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Working Together: Cooperation or Collaboration?[1]

ABSTRACT
Teamwork involves different types of interactions—specifically cooperation and collaboration—that are necessary in education and many other professions. The differences between cooperation and colla-boration underline the teacher's role in influencing group dynamics, which represent both a foundation for professional design education and a prequalification for students' competences as teachers and for critical evaluation. As a test case, we focused on the 'Working Together' action-research project in design education for specialised teacher training in design, arts, and crafts at the Oslo Metropolitan University, which included three student groups in the material areas of drawing, ceramics, and textiles. The project developed the participants' patience, manual skills, creativity, and abilities, which are important personal qualities for design education and innovation and represent cornerstones in almost every design literacy and business environment. The hope is that students will transform these competences to teaching pupils of all ages in their future careers.

Keywords:
art and design education, cooperative and collaborative learning, drawing, ceramics, textiles.

INTRODUCTION
Is teamwork a necessary premise for success in design environments or in creative entrepreneurship? How can we facilitate innovative pedagogic models for individuals working in a group in order to achieve higher goals? To answer these questions, we consider teamwork and small communities of practice (Wenger, 1998) as important parts of training and preparing for the teaching profession, specifically design education, where dialogue, discussion, co-working, co-exploring, and the building process itself

play central roles. Small communities occur when students discuss design, materials, methods, and function and when they experiment with materials and tools to develop manual skills. Building community in teacher education has several features common to teamwork, where students discuss, work, and look for new possibilities. Dialogues between lecturers and students and amongst students play an important role in creating a positive environment.

Different working methods will influence student community, develop design literacy, and stimulate innovation. Through the assignment of professional tasks in the drawing, ceramics, and textiles fields, students can gain experience from the beginning of their studies, which will increase confidence in their own ideas and develop students' abilities to communicate their intentions to others. In particular, at *Working Together*, an action-research project in design education within the bachelor-level Specialised Teacher Training in Design, Arts and Crafts at the Department of Art, Design and Drama at Oslo Metropolitan University (OsloMet) – students participated in teamwork by cooperating and collaborating on the assignments.

Using reflections based on Etienne Wenger's work (1998), the groups developed a shared repertoire of resources within the project, including experiences, designs, tools, and ways of addressing recurring problems; other important factors included having mutual trust and respect for each other's differences. The dialogue amongst the participants played a central role. The importance of dialogue is based on the tradition of practical knowledge and knowledge in action (Molander, 2015), which in turn is based on Schön's *The Reflective Practitioner* (1983).

It might be helpful to note how research-based teaching relates to the idea that both education and research are required for design and education. Following Norway's introduction of a common law for universities and colleges in late 1990`s, research requirements became clearer (St.meld. nr. 39 (1998-99). The term 'research-based teaching' was generally emphasised to stimulate quality and diversity in Norwegian higher education. The term is multifaceted, and the form it should take depends on the subject area in which it is being applied (Hyllseth, 2001). OsloMet's strategy is to develop and stimulate interaction amongst education, research, professional practice, and innovation (Havnes, 2011), but it is important to determine how this strategy can be implemented practically and which materials and techniques are most suitable.

The project *Working Together* was a type of action research conducted in a practical course, which stimulated design literacy. The students were the main actors; their knowledge development helped to create concrete solutions for the tasks at hand. The lecturer's role as facilitator and tutor was important for academic debate and for research related to the project. Niedderer (2013) discusses which research questions are important to ask in the creative practice of art and design, noting a distinction between art knowledge and design knowledge, which require different questions. This article's questions are related to teamwork in three material cases. Retrospective reflection linked to teamwork about what and how the students designed and improved their performances was a cyclical process of concrete experimentation and learning (Levin, 2017). We will use the reflections of the students and the lecturers as the basis for professional development and discussion throughout this article.

**THE VALUE OF COOPERATION AND COLLABORATION IN HIGHER EDUCATION**
In the autumn of 2018, the research project started as an introductory programme for a large 'herd' of 62 students, so they would become known to each other, and to OsloMet in general, work together, and gain professional knowledge.

A thorough analysis of an earlier teamwork project with first-year students showed a difference in participation in the design tasks (Kvellestad, 2017). In the healthcare field, Ness (2016) distinguishes between cooperation and collaboration to create better outcomes for patients and their families. This distinction has also opened new analyses of teamwork in education. Both cooperation and collaboration have goals that participants should achieve, but the process for reaching those goals is different.

Researchers agree that distinguishing between cooperation and collaboration is important. Roschelle and Teasley (1995), for example, describe *cooperation* on a task that is achieved as a situation

'where each person is responsible for a portion of the problem solving', whereas *collaboration* is 'the mutual engagement of participants in a coordinated effort to solve the problem together' (p. 70). Co-operation can seemingly be successful as long as one individual in the group is up to the task; collaboration, however, is largely based on each individual exchanging his or her perspective.

