.1 What student designers value most from the designing for one experience: a summary

Without a longitudinal study in which students and participants reach a level of collaboration in which the participant *appropriates* a design in their life context (Dourish 2003, p. 466), the students themselves are what is appropriated by the participant and the participant is what is appropriated by the student. Short term studies such as the experiences of the students in the Student Module Cases allow for glimpses of real-life; they are allowed to see what the participant provides access for them to see. In this way, there is an embedded understanding rooted in design ethnography that recognizes that design researchers are “affecting the scene” by their being in or a part of it (Blomberg and Karasti 2012, p. 103).

What has been suggested through these findings, is that the students highly valued the designing for one experience. Although they may have found the module challenging and nearly every student identified that the module was different to what they were expecting based on their experience of other modules, they valued the impact the participation had on their design practice, as well as what it afforded them in terms of learning both design skills as well as soft-skills. But, above all, they valued the interaction with the participant; the influence of the participant’s abilities, interests, needs and life-world and their participant’s satisfaction and enthusiasm for their project. What this data points to, then, is an overall benefit of designing for one approach used within the context of design education.

8.2.2 Why this matters: The pervasiveness of the exchange and the residue of interaction

Leaning on the shoulders of Human Centered Design and User Centered Design, in which contact with the user is methodology-focused and highly orchestrated by the designer within the context of methodology, designing for one places importance on getting to know (relational expertise and back stage participation) as a means to foster experiences that feeds into the design process. Dindler and Iversen discuss this in

terms of relationships being “thought of as an object of design” and thus a “phenomenon that is malleable and within the professional agency of the designer” (2014, p.43). Seeing the relationship itself as one of the outcomes of participation establishes the relationship as an integral part of both the design as well as the collaboration; one that should be valued and championed. Even when working as ‘designers’ within this relationship, developing prototypes or leading discussions that relate to the future of the thing being designed, designers “are not only working on the future digital artefact or future practice as the object of design” but they are “also working on the relationships between people that may eventually prove crucial to the success of the design products” (2014, p. 43).

This follows on with Ehn’s idea that design education should concern itself less with traditional linear models that focus on acquiring how-to skills and concern itself more with becoming responsive to future scenarios: moving to that of relationships instead of artefacts (Armstrong et al. quoting Ehn 2014, p. 19). Like Schon, who advocated for actively extending and grounding ideas and experiences “in the external world and through internal reflection about the attributes of these experiences and ideas” (1983, p. 52), the impact that these experiences with participants has on the designers is palpable. **The findings show that student designers are left with a residue; leftover elements that linger from the participation and exchange.**

Although not the focus of this research, it can be suggested that these interactions and micro-relationships possess the potential of having a residual, knock-on effect on the student’s future way of working. By creating this space of *unfamiliarity* and actively working in opposition to the *routine*, the designing for one approach created a fissure in which designers reconsidered their expectations about not only the role of design and their discipline, but their role in it⁴³. In some ways, then, design lost its boundaries; working directly with a participant may have seemed odd to a student in the beginning but seemed self-evident in the end. Working as a designer within a care-home setting seemed strange to a student on the first day, but felt natural by the end of the module. Spending so much time with a user in his/her home may have felt awkward the first time, but in the future not spending any time with users may seem almost fraudulent.

⁴³ See Digital Designers as Democratic Innovators; <https://www.youtube.com/watch?v=F9t857nnC38>

As students continue to *construct their own knowledge* (Piaget 1954) and actively construct a “view of the world based on his/her experiences” (Valkenburg and Dorst, 1998, p. 251) these experiences will inform their practice. **These experiences make up not only an immediate web of experiences that bolster the designer’s instincts or how they respond to student briefs in the moment, but they inform how they might identify and respond to design problems in the world around them in the future.**

8.3 What the findings mean: how empathy is developed through designing for one

The findings established that the design student developed empathy (for the participant in his/her life world, their abilities, interests, etc.) through the formation of a participant-designer relationship. What the findings identified furthered was the importance of reciprocity; the mutual benefit of both designer and participant, and their validation of each other within this collaboration. Although not the focus of this study, the participant’s voice echoed throughout the transcripts: “We both were like: ‘oh great, cool, let’s do this’” or “He wanted it to be as easy and as fast as possible...He was excited” or “We were talking about activities and... and eventually, maybe thanks to our conversation, she told me about what was important to her”. So too within the case films, the participants showed this valuing of the student by the participant: “the door is always open and coffee is on, or the cola!” and “We are Facebook friends now, so I can follow things that she posts, she can follow me...”

Within PD literature, reciprocity possess the following characteristics: it must be a mutual exchange, those participating benefit in some way from it, the participants act with the other person in mind, and the relationship is open to changing over time (Driessen et. al, 2020). The validation of each other’s contribution is based in this relating. **By reaching out to the participant, the designer identified his/her belief that the participant had worth (the merit of their lived experience, their expertise in use, etc.). In return, the participant showed that he/she finds value by their participation in this collaboration; the potential that there will be a return on this investment in the form of a design outcome).** Although the defined designer/participant may indeed *blur* in the process (MacDonald, 2003), the designer

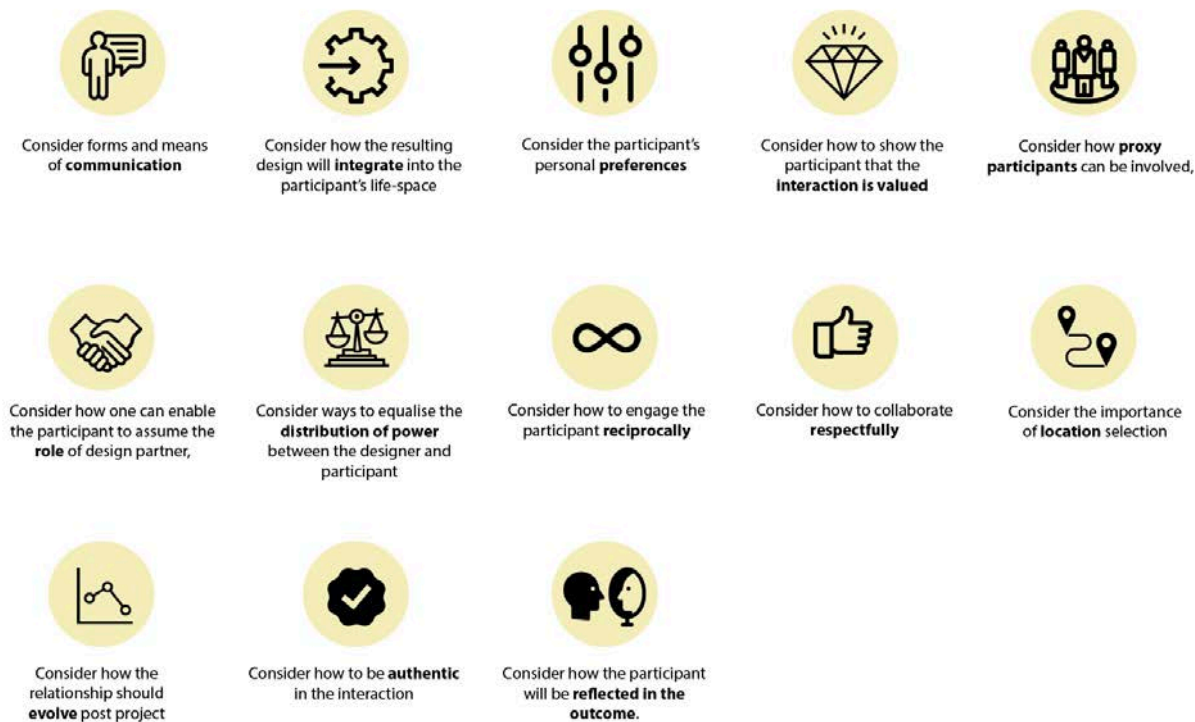
must draw on their *relational expertise*; their perpetual awareness that this relationship (as it manifests in both a personal as well as a design-centric form) are important (Dindler and Iversen, 2014). One of the key questions then is: how can education support students in developing an awareness of empathy and provide opportunities and strategies for them to build it? This creating of a relationship or a way of relating to an *other* is not limited to the steps of a research method, but instead comes in the shape of human exchange. Although the relationships in the four designing for one Student Module Cases are nearly all artificially orchestrated (as part of a student brief), the relationships were invested in by both parties and were fostered as a means to further the design, but also as a means to further the relationship.

8.3.1 Factors that enable empathetic relationships through designing for one: a summary

Based on the work of Hess and Fila (2015), Van Rijn (2011) and Kouprie and Visser (2009), the findings began from the position that the design students were designing empathetically *because* of their engaging with a participant directly. Next to this, within the transcripts, empathy was evidenced of how students were showing emotional interest, how they were evidencing how someone else feels, and their taking the participant's perspective (Baldner and McGinley's 2014).

What these findings point to, is that there are factors that influence the forming of empathetic relationships within the approach of designing for one. Although there were also factors found within the Student Module Cases that negatively impacted the forming of empathetic relationships (factors such as language barriers, time restraints, participants who stopped their participation, etc.) the research focused on factors that evidenced and thus in turn encouraged the forming of empathy relationships. What these eleven factors become are guidelines for establishing an empathetic relationship when designing for one: designers should consider the ways in which they **communicate** with a participant, they should take into consideration how the resulting design will **integrate** into the participant's life space, designers should take into account the participant's **personal preferences**, they should make a provision for how to show that the **interaction is valued**, designers should make allowances for other **proxy participants** to be involved, they should provide methods of participation that

Figure 107: Considerations for building empathetic relationships in designing for one design participation.



enable the participant to assume the **role** of design partner, designers should consider and make attempts to **equalise the distribution of power** between the designer and participant, they should **engage the participant reciprocally**, designers should show **respect** for the participant and their lived experience, they should empower the participant to mutually selecting **locations** that have the most value for the project and provide the most safety for the exchange, designers should consider how the relationship should **evolve** post project, striving for authenticity and considering how the participant is reflected in the **outcome**. What this research proves, then, is that the relationship between designer and participant is malleable and that there are factors that aid in the formation of the empathetic relationships between them.

8.3.2 Why this matters: Moving from exploiting users to developing a shared connection

Regarding the design process, there is countless literature detailing the how-to actions of design, the process required in order to *define* the problem and process with

which to *solve* it (Buchanan 1992, p.15). Although the research carried out in this thesis does not call for negating established methods, it posits taking a second look at the relationships being formed as a result of these, and the impact these relationships have on not just the outcome (a presumed better or more appropriate design) but on the designer and their practice; their sense of self, their relationship to their discipline and their positioning within society. Battarbee sees empathy as requiring a designer to step into the world: it is “an emotional understanding, achieved precisely by leaving the design office and becoming – if briefly – immersed in the lives, environments, attitudes, experiences and dreams of the future users” (2004, p. 188). Next to this, it requires internalization of this immersion in which designers let go of their previously held views (which can often include bias and prejudices) and merge their view with that of their participant (Kouprie and Visser 2009, p. 438). This merging is design participation; the designing *with* instead of *for*.

These real-life moments are equaled in relevance by the premise of diversity and marginalisation; presenting the student designer a different version of self by imposing their relating to an *other*. From a socially engaged Croatian imam to a struggling small-town baker, from an African American industrial designer with dementia to a recently retired former schoolteacher, from a woman charged with playing the carillon in a city centre’s church tower every Wednesday and Friday to the lead volunteer for a local community garden: this collection of participants was each in their own ways disruptive. Although one could challenge identifying them as ‘extreme’, in most cases the students and the participants could not have been further from each other in terms of demographic segmentation. This is one of the roles of education; to facilitate crossover and diversification. These extremes are part of *real life*. As Battarbee et al. suggest, designers should “seek those who live on the edge...These mostly ordinary people with extreme points of view—owing to their personality, circumstances, or culture—provide a broad range of experiences and well-developed perspectives that would be harder to identify if we looked at a random sample of individuals representing a range of the target demographics” (2014, p. 4).

Although this work does not provide a how-guide for establishing relationships within the context of research, the research findings become guidelines. A list of considerations, they are factors to consider when initiating and developing participatory research in which the establishment of a designer-participant

collaboration is required. For participatory research, grounded in design practice that identifies the outcome of such a participatory relationship as empathy, these guidelines are a litmus test, enabling novice designers to reflect on factors that may hinder or facilitate a working relationship within the context of participation. Combined with the variables identified in chapter 7, educators can refer to these guidelines when developing modules that disrupt the routine design space. In terms of reflective practice, these guidelines can also be used as a means to critically engage students to think reflectively about their practice and the sort of engagement they want to have with their participant, as well as aspects of worth. Used together with existing literature regarding methodology for achieving empathy within design, these guidelines can be used to further substantiate claims of achieving empathy as well as being a reference point for assessing best practices for developing methodology to engage participants through a designing for one approach as well as within co-design and participatory activities.

8.4 What the findings mean: how variables within the designing for one process are particularly different from conventional module design and why this is useful to the student design process.

Although this investigation did not focus on the creativity of the designs themselves, the findings led to an adapted model of Gero and Kumar's space of routine design. These adaptations were established based on the findings and the idea of intentionality; the ability for a designer to purposefully extend the design space by adding variables to the design process. What the research did was identify points of difference between routine design spaces and the design space that the designing for one approach created. These findings point to the ability of design educators as well as designers to, with great intent, apply these variables as a means to thrust routine design spaces into unknown ones. First identified as points of difference by design educators participating in the Residue of Interaction workshop, the educators both highlighted the challenges in adapting educational routines, and underscored how the potential for this type of student engagement could motivate their tackling these challenges.

Some participants suggested the designing for one approach “would be difficult to do” in their home institution, with others suggesting implementing such an approach would “require a significant investment of time”. Others remarked on the level of *motivation* and *responsibility* it would require from their students. Others, however, validated the designing for one approach by claiming that, although they would encounter many challenges in order to integrate this approach into their own modules, the *rich* student experiences posed a good return on their investment. One suggested the variable of working with one participant was valuable in and of itself: “It’s important for education of design students to have this ability to work one on one ... to have the student actually go out into a context and work one on one with other individuals that are maybe challenged is very helpful for them to get out of the familiar and to become much more problem-solving on the fly”. Another framed it in terms of its potential to counteract what is regarded as academic design research:

“I really like this kind of work and I haven’t figured out – I didn’t really see a path to it that clearly until this session. I think cumulatively, it’s just a very different way of thinking. We all do design research but I think if you are in academia, it’s really easy to think that the way to do is to publish in an academic journal, peer reviewed, use professional jargon, build your work on the box of other work as a way of validating its presence. Refer back to the Canon. And this kind of undoes that in a really big way.”

