Why Am I Studying Design?

Baha, S.E.; Koch, M.D.C.; Sturkenboom, N.; Price, R.A.; Snelders, H.M.J.J.

Why Am I Studying Design?

Ehsan Baha[ab*], Maartje Koch[a], Nick Sturkenboom[b], Rebecca Anne Price[a], Dirk Snelders[a]

[a] Delft University of Technology, Delft, the Netherlands
[b] Meaningwise, Eindhoven, the Netherlands
*Corresponding author e-mail: s.e.baha@tudelft.nl
doi: 10.21606/drs.2020.386

Abstract: Identity development of design students is a dynamic entanglement between personal and professional identities. Yet, literature primarily focuses on professional identity, based on institutionalized definitions of design to which students must conform. In contrast, we explore personal motivations for wanting to become a designer. An instrumental case study explores how an undergraduate design student develops personal principles for good design, and a personal vision for designing. Results show these principles and underlying vision are applied in the student's design work, leading to development of a holistic identity (personal and professional). Finally, we note this exercise necessitated a plural and dynamic understanding of design (education). We therefore encourage design students and educators to co-design educational spaces and processes to stimulate enriched potentiality of design culture.

Keywords: Design Education, Designer Identity, Principles for Good Design, Research through Design

1. Introduction

"When I was a first year undergrad student in industrial design, I received a copy of 'Understanding Design' by Kees Dorst (2003), one of the professors in my school. The book contained 175 reflections on being a designer and posed the question: 'What does it mean to be a designer, and what does it take to be a good designer?' Kees Dorst told us this is a book he wished he had when he started studying industrial design himself. His aim was to stimulate designers to think about what they do, how they do it, and why they aim for a certain effect. The mini-essays in the book gave insight into the design process and encouraged reflection. Later that year, I attended a lecture by Kees at another school, in which he argued that design finds itself in an era in which ideologies have come to an end, referring to the styling movement in the history of design. While listening to the lecture, I was thinking how I had just entered the faculty council and education committee as a student member. In these groups we had been reflecting on the undergraduate curriculum, which followed a competency-based education model, with the first year focusing on a transition from 'blank' to 'awareness' of 'designing interactive systems'" (1st author reflection, 2017).

What does it mean to be a designer? Am I a designer? What kind of designer do I want to be(come)? Why do I want to be(come) that kind of designer? These are difficult questions to answer, yet necessary to confront as design students transform towards design professionals (Buchanan, 2001). The possibility of guidance in answering these questions can stimulate design students' to find their element[1] (Robinson & Aronica, 2009, 2014). When in their element, design students' realize their potential in the world. These questions not only relate to a designer's professional identity, they relate to the designer's personal identity too. Educational philosopher and theorist Dall'Alba (2009) states:

> "Learning to become a professional involves not only what we know and can do, but also who we are (becoming). It involves integration of knowing, acting, and being in the form of professional ways of being that unfold over time. When a professional education program focuses on the acquisition and application of knowledge and skills, it falls short of facilitating their integration into professional ways of being. In addition, through such a focus on epistemology (or theory of knowing), ontology (or theory of being) is overlooked." (p. 34).

For design education, the above implies that an understanding of design is a fundamental aspect of becoming a design professional (Adams et al., 2011; Hara, 2003). Design education and understanding are interrelated and yet distinct. Two points of distinction are particularly important in the context of this paper. First, design education is constructed by design educators through their framing of (good) design; which forms the basis of curricula, courses, pedagogy, and educational models. Although there are many different understandings of design (Daly et al., 2012; Exter et al., 2019; Micklethwaite, 2002), design schools usually develop and overtly or subliminally promulgate a dominant view of design according to their own preference (Glasser, 2000; Fry, 2003b; Porter & Kilbridge, as cited in Mewburn, 2010). This preference can be based on geopolitical strategies and influenced by leaders in the design community revolving around it.[2] A network of educators and leaders co-construct an identity for the school (Ghajargar & Bartzell, 2019), and profile one or more design professionals that the school aims to deliver to society.

The second distinction between knowledge and education is that design students use their understanding of design as a basis for learning design and becoming a design professional (Daly et al., 2012; Ghassan, 2011; Ghassan & Bohemia, 2011). Prior to selecting and starting a design education program, design students have a limited understanding of design and the particular design philosophy they are subscribing to, set by their choice of school. Their understanding of a school's identity will be based on a set of manifestations – i.e. school's website, samples work of graduate projects, celebrated alumni and staff, the school's

---

[1] The term 'element' concerns, "doing something that feels so completely natural to you, that resonates so strongly with you, that you feel that this is who you really are" (Robinson and Aronica, 2014, p. ix).

[2] For example, in The Netherlands in the 1970s, the influential designer Wim Crouwel set the stage for the nation's design industry around a somewhat authoritarian notion of design integration he called 'Total Design'. From the 1970s onward he then promoted this notion in the educational curriculum of the Faculty of Industrial Design Engineering at Delft University of Technology (Mertz, 2019; van Winkel, 2005).

building and environment itself. For some other students, they may simply choose the design school that is most nearby.

A designer's identity development starts as soon as the student enrolls into an undergraduate design program. This act often forecloses their professional identity, with students gradually developing an authorized understanding of design, and learning to meet prescribed standards (Smith, 2015). However, a designer's identity development does not only proceed with acquired knowledge, skills, and ethos. It is also affected by the student's hopes, dreams, and the related understanding of themselves in becoming a professional. Moreover, students get to know themselves as designers based on their proficiencies, what topics or approaches resonate with them, or simply by the spectrum of possibilities they are able to see.

