



## Section 02

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**Empowering Critical Design Literacy:** Exploring Practices, Discourses and Implications in and Across Design Education from Kindergarten to PhD

## Track 02: Empowering Critical Design Literacy

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Back in 1992, David Orr stated the need for an epistemological shift “...against the test of sustainability our ideas, theories, sciences, humanities, pedagogy and educational institutions have not measured up” (Orr, 1992, p. 83). Thirty years later, the need for a shift is ever more pressing—the Sustainable Development Goal Index 2020 reveals that major challenges remain (Sachs et al., 2020). How might design education empower the young generation to imagine society and everyday living differently, and to opt for sustainable design and responsible consumption? How might design education empower for ethical sensitiveness, transformative practices and to tackle wicked problems ahead?

The track call is a continuum of the DRS//Cumulus-conference 2013 with the overall theme *Design Learning for Tomorrow – Design Education from Kindergarten to PhD*. The Oslo conference in 2013 framed design education for all as a game changer: To promote sustainability and meet global challenges ahead, the professional designers are dependent on the critical and informed consumer—a design literate general public (OsloMet, 2013, Nielsen et al., 2015). Design Literacy is connected to both the creation and the understanding of design in a broad sense (DesignDialog, n.d.; Design Literacy International Network, n.d.; Nielsen et al., 2019; Nielsen & Digranes, 2012; Nielsen & Brænne, 2013; Research group Design Literacy, n.d.). Designers, policy makers, investors and consumers all make choices that influence future visual and material culture—the mitigation or continual growth of pollution, overconsumption and social inequalities (Lutnæs, 2017). What is it that the next generation of professional designers and a design literate general public needs to know and be able to do, challenge and discover to contribute to the large-scale changes needed facing the global challenges of climate change, loss of biodiversity and social inequality?

In track 02, we invited design researchers and educators to explore, and crack open *critical design literacy* as a subset of *design literacy*. At the core of *critical design literacy*, we suggested the ability to connect to real-world dilemmas with empathy, reject destructive products of human creativity and focus on problems that are worth solving. The main concern of the track is the exploration of current educational practices, academic discourses and implications of design education empowering for critical design literacy at a specific level of education or across levels (kindergarten to PhD). We provided some questions of interest as a starting point:

- How might design education provide an arena to question, rethink and transform current knowledge and cultural practices towards more sustainable ways of living?
- How might the abilities of critical design literacy be articulated for the general public and/or for the professional designer?
- What are the current academic discourses of critical reflection across levels of design education, or across fields of art, design, craft and technology?
- What distinguishes practices of critical reflection within the field of design compared to other disciplines (artists, engineers, craftsmen)?
- How does the role of design education change empowering for critical design literacy, what are the ethical dilemmas involved?
- What design briefs and exercises might support the development of critical design literacy?

### Contributions to track 02

In their paper, *Hofverberg* and *Maivorsdotter* make the question of sustainable clothing a matter for critical



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design literacy. Specifically, they examine the meaning making of an educational material consisting of 17 design and craft projects produced for teachers in design and craft education by *The Swedish Consumers' Association*. The meaning making produced in the educational material provides certain norms and certain ways to act for the pupils. Hofverberg and Maivorsdotter contribute by articulating abilities of critical design literacy related to the topic of sustainable clothing. Two ways of becoming a sustainable consumer of fashion have been identified – to have fun and to feel clever – and these meaning making activities incorporate certain actions of what it means to be a sustainable consumer. The 17 design and craft projects are targeted to the pupils in general education. By analysing design briefs and exercises, Hofverberg and Maivorsdotter crack open the current outcome and invite researchers to discuss other possibilities towards critical design literacies. As we all wear clothes, the contribution of a general public that is capable of acting on clothing sustainability is substantial.