Finally, another called out its plausibility: “as complicated as that might seem to be to do, I think it’s – this workshop has demonstrated to me that it’s all very plausible. It’s just a matter of whether I have the will or my faculty have the will to kind of put together”.

By focusing on difference, those present at the workshop and the lead lecturers reflecting on their other modules drew links between their own educational practice and this alternative way of working. Grouped together into themes, the differences they outlined were: the **participation** of real users, the **dissemination** of the student module, the **students's proximity to theme/topic/users**, **limitations** imposed on the module in terms of setup and practical measures, **module expectations** held by the students and **student responsibility** in terms of their role within the module, the **module setup** itself in terms of its intensity or length, the use of **design participation**

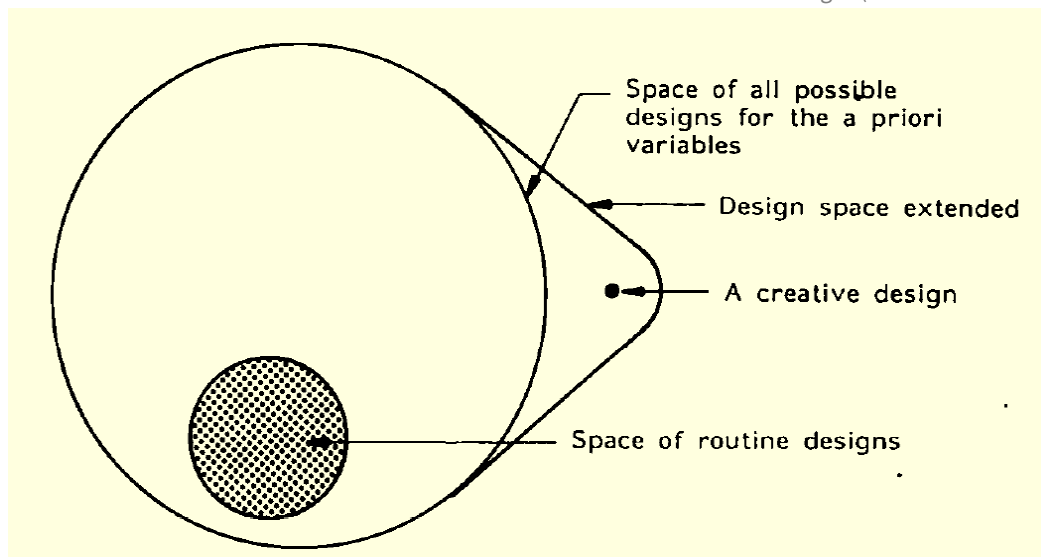
research methodology within the module, moving the **module situation** off campus, the diversity in terms of **module outcomes**, the **risk** involved by both the lecturer, the student as well as the participant and finally, the engagement of **external interest and participation** of organisations.

Because the thesis is also concerned with the educational experience of the students, these points of difference were identified again, through the coding of the over 200 pages of student interview transcripts; looking to identify how they experienced these differences. When considering the routine design space, these differences become the *variables* which disrupt the routine. These findings identified the participation with the real user and the module situation as being the two variables most elaborated on by students. Although the gathered list of designing for one *change variables* may not be an exhaustive list and welcomes additions, this initial list forms a starting point for educators and designers to disrupt their research or their educational design practice.

8.4.1 Variables that disrupt the routine and add value: a summary

Based on the theoretical framework of Gero and Kumar (1993), the findings in Chapter 7 were positioned in their work around creativity. Rooted in academic definitions surrounding creativity, such as Rhode's four dimensions of creativity: a) the person, b) the process (ideas), c) the press (environment) and d) the products (outcome)) (Rhodes 1961, p. 307) and Stein's definition identifying the important qualities of *usefulness* and *newness* (1953, p. 311), Gero and Kumar sought to identify what it was that triggered creativity and if this could be harnessed. Looking specifically at the design process, they identified one of the limitations of design; its possessing elements of routineness or even potential stagnation. In their work looking at creativity, Glück et al. proposed that creativity might actually be "different for persons doing different types of creative work" (2002, p. 56). They specifically identified the designer as constrained in his/her freedoms due in a large part by predetermined qualities concerning style, cost effectiveness, and time restrictions (2002, p. 56). This predetermined quality comes back in Gero and Kumar's ideas surrounding the routine nature of design; the expectations surrounding what a designer can do, the expectations surrounding format and medium as well as a set list of design elements

Figure 108: Space of routine and creative designs (Gero and Kumar 1993).



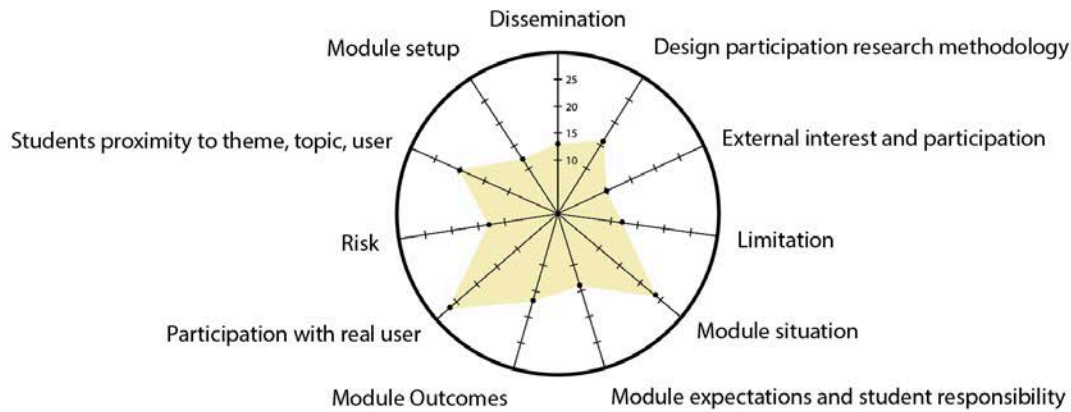
that a designer must take into consideration. Boden called creativity within these limitations as combining *familiar ideas* in *unfamiliar ways* (2007, p. 85). Likewise, in his work surrounding reflective practice, Schön likened specialised design work to *practicing practice* (2017); which is by nature repetitive precisely in order to become a specialist within a discipline.

In the context of design education, all of what makes the fuzzy qualities of the design squiggle dynamic become second-nature. Gero and Kumar identified this routine space by suggesting that the variables for executing a design “are known *a priori*” or already known to the designer (Gero and Kumar 1993, p. 220). These *familiar ideas*, they posited, required influence from unfamiliar elements external to what is already known in order to achieve novel results. By adding variables, they proposed, designers would be able to produce “solutions where feasible solutions do not exist in the current solution space” or “improve on solutions already found” (Gero and Kumar 1993, p. 219). By adding variables, the designer’s process had to take these new variables into account, thus extending the design process beyond the routine into an extended one, one in which unfamiliar ideas present themselves, creating a space for novel, useful creativity to take place.

Identified as points of difference by design educators, the above variables were further qualified by the reflections of students; there was a correlation between the designing for one change variables and the student experience. The students

Fig: 109: Mapping the Designing for One variables to the three basic perspectives in design based on Smneek's visualisation (2016) of Tomico et al.'s model of the three perspectives in design (2012).

Prevalance of reflection on designing for one variables across the 28 student interviews



particularly valued the **participation with a real user** and contrasted this against other school modules in which they did not work with real users. They discussed this in terms of motivation and intimacy and the impact this had on their process: “once you get started... and also the people you are doing it for, they like it as well, that gives of a positive vibe and it doesn’t matter how long it takes” and “It’s a bit more personal. That motivates you, for sure. Because you actually have a purpose before your eyes that you *both* want to achieve.” Next, they valued the module’s differing **situation** and suggested that the change of location took them out of their comfort zone and into places with which they were unfamiliar. This shift of location contributed to how students felt about the area, with one student suggesting that she had previously thought that the area in which they were working was “a slum”, but by being on location she saw it differently. So too the students linked situation to person, using the context as a means to explore their participant’s daily life, to not only understand them better as a human, but to understand the place in which their life takes place; having coffee in local cafes, going on walks with them in the neighbourhood or even accompanying a participant in the care facility to activities. In all, eleven change variables were identified (see Chapter 7.3) including exploring other forms of **dissemination**, changing the **student’s Proximity to theme/topic/user**, working within the **limitations**, changing the **expectations of the module** and the **responsibility of the student**, varying the **module setup**, applying **design**

participation research methodology, opening the **outcomes**, taking **risk** into consideration and **engaging external Interest**. What these findings suggest, then, is that embedded within the designing for one approach are variables that extend the design space for student designers as well as their lecturers.

8.4.2 Why this matters: orchestrating and enabling the unexpected

Even though the focus was not on creative outcome, referring back to Stein's definition of creativity, the ingredients of creativity are there. By designing for an individual, and specifically responding to their situation, abilities and needs, the result must, by nature, be useful. Because it takes place within a framework of design education that has the intent to *practice practice*, it reintegrates, as Stein suggested, *existing materials or knowledge* that result in a combination of both the knowledge surrounding the discipline but also *elements that are new* (1953). Because it takes place within an educational context, to make the distinction between Boden's (2004) personal (little-c) vs. historical (big-C) creativity seems almost irrelevant. As Davis points out, the goal of design education is to:

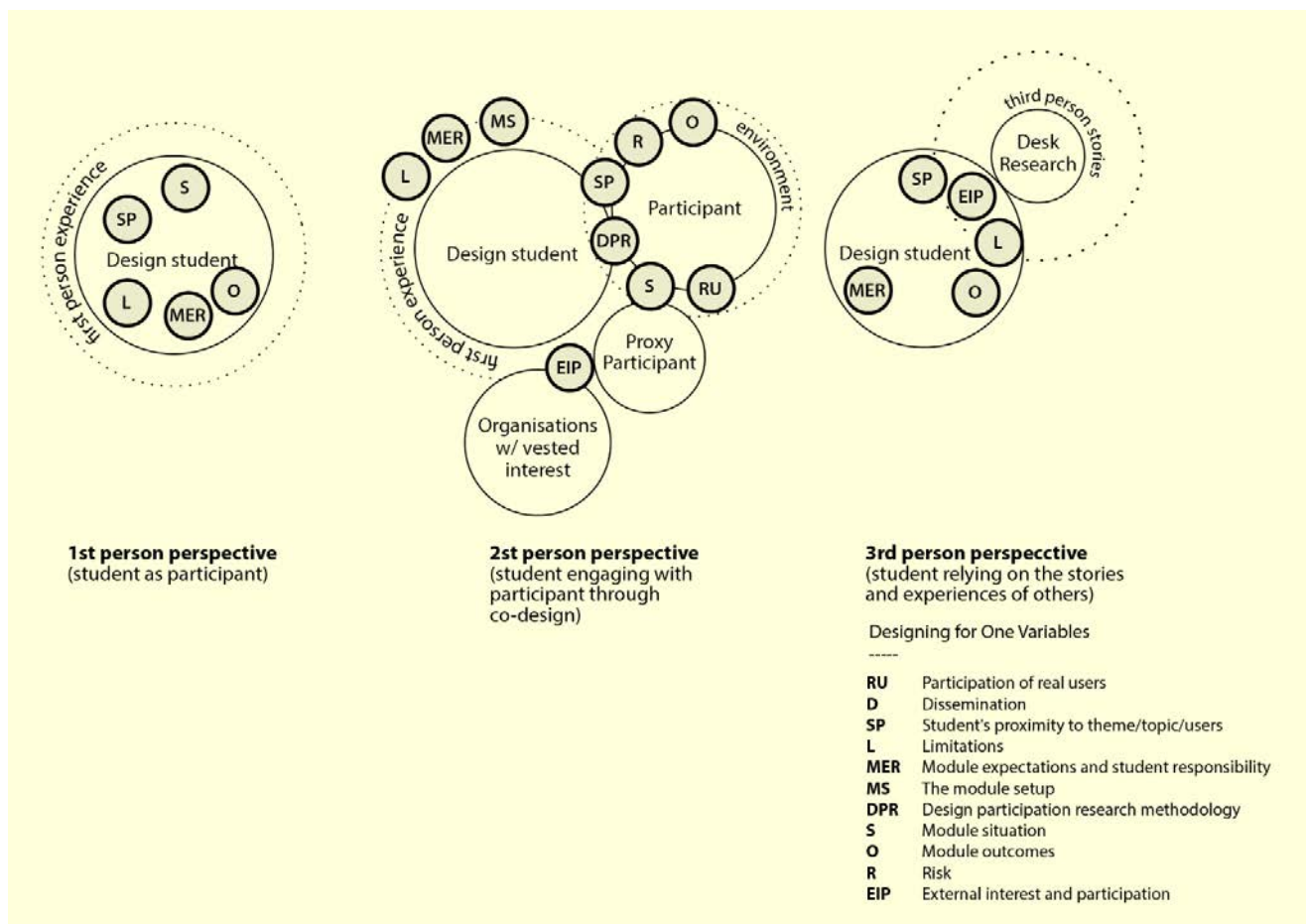
“prepare students for evolving with the field... responding to shifting paradigms for practice and solving problems that are new to their fields. More importantly, colleges and universities prepare productive citizens who shape the world we live in through the type of inquiry a design education instills” (2017, p. 1-2).