In design schools, some students may end up happily subscribed to the foreclosed design identity of the school. They become professionals, and as alumni stay loyal to the identity of their alma mater. Others, however, may fall into an identity crisis[3] at some stage of their education. These students sense a feeling of malaise that potentially can result in insecurities and suboptimal achievements in education and later work. However, from our own education experience we can contend that there may be students who do not subscribe to a foreclosed design identity of their design school, but do not care enough to become unhappy about this lack of commitment. For it is convenient to adopt the schools approach to design – i.e. getting good grades and causing no trouble. Confirmation is in the work of Fry (2003a), who proposes that a majority of students fall into the latter category, and that design schools silently accommodate these students. If this is the case, then a majority of students risk losing care and initiative, and may seek confirmation and comfort rather than realizing their potential. We have thus far, examined the practice of design schools professing and upholding standards of good design. However, even without setting such standards, should design educators then be satisfied with comfortable yet unimpassioned students? Or should design educators offer authentic support to stimulate students to identify and realize their hopes and dreams?

Research on design education stresses the importance of meeting standards, focusing primarily on knowledge and skills development (Dorst & Reymen, 2004; Eckert, 2020; Fleischmann, 2014; Giard, 1990; Meyer & Norman, 2020). Literature also acknowledges the existence of personal aspects that make up a professional identity (i.a. Adams et al., 2011; Gray, 2014; Kosonen, 2018; McDonnell, 2016; Tracey & Hutchinson, 2018). Among these authors, we find particular inspiration in the work of McDonnell (2016), who states; "novice designers find their own voice as designers whilst simultaneously learning what is expected from them as professional practitioners in a particular design field" (p. 1). In our paper, we acknowledge the need to balance a relationship between personal hopes and dreams, and

---

[3] The term 'identity crisis' was coined by the German developmental psychologist Erikson (Levesque, 2018, p. 94), who also developed the leading theory in this area. 'Identity crisis' is, "a time of intensive analysis and exploration of different ways of looking at oneself". In psychology, an identity crisis is seen as a positive phenomenon for one's identity development.

professional standards in design education. This need presents in many design schools (Winters, 2011), where students lack support in developing a good understanding of themselves and their personal view on design (Escobar, 2017; Margolin, 2003). As indicated by Julier and Kimbell (2019), design students often do not know why they are studying design, who they are as a designer, and how they may speak up and contribute to design culture (and society) through the realization of their potential, i.e. what Manzini (2015) describes as their 'life project', and Escobar (2018) builds by describing the, 'planes de vida'.

In what follows, we explore designer identity from one student's perspective. We report an instrumental case study in which an undergraduate design student overcomes her identity crisis through design.

2. Research Design and Methodology

2.1 Method

A two-year instrumental case study is applied with Research through Design (RtD) as the underlying paradigm (Isley & Rider, 2018).

2.1.1 Instrumental case study

Creswell (2012, p. 465) defines a case study as, "an in-depth exploration of a bounded system (e.g., activity, event, process, or individuals) based on extensive data collection. Bounded means the case is separated out for research in terms of time, place, or some physical boundaries". An 'instrumental case study' is most appropriate for this research as this type of case study, "serves the purpose of illuminating a particular issue" (Creswell, 2012, p. 465). The particular issue at hand concerns the notion of designer identity.

2.1.2 Research through design

Designer identity is studied through (visual) narratives that are produced through post-hoc reflection (i.a. Gray, 2014; Kosonen, 2018; Sonneveld & Hekkert, 2008; Tracey & Hutchinson, 2013). While this approach has been fruitful for understanding designer identity, it lacks embeddedness into the everyday work of design students as they confront an identity crisis. We are not only interested in describing the development of a designer identity, but also in the performance of design students as they 'come into being'. As Lawson and Dorst (2009) explain:

> "The quotes of the most experienced designers in this book suggest they are their practices. (...) most designers seem to feel easier describing themselves through the projects that, taken together, make up their practice. (...) designing is not just something you do, or that you take lightly when you practice it, but rather it helps form your identity" (p. 270).

We therefore deploy a RtD approach. RtD offers an ontology that brings design activity and materiality together with research (Fryling, 1993). For example, in reflective practice where RtD is rooted, Schön (1983) emphasizes the importance of reflection in relation to actions and creation. He demonstrates how designers may use reflection in and on action, and how

they may see their creations through different lenses. In this way, design activity and materiality become the means through which practitioners advance a personal style, within particular contexts, or 'situations at hand' (Schön & Wiggins, 1992). Similar ideas are echoed by Jonas (2007, p. 191), who views RtD as, "a research and design process intrinsic to design" where, "designers / researchers are directly involved in establishing connections and shaping their research object". Similarly, Dow et al. (2013) argue for the 'projection of vision' to be one of the main characteristics of RtD.

Although designing and reflecting would be the preferred approach to sense a designer identity, this approach does not work well for students in an identity crisis. Our experience tells that students in an identity crisis have difficulty producing unique work because of their insecurities and alienation from their element. However, selecting and reflecting upon the work of other designers is a task that is more feasible. Therefore, we consider annotated portfolios as an inclusive approach, open to all students for sensing their designer identity – be it indirectly, through the design work of others (Gaver & Bowers, 2012). By putting together multiple design outcomes and reflecting upon them, annotating portfolios allows for a meta-reflection that can facilitate finding what underlying principles resonate with a person while becoming a design professional. We have found this approach successful in empowering design students. For example, in earlier work we showed how a designer's principles for good design influence the planning, decision making (design process), and the outcome of a design project in industry (Baha et al., 2018).

2.2 Sample

2.2.1 Context and participants

The study includes two main participants; (1) An undergraduate student in Industrial Design Engineering (second author, henceforth 'the student') at Delft University of Technology,[4] and; (2) A design practitioner, educator, and researcher (first author, henceforth 'the researcher') at the same school performing research on designer identity. The case reported in this paper is selected from a series of fourteen performed cases, as the best case to illuminate an individual student's experience of an identity crisis.

The student and researcher met within a first-year undergrad course. Staying in touch, they would occasionally meet and have conversations about the student's journey within her design education. Listening to the experiences of the student, the researcher was reminded of his own (designer) identity crisis when he was still a student. When the student was in the second year of the undergrad program, the intrinsic motivation of both participants to improve good design education resulted in the production of this research.