The potential of the research method Photovoice is explored in *ten Brink, Nach and Schouten's* paper on how to support design students' critical reflection. The authors frame critical reflection as a crucial skill for responsible design professionals and turn our attention to the challenge for design educators to turn reflection from an individual cognitive process inside a student's head into a social, tangible and preferably self-guided process in class. The paper draws upon an explorative user study with two cohorts of 3<sup>rd</sup>-year bachelor students in the Netherlands. The students explore given concepts by taking photos and the authors adapt the conventional steps of Photovoice to an educational setting that shifts the responsibilities from the educator to the students. The students are able to express interpretations. However, they need more support to relate their interpretations to beliefs, values and internal loyalties' and make complex connections. *ten Brink, Nach and Schouten* construct five frames from their empirical data to guide further exploration of the method. They suggest how the five frames might be translated into a set of frame cards as reflective triggers in Photovoice assignments. *Ten Brink, Nach and Schouten* contribute by exploring potential as well as boundaries related to how Photovoice as a design exercise supports critical design literacy.

*Maus* turns to the current academic discourse of design education in her paper. Her study is a conceptual review of three selected frameworks for promoting students' reflection in design education. The frameworks are described in recent research papers and *Maus* contributes by comparing and discussing their different focus of attention, steps and topics of reflection. Her review results indicate that the focus of attention affects the topics of reflection: the how-topics related to product design, the why-topics related to environmental impacts and the what-topics related to multiple solutions to challenges in both product design and environments. The three frameworks for reflection provide different contributions to enhance students' critical design literacy. *Maus* concludes that they all have the potential to support the students' capacities to operate within, question and transform their field of practice.

*Noel* challenges the traditional script of global social design projects by intentionally flipping the power dynamics of the collaboration. Her paper details a workshop for design students in which the students from the Global South had more decision-making power than the students in the Global North. They were the ones who would lead the discussion, 'diagnoses', and determine the preliminary design direction, and the Global North students had the roles as local consultants who served as a bridge between the foreign consultants and local culture. The context of the design challenge in the workshop was the culture of Silicon Valley. The students were introduced to ethnographic techniques and practices of critical reflection by examining bias and positionality. *Noel's* contribution to design education is twofold. First, she provides alternative models for international collaboration that disrupt unbalanced power relations from colonialism and the design saviour narrative in global social design projects. By this she inspires design educators to critically examine the design challenges they provide for their students, and the narratives that come along. Secondly, she details exercises on how future design professionals can be empowered for critical design literacy and reflect on power dynamics in international design work.

*Lutnæs* moves between different levels of educational practices as she works both as a teacher in lower secondary education and as a professor at the university. The study is set at the scene of lower secondary education and she maps out potential empowerment of critical design literacy within two of her design projects: *Repair* and *Ecovillage*. The empirical review examines ways in which pupils are challenged to question, rethink and transform unsustainable practices of everyday living. Both projects disrupt the commonplace habits of inevitable human practices: getting dressed and building shelter. In the *Repair* project, pupils design kits for mending clothes and suggest changes in both the fashion industry system and their own consumption patterns. The *Repair* project holds the potential of empowering pupils to navigate complexity and ethical concerns of fashion as consumers. In the *Ecovillage* project, pupils are challenged to claim a role as redirective practitioners in the design process and discern the possibilities of architecture to nudge change in our modes of being in this world. By gaining first-hand experiences with design as a redirective practice, pupils

unveil the vital roles and responsibilities of designers of coining visions and actions towards more sustainable ways of living.

## Coda

The transition into a more sustainable model of society depends on citizens that act on their knowledge and design and implement large-scale changes. Looking back at the questions asked in the call, the contributions of track 02 articulate what critical design literacy means at specific levels of the educational system, for the next generation of professional designers and for a design literate general public. A shared concern of the papers is on how design educators might empower for critical design literacy. The papers contribute by exploring frameworks, briefs, educational materials and exercises. We hope to inspire the community of design educators to measure up against the test of sustainability and make changes that embed critical design literacy as a core part of their educational practices.

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