Delivering students *personally* new-to-them student experiences within design education fulfils this purpose. Lecturers may have seen similar solutions before, but the actual experience of the student remains state of the art, and personally novel. This is reflected in how the students spoke about their experiences. One contrasted it against other briefs delivered in the classroom: “You'll never be able to get the same result as when you meet that person in real life”. Another student discussed the ability to do something for the first time: “Testing things was really cool to me too. I had never done before with this any other design project”. In another reflection, the student discussed the particular value that was embedded in the outcome: “I've never made anything that's supposed to be so special to somebody and help somebody”. What these each detail, is the student standing in an extended design space; extended by location, application and participation. **By designing for one, there is an ever changing**

landscape not only for the design student, but for the lecturer or design researcher as well.

This extension can also be seen if the designing for one change variables are mapped against existing models of design practice. It is not to say that these variables do not exist within routine design space, but rather it is how they are applied in the designing for one approach that disrupts the routine. Looking at Tomico et al.'s model of the three perspectives in design as an example (see Figure 26, p. 76), in the 1st person perspective, the design research (in this case a student designer) is researching on themselves. Variables such as student proximity to theme/topic/users (SP) or situation (S) are all in relation to the student's own experience. It is self-contained and there is little need to engage with any external variables. Likewise in the 3rd person

Figure 110: Mapping the Designing for One variables to the three basic perspectives in design based on Smneek's visualisation (2016) of Tomico et al.'s model of the three perspectives in design (2012).



perspective, the design student is working with third-person information. Through desk research, the student comes into contact with facts and figures as well as narratives regarding the users and contexts. Variables such as limitation (L) or external interest and participation (EIP) may influence the design space, but there is no experiential knowledge gained by the student. Empathy in this perspective is difficult (Van Rijn et al. 2012). However, in the 2nd person perspective (here referring to the designing for one approach), the addition of the variable participation of a real user (RU) radically shifts where a student accesses information. The student must not only consider the participant, but his/her situation (S). Methodology goes beyond carrying out desk research and moves into design participation research methodology (DPR); requiring a student to manage how to engage their participant and interpret this engagement.

The findings in chapter 7 identify the factors requiring this accommodation: variables that design educators can manipulate in order to extend the design space within their educational practice, in order to foster empathy (chapter 6), in order to offer a diverse student experience (chapter 5). This expansion requires additional planning, logistical support, etc. as well as an openness for students to stumble and find their own way as well; leading, in theory, to unexpected, creative results.

8.5 The result: a new model for design participation within design education

In her book on Design Pedagogy, Davis suggests that design education must be able to respond to complex problems, not merely focus on artefact creation. Siding with Norman, it is her view that design now involves “perpetually changing relationships among countless interdependent variables, making it impossible to address one variable at a time in isolation or through a single discipline” (Davis 2017, p. 43). Next to this, the AIGA’s research into Design Futures suggests that the heightened role technology now plays demands that design (and thus education) create a new sort of normal that includes “conditions for authentic user experiences” and “requires working *with* rather than *for* people” (AIGA Design Futures 2018). Likewise, they identify “planning, facilitation, and research” as being areas which take on “greater significance as essential design skills under these conditions. Because design problems are

increasingly complex and subject to rapid change among interdependent elements, work at this level requires interdisciplinary collaboration and continuous updating” (AIGA Design Futures 2018). Although designing for one does not present a complete response to Davis’ shift, it does create a platform that responds by providing increased levels of complexity, planning, research and collaboration.

Designing for one, then, is not just another form of codesign, nor is it limited to being a participatory design method. One of the ways in which designing for one engages with participatory design is related to the complexities identified in Chapter 7. Designing for one can facilitate collaborating with marginalised groups, however workshop participants suggested that this was potentially difficult and too *risky*. It is precisely this riskiness that allows underserved communities to “disrupt research” and literature calls on design to both facilitate and identify ways that participants from “underserved communities” *can* be seated at the table and be disruptive (Erete et. al., 2018, p. 66). Engaging marginalized participants, however, is just one change variable within the whole approach, as is setting up and establishing empathetic relationships. As a collection, then, these findings identify elements and variables that can be used by design educators as well as designers who are looking to step away from *single discipline, practicing practice, routine design*; those who are looking for new ways to challenge and engage themselves as well as their students.

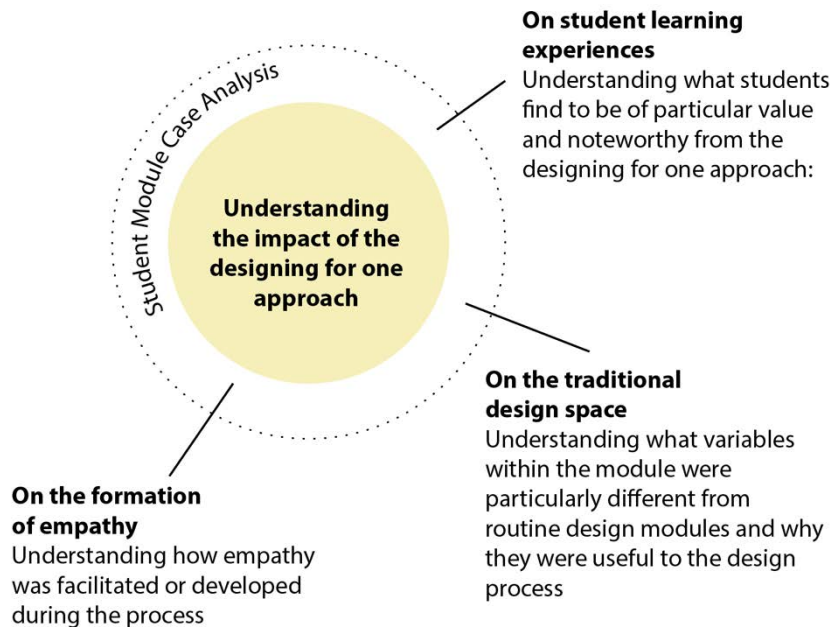
Because of these participatory leanings, the results of this research of this thesis were placed within Kvan’s sliding scale of collaboration. Kvan, who himself found designing an action that always involves *others* on some level (2000, p. 411), placed *participation with others* on a spectrum of ideological positions. The spectrum included the artist working in isolation on one end and participatory design with participants as full participants on the other (see Figure 25). Designing for one as seen in the Student Module Cases within this thesis falls within this spectrum. Because of its inherent riskiness, some students will engage with participants in ways that might closely align to participatory design, however other students will, because of various circumstances, be limited in the amount of contact they have with participants, resulting in a sliding on Kvan’s scale. Like Kvan, Lee too suggested that design is inherently social. She suggested that design participation happens across: the designers’ space (abstract and expert space), the realm of collaboration (a space between designers and people) and users/people’s (concrete or *the people’s world*) space (see Figure 27) (2006, p.9). In

designing for one, the designer (and by proxy, the lead lecturer as well) must determine the type of social positioning. By its facilitating this *realm of collaboration* between (student) designer and participant, designing for one becomes a new model of design participation within design education.

Chapter 9.

Conclusion

Figure 111: The research's aims and objectives.



9.1 Resolving the research's aims and objectives

The aim of this research was to employ design participation through the use of the designing for one approach within a diverse range of design education contexts in order to investigate the impact of designing for one on the student designer. More specifically, the resulting findings pointed to 1. understanding what students found to be valuable and noteworthy within the designing for one approach, 2. Understanding how empathy was developed during the designing for one process and 3. Understanding what variables within the designing for one process are particularly different from conventional module design and why this is useful to the student design process. This research is the first of its kind that looks specifically at designing together with individuals and the impact this has on student design processes and learning. Although drawing from value-led practices such as social design, designing for one positions itself within the gamut of design participation, allowing it to be informed by

co-design (the participant as expert) as well as participatory design (designing together with underserved people groups). The documentation and analysis of student reflections across the four Student Design Modules provide significant insights into how empathy and knowledge can be orchestrated through adaptations of the learning environment. Next to this, by establishing the research's results in relationship to existing literature and by collaborating with the design educator community within the context of the Residue of Interaction workshop (see Chapter 7), designing for one is validated as an approach. It is seen to evidence how design modules in which students are *practicing practice* could and should be adapted in order to meet the demands of not only industry but of society.

In Chapter Five, the research questions were examined from the position of student designer experiences and identified what key points they were taking away from the designing for one experience. The analysis of student reflections identified what the students valued in terms of their designing for one experiences. The four most

Figure 112: Design learning experiences that can be initiated through designing for one.



Designing for one student learning experiences

Process

Process experiences allow students to come into an understanding of how to execute specific research research methods and how to analyse the results. It also allows for students to create a better appreciation or understanding processes related to their design discipline.

Learning design skills

Design skills experiences focus on the range of experiences that lead to learning about designing and a student's discipline. These experiences relate s to design-related skills and/or design research and how the research relates to the project's development.

- design research methods
- transferable design
- importance of design research
- real vs. fictional users
- design thinking
- design functionality
- usability
- understanding users
- ...

Learning non-design (soft) skills

Learning non-design (soft) skills experiences emphasise the use of and reliance on what students identify as being 'non-design skills' such as the idea of building trust, drawing on their social skills or self reliance. Next to this, it also focuses on experiences that lead to feelings; a students ability to overcoming fears of stepping out of a student's comfort zone or tackling design challenges.

- time management
- setting boundaries
- confronting prejudice
- patience
- becoming a good listener
- compassion
- self-determination
- working outside of comfort zones
- ...

Interaction

Interaction experiences enable students to engage with participants and form relationships. It includes experience in which students see the added value of the participant's input; their satisfaction and enthusiasm. Next to this, these experiences add 'authentic' voices and what this 'realness' means in terms of a students shifting perspectives or how it is related to their discipline.

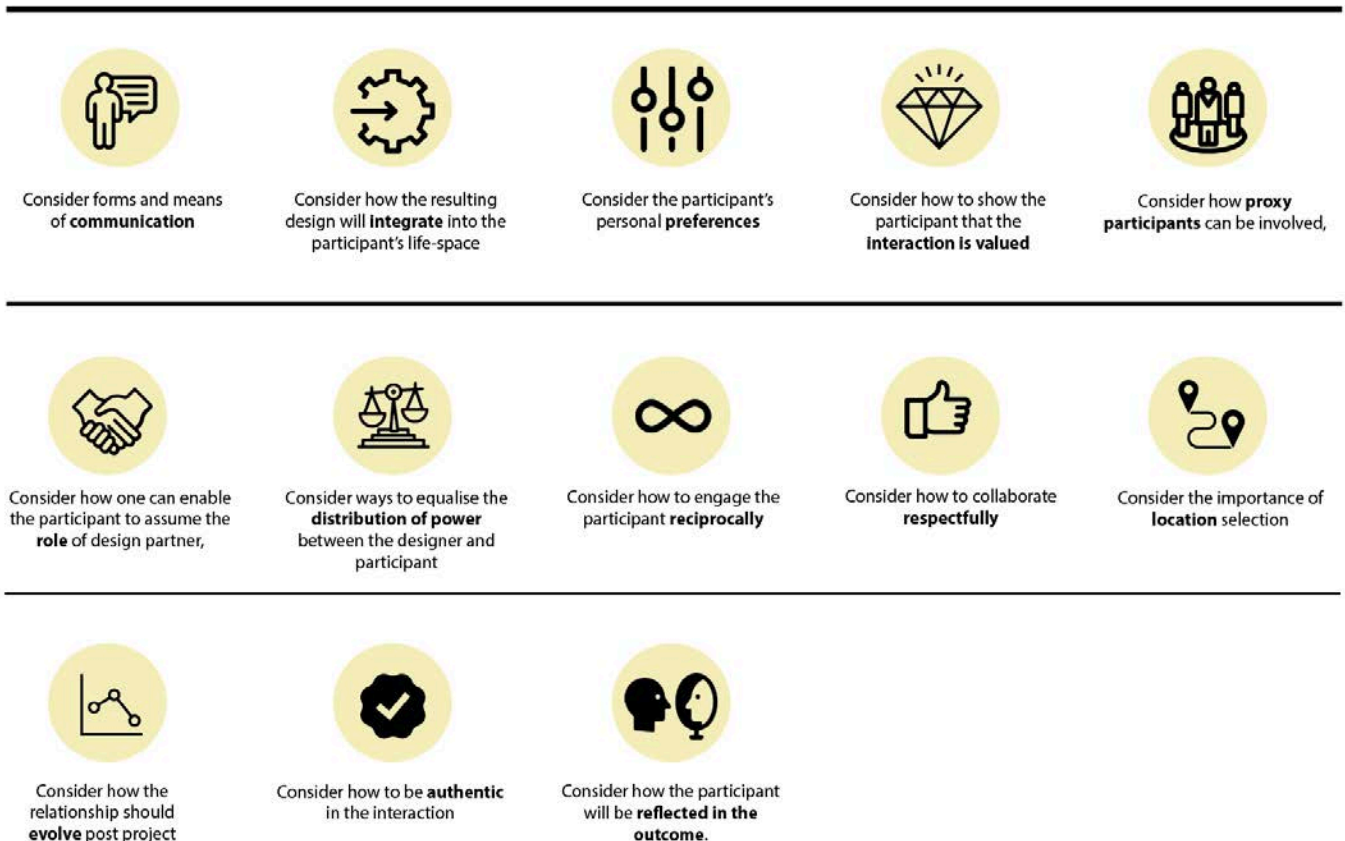
prevalent being: designing for one can cause students to become more keenly aware of the **design process**; enabling students to see their process in terms of moving from one phase to the next (from gathering insights to decision making to testing...) Designing for one can facilitate **learning through experience**; from actual 'design skills' based on situations in which students need to acquire new skills outside their own discipline because the interaction necessitates it to their applying theory (methods and practices) in real life situations and contexts. Designing for one can lead to students **acquiring and using soft-skills**; from patience to respectful communication to time management. It can foster student awareness regarding the **value of participation** by its requiring intimate understanding of participant needs and abilities. Thus, as an approach, designing for one can further a project's appropriateness or its usefulness and this 'realness' can shift student perspectives in terms of their bias and previous held beliefs.