---

[4] Delft is a relatively plural design school in which design is understood as a human faculty. The school has a high focus on technology and design theory and methodology. For more, see Voûte et al. (2020).

2.3 Procedure

2.3.1 Data generation, collection, and analysis

The procedure for data generation, collection, and analysis was twofold. First, a sequence of eight steps as indicated in Table 1 (below), were followed for and during the designer's identity work (DIW) session[5]. Second, a serendipitous[6] informal co-reflection concerning the two-year activity based on the sagacity[7] of the student occurred. An overview of all methods and rationale for their usage is provided in Table 2 (see next page).

Table 1   Overview of the data generation, collection, and analysis procedure.

	Step	**Description**
1.	DIW session assignment	The student was assigned by the researcher to create a good design board – a portfolio of good design examples in order to express the student's vision for designing.
2.	Good design board	The student collected and selected personal examples of good design with which she created a good design board.
3.	Annotated good design board	During the DIW session, the student's good design board was annotated through a critical dialogue between the student and researcher similar to Scagnetti (2017), based on the annotated portfolios method of Gaver & Bower (2012) (see Figure 1).
4.	Post-DIW session reflections	The annotations were used to continue with the critical dialogue after the DIW session, using an online co-reflective journal (Parker & Goodwin, 1987). The co-reflection was based on the post-intentional phenomenology approach of Vagle (2010).
5.	Intermediate principles for good design	The annotations and the post-DIW session critical dialogue were used by both participants to derive two sets of principles for good design as an intermediate result. The intermediate result regarded data analysis from two perspectives (student and researcher).
6.	Clustering principles for good design	The principles were then iteratively clustered by both participants, based on Kawakita's (1991) affinity diagram method.
7.	Final principles for good design set	The clusters were then merged into a final set of principles for good design.
8.	Designer's vision for good design	Eventually, the relation between the student's principles for good design was further analyzed and discussed to express her vision for good design through a diagram (see Figure 2).

---

[5] A 1:1 engagement between the student and the researcher emphasizing dynamic aspects and on-going struggles around creating a sense of self as a designer. A DIW session provides students with a starting point for resolving questions such as: 'who am I as a designer' and, 'what do I stand for as a designer'.

[6] Serendipitous here means an unexpected valuable finding from ambiguous objects open to interpretation within RtD (Halvorsen, 2016). For more on serendipity in design see Amacker (2019).

[7] Sagacity is an individual's ability to make use of serendipity in some sort of intellectual leap (Halvorsen, 2016).

Table 2   Overview of the mixed methods and specific foci.

Method	Materials	Participants	Time	Foci	Authorities
Annotated Portfolios	16 pages (Apple Keynote slide deck)	Designer and researcher	1,5 hours (during the DIW session)	Meta reflection based on multiple design work	Gaver & Bowers, 2012
(Co-)Reflective Journal	43 pages (Google Docs, A4)	Designer and researcher	6 weeks planned online reflection with unplanned informal aftermath for another 2 years	Illumination of personal designer identity and its agency	Parker & Goodwin, 1987
Post-Intentional Phenomenology	43 pages (Google Docs, A4)	Designer and researcher	6 weeks planned online reflection	Nurture of student and researcher perspective, bias prevention	Vagle, 2010
Critical Dialogue	43 pages (Google Docs, A4)	Designer and researcher	6 weeks planned online reflection with unplanned informal aftermath for another 2 years	Constructive feedback for personal designer identity development	Scagnetti, 2017
Principles for Good Design	5 principles (Adobe Illustrator diagram)	Designer and researcher	1 day of joint data analysis and visualization	Capture and expression of personal designer identity	Klemp, 2017
Affinity Mapping	5 clusters (Post-it notes)	Designer and researcher	1,5 hours (during the DIW session)	Organization of recurrent and variant expressions of designer identity as principles for good design	Kawakita, 1991

2.3.2 Research ethics and other considerations

Designer identity is a complex and sensitive research topic to be approached with utmost care. Table 3 (below) provides an overview of the ethical considerations in our research. Further research on this topic must acknowledge these ethical considerations.

Table 3   Overview of research ethics.

Ethical consideration	Description
Status	The student was informed that the design identity work session was an experimental method as part of research in progress. She was allowed to walk away from the exercise at any time.
Safe space	The design identity work session was not part of the school curriculum or subject to media attention, hence there was no formal or informal assessment of the student's participation in the research prior to the manuscript of this paper.
A student-led approach	Priority was given to the reasons of the student for doing designer identity work – not the reasons of the researcher.
Minimizing bias	The researcher sensed his design identity prior to the student's design identity work to avoid the projection of his own design identity onto the student.
Transparency	The idea to write this paper came after the DIW session, planned co-reflective journal, and developing principles for good design. Therefore, publication considerations did not affect the context of the student's participation in these events. The proposal of the researcher was to write this paper together, in collaboration with a larger project team.
Control	The student opted for egalitarian co-production of this research article, which allowed her to safeguard disclosure of personal experiences.

3. The student's personal designer identity

Analysis of data resulted into a personal designer's identity based on five principles for good design. These principles are structured in Figure 2. Principles 5 – 'good design brings out the best in people' – is an overarching principle in relation to principles 1 to 4, and can be seen as the core of the student's vision. In the remainder of this section we explain each principle, as voiced by the student after a critical dialogue with the researcher.

