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THE BLACK THREAD PROJECT: BUILDING STUDENT COMMUNITIES

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ABSTRACT

Teamwork involves different types of interactions and is necessary in education as well as a number of professions. The Black Thread is a *co-design embroidery* research project in design education for Specialised Teacher Training in Design, Arts and Crafts at the Oslo and Akershus University College of Applied Sciences, Department of Art, Design and Drama programme. Over a three-year span, the project dedicated nine student groups, each with approximately 15 members. Each year, the teacher asked the students to investigate a new area of combinations of materials in embroidery. The instructions ranged from vague in the first year to clearer recommendations in the two last years.

Differences in teamwork were observed; in the first year, the students' cooperated, but their spontaneous embroideries were rougher and their composition was disjointed, whereas in the two last years, the students collaborated in the planning of their work and used material and composition rules. Both approaches to the professional development work required a variety of learning skills and experience with materials. Dialogue was important in advancing the project during the different stages. The observed difference between cooperation and collaboration underlines the role of the teacher in influencing the dynamics of a group.

Co-design embroidery projects such as the Black Thread develop the participants' patience, manual skills, creativity and abilities. These (personal) qualities are important for design education and represent cornerstones of almost every community. The students learned how to successfully manage and complete a project. Hopefully, they can transform the competence they gained and apply it to teaching pupils of all ages.

Keywords: Design, education, student, building community, co-design embroidery.

1 INTRODUCTION

Teamwork or small communities of practice [1] are important parts of training and preparing for the teaching profession, where the building process itself, dialogue, discussions, co-working and coexploring have central roles. In design education, small communities emerge and persist when students discuss design, materials, methods and function. Participation design emerged within the design community in the 1970s when users were given a contributing role in design work alongside the researcher and the designer [2]. From the area of participatory design, the terms co-design and cocreatism evolved. In co-design, collective acts of creativity are shared by two or more people [2:6]. On the way to a common goal, the dynamics of a group can be characterized as degrees of cooperation and collaboration [3]. The collective act and the roles between students and students and the teacher borrow perspectives from the area of co-design [2]. According to Etienne Wenger [1], groups develop a shared repertoire of resources: experiences, designs, tools and ways of addressing recurring challenges. In an educational context, a listening and open dialogue is important for change. Other significant factors are mutual trust and respect for each other's differences. The importance of dialogue is based in the tradition of practical knowledge, such as Molander's knowledge theory [4], Donald Schön's The Reflective Practitioner [5], Richard Sennett's The Craftman [6] and Kristine Riis's Ph.D. thesis (My DNA) about design and the design process [7].

The present article explores the Black Thread project, an example of a community of practice, which evolved from textile design education involving elaborate dialogue and participation during the design process. The project was a kind of action research in a practical course. Retrospective reflection linked to what and how students designed and improved their performances. Exploring and discovering new

challenges with new materials is similar to collaborating with materials. The students were involved in the teacher's exploration of synthetic leather and silk thread; thus, the Black Thread project emerged. In the project, the roles of the students and the teacher switched between user, facilitator, designer and researcher.

2 METHODS AND RESULTS

The Oslo and Akershus University College of Applied Sciences has a *Specialised Teacher Training Programme in Design, Arts and Crafts*, organised in several material-based periods, including a fourto six-week textile period of which the present project took one week. A total of nine student groups distributed over three years, that is, three groups each year, were involved in the completion of embroidery tasks. Each group consisted of 12–17 students who were required to collaborate in solving challenges concerning the task and the practical work. All student groups were provided with one piece of light grey synthetic leather and different black threads. The idea was to use different stitches on an uncommon material. The instructions explaining the task became more precise as the years progressed from the first year groups in 2013 to the last groups in 2016. The improved explanations were reflected in the results of the project.

2.1 First year 2013/14

Every day for six weeks, students were asked to make a track on a collective picture according to their sense of humour or other states of mind. They had the opportunity to embroider either on their own design or on those of their neighbours. The final results differed substantially. The tracks went all over the leather in a free composition. Although the students cooperated, they worked as individuals with limited dialogue related to the final product.