In Chapter Six the research question was examined from the position of student-participant relationships; specifically looking at how this form of relating can initiate empathy in the design student. In the reviewed literature, interaction and participation were identified to be the causal source of empathy but offered little or no further explanation as to how these empathy-causing-actions worked in practice. The analysis of student reflections identified that designing for one provides a relationship wherein interaction and participation can result in empathy. Next to this, it identified 13 factors that can influence the empathetic relationship between the designer and participant. Although they were initially identified as factors, seen to be recommendations or considerations, they become a tool: *Guidelines for building empathetic relationships* (see Figure 113). These guidelines included *Consider forms and means of **communication*** (regarding language, preferred communication form identified by the participant, openness, taking time to explain (non-)designer terms, and searching for alternatives if communication is difficult), *Consider how the resulting design will **integrate** into the participant's life-* (considering how the project will be supported, looking for funding to extend the concept, making sure that the design is built upon existing routines...), *Consider the participant's preferences* (ensure that a participant's personal preferences have been taken into account as manifested in the design, the



Figure 113: Guidelines for building empathetic relationships in designing for one design participation.

Guidelines for building empathetic relationships in design participation



design responds to a person's particular needs and tools he/she has available), *Consider how to show the participant that the **interaction is valued*** (try to make moments of participation enjoyable by designer and participant and that this is communicated to others, a significant amount of time is invested by both parties, both parties show gratitude for the relationships...), *Consider how **proxy participants** can be involved* (involve not only the participant, but friends, family and community to supplement the participant's story and context) among others (see Chapter Six). What these identified factors/guidelines suggest is that design participation should not merely focus on methodology (how to orchestrate the moments of collaboration) but on the relating between designer and participant.

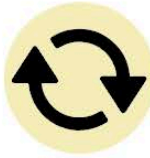


Figure 114: Designing for one change variables for use within design education to extend the design space beyond *routine* design.

Designing for one change variables

Include the **participation** of real users

Provide students the opportunity to engage directly with real users over a duration of time.

Change the **module situation**

Teach in the spaces and places which offer added insights into the participant's daily lives or the situation or context in which students are working.

Change the student's **proximity** to theme/topic/users

Search for topics, contexts and projects that are relevant to your community and which challenge a student's existing knowledge about a subject.

Open the **module outcomes**

Allow for a brief's direction to define the outcomes instead of using predefined ones that may limit the scope or medium of a student's project.

Shift **module expectations** and **student responsibility**

Create opportunities that require students to take more responsibility that makes them reflect on the relationship between the brief and their discipline.

Build **risk** into the module

Consider ways to both handle risk (ethical issues, new partnerships, etc.). Embed risk into the module by creating the space for a student to fail, reflect and succeed.

Apply design **participation research methodology**

Adapt and use co-design methods for the specific situation of the participants and context of the brief instead of teaching about methodology.

Explore other forms of **dissemination**

Document the student's design process and reflect on how to best share the results with other design educators.

Work within **limitations**

If a design educational institution imposes restrictions which cannot be adapted to the needs of a project, explore ways to make it work within them. Provide situations for students to work within the limitations of a participant and not a brief.

Vary the **module setup**

Explore how the format and intensity for a module impacts student experience: such as workshop weeks, day-long sessions or year long, independent coursework.

Engage **external interest and participation**

Begin from needs that ensure that the results of the brief or the module will be not only important to individuals but to external parties within the community as well.

Change variables are ranked in order of their prevalence in the 28 student interviews.

In Chapter Seven the research question was examined through the lens of design educators in order to further examine the student experience. It looked specifically at how, as an approach, designing for one included variables in its design process that contributed to the difference the students experienced. These differences resulted in design processes in which students were confronted with the unexpected, a sort of otherness; differences which were in a sense, *orchestrated* by educators to instigate this unexpectedness within in their classrooms. Through the Residue of Interaction workshop, design educators analysed their own curricula and modules against the designing for one approach (as seen through the Student Module Cases) and identified points of difference. What was the designing for one approach doing that they weren't doing in their own course modules? With the help of 24 design education leaders, eleven points of difference were identified and analysed in relationship to the student experience. These categorised variables were then used to code the student reflections, matching student experience to variable with the three most valued to by students being: the **participation of real users**, varying the **module setup** and changing the **student's proximity to theme/topic/users**.

Students overwhelmingly found the participation of real users as having added the most value. Not only did they suggest, in some cases, that it was the first time they had ever worked with a real user (a mark of difference), but they framed the participant's value in terms of their participation motivating them, challenging them, allowing them to create something of real value. Value as identified by the student is part and parcel in each of these designing for one change variables; suggesting that the student's experience, what they learned as well as the things they created, were inherently shaped by them. Looking at contrasting versions of these variables also highlights the potential issues that can arise with maintaining routine design educational practice: there is little variation of the module setup or timeframe as this remains over the course of a student's university career, participatory methodology may be taught but not necessarily practiced with authentic users, outcomes for briefs are predefined and leave little room for exploration... What has been suggested through these findings, then, is that embedded within the designing for one approach are variables that are not only relevant within the context of designing for one as a means to extend the design space for student designers as well as their lecturers, but perhaps even individually they are able to extend the design space and disrupt routine educational practice. As

variables it is not suggested that they are finite, nor do they offer a direct suggestion for implementation or call to action. Instead, they are starting points for designers and educators to reflect on how their own modules can be adapted, how they are relating theory to practice in their own departments, what sort of experiences they are offering their students and the closed-loop nature of design education.

9.2 The research's contribution

The contribution of this thesis goes beyond the schematics diagrams presented in this chapter. In terms of how the research has contributed to the academic literature surrounding empathic design and empathetic design practices: it extends Kouprie and Visser's (2009) work on the development of empathy in the designer, it furthers the premise established by Van Rijn et al. (2011), Tomico et al. (2012) and Battarbee et al. (2014) who suggest that immersion on behalf of the designer and direct contact with participants is a superior (enriched) means of working within a participatory framework, it challenges the work of Hess and Filler (2016) and IDEO (2015) whose work focusses specifically on empathy acquisition and its relationship to co-design methodology and it supports the work of Smeenk (2019), who places designers in the vital role of participant advocates, suggesting that, post experience, designers possess the potential to handover their empathetic experience to others through empathic object or experiences.

Co-design and participatory design researchers and specifically educators integrating participation into their academic practice will benefit from this research by building upon its results and referring to it as a resource. Designers and educators can use the list of variables (Chapter 7) to adapt to their own designing for one context and tailor to their own interests, student population and specifically cater to their own community's needs. Next to this, the change variables can be mapped against the sort of experiences educators would like to engage their students in (Chapter 5). When involving participants within the process, the factors regarding empathetic relationships between student designers and their participants can be referred to as a guideline for instigating and supporting these constructed relationships (Chapter 6).

Designing for one, then, is both disruptive to the status quo as well as an approach that can offer specific, intended results. Looking specifically at the potential

for unknowns that designing for one can cause within an educational contexts:

Shifting the learning space, for example, from design studio to community center opens up new influences and encounters. **Placing a student in direct proximity to a participant**, for example, can result in exchange between the two; the student must work with the non-fiction, or rather if they ignore the design requirements of their participant, they do so consciously (thus becoming a political actor). Finally in the example of **limiting a student's design outcome to the needs/abilities, etc. of one person**; this holds them accountable, they see their discipline in a new light, or even understand their role in generating and communicating meaning for the first time. These designing for one change variables facilitate the students developing empathetic relationships and rich design experiences. In terms of knowledge acquisition, these **designing for one change variables enable the acquisition of new types of knowledge experiences** (Chapter 5); **knowledge that would have otherwise been difficult for student to gain in a traditional studio setting.**

Designing for one is an approach that, when these variables are applied to existing curricula, **opens the design process to design participation** (individuals) and in doing so **offers students rich, meaningful, empathetic relationships** that ready them for a future of working together with people; through collaboration with others, in problem spaces that are undefined, with restrictions imposed by real contexts and abilities instead of generalisations. Working from a baseline of wanting to disrupt their current way of working, this research offers educators the ingredients (variables) that can be used in order to motivate and substantiate their intentions with colleagues, heads of schools, industrial partners and deans as well as used as the ingredients to define their own experience-based coursework .

What makes this valuable is that orchestrated experiences align with the skills that literature suggests is required for future designers. Designing for one places humans at the “center of the design process”, which Slavin suggests should be mandatory not only for future designers, but for designers creating now. (2016). The student experiences move students beyond simply reacting to the world, towards designers who are “actively engaged in shaping the world around them” (Mendoza and Matyok 2013, p. 215). Through the designing for one approach, the student experiences result in an understanding of communication, of understanding their craft, not in terms of just organising information or logo creation, but rather as a powerful mechanism of

social communication that goes beyond the aesthetic expectations of the medium (Resnick 2016). The experiences move students away from message and product-centered design towards research-based inquiry and decision making; increasing the importance of research that is “not just information retrieval at the beginning of the design process but ongoing feedback and evaluation of the consequences of design action” (AIGA Designer 2025 2017). Instead of responding to briefs which change little from year to year, designing for one is dynamic and engages students in a way that they can develop their own “appetite for enquiry” (Macdonald and MacLeod 2018, p. 215). With its focus on interaction, engagement and participation, and supported by purposeful, guided reflections, these experiences can move from being tacit happenings to explicit learning that calls on a “student's ability to adapt, innovate, empathize, persevere, and succeed through possible failures, solving problems through design thinking and critical analysis” (Kelly 2019, p.44). Although this work does not place particular importance on a specific type of experience, but rather considers each type of student experience as valid and full of further potential, it serves to further validate types of experience-based learning (EBL) and problem-based learning (PBL) and calls for their further use and exploration within design education.

What this research achieves, then, is articulating designing for one as a unique approach to design participation within design education. By stepping away from the defined construct of participatory and co-design practices (empowerment of participant, the assumed betterment of end design, a focus on methodology...), designing for one becomes a stand-alone educational approach. It distinctively returns research methodology to its results-orientated function and allows relationship-building to take precedence; resulting in an educational approach that offers students rich experiences with individual participants in which empathy (and thus empathetic designs) emerge from the interaction instead of a particular tool or method. It offers design educators looking to move away from routine design, those looking for new ways to challenge and engage their students, a way forward. It provides them with resources which they can adapt to their own educational context, their own interests, their own student population and specifically cater to their own community's needs.

9.3 The research's limitations

This research represents a promising addition to design educational practice, however there are restraints. As open as the model is, each Student Module Case study is a one-off experiment composed of different student levels, different disciplines and different lengths of time. This may mean that the results are not transferable to other course modules, or it might mean that the findings are not representative. Looking specifically at the level of experience of the student, using asters students might have delivered different results in the findings. Next to this, all of the cases took place under the supervision and support of the design researcher, who had extensive prior knowledge and experience in designing for one; thus this influenced the way in which the module operated and how the students were coached. This way of working inevitably also, then, influenced the student's outcomes as well as their experience, as did working with the specific lecturers involved and the type of relationship or pre-existing teaching style that each individual lecturer already had with their students.

Although many students identified the idea of *authenticity* and 'real-life' participation as being important, neither can be seen to be true. As with literature discussing design ethnography, or even Miller's Third Space, the overlap between student experience and participant experience is compromised. Although students may meet a person in the participant's living room, it does not mean that this living room is authentic. In this way, the student designer's participation influences the collaboration. Although steps can be made to alleviate this problem (moving to more sterile locations, using tools such as cultural probes, or camera journals, etc.) solace can be found in the project's intention: to bring students closer to an individual user and his/her context, closer to real life use scenarios, closer to an understanding of the relevance of user-designer interaction.

As with this concern about the authenticity of the participant and his/ her life world, so too is the limitation of what a student can transfer from this experience to another. They may transfer the knowledge of the importance of research and the value of a particular method, but it should not be suggested that by designing for *one* the results are appropriate for *many*. As with other research in the area of working with people with dementia or with participants within co-design in particular, without

enough communication, designing for one can lead to designs that are based on designer assumptions or actions which happened per chance.

Even within the designing for one Student Module Cases themselves, there were factors that influenced the results. Participants in Ghent - Digital Design were paid to participate, whereas for the others (including all of the cases before this research started) this was done on a volunteer basis. One could certainly argue that this well-intentioned gesture, when working with such a diverse range of individuals, had ramifications on the findings and could have compromised the findings attached to that particular case. In the case of dementia, the fact that the head lecturer's mother was one of the participants also influenced this student's project as well as the lecturer's motivation, enthusiasm, critique, etc. Next to this, the class size of both UMSL and Genk influenced the students' projects; with this offering students more coaching time and more lengthy critique.

As discussed in the introduction, the original ideas for this research also included looking at the outcomes and if they were 'better' through the designing for one approach. However, as the project took shape, it was clear that this was outside of the scope of the research. The experiences and outcomes of the students were so diverse that trying to achieve parity between the outcomes and the student experience would have proven difficult. So too, interviewing the experience of the participant could have added a lot of value, especially in terms of further articulating the qualities of an empathetic relationship, but this too existed on the fringes of the focus of the research.

9.4 Areas for future research

Regarding student experiences, suggested potential follow on research in this area could be attaching further value to the catalogue of experiences with specific focus on one particular area (ie. the acquisition of soft-skills) and seeing how module structure and participant engagement could better support in-depth student learning, as well as identifying which variables lead to this particular experience. Regarding empathetic relationships, and Lindsay's suggestion that there is a "lack of techniques to scaffold empathetic design engagements" (2012, p.150) the thick description of Evelien working with Virginia highlights the reason for this lack of techniques: the time involved, the emotional toll, the blurring of borders between researcher, designer and volunteer or

friend. This type of experience-based education and/or design process begs the question of scalability. Thus, what factors of empathetic relationships transfer well to groups and how are relationships defined within a group setting? What are the minimum requirements for building an empathetic relationships? What are the ethical implications of artificial relationship building? And how might one retain or achieve authenticity within these constructed relationships⁴⁴, etc.

If designing for one is seen to be a template or road-map for disrupting educational practice (off-site, marginalised user group, designing for one, open-ended design brief) then additional research needs to be done into what contexts or disciplines could best utilise this approach. The Residue of Interaction workshop touched on this briefly, suggesting its value to education, but this was not explored fully. Similar contexts were used in the popular designing for one television programmes which have aired during the course of this research (see the BBC's *The Big Life Fix*⁴⁵ and the Flemish version *Team Scheire*⁴⁶). In discussing her experience, one of the designers from *The Big Life Fix*, Steel, offered a very similar experience to that of the students in the Student Module Cases. Working with a man who had had a stroke who had very little ability to move or to communicate she said:

“Getting to know Graham so well and spending so much time with him created a connection between us that went further than the traditional designer/user relationship. This behaviour is a lot closer to that of a friend or family member. I feel we were better able to empathise because of this and therefore better able to create a more meaningful solution” (2018).