3.1 Principle 1: good design flows from integrity

In designing, integrity (both personal and product-related) is achieved when designer(s) and other producers are authentic in their actions. Since authenticity is inherently inclusive, by extension it will elicit the best out of people who eventually use the design. This results in design that is neither pretentious nor dominant. Consider the example provided for this principle: The 1,5 liter green recycled glass pitcher by the Dutch franchise Dille & Kamille. The integrity of the product, i.e. the artisanal production and the product material is

preserved in the design. Each pitcher varies in both shape and color. There are some bubbles in the glass that are unintended and irregular, but are a result of the production process. The green color of the pitchers results from the recycling process and is not uniform throughout the object. In sum, every pitcher has its own authentic appearance.
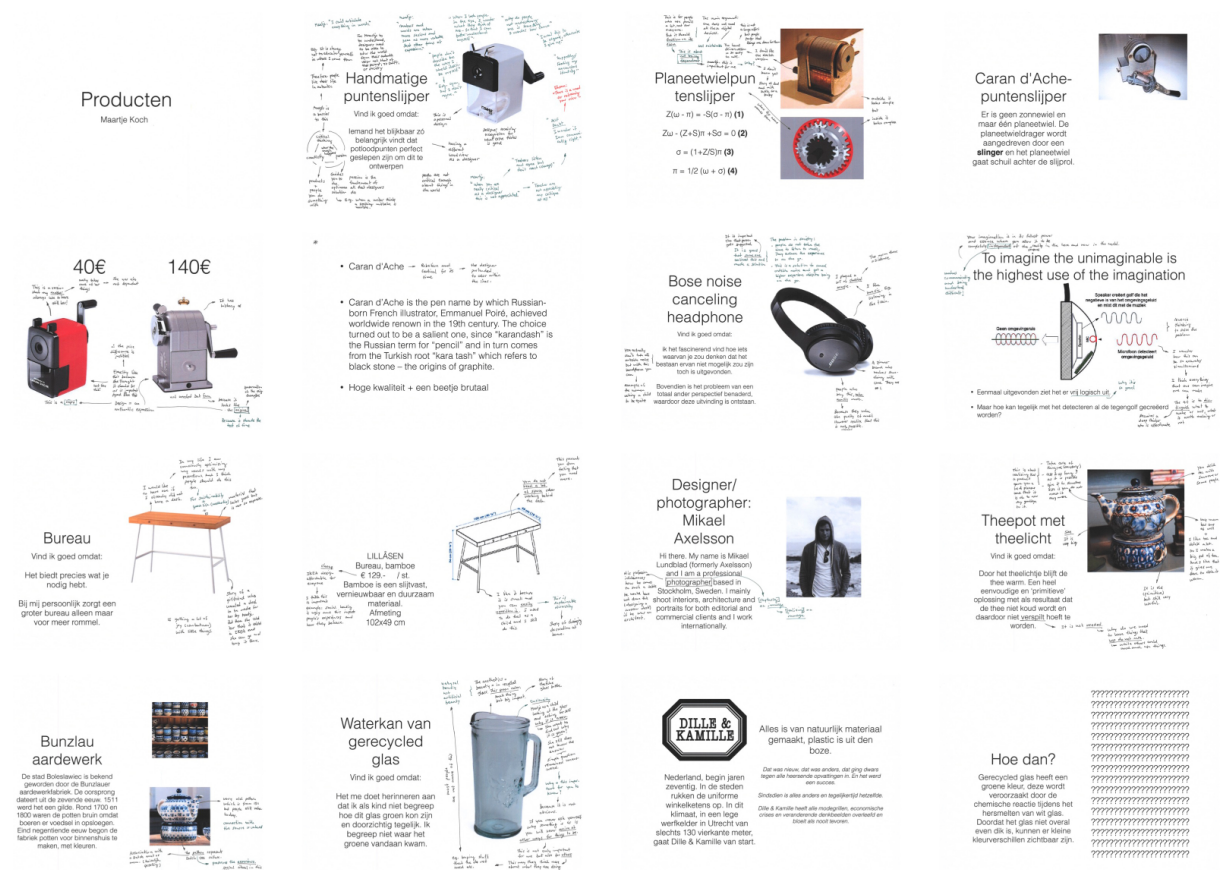

Figure 1   The student's annotated good design board.

3.2 Principle 2: good design is conscious

Integrity requires self-consciousness of the designer in the very act of designing, so pretention is avoided. Consciousness of self as a designer unlocks another level of thought with respect to ecology, in which and for which one is designing. This higher level of thought enables design that is not only good for society, but also the environment. An example of such a design is the LILLÅSEN Desk, designed by Mikael Axelsson for IKEA. The product has a strong form and specific function, namely a minimalistic workspace that discourages clutter and thus ensures concentration. Furthermore, the top is made from bamboo, a consciously chosen material to make desks more durable, renewable, and sustainable.

3.3 Principle 3: good design is the impossible made possible, imagined in freedom

If, and only if, designers are conscious about their environment will they see and hence have the opportunity to make the impossible possible. To be conscious is to acknowledge all that already exists in the world one resides. How can one create the impossible if one is not

conscious of what is already possible? Exploration of this dichotomy involves the fantasy and unique vision of designers. Designers creatively combine their imagination with what already exists in the world. An expansive imagination is a precondition, yet not a sole prerequisite for good design. This is because, crucially, there should be no restriction on imagination or creativity. Any restriction implies an imposition that is by definition exogenous. Therefore, freedom is the foundation of imagination. The QuietComfort 35 II Wireless Noise Cancelling Headphones by Bose is a manifestation of this principle. Is it not illogical to think of an object that produces, and at the same time mutes sound? Yet a designer imagined this, and now this exists as a product.

Good Design flows from integrity.

The product is genuinely what it is.

The 1,5 L green recycled glass water can by Dille & Kamille (Dille & Kamille, n.d.).

1

Good Design preserves cultural plurality.

The product represents and in this way acknowledges differences between people.

The Polish (Bolesławiec) 48 oz Teapot with Warmer (Touch of Poland, n.d.).

4

Good Design brings out the best in people.

The product's ethics and aesthetics encourages the good (principles 1-4) in people.

The Caran d'Ache pencil sharpener (Caroline Weaver Pencil Enterprise, n.d.).

5

Good Design is conscious.

The product is designed with at-most awareness regarding its influence in the world.

The LILLÅSEN Desk by Mikael Axelsson for IKEA (IKEA, n.d.).