Figure 1. Two examples of the Black Thread in 2013/14

2.2 Second year 2014/15

The task was essentially the same but the teacher instructed the students to make links between the tracks and to invite their neighbours to continue and finish their embroidery. However, before they began, they decided to have a common subject, which was defined through creative and open-minded dialogue, collaboration, discussion and planning of the composition. Therefore, these preparations provided new experiences.



Figure 2. Two examples of the Black Thread in 2014/15

2.3 Third year 2015/16

In the project's third and final year, the teacher's instructions for the students were even more precise. Students were advised to transfer sketches from their drawing course or from an exhibition in the National Gallery to embroidery, and their neighbours were invited to continue the design. The stitches, texture possibility with surfaces and formal composition knowledge were emphasised. The students took photos, discussed and exercised the composition in different ways. The design process was characterised by openness and appreciation.



Figure 3. Two examples of the Black Thread in 2015/16

2.4 Completion of the project

The differences between the nine resulting pictures were obvious when exhibited in Gallery PP33 in 2016. The three pictures from the first year lacked a planned design process and were characterised by free compositions and tracks with personal messages. The students were not well informed about the project but simply completed the task. In the evaluation, some mentioned it was fun to design without knowing how it would turn out. These spontaneous embroideries were rougher and their compositions were not unified. Before issuing instructions for the six pictures for the final two years, the teacher knew more about the material and the possibilities, and explained the task more clearly. The above-mentioned students' planning etc. contributed to thoughtful and clear compositions with harmonious tracks.

3 DISCUSSION ABOUT THE PROJECT AND TEAMWORK

A thorough analysis of teamwork in the Black Thread project showed a difference in participation in the design. In the healthcare field, a distinction is made between cooperation and collaboration to create better outcomes for patients and their families [3]. The definitions for cooperation and collaboration as they relate to design clearly describe communicative and relational processes. In the present project, the actors were both user and designer through the levels of doing, adapting, making and creating [2] to achieve a common design. In the first year, the groups communicated but with minor processual contact. Each student completed his or her own task and then passed the piece on to the next person. The contents of the sketches and the topics were splayed. In the final phase, a few students embroidered wildly and freely and completed the work because there were no group leaders and no common rules for the tasks.

In the two last years, six groups had a collaborative relationship and dialogical conversation about the material and designs [8]. They interacted with one another in mutually responsive ways and new possibilities emerged. This interaction leaded mainly to a co-owning [8] of the project, which was extremely important for its completion.

Another goal for the co-design embroidery was the exploration of the combination of materials. Synthetic leather with silk embroidery is not an obvious combination. The teacher was a researcher, a user and the initiator of the material. Choosing clear constraint restrictions such as only one colour, either white-to-white or red-to-red, gave a deeper understanding through experience and reflection [7] in designs and crafts. A thorough investigation of the combination of materials and the stitches was conducted. The material's dull surface provided resistance to the needle, and when the stitches tightened, a relief arose, resulting in embroidery rising from a two-dimensional surface. Applying only one colour inspired creativity and innovation with new expressions in the material. The use of dialogue played an important role at three levels and in three areas: the material, technics and the embroidery topics. To take the material seriously, a sense of co-owning is required, which is important for creating quality not only in this particular embroidery, but in all material. This is emphasised in Richard Sennett's book *The Craftsman*; to achieve good craftsmanship, you have to work with great respect and insightful meaningfulness. Among other things, Sennett highlights the curiosity of whether a material will produce a work of great quality [6].

In the Black Thread, embroidery students worked within a short timeframe. Their challenge was to make various lines with stitches and texture surfaces and to produce compositions. Donald A. Schön characterised a second aspect of reflection about craftsmanship as knowledge-in-action but also reflection-in-action [5]. In action research, knowledge can be both tacit and spontaneous; however, through thought and action, adaptation and adjustments create new knowledge and extended reflection. Dialogue and collaboration helped in the development of curiosity and an understanding of materials, techniques, theses and composition [7].