This idea of *going further* and *creating something meaningful* raises the question of further use. Besides its making good television, the potential for professional design(ers) to draw on the designing for one approach has been validated. Thus, how designing for one can be utilised within industry should be further explored; how this hyper-focused form of co-design and these accompanying variables of change could, as mentioned above, be scaled or transferred. How industry could use it to make

⁴⁴ There is ongoing work in this area in terms of Participatory Design and the idea of reciprocity.

⁴⁵ <https://www.bbc.co.uk/programmes/b084ztrw>

⁴⁶ <https://www.canvas.be/team-scheire>

services, tools and objects that resonate on a deeper level with not only individual users, but for an even wider group.

9.5 In closing

This research was an investigation into how the designing for one approach enriches the student design experiences. The term enrichment refers to adding value or quality, to enhance or improve; thus the intention was to see how designing for one could enhance or improve already established design educational practice. What has been revealed through these findings is that the students highly valued the designing for one experience. Although they may have found the module challenging and many students suggested that the module was different to what they were expecting based on their experience of other modules, they valued the impact the designing for one participation had on their design practice, as well as what it afforded them in terms of learning both design skills as well as soft-skills. Above all, they valued the designing for one interaction with their participant; the influence of the participant's abilities, interests, needs and life-world; their participant's satisfaction, criticality and enthusiasm for their project. What this reveals, then, is that the designing for one approach, as used within the context of design education, enriches the student learning process.

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Appendix

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Example Designing for One Course Outline (UMSL)

<i>Syllabus</i>	*	DESIGN FOR DEMENTIA	UMSL <i>summer</i> 2017	m-th 10:00-12:30	* JEN MCKNIGHT ph 314-516-6965 mcknightj@umsl.edu * office hours: mon, wed 12:30-1:00
course description		Design for Dementia is a cause-based design class pairing UMSL designers with dementia patients one-on-one at a local retirement center (Brooking Park) to create human-centered design solutions for daily challenges. Students will be paired with a patient or caregivers, conduct interviews, interact, identify problems, and propose and design life-improving solutions for these patients.			
course objective		Emphasis on applying design principles to human-centered design problems.			
disclaimer		This is a junior level class. That means, you are responsible for knowing Photoshop and Illustrator, including good craft and appropriate resolution.			
project assignments		In the course of 4 WEEKS!!! we will complete 1-2 assignments where you will apply and finesse the investigations we are making in class into design solutions. Depending on the class, assignments may be substituted or altered.			
organization/class binder		Plan on keeping organized and up-to-date documentation of your observations throughout this course. As we cover information in class, I recommend that you take notes regularly to assist you in retaining important information that you'll need to know in the future. I will provide handouts with useful information that should be kept and filed in your binder.			
layout stages/critiques		Coming to class on time and prepared, with all the required materials listed on the schedule is ESSENTIAL to passing this course. So is working effectively in class. Projects must be ready for presentation at the start of the class/critique session. Improper presentation will result in a reduced grade. Failure to meet a project deadline will result in an F grade on the project.			
between class/lab time		<p>You will be graded on your visual and problem-solving investigations and participation in class. Learning to discuss work and offer feedback to your classmates is a critical skill for the graphic design profession, and is expected throughout this course.</p> <p>Expect to spend 12 hours minimum each week outside of class to complete assignments. This includes time collecting materials, doing research, developing sketches and solutions, working in the computer lab or on your own computer. We are trying to make meaningful design on a very short timeline. Please honor this class with time to complete assignments/ If your schedule will not allow you to devote significant time to this class, you should reconsider taking this course.</p>			
attendance		Classes meet Monday through Thursday from July 10 through August 3. Class begins at 10:00 am and ends at 12:30. All classes, unless otherwise specified, take place at Brooking Park Each student is expected to be present and ready to work at the start of each class, arrive to class on time, and stay for the entire class. This class is as great as each of you chooses to make it!			
tardiness		You will be responsible for signing in at the beginning of each class. The sign-in sheet will be taken up after the first 15 minutes of class. If you have not signed the sheet, you will be considered absent. If you arrive after the first 15 minutes of			

class, you should mark yourself tardy. Three tardies equal an absence.

You are allowed TWO free unexcused absences. **THREE** unexcused absences will drop your grade by a letter grade. Four unexcused absences will drop your grade by two letter grades. *****Incomplete homework counts as a tardy.**

absences Absences will be excused **only** in the case of your own illness or a death in the family, and then only if you provide appropriate proof (note from doctor, etc.) Absences due to illness of a family member will not be considered excused. If you cannot attend class, you must notify me before class and pick up any assignments that will be given during the class you miss. On a personal note, the bonds you make in this class are so important to those you will touch with this project. Please realize you are wanted and needed in class by more than just your classmates and me.

Five absences, (regardless of excused or unexcused) will result in course failure. Unexcused absences at critiques and exams will result in a failing grade on that assignment. If you must miss class for any reason, it is up to you to contact your classmates for homework assigned while you are absent.

grading **A** Memorable. The work exhibits original, well-resolved design solutions, excellent craftsmanship and is presented in an articulate manner. This work can be included in your portfolio. Consistent class attendance and participation are required to achieve this grade level.

B Competent. The work is very well done but is not of the highest quality in one or more areas: originality, design quality, craftsmanship or presentation. With modifications or reworking, this work could become part of your portfolio. Consistent class attendance and participation are required to achieve this grade level.

C Average. The work only adequately meets expectations in design, craftsmanship and presentation. A grade of C indicates that the work is not original in nature, but meets the parameters of the project. Projects are not portfolio level work.

D Below Average. The work fails to meet minimum quality requirements (good ideas, creativity, execution, presentation are key components). In a course for your major, D is not a passing grade.

F Failure to satisfy the basic requirements of the course.

Your final grade will be composed of grades on projects, assignments, class participation and amount of work done outside of class. Grading will also be based on professional attitude, ability to interact and contribute to other students, research gathering, regular and prompt attendance at classes, participation in discussions and critiques, turning in of projects at due dates.

On each project, the components listed below make up your grade:

25% originality

50% design quality

25% topic specific criteria

Other elements that factor into the design quality of a project are notated on your sheet to give you benchmarks: examples are development/process, formal aspects, conceptual aspects, growth perception, homework, craftsmanship, final presentation

and class participation.

RECOMMENDED:

textbooks

Have the following available for class:

course materials

- pens • Drawing or mechanical pencils
- sketch pad (where pages tear out, preferably 8 1/2" by 11" for insertion into sheets
- one pad of tracing paper, or layout paper where you can see underneath (I like: Bienfang Designer Series, graphics 360, translucent marker paper 14 x 17, 50 sheets, available at Dick Blick/Office Depot)
- Sharpie Fine Point Permanent Black marker (no. 37000)
- laptops / reliable file storage

lab fees

This class requires a lab fee of roughly \$25 per credit hour. The lab fees assessed in studio classes are used to provide both lecture and preparation materials, teaching supplies, software maintenance, inkjet supplies, model fees, and to provide honoraria for guest artists.

digital files

The University of Missouri-St. Louis and the Department of Art and Art History are not responsible for any loss of data. We encourage you to ROUTINELY BACK UP YOUR FILES.

course withdrawal

Please advise me before you withdraw from this class, so that I have an opportunity to assess what I can do as an instructor to assist you in meeting your objectives. Please be attentive to withdrawal deadlines if you find no alternative to this. Missing a deadline can affect your GPA.

academic honesty

Plagiarism is the use of another person's words and or ideas without crediting that person. Plagiarism and cheating will not be tolerated and may lead to failure on an assignment, in the class, and dismissal from the university.

general information

Professional behavior will be expected. This includes being on time, keeping common areas clean, and not leaving your materials in the classrooms. This also means helping to promote a classroom atmosphere, with both your words and deeds, which will help everyone make better projects. Please, turn off cell phones and don't text during class. I am committed to creating a class environment characterized by respect for your work and class contributions. I expect you to make a similar commitment to yourself and your classmates.

class experience

These guidelines are important framework for your growth and overall success of the class. I look forward to working with you. It is my goal to provide a class that is both enjoyable and promotes many learning opportunities. The rest is up to you!

Student Module Cases

Ethical Code of Conduct/Guidelines

Ethical Guidelines for Module Participation

Lecturer(s):

Inge Ferwerda

Contact information:

inge.ferwerda@luca-arts.be

Department:

Graphic Design: Advertising
Pathway

University Address:

LUCA School of Arts
Alexianenplein 1&2, 9000 Gent

Module Name and/or Number:

Semester Assignment 11

Date of Module:

May 2017-June 2017

Researcher:

Andrea Wilkinson
Guest Professor, LUCA School of
Arts, Campus C-Mine, Genk,
Belgium

Contact Information:

andrea.wilkinson@luca-arts.be

As part of research carried out within the Inter-Actions Group, LUCA School of Arts, Genk, Belgium a course was selected for research participation.

Following the ethical guidelines of the home institution (the LUCA School of Arts, Campus Genk) regarding student participation, the following ethical guidelines for module participation were considered and put into place.

1. The researcher: Andrea Wilkinson provided information that was supplemental to existing course framework. This included the following:
 - a. presentation into the research being carried out,
 - b. why the investigation is taking place,
 - c. the benefits of the research as well as the benefits of student participation,
 - d. how the data generated during the research was stored,
 - e. how the results of the research will be disseminated.
2. The students were informed that their participation had no impact on their module grades. Observations, reflections and interviews which took place during the course of the module and made between the researcher and the student and/or lead lecturer did not contribute to nor did they impact the student's module grade.
3. The researcher provided ongoing coaching sessions throughout the module which supplemented the coursework provided.
4. Students were informed that their participation was voluntary and that they did not have to participate in post-course interviews.

5. Students were informed that documentation of the course module in the form of photos, film or documentation of their assignment was pre-granted for use in promotion material and research publications through their signing their LUCA School of Arts student contract (see xxx, p. xxx).
6. All text-based research that was intending to be published was agreed to be anonymized.
7. Students were informed that the original generated data (audio files and transcripts) would be destroyed once the analysis was complete and the research findings were published.
8. Students were made aware that they must provide verbal consent during the interview process if they wish to participate.

The above guidelines were followed.

Signature.

date 25 - 4 - 2020

Ethical Guidelines for Module Participation

Lecturer(s):
Jennifer McKnight

Contact information:
mcknightj@umsl.edu

Department:
Graphic Design

University Address:
LUCA School of Arts
Alexianenplein 1&2, 9000 Gent

Module Name and/or Number:
Design for Dementia
(Summer)

Date of Module:
July 2017-August 2017

Researcher:
Andrea Wilkinson
Guest Professor, LUCA
School of Arts, Campus C-
Mine, Genk, Belgium

Contact Information:
andrea.wilkinson@luca-arts.be

As part of research carried out within the Inter-Actions Group, LUCA School of Arts, Genk, Belgium a course was selected for research participation.

Following the ethical guidelines of the home institution (the LUCA School of Arts, Campus Genk) regarding student participation, the following ethical guidelines for module participation were considered and put into place.

1. The researcher: Andrea Wilkinson provided information that was supplemental to existing course framework. This included the following:
 - a. presentation into the research being carried out,
 - b. why the investigation is taking place,
 - c. the benefits of the research as well as the benefits of student participation,
 - d. how the data generated during the research was stored,
 - e. how the results of the research will be disseminated.
2. The students were informed that their participation had no impact on their module grades. Observations, reflections and interviews which took place during the course of the module and made between the researcher and the student and/or lead lecturer did not contribute to nor did they impact the student's module grade.

3. The researcher provided ongoing coaching sessions throughout the module which supplemented the coursework provided.
4. Students were informed that their participation was voluntary and that they did not have to participate in post-course interviews.
5. Students were informed that documentation of the course module in the form of photos, film or documentation of their assignment was pre-granted for use in promotion material and research publications through their signing their LUCA School of Arts student contract (see xxx, p. xxx).
6. All text-based research that was intending to be published was agreed to be anonymized.
7. Students were informed that the original generated data (audio files and transcripts) would be destroyed once the analysis was complete and the research findings were published.
8. Students were made aware that they must provide verbal consent during the interview process if they wish to participate.

The above guidelines were followed.


Signature.

4 / 26 / 2020
date

Ethical Guidelines for Module Participation

Lecturer(s): Ingwio D'Hespeel	Contact information: ingwio.dhespeel@luca-arts.be
Department: Graphic Design: Digital Pathway	University Address: LUCA School of Arts Alexianenplein 1&2, 9000 Gent
Module Name and/or Number: Digital Design Studio	Date of Module: September 2016-January 2017
Researcher: Andrea Wilkinson Guest Professor, LUCA School of Arts, Campus C-Mine, Genk, Belgium	Contact Information: andrea.wilkinson@luca-arts.be

As part of research carried out within the Inter-Actions Group, LUCA School of Arts, Genk, Belgium a course was selected for research participation.

Following the ethical guidelines of the home institution (the LUCA School of Arts, Campus Genk) regarding student participation, the following ethical guidelines for module participation were considered and put into place.

1. The researcher: Andrea Wilkinson provided information that was supplemental to existing course framework. This included the following:
 - a. presentation into the research being carried out,
 - b. why the investigation is taking place,
 - c. the benefits of the research as well as the benefits of student participation,
 - d. how the data generated during the research was stored,
 - e. how the results of the research will be disseminated.
2. The students were informed that their participation had no impact on their module grades. Observations, reflections and interviews which took place during the course of the module and made between the researcher and the student and/or lead lecturer did not contribute to nor did they impact the student's module grade.
3. The researcher provided ongoing coaching sessions throughout the module which supplemented the coursework provided.
4. Students were informed that their participation was voluntary and that they did not have to participate in post-course interviews.