2

Good Design is the impossible made possible, imagined in freedom.

The product is the result of the designer's imagination of an unlikely to exist phenomenon.

The QuietComfort 35 II wireless noise cancelling headphones by Bose (Bose, n.d.).

3

Figure 2   The student's personal designer identity as a set of five principles for good design structured in a diagram that represents her vision for good design.

3.4 Principle 4: good design preserves cultural plurality

Material culture is the manifestation of realized imagination. Since not every individual has the same imagination, different cultures exist. A person's imagination is proof of their existence as a human being; their emerging sense of self within the world. The existence of different cultures together on Earth is important for people to have a sense of belonging. Both a sense of self and a sense of belonging are crucial for one's well-being. Take, for example, the Polish Boleslawiec 48 ounce teapot with warmer. By its existence in a context of production and consumption this product preserves a part of Polish culture. However, it is not only Polish culture that it safeguards, it also provides people from other cultures the possibility to celebrate the teapot within their own culture.

3.5 Principle 5: good design brings out the best in people

A design should add meaning so that people can live a happier life. Happy people have a higher tendency to be the best version of themselves. Bringing the best out in people is the foundation and simultaneously the result of the four previous principles (Principle 1-4). Designers can only bring the best out of people if, and only if, they manifest the best version of themselves in their design. The Caran d'Ache pencil sharpener is an example of this. The very fact that a device exists to sharpen pencils in a very precise way (Principle 1), indicates that the designer deliberately cares about detail (Principle 2). This impossibility made possible (the existence of a device to sharpen pencils in a very precise way) is imagined and manifested by the designer for others (Principle 3). Remaining almost unchanged ever since its existence, a cultural vein is preserved (Principle 4).

4. Agency of the student's personal designer identity

In this section we report a summary of the student's experiences, two years after beginning to sense her personal designer's identity with the researcher. Experiences are structured chronologically to reflect the process of moving through identity crisis to being in her element.

4.1 Acknowledging her (designer) identity crisis

The student's designer identity work session and derived principles for good design functioned as a mirror that projected and acknowledged the student's vision for good design to herself. Attaining this view gradually enabled the student to become more mindful about her being in the world and gaining confidence. In her words:

> "My sensed designer identity helped me understand my struggles within education. However, I did not know how I could use this identity in a proper way to prevent future struggles in education. But quitting the Industrial Design Engineering program also would not have helped. So I decided to do a minor offered by another faculty (Technology Policy and Management) which included a three month internship in Rwanda. Besides looking forward to trying something else, I wanted to put myself literally in a position that I could not escape easily. I thought this would motivate me enough to finish what I started. In hindsight, I realize how uninspired I actually was" (2nd author reflection, 2019).

Outside her usual routine, a space had opened to reflect upon her design identity and start taking action towards becoming the designer she wanted to become. Here is how she describes this experience:

> "In Rwanda I could not occupy myself with the same leisure activities as in the Netherlands. Besides, the workload was much lighter than what I was used to. So I had to, and had the time to, think about the things I actually would like to do. For example, seeing the Kitenge fabrics and the tailors in Rwanda inspired me to create a jumpsuit for myself. Eventually, enjoying this experience persuaded me to sign up for a high-quality couturier course, which I followed after the minor in the Netherlands. As the internship had a lot of disruptions, all the time I had nothing to do I would search for a graduate design program in tune with my vision. I really enjoyed this research since I became aware of the possibilities to pursue my principles for good design within education. I visited the open day of one of the schools after the minor" (2nd author reflection, 2019).

4.2 Practicing her personal designer identity in education

Returning to the Netherlands, the designer felt more in her element. She became more confident to practice her personal designer identity within her design education. Having a better sense of what kind of designer she wanted to become, made choosing elective courses much easier. Furthermore, she became more conscious about prioritizing her learning, and was able to focus on the development of skills and knowledge relevant to her for becoming a designer. This is what she says about one of the elective courses:

> "I decided to take an elective course relating to my principle 4 (good design preserves cultural plurality). In this course we had to design an intervention in the cultural relationship between humans and animals. Practicing my principles for good design, I designed a leopard printed t-shirt that manifests provocative issues concerning social and environmental problems caused by the fashion industry. The t-shirt would be for sale in a museum where the social and environmental issues are explained in order to raise awareness among people. Being inspired, people could then buy and wear the t-shirt to further spread this message in a joyful way and stand for a new attitude towards clothing. My intention was to design for a cultural impact that could enable a possible change in the fashion industry which may initially seem impossible. However, 'you cannot change the world' my teacher told me. I felt discouraged. A later conversation with my teacher made things more clear" (2nd author reflection, 2019).

4.3 Self-directing her designer identity development

After sensing her personal designer identity, acknowledging her crisis, and practicing her sensed designer identity, the student started to better understand the possibilities and limitations of her work within her design school. Clearly, her designer identity did not always resonate with the professional designer identity of the school. Having a stronger awareness of herself as a designer, she had no doubt anymore about becoming one. Her self-confidence enabled her to better process feedback and comments of her peers and teachers. Exploring her designer identity enabled her to realize that design is a broader area of expertise than professed in her current school. This is what she writes about her designer identity transition:

"When I started studying Industrial Design Engineering I did not really think about why I want to become a designer. Following courses, I did not really care about grades as I often could not make any sense of the assessment of my projects. Five teachers told me that I should consider studying something else. I felt misunderstood and lonely. In hindsight, I realize that I did not really understand myself and the qualities of my work. Further developing my design identity within the undergraduate program, at the same time successfully completing courses, is going to be both challenging and risky. Nevertheless, my designer's identity work journey has been inspiring. I would like to further develop knowledge and skills relevant to my design identity. Fortunately, I am accepted to the MRes Communication Design Pathway graduate program at the Royal College of Art, a design school where I look forward to obtaining my graduate degree" (2nd author reflection, 2019).