4 VALUE OF DIALOGUES

4.1 The significance of dialogue on the subject

For students in the six last groups, dialogue in the collaborative work was a basic action at four levels: between the teacher and the students, between the students themselves, between the single student and the material and finally between the students and the embroidery topics. The teacher's role switched between designer and researcher. The teacher's communication with the students played an important role by initiating the activity and precisely articulating the task. Students were users and designers in completion of the embroidery as a whole; they worked with a sense of co-owning and sharing responsibility. Recurring challenges gradually disappeared.

Molander is a pragmatic philosopher who reflects [4] on Donald Schön's main case in *The Reflective Practitioner*: the communication between the architecture student (Petra) and her teacher (Quist) in design learning. Petra is a novice at the University of Architecture, and she had to listen to an experienced practitioner. In their communication, there was switching between arguing for her own knowledge and being open to the teacher's coaching. Molander mentions four tensions that characterised the action in the dialogic structure: part-whole, commitment/involvement-detachment, criticism-confidence and action-reflection [4:286]. In the Black Thread, students had to work with their own embroidery (the part), select the stitch and thread and make expressive lines. However, it was also important to pay attention to the whole design by looking for balance, repetition and texture

effects. They had to discuss, make choices and defend their views with professional arguments, just like Petra. In this little project, they had to trust in those with whom they did not agree. In this form of dialogue structure, knowledge was maintained and it evolved [4]. This process was similar to the creative dialogue in Katrine Riis's Ph.D. thesis, which was characterised by openness, complexity and a dynamic nature. A creative dialogue contains sketches, form studies, solutions and changes [7]. Knowledge in design emerges through applying, challenging and developing experiences, and knowledge and action rules [7].

4.2 Dialogue in an educational context

The students established a type of community; everybody participated and worked effectively over a short period of time. The project had features common to Wengers' social theory of learning [1], which can be used to describe and understand elements in a partnership.

This perspective pertains learning as a social phenomenon with a focus on action and participation; however, it also includes flexibility and fluidity [8], a community in motion. The exploratory colleagues will eventually be teachers and participate in communities of practice. Such co-activity is an action used in school projects in music, language and science courses. Nina Scott Frisch [9] studied child development in drawing, and she used the term *wildfire effect* to explain a drawing activity where pupils looked at and learned from each other. The sketches progressed and created informal learning. Pupils were aware of each other's work, borrowed from each other and realised joint development. A fearless approach, with both constructive and instructive moments among the pupils, characterised the activity. By working practically and physically with materials, the students in the present project also achieved a better feeling for touch and for the sense of the material and the needle. They might also remember the activity better because co-design embroidery is a long-term process. Students used the thread like a pencil but with substantially more imitated options, which can be perceived as beneficial or inhibitory. For example, some students commented that the synthetic leather was nice, solid and comfortable to embroider.

In a larger educational context, the present project in design work supports the three themes that the Ministry of Education promotes in the upcoming subjects' renovation in Stortingsmelding (White paper, Parliamentary report) 28-2015/16 [10]; democracy and citizenship, sustainable development, and health and life skills. The present project particularly stresses life skills, with everybody participating, employing stimulating skills and demonstrating good attitudes. This knowledge has both academic and social aspects. Interaction is important in almost all professions. Teamwork and participation characterise the work of politicians, educational institutions and health services. The international project *Education 2030* is a framework for the qualifications pupils will need in OECD countries in 2030, including professional knowledge; cognitive skills such as creativity, problem solving and critical thinking; and social competencies such as interpersonal relationships and communication skills [10]. The Black Thread project can serve as an example of an interaction where these competencies are important to the task's progress. To co-embroider, one must consider the other participants.