5. Students were informed that documentation of the course module in the form of photos, film or documentation of their assignment was pre-granted for use in promotion material and research publications through their signing their LUCA School of Arts student contract (see xxx, p. xxx).
6. All text-based research that was intending to be published was agreed to be anonymized.
7. Students were informed that the original generated data (audio files and transcripts) would be destroyed once the analysis was complete and the research findings were published.
8. Students were made aware that they must provide verbal consent during the interview process if they wish to participate.

The above guidelines were followed.

Signature.

Date

27.02.2020



Ethical Guidelines for Module Participation

Lecturer(s): Niels Hendriks	Contact information: niels.hendriks@luca-arts.be
Department: Communication, Media Design (CMD)/Interaction Design	University Address: LUCA School of Arts, C-Mine 5, 3600 Genk, Belgium
Module Name and/or Number: Designing the Personal: M3CMDG	Date of Module: September 2017 – November 2017
Researcher: Andrea Wilkinson Guest Professor, LUCA School of Arts, Campus C-Mine, Genk, Belgium	Contact Information: andrea.wilkinson@luca-arts.be

As part of research carried out within the Inter-Actions Group, LUCA School of Arts, Genk, Belgium a course was selected for research participation.

Following the ethical guidelines of the home institution (the LUCA School of Arts, Campus Genk) regarding student participation, the following ethical guidelines for module participation were considered and put into place.

1. The researcher: Andrea Wilkinson provided information that was supplemental to existing course framework. This included the following:
 - a. presentation into the research being carried out,
 - b. why the investigation is taking place,
 - c. the benefits of the research as well as the benefits of student participation,
 - d. how the data generated during the research was stored,
 - e. how the results of the research will be disseminated.
2. The students were informed that their participation had no impact on their module grades. Observations, reflections and interviews which took place during the course of the module and made between the researcher and the student and/or lead lecturer did not contribute to nor did they impact the student's module grade.
3. The researcher provided ongoing coaching sessions throughout the module which supplemented the coursework provided.
4. Students were informed that their participation was voluntary and that they did not have to participate in post-course interviews.

5. Students were informed that documentation of the course module in the form of photos, film or documentation of their assignment was pre-granted for use in promotion material and research publications through their signing their LUCA School of Arts student contract (see xxx, p. xxx).
6. All text-based research that was intending to be published was agreed to be anonymized.
7. Students were informed that the original generated data (audio files and transcripts) would be destroyed once the analysis was complete and the research findings were published.
8. Students were made aware that they must provide verbal consent during the interview process if they wish to participate.

The above guidelines were followed.

Signature.

Date

27/04/2020

Example Interview Transcript

Because there were over 200 pages of transcripts included in this research, a sample has been provided in order to show how the interview was transcribed as well as how student were asked to give verbal approval for participating in the research and for the recording of the interview.

(I) = Interviewer

(S) = Student

(I) 00:05 What is your name?

(S) 00:06 Anissa

(I) 00:08 Do you agree to participate in this research into designing for one?

(S) 00:15 Yes, absolutely.

(I) 00:22 Do you give approval for this interview being recorded?

(S) 00:27 Yes, ha.

(I) 00:32 What did your participant need?

(S) 00:37 She was born and grew up in Genk and I wanted to make sure she was able to look back to certain spots or things she experienced, as to leave her footprint in Genk and pass it on to others.

(I) 00:51 What did you make for her?

(S) 00:52 I made her a personal city card. not like a regular coffee tour for example, but a more personal tour, composed by herself, with pictures of herself at various locations.

(I) 01:10 You composed it together?

(S) 01:14 Yes we did.

(I) 01:44 If you look back at the designing process, have there been moments, or did you make any decisions where it was obvious you took a certain direction? where were the important decision points throughout the process?

(S) 02:00 At first, I wanted to work with elderly people and close the gap.

(I) 02:06 Why?

(S) 02:06 Because she mentioned herself that gentrification is becoming a problem in Genk and I thought I might be of help. But I found it hard. I knew how she was like, but other people not so much. that made it harder to close the gap. therefore i decided to make something else for her. I asked if she wanted a blog or a booklet. Of course, a blog has a different audience and therefore I decided to make a booklet.

(I) 02:46 Can you tell me something about your motivation. Did you do it just for the points, for example?

(S) 02:55 I was motivated to get results because of her. she also had expectations.

(I) 03:05 What kind of expectations?

(S) 03:06 She was confident in the end result, that it would be something beautiful. That set the bar higher than when I was just by myself. in this project it was both her and my expectations combined.

(I) 03:21 What will you take from this whole experience? what remains?

(S) 03:30 The way to have conversations and the method of asking questions. Mapping, brainstorming had all been done differently.

(I) 03:47 Can you imagine you could use this process somewhere in the future?

(S) 03:51 I can, if I were to choose a more social direction.

(I) 03:59 And why do you think it fits well within a social context?

(S) 04:01 Because it is about dealing with people, getting to know them better.

(I) 04:15 Is this one any different from other modules?

(S) 04:15 With other subjects, you are just provided with the theory and you need to work and design around an imaginary person. this allows you to generalize, but in real life, it's not imaginary, that person really has an opinion of his own. he or she'll tell you if they like it or not.

(I) 04:38 That makes it different?

(S) 04:40 Yes

(I) 04:40 I you think 5 years ahead. will you remember this module? what will remain?

(S) 04:50 Cooperating with someone I hadn't done before, so that's something I'll remember.

(I) 05:03 What will you remember of that experience? personal contact or something else?

(S) 05:06 Her as a person, her hospitality, the fun moments, not just the conversations but sharing personal experiences as well.

(I) 05:20 Can you provide some examples?

(S) 05:20 We were having a coffee and she asked me about my hobbies, my parents, my sisters and stuff like that. we more or less turned into friends.

(I) 05:37 I don't know if you can remember the first presentation, about give and take? by asking a lot of information from her, you are able to give back as well. that's a nice thing. How can we improve this experience for future students. If we want to repeat this module next year, how can we provide a better experience?

(S) 06:02 I think the design process took too long, and with the papers it was too short to be truly effective. other than that, it was fun to do.

(I) 06:21 As this module is different we often receive replies that this module is too long or too short. for some the period is just perfect, but you can't guess. Do you think that this method has to stay?

(S) 06:52 Yes, in general it's a nice working method.

(I) 06:52 Why?

(S) 06:55 Because it's in the center of Genk, in a different environment, which was a good thing. it was also great that we had a small group.

(I) 07:10 It's better to work in small groups?

(S) 07:11 Yes, I think so.

(I) 07:17 Jeff said that it would be better to have 2 students per 1 person, as there are many students. but that would make the experience very different.

(S) 07:30 Everybody has their own style of working their own working method and in a group it's just more complicated. it may cause collisions.

(I) 07:37 Ok, that was all, thank you.

Portion of Example Coded Interview Transcript

Audio Title: Record [REDACTED]
Duration Transcribed: 0:00:00 – 0:18:32
Number of Speakers: 2

Transcript

Andrea: Hello. Before we start I need to confirm that you agree to participate in this research and are aware of how this interview will be use.

[REDACTED] Sure, no problem.

Andrea: Yeah, ok, great. So I also need to ask – I need to – This is also recorded. Are you ok that I record you?
You have to say yes so I can record it, and then we can start.

[REDACTED] Oh, ok. Yes – I – that's totally fine.

Andrea: Great. Thank you. What is your name and what year are you or what's your place here at UMSL?

[REDACTED] I'm a senior Graphic Design student.

Andrea: OK. Why did you take this course?

[REDACTED] Well, aside from needing the credit hours, I was also very interested in it. I have a, or had a grandma who had Alzheimer's...

Andrea: Yeah.

[REDACTED] ...who passed away about a year and a half ago.

Andrea: OK. So this is kind of a cathartic way to pay homage to her?

[REDACTED] Mm-hmm. Yeah.

Andrea: OK. And yeah, I understand that as Danielle said almost exactly the same thing. Same experience for me when I was first I think they– in a research meeting they said, "Hey, who wants to do work on a dementia project?" Yeah, I do because my grandmother had dementia. I think it's a nice– we don't get to do that very often in graphic design.

[REDACTED] Mm-hmm.

Andrea: And necessary. And it's also OK to say I needed the credits as well. Thanks.

[REDACTED] Yeah.

Andrea: Who were you working with in this project?

[REDACTED] I was working with [REDACTED].

E - perceived other awareness
E - perspective taking
Coding Density

E - emotional interest

Andrea: Yeah. And how would you describe the design problem, I'm sure Sylvia certainly didn't come to you and say, "Adam, I have a design problem."

█: Mm-hmm.

Andrea: How would you— so, a design problem is our language but how would you describe the problem that she has or issue that you were working with as a designer?

█: Well, █ kind of has a unique problem because she's kind of stuck in the mindset that she's still a teacher and art is a very big important part of her life. So— and she didn't really have the means to express herself creatively at Brooking Park. So, I kind of wanted to give her something that she could do that with.

Andrea: And what did you actually make for her then?

█: I made an Art Conversation Book that can be used with either a family member or a staff member at Brooking Park to kind of talk about art in conversational tone and also to use as kind of a source of inspiration for creating art.

Andrea: Yeah. And so, it's not just about looking but it's also about doing as well.

█: Mm-hmm. Yeah.

Andrea: And did you think specifically about, I think last time we were here we talked a little bit about the caregivers because we are designers, we're— some of us are artists, we are much more able to pick up something you know, there's a book of pattern design and talk about the colors or the pattern, the space between the colors, the shadow, the tonal values, etcetera. How did you equip someone that has basic nursing skills or did you think about that?

█: Yeah. Well, I kind of simplified the questions into talking about mood or...

Andrea: OK.

█: Talking about or just asking what colors work well together just real simple questions that really anyone can answer or talk about without having like a deep understanding about art.

Andrea: Yeah. That is really important.

█: Mm-hmm.

Andrea: Because that's a design decision so at some point in time you made that decision to make it open for other people and I think that is huge. It's huge.

█: Mm-hmm.

Andrea: I think we talked about that on one of the times I was here.

█: Yeah.

Andrea: Just briefly but I think that's important for you to have made that decision as a designer. What- this is weird question and it's worded strangely. What influence- obviously, you made a project just for [REDACTED]

[REDACTED] Mm-hmm.

Andrea: What influence or how do you see Sylvia on the thing that you made?

[REDACTED] Well, I kind of tailored the book specifically to her. So, I looked at what artwork she had in her room. I talked to her sister about what art she liked. And I also brought in a lot of materials for her to go through to see what she kind of gravitated towards.

Andrea: Yeah. So it's a lot of testing huh?

[REDACTED] Mm-hmm. Yeah.

Andrea: Great. Do you remember where you were when you had your idea? Or what- you know, some people it's the "aha" moment or the moment that you said, "Hmm, this is the direction I want to go." Do you remember?

[REDACTED] Oh, I think it was whenever we're on meeting as a group at the end of one of the days and I was kind of lost as to what direction to go into but I knew that I wanted to do something that allowed her to express herself creatively. And I guess the idea just kind of came to me I think Jen might have actually suggested something similar. Yeah.

Andrea: During the school year, how would you describe yourself as a student? Or what's your- are you really passionate about design? Or how did you end up? You're a senior so you've made it through a few years of design school.

[REDACTED] Mm-hmm.

Andrea: What kind of student are you?

[REDACTED] Well, I've always kind of been passionate about graphic design. I have known that this is what I want to do since I was like 13.

Andrea: Oh, wow!

[REDACTED] And yeah, I'm really into typography and simple flat illustration and branding and logo design. So...

Andrea: Yeah. And so how does this- I mean all the things that you just mentioned. That's kind of different stuff than what you have done in this class.

[REDACTED] Yeah.

Andrea: How would you describe the difference? Or how was this class different or how has it been different?

Example Authorization and Consent Forms

Decipher Conference

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2018 DESIGN EDUCATORS RESEARCH CONFERENCE

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Your Full Name: [please print]

SUDEBI THAKURATA

Your Affiliation:

SRISATI INSTITUTE OF ART, DESIGN & TECHNOLOGY

By initialing on my selections below and signing this form, I give (or withdraw) my consent for the organizing committee of the Decipher 2018 Design Educators Research Conference, their assistants, volunteers, and associates, and conference facilitators (the "Team") to make and use photographs, illustrations, and recordings of me, to use my name, and/or to use the materials I make available to the Team as part of my participation in the sessions offered at the Decipher 2018 Conference in which I participated (the "Sessions").

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Signature: _____

Date: 27/9/18

E-mail: _____

Phone: _____

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Your Full Name: (please print) SHEILA PONTIS

Your Affiliation: PRINCETON UNIVERSITY

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I have had a chance to discuss this form with the Team staff and received answers to all my questions.

Signature: _____ Date: 9/24/18

E-mail: spontis@princeton.edu Phone: _____



Sheila will update her deck so it can be shared and doesn't have any confidential material

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Your Full Name: (please print)

ANN MCDONALD

Your Affiliation:

NORTHEASTERN UNIVERSITY

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I have had a chance to discuss this form with the Team staff and received answers to all my questions.

Signature:

Date:

9/27/2018

E-mail:

a.mcdonald@northeastern.edu

Phone:

Nichole: Designing for one, Student Experience Summary

School	Course/Discipline	Class Setup	Location	Important to note
University of Missouri - St. Louis, USA	Graphic Design	5 weeks, 4 times per week 2 hours per day	18 x Offsite in care facility 2 x Classroom/Atelier	Participating required background check and needed test for TB
Student	Participant	Who is design for	External parties involved	Activities student carried out
Nichole level 4 of 4 years	Emily	Emily, carers and family	Family members and carers	Interview, discussion with family members, room survey, multiple organised art activities

Summary of what was made

How is the participant evidenced in the design that was made?