5. Discussion and final words

With our work, we demonstrate that supporting students to sense their personal designer identity helps them to become aware of their potential and responsibility, and enables them in learning to articulate more clearly why they want to become a designer. Furthermore, designer identity work allows designers to find novel possibilities that are 'un-foreclosed' (i.e. not conforming to institutional standards), and that contribute to more personalized development. Related to this, an important insight from the student work in our case study was that her search for novel possibilities was not limited to the boundaries of a design school. Her growing self-awareness and self-confidence nurtured greater autonomy in education and career choices. Simultaneously, this affected how the student understood feedback from educators. The reflections indicate that the designer became able to discern, constructively, how criticism could be reframed to become constructive. This allowed her to develop her potential through focused and achievable actions.

Conflict and failure are inevitable when trying out and practicing design based on newly sensed principles (Krippendorff, 1995). During her studies, the student faced strong emotional confrontations that were overwhelming, and at times hard to overcome. It could be argued that the identity work described in this case study is an extreme example, in the sense that her commitment in wanting to become a designer led to her crisis. In that sense our case does not describe Fry's (2003a) 'majority of students' who are taught to conform to institutional standards in silence. While we have no access to the wisdom of said commitment, the student's case demonstrates how the identity work sessions were able to revive hopes and dreams, even at a moment where the student found herself confused by discouraging feedback. Still, what could be questioned in future research is how revived hopes and dreams can be supported and realized within educational curricula, and ultimately in professional practice.

When writing this paper, a major source of inspiration came from McDonnell (2016), who argued for a balanced view between a design student's personal and professional development (i.e. between students finding their own voice and the particular standards set by practitioners). However, this paper departs from McDonnell in that we approach the

standards of professional design practice pluralistically and dynamically.[8] First year undergraduate students are at the roots, not conforming to 'how things are', courageously embracing, 'how things ought to be' (Simon, 1969), and overcoming setbacks and crises. Some design schools and their staff may resist, or not have the capacity to care for every personal ambition in design in an enriched way. As design grows in popularity, design education becomes stretched under demand. Design educators must avoid becoming desensitized to individual students in an effort to 'scale-up'.

Our vision is one of a design culture that feels alive to students and educators. Within this vision, design education provides authentic support for the development of a personal designer's identity. We believe this support is best seen as a co-designed act performed by students and educators, while practicing, learning, and educating design. First and foremost, this involves the co-design of educational spaces where hopes and dreams can be nurtured. Second, it involves co-designed processes, fashioned as ongoing critical dialogues, aimed towards transforming students' and educators' hopes and dreams to novel, yet acceptable standards.

6. References

Adams, R. S., Daly, S. R., Mann, L. M., & Dall'Alba, G. (2011) Being a professional: Three lenses into design thinking, acting, and being. *Design Studies*, 32(6), 588-607. https://doi.org/10.1016/j.destud.2011.07.004

Amacker, A. (2019). Surrendering to The Now. Improvisation and an embodied approach to serendipity. *The Design Journal*, 22(sup1), 1841-1851. https://doi.org/10.1080/14606925.2019.1595043

Baha, S. E., Dawdy, G., Sturkenboom N., Price, R. A., & Snelders, H. M. J. J. (2018). Good Design-Driven Innovation. In Storni, C., Leahy, K., McMahon, M., Bohemia, E. and Lloyd, P. (Eds.). (2018). *Proceedings of DRS2018: Catalyst*, Vol. 1, pp. 98-111. https://doi.org/10.21606/dma.2017.648

Bose. (n.d.). QuietComfort 35 wireless headphones II. Retrieved April 20, 2020, from https://www.bose.com/en_us/products/headphones/over_ear_headphones/quietcomfort-35-wireless-ii.html

Buchanan, R. (2001). The Problem of Character in Design Education: Liberal Arts and Professional Specialization. *International Journal of Technology and Design Education*, 11, 13–26. https://doi.org/10.1023/A:1011286205584

Caroline Weaver Pencil Enterprise. (n.d.). Pencil Sharpening Machine. Retrieved April 20, 2020, from https://cwpencils.com/products/pencil-sharpening-machine

Creswell, J. W. (2012). *Educational research Planning, conducting, and evaluating quantitative and qualitative research* (4th edition), Pearson.

Dall'Alba, G. (2009). Learning Professional Ways of Being: Ambiguities of becoming. *Educational Philosophy and Theory*, 41(1), 34-45. https://doi.org/10.1111/j.1469-5812.2008.00475.x

Daly, S. R., Adams, R. S., & Bodner, G. M. (2012). What Does it Mean to Design? A Qualitative Investigation of Design Professionals' Experiences. *Journal of Engineering Education*, 101(2), 187-219. https://doi.org/10.1002/j.2168-9830.2012.tb00048.x

---

[8] Born from Jobsian 'crazy ones'; i.e. people committed to the higher level goals that underlie their design work, even when those goals are not shared by many others (Stanford News, 2005).

Dille & Kamille. (n.d.). Kan, groen gerecycled glas, inhoud 1,5 L. Retrieved April 20, 2020, from https://www.dille-kamille.nl/nl/glaswerk/kan-groen-gerecycled-glas-inhoud-1-5-l-5368.html

Dorst, K. (2003). *Understanding Design*. BIS publishers.

Dorst, K., & Reymen, I. (2004). Levels of Expertise in Design Education. In Lloyd, P., Roozenburg, N., McMahon, C. and Brodhurst, L. (Eds.). (2004). *Proceedings of E&PDE 2004: The Changing Face of Design Education*, Vol. 1, pp. 159-166.

Dow, S., Ju, W., & Mackay, W. (2009). Projection, Place and Point-of-view in Research through Design, in Price, S., Jewitt, C. and Brown, B. (eds.), *The SAGE Handbook of Digital Technology Research*, SAGE Publications Ltd., pp. 266-285. https://doi.org/10.4135/9781446282229.n19

Eckert, J. (2020). Why Design Schools Should Take the Lead in Design Education, in Raposo D., Neves J. and Silva J. (Eds.), *Perspective on Design: Research, Education and Practice*, Springer, Cham., pp. 3-15. https://doi.org/10.1007/978-3-030-32415-5_1

Escobar, A. (2017). *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. Duke University Press.