5 INTERACTION IN CO-ACTIVITY

Co-activity as practiced today takes on quite different manifestations depending upon the expertise and the mindsets of its practitioners [2]. In a design process, practitioners take part in collective creativity applied across the whole span of the process. This is the strength of the method. A designer has ideas and starts a project, and when users, students, or technicians next get involved, the ideas will change. New ideas, materials and technologies that arise in the process may be caught up and influence its outcome. The co-activity is by nature not rigid and static, but characterised by flexibility and fluidity, which allow for appreciation and changing of the product. Through collaboration in educational contexts, the teacher leads people in doing, guides them in adapting, and provides support for making and creating. Such interaction challenges the teacher to ensure that the students take ownership of the task and are users and designers in the process. A good dialogue involves interaction of mutual inquiry: connection of sharing, exploring, discussing and weaving of new ideas through which newness and possibility emerge. Responding, a critical feature of dialogue is an interactive process [8:15]. In the co-design embroidery project, the co-activity was both a method and an action for results in design education. The greatest challenge in interaction was the time limitation for the students; their evaluations suggested that they wanted more time to do a better job. Some said they worried about ruining the whole and that it was difficult to get things to harmonise because everyone thought differently. The majority were satisfied and highlighted their eagerness to see the result; it was exciting to see how totally different expressions and motives could be conveyed and still constitute a whole. The concept here can easily be transferred to other materials in design education.

6 CONCLUDING REMARKS

The present paper is, to the best of my knowledge, the first report on a co-design embroidery study. Co-design embroidery requires close partnerships between participants in both the design process and the production of results. The teacher's role was imperative for the modes of interaction between the participants, that is, mainly either cooperation or collaborations, and for the final result. Dialogue between the participants in the design process took place at different levels and within the professional work that the task required. The student groups developed a shared repertoire of resources: patience, manual skills, creativity and abilities. Teamwork was, and is, an important resource for all participants as well as for the general public.

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REFERENCES

- [1] Wenger, E. *Communities of Practice Learning, Meaning and Identity,* 1998 (Cambridge University Press, Cambridge).
- [2] Sanders, E.B.-N. and Stappers, P.J. Co-creation and the new landscapes of design. *CoDesign*, 2008, 4(1), 5-18.
- [3] Ness, O. *Samarbeid eller samhandling? Er det noen forskjell?* [Cooperation or collaboration? Is there any difference?] 2016 (Available: https://www.napha.no/content/14929/Samarbeid-eller-samhandling-Er-det-noen-forskjell [Accessed on 2017, 13 May].
- [4] Molander, B. *The Practice of Knowing and Knowing in Practice*, 2015 (Peter Lang Edition, Frankfurt).
- [5] Schön, D.A. *The Reflective Practitioner. How Professionals Think in Action*, 1991 (Ashgate, Great Britain).
- [6] Sennett, R. The Craftsman, 2009 (Penguin Books, London).
- [7] Riis, K. Design Knowledge DNA. Exploring Design Knowledge Through the Design Process. My DNA, 2016. Ph.D. Thesis (Norwegian University of Science and Technology, Trondheim). Available:

https://www.researchgate.net/publication/304353614_Designkundskabens_DNA_Udforskning_a f_designkundskab_gennem_designprocessen_Mit_DNA [Accessed on 2017, March 3].

- [8] Anderson, H. Collaborative relationship and dialogic conversations: Ideas for a relationally responsive practice. *Family Process*, 2012, 51(1), 8-24.
- [9] Frisch, N.S. To See the Visually Controlled: Seeing-Drawing in Formal and Informal Contexts: A Qualitative Comparative Case Study of Teaching and Learning Drawing Processes from Vega in Northern Norway, 2010. Ph.D. Thesis (Norwegian University of Science and Technology, Trondheim). Available: https://brage.bibsys.no/xmlui//handle/11250/270213 [Accessed on 2017, 3 March].
- [10] Meld. St. [Report to the Norwegian Parliament] no. 28 (2015-2016). Fag Fordypning Forståelse. En fornyelse av Kunnskapsløftet [Profession–In-Depth Learning–Understanding. A Revision of the (Norwegian) Knowledge Enhancement Programme]. Det kongelige Kunnskapsdepartement [The Royal Knowledge Ministry], Oslo. Available: https://www.regjeringen.no/contentassets/e8e1f41732ca4a64b003fca213ae663b/no/pdfs/stm2015 20160028000dddpdfs.pdf [Accessed on 2017, 3 March].