Nichole made the care facility a book that included planned art activities for older artists. Her project was “dedicated to Emily”. In it there were detailed lesson plans, material lists and how-to guides to open up ‘more advanced’ artwork to both advanced and novice participants. Emily had been an artist (oil painting, drawing, sculpture) her entire life. Her room was full of things she had made and supplies for creating art (to the point of hoarding material). Due to dementia, it was becoming increasingly more difficult for her to self-initiate the act of creating and she (as well as her family) was frustrated with the level of art available in the activities. Examples in the activity room were clothespin butterflies and worms made with pipe cleaners. Emily was so advanced with oil painting, that, before she had dementia, she had given lessons in her own community. What was on offer to her at the care facility were intended to be more inclusive ‘activities’ but had been labeled ‘art’. It was basic and ‘child-like’ according to her family. This did not motivate Emily to make anything though she attended all of them for the social aspects. Sara’s book was full of a selection of themed ‘art activities’ that a caregiver or family member could set up with little or no experience. But the outcome and what was created was pitched at a level that both artists and novices could appreciate and explained how to engage participants (in Nichole’s case, Emily) with cognitive challenges. Although the ‘activity specialist’ had was initially very critical of the idea, after Nichole did a first test, she was both surprised and enthusiastic about offering ‘other types’ of art activities to the residents.

Although the content was not made for Emily, the entire book was made with Emily in mind and drew on her own interests (painting, drawing, sculpting, mosaics...) and built on the type of activities she, in her stage of dementia, was able to do and accomplish.

Student Quotes

About this type of working: “I hope that...I wish there was some kind of job that was like this because I would go for it in a second. I don’t know if there is or like if– I mean it has definitely helped with people skills I guess but I had an internship where I was– it was at a design firm and it was great. I learned a lot but I had hardly talks to anybody and it sucked. Like this is great. I wish I could do this in a work environment.”

About what she learned: “I don’t know. [Laughter] Compassion, I guess... I’m sad that it’s over like I wish could keep taking this class, because it’s going to be different every time.”

About other challenging her idea: “Well, I got kind of negative feedback at first. I was told no one is going to come to my workshop and I thought well. OK, that’s great. [Laughter] But 14 people showed up. So I was kind of like, “Yeah, see I knew there was a need there?”

About the experience: “It’s the most fun I’ve ever had.” “I wish I had a few more days or even one more day.”

About how it was different than other courses: “I don’t really know. I mean it was just– I guess it’s more of a personal experience. And you’re getting to know someone and developing a relationship with that person so and you’re designing this thing for them, with them in mind. And it was just, I don’t know, just really great.”

Student Project Summaries

Decipher Conference

Jessica: Designing for one, Student Experience Summary

School	Course/Discipline	Class Setup	Location	Important to note
LUCA School of Arts, Campus C–Mine Genk, Belgium	Interaction Design	9 weeks, 1 day/6 hrs/week 1+ hour with participant/week	9 x Offsite in Town Center	All meetings took place in Walter's home.
Student	Participant	Who is design for	External parties involved	Activities student carried out
Jessica level 3 of 3 years	Walter (and Els)	Walter and Els	None	Interview, mapping of their interests and travels, walking tour, informal discussions, prototype testing

Summary of what was made

Although on the first day Jessica specifically said she did not want to work with 'old people', the person(s) Jessica worked with ended up being elderly and whose age was having an impact on what activities they could do. In their house they had a cabinet full of souvenirs from their world travels. They had been all over the world, Jessica went through the entire cabinet with them and listened to them discuss each one. Because of their health, they no longer could travel like the used to, and were, in Jessica's words, 'stuck in Genk'. Jessica's idea was to bring the world to them by exploring their city through these objects. It was also a chance to document their souvenirs digitally and capture the stories related to these artefacts. Jessica made a paper-based, city-exploration kit: a personalized map of Genk. The map made connections between certain places in Genk and other parts of the world. One example was a map of Genk linked to Scandinavia. In it she showcased sites and locations in and around Genk that related to Scandinavia. This included stores and restaurants to visit but also locations in nature as well. A set of cards included facts like: Did you know there is a Scandinavian bird called 'the keep'? But also included 'challenges' like looking for that particular bird in the forest located on the map. There were recipes like how to make Swedish meatballs or DIY projects. There were also 'hidden' gifts: coupons for free meals/sweets that Jessica had arranged. This gift idea stemmed from the fact that Jessica had really enjoyed spending time with them. Jessica visited their house every Monday for 9 weeks. In a video documentation of the project, Walter and Els enjoyed it too. They said in a video that they had even started making sure they had particular types of cookies and coca-cola on hand for her on Mondays. Jessica also visited them a few times outside of school hours, just to 'hang' with them (her words).

How is the participant evidenced in the design that was made?

Although someone else could use the kit in order to explore the city thematically, through different areas of the world, the content is catered to the ability, format and interests of Walter and Els. (ie. the places are close to bike paths or public transport, the kit is a physical kit instead of an app or something online)

Student Quotes

On the project: "My motivation was mainly to start something with these people and in the end it would make them happy. I wanted to see satisfaction in them. It would be a pity for them to participate with the project and leave without learning anything. In fact it has been the other way around, they have taught me more... like patience around the elderly, friendliness." "The warmth that people can give you if you do a project with them, that was unexpected."

On what she learned: "At first, I wanted to make something cool for myself... this year I wanted to make something 'designerly'. But this taught me to not focus on design alone, but to focus more on people: to provide something beneficial for them and not just for myself. What they might like, might not be my taste; to work with someone's personal preferences. In the future, when working for clients you also might not like something, and that's what I learned, to be a chameleon."

Reflecting on the class: "I think it should remain (in the curriculum), as it's the only interaction module there is. A direction is more about how people get in contact with stuff, and with other modules you get taught how to make those things. How and what, but not necessarily contact with people. Design the personal is about bringing people back into your designs. You learn how to design a vision for people and not just for myself."

Eddie: Designing for one, Student Experience Summary

School	Course/Discipline	Class Setup	Location	Important to note
LUCA School of Arts, Campus Chent Chent, Belgium	Digital Graphic Design	11 weeks, 5 hours/week coursework	4 weeks on-site as class, 7 weeks in school 1 hour/week on-location	The house that Ingeborg lived in was very humble.
Student	Participant	Who is design for	External parties involved	Activities student carried out
Eddie level 2 of 3 years	Ingeborg	Ingeborg and local community as well as local organisations	None	Cold-calling, informal/formal Interview, walking tour of neighbourhood, informal discussions in home, prototype testing

Summary of what was made

How is the participant evidenced in the design that was made?

Eddie made Ingeborg a anonymous, web-based question portal for her neighbourhood. One of the 'bridges' between different groups living in 'the Muide', a low-income, diverse, 'recently hip' and working-class area in Chent, Eddie wanted to see how a digital tool could support Ingeborg in sharing her knowledge of the neighbourhood. An aging, but active member of the community, Ingeborg had recently started dealing with health issues that caused her to give up some of the activities that she had always be a part of. Everyone knew who she was and respected her. She had been a touchpoint across a diverse public, selling lingerie to local stay at home, immigrant mothers, being active in community cooking events, and supported people when they moved into the area in terms of putting the right support network together in order to get them off to a good start. Technically savvy and an avid Facebook user, Ingeborg shared issues with Facebook such as questions and comments being linked to a person's personal profile. She knew that technology was a way to reach people across language barriers and together with Eddie wanted to become the web-based trusted 'face of questions and answers' just as she had always been. Working from her kitchen table for an hour every week, Eddie took Ingeborg through the development of his prototype. The result was a web-based digital prototype that Ingeborg could promote on facebook but allowed people to anonymously post questions and/or search for questions based on different categories.

The service that Eddie created responded to the problems that Ingeborg had with Facebook. The name also referenced the role that others said she had in the local community: 'the bridge'.

Student Quotes

About getting into contact with Ingeborg:
(B): "I sent my first message, a bit late at night.
(I): "At twelve o'clock at night!" (laughs)
(B): "Indeed. That already gave us a topic to talk about!
It was a bit too late. That's how it all started."
(I): "I showed him his place from the start!" (laughs)

About his participant's vision: "I think when we talked about how she likes to help people, how she sees herself as a bridge builder, that was something which stuck with me. I needed to make something that made it easier for her to help people."

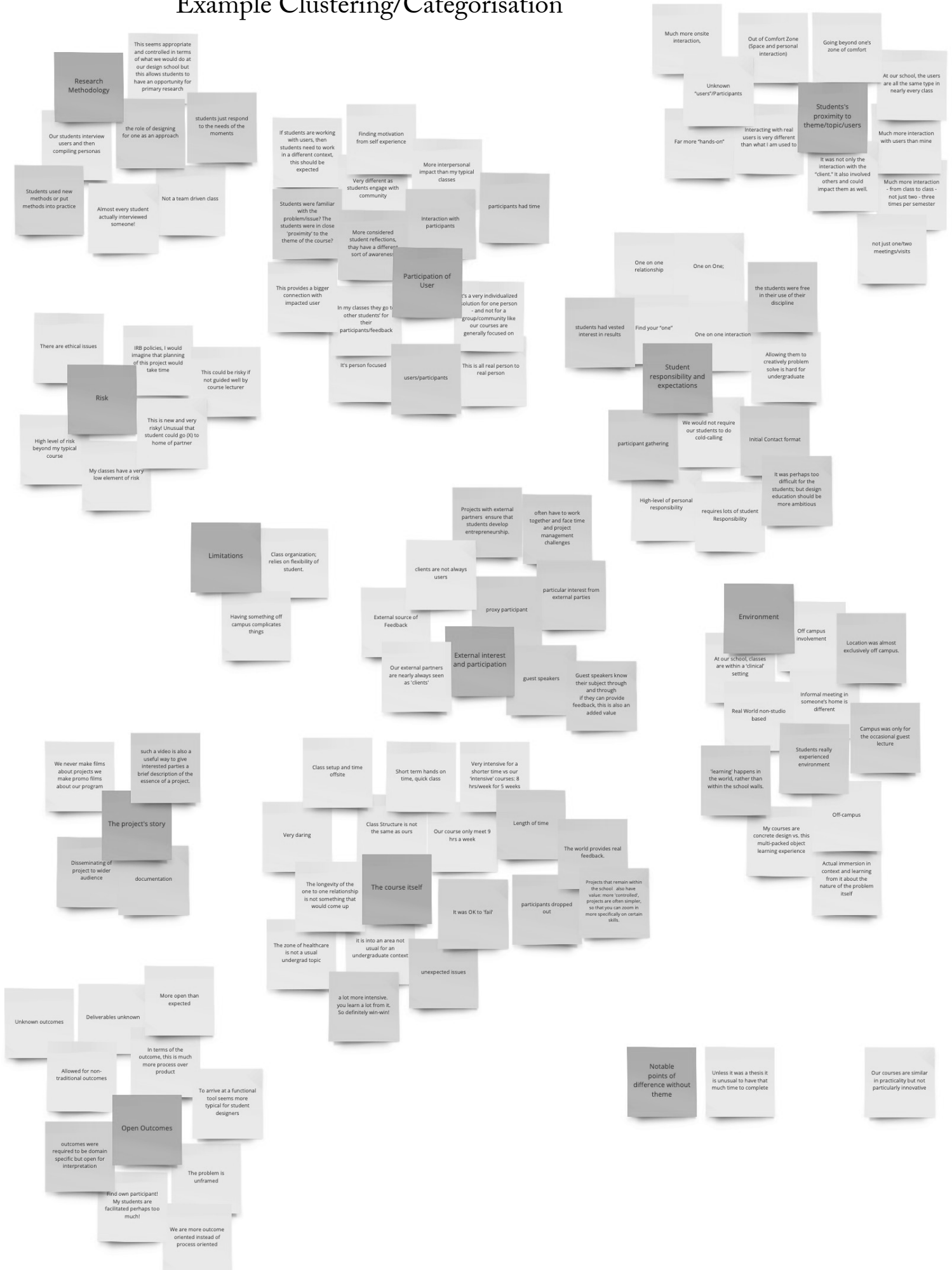
About the process:
(B) "It was a lot of talking. lot of getting to know things about her."
(I) "You were being very curious, weren't you!"
(B) "I think it was important to look at who you, the user really is, how you think, how you'd use the website, that was useful information to know."
(I) "You were also having less fun."
(B) "Yes, that as well!"