Escobar, A. (2018). Autonomous design and the emergent transnational critical design studies field. *Strategic Design Research Journal*, (11)2, 139-146. https://doi.org/10.4013/sdrj.2018.112.10

Exter, M. E., Gray, C. M., & Fernandez, T. M. (2019). Conceptions of design by transdisciplinary educators: disciplinary background and pedagogical engagement. *International Journal of Technology and Design Education*, 29(3), #-#. https://doi.org/10.1007/s10798-019-09520-w

Fleischmann, K. (2014). Design futures—future designers: give me a 'T'? *Studies in Material Thinking*, 11, 1-23. https://www.materialthinking.org/papers/160

Frayling, C. (1993). Research in Art and Design. *Royal College of Art Research Papers*, 1(1), 1-5.

Fry, T. (2003a). Touching the Wall of Silence: The Voice of Sustainment. *Design Philosophy Papers*, 1(3), 137-140. https://doi.org/10.2752/144871303X13965299301993

Fry. T. (2003b). Dead Institution Walking: The University, Crisis, Design and Remaking (Hot Debate). *Design Philosophy Papers*, 1(5), 267-282. https://doi.org/10.2752/144871303X13965299302712

Gaver, B., & Bowers, J. (2012). Annotated Portfolios. *Interactions*, 9(4), 40-49. https://doi.org/10.1145/2212877.2212889

Ghajargar, M., & Bartzell, J. (2019). What design education tells us about design theory: a pedagogical genealogy. *Digital Creativity*, 30(4), 277-299. https://doi.org/10.1080/14626268.2019.1677723

Ghassan, A. (2011). Full Circle: Balancing the Knowledge Equilibrium Between Newly-Enrolled Design Students and Their Design School. In Kovacevic, A., Ion, W., McMahon, C., Buck, L. and Hogarth, P. (Eds.). *Proceedings of E&PDE 2011: Design education for creativity and business innovation*, Vol. 1, pp. 1-9.https://www.designsociety.org/download-publication/30894/Full+Circle%3A+Balancing+the+Knowledge+Equilibrium+between+Newly-Enrolled+Design+Students+and+their+Design+School

Ghassan, A., & Bohemia, E. (2011). Notions of Self: Becoming a 'Successful' Design Graduate. In Roozenburg, N., Chen, L. L. and Stappers, P. J. (Eds.). *Proceedings of ISADR 2011: Diversity and unity*, Vol. #, pp. 1-9.

Giard, J. R. (1990). Design Education in Crisis: The Transition from Skills to Knowledge. *Design Issues*, VII(1), 23-28. https://doi.org/10.2307/1511468

Glasser, D. E. (2000). Reflections on Architectural Education. *Journal of Architectural Education*, 53(4), 250-252. https://doi.org/10.1162/104648800564662

Gray, C. M. (2014, June). Locating the Emerging Design Identity of Students Through Visual and Textual Reflection. In Lim, Y. K., Niedderer, K., Redström, J., Stolterman, E. and Valtonen, A. (Eds.). (2014). *Proceedings of DRS 2014: Design's Big Debates*, Vol. #, pp. #-#.

Halvorsen, B. (2016). *Design for serendipity: a Research through Design approach* (Master thesis). Retrieved from http://urn.nb.no/URN:NBN:no-56910

Hara, K. (2003). *Designing Design*. Lars Müller Publishers.

IKEA. (n.d.). LILLÅSEN Desk. Retrieved April 20, 2020, from https://www.ikea.com/us/en/catalog/products/90278277/

Isley, C. G., & Rider, T. (2018). Research-Through-Design: Exploring a design-based research paradigm through its ontology, epistemology, and methodology. In Storni, C., Leahy, K., McMahon, M., Bohemia, E. and Lloyd, P. (Eds.). *Proceedings of DRS2018: Catalyst*, Vol. 1, pp. 357-367. https://doi.org/10.21606/dma.2018.263

Jonas, W. (2007). Design Research and its Meaning to the Methodological Development of the Discipline, in Michel, P. (Ed.), *Design Research Now*, Birkhäuser Basel, pp. 187-206. https://doi.org/10.1007/978-3-7643-8472-2_11

Julier, G., & Kimbell, L. (2019). Keeping the System Going: Social Design and the Reproduction of Inequalities in Neoliberal Times. *Design Issues*, 35(4), 12-22. https://doi.org/10.1162/desi_a_00560

Kawakita, J. (1991). *The Original KJ Method*. Kawakita Research Institute.

Klemp, K. (2017). A New Approach to Design: Dieter Rams and the Birth of the Braun Design Ethos 1955-1961, in de Jong, C. W. (ed.), *Ten Principles for Good Design: Dieter Rams*, Prestel, pp. 50-73.

Kosonen, K. (2018). *Finding One's Own Way in Design - Reflections on Narrative Professional Identity* (PhD thesis). Retrieved from https://aaltodoc.aalto.fi/handle/123456789/31487

Krippendorff, K. (1995). Redesigning design; An invitation to a responsible future, in Tahkokallio. P. and Vihma, S. (Eds.), *Design: Pleasure or responsibility, University of Art and Design*, pp. 138-162. http://repository.upenn.edu/asc_papers/46

Lawson, B., & Dorst, K. (2009). *Design expertise*. Architectural Press.

Levesque, R. J. R. (2018). Adolescent Crisis, in Levesque R. J. R. (Ed.), *Encyclopedia of Adolescence*, Springer, Cham., pp. 94-96. https://doi.org/10.1007/978-3-319-33228-4

Manzini, E. (2015). *Design, When Everybody Designs: An Introduction to Design for Social Innovation*. The MIT Press.