Identified Points of Difference between Student Module Cases

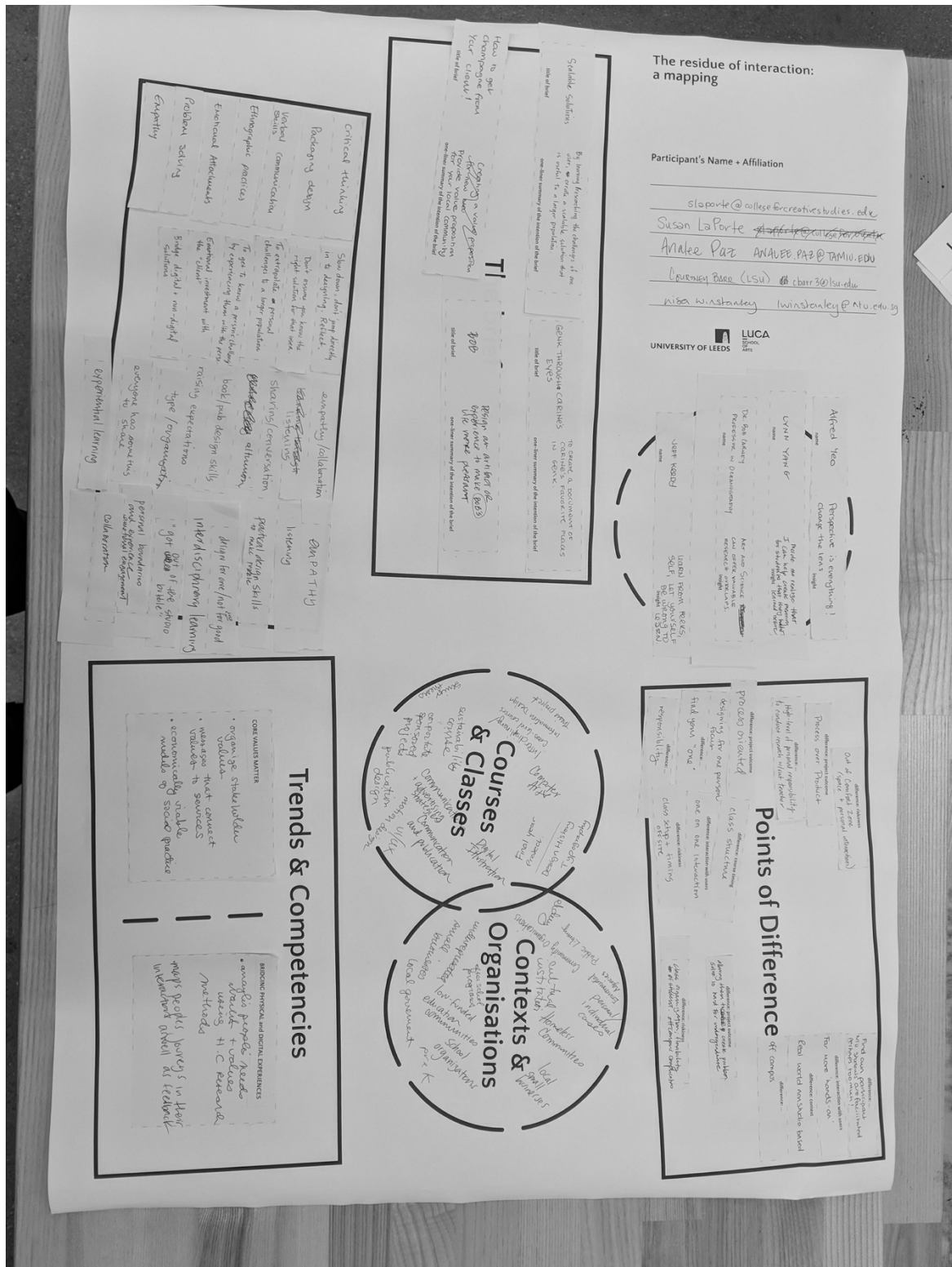
categories	Gent Digital	Gent Advertising	St. Louis Graphic Design	Genk Interaction	
users/participants	included perhaps the most societally marginalised group; from homeless to physically disabled to language barrier	diverse, no commonality except their living in the same neighbourhood in Gent, Belgium	Included 'marginalised' people group; all people living with early to mild form of dementia	diverse, no commonality except their living in the same city, Genk, Belgium	
Initial Contact format	cold-call phone first class	Neighbourhood party, informal meeting first class	Informal activity first class	cold-call phone first class	
participant gathering	Neighbourhood Social Workers targeted people they thought would benefit from interaction	Students had to self-initiate and find their own participant who filled requirements of living in the neighbourhood Muide/Mulendeste	Care center activity manager selected participants who they thought would benefit and whose family approved and would be involved as secondary participants	Department of Culture sought out group of participants who would be willing to participate	
participants were paid	Yes	no	no	no	
Interaction with participants	Some students met with their participants weekly, others only when required by the course or at specific decision moments, the later did not seem to be motivated by the relationship with their participant	Some students met with their participant regularly throughout the course, others relied on email for further feedback	Students met their participants for at least one hour each class day, for the duration of the course where they played games, participated in care home activities, hung out with family members, etc.	Students met with their participant regularly throughout the course, at least 1 day a week. This was supplemented by spontaneous visits, social media messaging, and email.	
participants had time	this ranged from participant to participant, some did not work, others had difficulty fitting the meeting with students into their agendas	this ranged from participant to participant, some had difficulty fitting the meeting with students into their agendas and likewise because of the short timeframe students had difficulty fitting meeting moments into their own agendas because this took place while they had other school requirements.	participants had schedules (activities, physical therapy, etc.) but they had a lot of free time to meet with students	this ranged from participant to participant, some did not work, others had difficulty fitting the meeting with students into their agendas but students managed this by meeting with them during other non-school hours.	
proxy participant	in some cases the social worker provided additional information or supported the students with additional feedback	n/a	family members, care givers	n/a	
unexpected issues	one female student was paired with a homeless man who had an illegal caravan down by the waterside. Because of its location, the student had another student stay in the area 'on lookout' so she did not feel scared. This led to us firmly advising the students to meet in public places and go with their gut/instinct regarding meeting locations and to go in pairs if necessary.	One of the 'top students' (as suggested by the lecturer) was paired with a city worker who lived in the area. He was not very keen on the students idea and also not very forthcoming. The student really felt the engagement wasn't working and still tried to make something based on his experience. Because the participants are so diverse, this was unfortunate but hard to avoid.	because the module only ran from 9:30 to 12:30, it sometimes felt there was not enough time to meet with the students and provide feedback. The students were all working part time outside of the module (which was during the summertime) so the module felt restricted in this area. Additionally, the short turn around (it was every day, Monday - Thursday) meant that there was little time for students to work on their project from one day to the next.		
extras that added to spirit of group	none to mention	Began with 'buurtheest' and ended with students cooking for neighbourhood as part of the monthly 'buurtdinner'	small class-size enabled quality discussions and time between lecturer (s) and students. Student and teacher interaction was very informal	Because of the small group, the students often ate together. Final moment was a catered screening of the film that was made.	
guest speakers	Initial presentation and neighbourhood walkthrough by Social Worker Peter, Dr. Ilse Mariën, Dr. Frank Maet, Gent Communicatie Department???	Initial presentation and neighbourhood walkthrough by Social Worker Peter	Introduction and house-rules provided by Activities Manager who liaised with her supervisors	Initial presentation and neighbourhood walkthrough by representatives of the Department of Culture (An en Gert) and Social worker responsible for city centre (Annelies)	
number of students	17 students	13 students	5 students	6 students	
discipline	Digital	Advertising	Graphic	Interaction	
outcomes were domain specific	no	no	no	no	
stayed in discipline	No, not all students created projects that were digitally or screen based. Students created a variety of concepts from paper-based flowcharts and beer coasters to apps and websites.	No, only a few of the students created designs that were advertising or promotional in nature. Some focused more on information and print-based communication.	No. Although the output was very print-based graphical, some of the students focused more on art therapy, and supporting intereraction than their graphical concepts	No, not all students created projects that contained aspects of digital interaction. Students created a variety of concepts from paper-based books and cards to web-based applications.	
Length of time	1 semester	1 month	5 weeks	1 semester	
Location	Students met in homes, community centers, cafes, places of work and religious contexts and public places	Students met in homes, community centers, cafes, places of work and religious contexts and public places (social restaurant and school)	Care facility; activity room, person's individual room, chapel, cafeteria, and other 'public' spaces	Students met in homes, cafes, places of work and religious contexts and public places	
Methodology common method for each participating student	multiple types from activities to formal processes	multiple types from activities to formal processes	multiple types from activities to formal processes	multiple types from activities to formal processes	
Experienced	Every student shared informal/formal, conversation-based moments with their participant	Every student shared informal/formal, conversation-based moments with their participant	Every student shared informal/formal, conversation-based moments with their participant	Every student shared informal/formal, conversation-based moments with their participant	
	different for each student	different for each student	homogenous for all student designers	different for each student	

defined brief outcome	create tool that supports participant in engaging with the community	find a problem or interest from a community that they feel will make their community better and support them in initiating this action	make the life of a person with dementia better	identify the problems residents of central-Genk face and support them in initiating a response to it.	
vested interest in	City of Gent, CERA Awards	City of Gent	n/a	City of Genk (Department of Culture)	
particular interest from external parties	Wanted to know how to reach people who were not reachable digitally with e-inclusion	Was interested in find out small, community based initiatives that better the community	n/a	Interested in how they could reach new segments of central-Genk residents with new ideas and initiatives	
Students identified as being similar to participant	no	no	no	no	
Students were familiar with the problem/issue? The students were in close 'proximity' to the theme of the	no	Mostly no. Some students chose participants who shared similar interests with them; gardening, the youth movement, etc.	Mostly no. The project resonated with some students because they had worked in a care facility or had had family members who had had dementia.	no	
Limitations	Students were required to develop a concept, test it with the participant and pitch this idea (and research carried out) to a jury. Students were limited by accessibility of their individual user to technology, time available, etc.	Students were required to develop a concept, test it with the participant and pitch this idea (and research carried out) to a jury. Students were primarily limited by time and trying to meet with their participants. Concept had to relate to their individual's circumstance and wishes to change their neighbourhood. The concept was intended to be 'passed over' to the participant at the conclusion of the project.	Students were required to develop a concept that suited their individual's ability, needs and daily life. Students were required to test it with the participants within the context of use. Next to this, the design created had to fit into the real care context and be sensitive to time involved, hygiene, privacy, physical limitations, etc and be aware of time restraints from family/carers.	Students were required to develop a concept, test it with the participant and present this work to lecturers. The limitations involved related only to the limitations of meeting weekly with the participant, the duration of the course and the interest of the participant.	
Amount of time spent in school	14 weeks, 6 weeks meetings in school.	4 weeks (3 days per week); 4 days in school	5 weeks (4 days a week); 2 days in school	9 weeks (2 days a week); 0 days in school	
It was OK to 'fail'	in the case of participants leaving the project mid-course, students were able to join an existing project of a peer student	students with participants who were not actively engaged were able to reflect on their process and still pass the course	n/a	n/a	
participants dropped out	yes	no	no	no	
Disseminating of project to wider audience	Projects were presented to City of Gent as part of final grading/jury. Project film was presented at Cumulus Conference	Project posters were made and showcased during the buurt diner moment. This allowed for participants as well as the part-funders (CERA) to see the results. Film was made	Students had a mid-day showcase in which family members, the participants and other residents could come and see what the students had made. Radio interview on St. Louis channel of NPR (National Public Radio)	Students and participants were filmed and a short film was made over the process. This was shown in a catered screening night in the cafe of one of the participants.	
how designing for one was applied	designing for one was applied to an existing course as an approach.	designing for one was applied to an existing course as an approach and adapted for a more 'social' context	A new class was created which used a designing for one approach	the class was developed with designing for one as the main approach	
documentation	Some students kept a logbook which was not referenced in their grading; students documented process with photos and recordings and visualisation of prototypes	Students were not required to keep a logbook or research notebook	Students were required to keep a logbook as well as an ongoing Living Persona document; some opted for journaling	Students were required to document their work (photos of person and context) as well as a mapping document in which the problem was articulated through a participatory manner together with their participant	
reflection	Interview	Interview	Interview	Interview	
elements of risk	reliability of participants, commitment of participants, a diverse but not too diverse range of needs,				

Example Clustering/Categorisation



Example Residue of Interaction Mapping Results



The residue of interaction: a mapping

Participant's Name + Affiliation

UNIVERSITY OF LEEDS

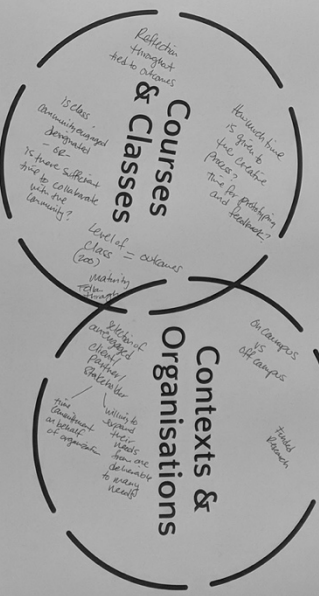
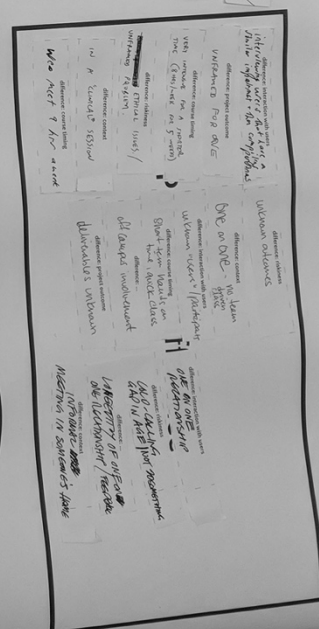
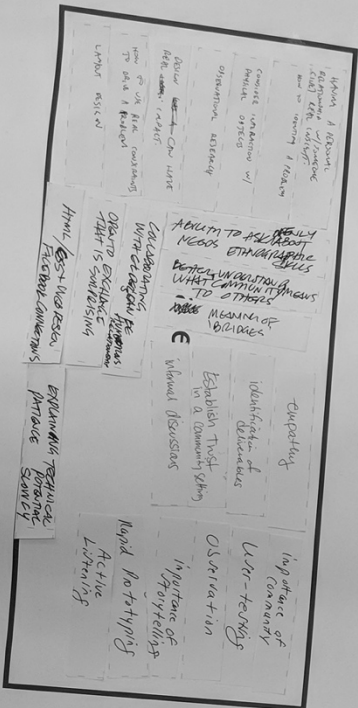
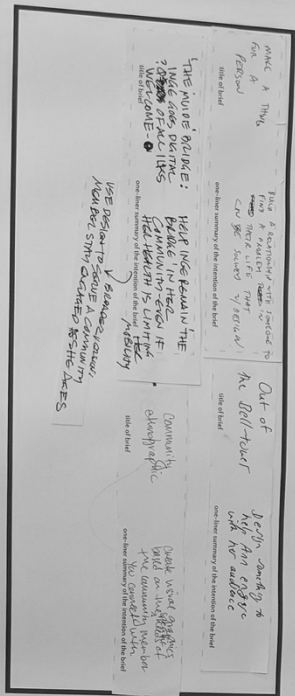
The Residue of Interaction

Model
Process of voluntary collaboration between stakeholders to achieve a common goal

Ed Jamaris
Opportunities created by multi-stakeholder

HA01
The residue of interaction is the part of the interaction that remains after the interaction has ended

HA02
The residue of interaction is the part of the interaction that remains after the interaction has ended



Trends & Competencies

ACCOUNTABILITY FOR PREDICTING OUTCOMES OF DESIGN ACTION

- Student is acting while researching
- What being researched and addressed
- State of time - who is checking in
- What being researched and addressed
- Who is researching the social system
- Research accountability vs. Student research
- Research accountability vs. Student research

COMPETENCY

- Understand the problem - define it
- When there is a problem - what is the problem?
- Work with Designing users - what is the problem?
- Design for a user + community - what is the problem?
- What other resources need to be used?
- What other resources need to be used?