Manzini, E. (2016). Design Culture and Dialogic Design. *Design Issues*, 32(1), 52-59. https://doi.org/10.1162/DESI_a_00364

Margolin, V. (2003). Re-Visioning Design Practice: Hot Debate. *Design Philosophy Papers*, 1(6), 353-356. http://dx.doi.org/10.2752/144871303X13965299303072

McDonnell, J. (2016). Becoming a designer: Some contributions of design reviews, in Adams, R. S. and Siddiqui, J. A. (Eds.), *Analyzing Design Review Conversations*. Purdue University Press, pp. 353-369. https://doi.org/10.5703/1288284315935

Mertz, P. (2019, June, 4). Wim Crouwel (Haak, T. Trans.) [Web log post], in Zijlstra, S. (Ed.), Dutch Graphic Roots. Retrieved April 20, 2020, from https://www.dutchgraphicroots.nl/?p=1414 (Original work published 2008, November)

Mewburn, I. (2010). Lost in translation: Reconsidering reflective practice and design studio pedagogy. *Arts & Humanities in Higher Education*, 11(4), 363-379. https://doi.org/10.1177/1474022210393912

Meyer, M. W., & Norman, D. A. (2020). Changing Design Education for the 21st Century. *She Ji: The Journal of Design Economics and Innovation*, 6(1), 13-49. https://doi.org/10.1016/j.sheji.2019.12.002

Micklethwaite, P. (2002). *What is Design? An empirical investigation into concepts of design in the community of design stakeholders* (PhD Thesis). Retrieved from http://eprints.hud.ac.uk/id/eprint/4673/

Parker, R. P., & Goodkin, V. (1987). *The Consequences of Writing: Enhancing Learning in the Disciplines*. Boynton/Cook.

Robinson, K., & Aronica, L. (2009). *The Element: How Finding Your Passion Changes Everything*. Penguin Putnam Inc..

Robinson, K., & Aronica, L. (2014). *Finding Your Element: How to Discover Your Talents and Passions and Transform Your Life*. Penguin Putnam Inc..

Scagnetti, G. (2017). A dialogical model for studio critiques in Design Education. *The Design Journal*, sup1, S781-S791. https://doi.org/10.1080/14606925.2017.1353024

Schön, D. (1983), *The Reflective Practitioner: How Professionals Think in Action*. Basic Books.

Schön, D.A. & Wiggins, G. (1992). Kinds of seeing and their functions in designing. *Design Studies*, 13(2), 135-156. https://doi.org/10.1016/0142-694X(92)90268-F

Simon, H. A. (1969). *The science of the Artificial*. MIT Press.

Smith, K. M. (2015). Conditions influencing the development of design expertise: As identified in interior design student accounts. *Design Studies*, 36, 77-98. https://doi.org/10.1016/j.destud.2014.09.001

Sonneveld, M. H., & Hekkert, P. (2008). Reflecting on Being a Designer. In Clarke, A., Evatt, M., Hogarth, P., Lloveras, J. and Pons, L. (Eds.). (2008). *Proceedings of E&PDE 2008: New Perspectives in Design Education*, Vol. 2, pp. 529-534. https://www.designsociety.org/publication/28147/Reflection+on+being+a+Designer

Stanford News. (2005). 'You've got to find what you love', Jobs says. Retrieved April 20, 2020, from http://news.stanford.edu/2005/06/14/jobs-061505/

Touch of Poland. (n.d.). 48 oz Tea Pot with Warmer. Retrieved April 20, 2020, from https://www.touchofpoland.com/products/48-oz-tea-pot-with-warmer

Tracey, M. W., & Hutchinson, A. (2013). Developing designer identity through reflection. *Educational Technology*, 53(3), 28-32. https://digitalcommons.wayne.edu/coe_aos/6/

Tracey, M. W., & Hutchinson, A. (2018). Reflection and professional identity development in design education. *International Journal of Technology and Design Education*, 28(1), 263-285. https://doi.org/10.1007/s10798-016-9380-1

Vagle, M.D. (2010). Re-framing Schön's call for a phenomenology of practice: a post-intentional approach. *Reflective Practice*, 11(3), 393-407. https://doi.org/10.1080/14623943.2010.487375

Van Winkel, C. (2005). *The Regime of Visibility*. Nai010 publishers.

Voûte, E., Stappers, P. J., Giaccardi, E., Mooij, S., & van Boeijen, A. (2020). Innovating a Large Design Education Program at a University of Technology. *She Ji: The Journal of Design, Economics, and Innovation*, 6(1), 50-66. https://doi.org/10.1016/j.sheji.2019.12.001

Winters, T. (2011). Facilitating Meta-learning in Art and Design Education. *International Journal of Art & Design Education*, 30(2), 90-101. https://doi.org/10.1111/j.1476-8070.2011.01685.x

About the Authors:

Ehsan Baha is a design practitioner, researcher, and educator. He is the founder of Meaningwise – a design consultancy specialized in Good Design-Driven Innovation. Ehsan is investigating designer identity as a foundation for pluralism in design.

Maartje Koch is an undergraduate student in Industrial Design Engineering at the Faculty of Industrial Design Engineering at Delft University of Technology. As a designer-researcher Maartje investigates how bringing out the best in herself can bring out the best in people.

Nick Sturkenboom is a Service Design Consultant at Keen Design and a part-time researcher at Meaningwise. Nick is concerned with Design-Led Digital Innovation, studied through the lens of Cultural Historical Activity Theory.

Rebecca Anne Price is an Assistant Professor of Transition Design at the Faculty of Industrial Design Engineering at Delft University of Technology. Based in the department of Design, Organization and Strategy, Rebecca investigates how design can advance sectors and industries through multi-levelled and networked innovation.

Dirk Snelders is Professor at the Faculty of Industrial Design Engineering at TU Delft, Department of Design, Organization and Strategy. His research interest lies in the organization and professionalization of design in relation to service innovation.