The definitions for cooperation and collaboration, as they relate to design, clearly describe communicative and relational processes (Kvellestad, 2017). A lecturer's communication with the students plays an important role by initiating activities and precisely articulating tasks. Students are users and designers in the completion of the teamwork as a whole. In a didactic context and in education, relational processes are based on dialogue between the actors and on making progress in the design work. The lecturer provides the students with the thesis (i.e. the keystone) along with certain guidelines; the students must then communicate, plan, and distribute the work (Figure 1). To attain helpful strategies for creating a positive psychosocial environment in education, tasks must be equally understood by all parties. In a creative process, it is common to stop and discuss the work completed at that point, change and perhaps add new strategies, and then continue. In design education or in a company, it is important for leaders to take responsibility, correct and clarify tasks, and ensure participants' involvement. In Sennett's (2009) *The Craftsman*, he emphasises and elevates crafts by discussing them with great respect and insight. He mentions targeted work as an important part of crafts. According to Sennett (2009), targeting is something that is achieved, not something that is set in advance.
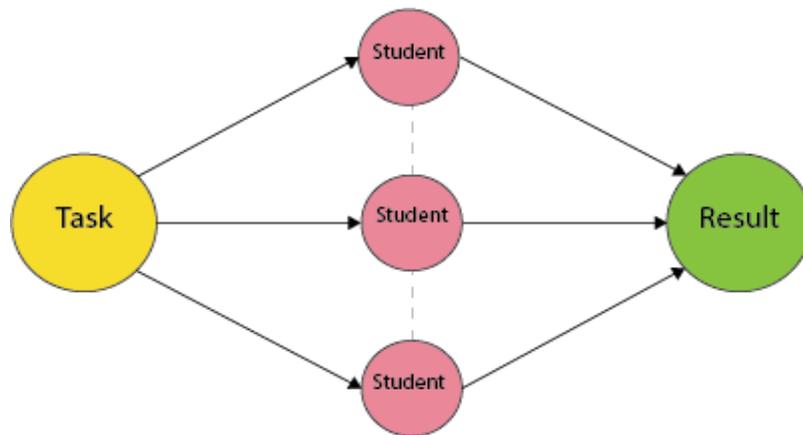
FIGURE 1. Cooperation in the relational process: the start of the project. The lecturer's introduction of the task (the whole) activates the students (the parts) who solve the task jointly. Illustration: authors and © Peter Haakonsen, 2019.

According to figures 1 and 2, this process is similar to Riis's (2016) creative dialogue, which is characterised by openness, complexity, and a dynamic nature. A creative dialogue contains sketches, form studies, solutions, and changes. Knowledge in design emerges through application, challenges, and the development of experiences, as well as through knowledge and action rules (Riis 2016). Ensuring that everyone is involved in teamwork is often a challenge—even in higher education. Cooperative efforts where everyone has tasks usually proceed smoothly because all participants know what to do. In collaboration, however, participants should work and discuss more, listen to and understand each other's points of view, and interact with those with whom they disagree or with those who do not have an opinion (Figure 2).
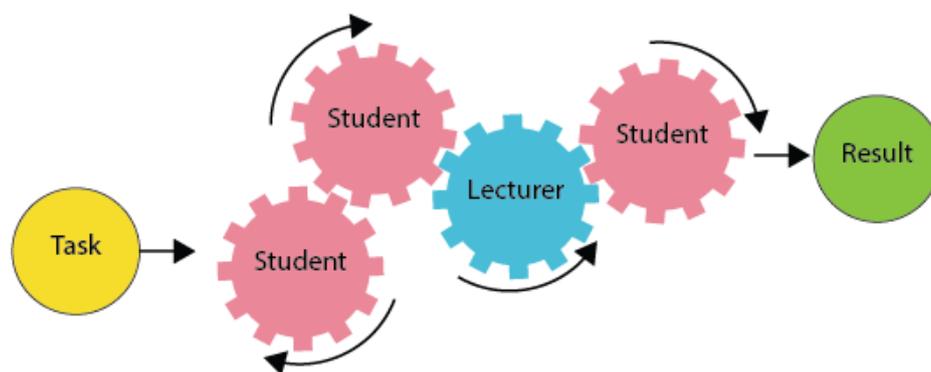
FIGURE 2. Collaboration in the relational process that eventually unfolds; dialogues develop the process. Illustration: © authors and Peter Haakonsen, 2019.

Molander (2015) is a pragmatic philosopher who reflects on the main case Schön presents in *The Reflective Practitioner* (1983): the communication between an architecture student (Petra) and her teacher (Quist) in design learning. Petra is a novice at the University of Architecture, and she listens to an experienced practitioner. Their communication includes switching between Petra arguing for her own knowledge and being open to Quist's (the lecturer) coaching. Molander (2015) mentions four tensions that characterise the action in the dialogic structure: part-whole, commitment/involvement-detachment, criticism-confidence, and action-reflection (p. 286). In the project *Working Together*, the dialogue between the participants went back and forth between individual parts and the whole task and between practical activities with materials and reflections about those activities. In time, new discussions and new choices became necessary.

In this project, the main goal was to raise awareness of the differences between cooperation and collaboration in higher education (cf. the models). Cooperation consists of several parts that work towards the same goal. Collaboration is characterised like gears in that it requires closer contact and work amongst all parts along the way towards the goal. After the students become teachers, they will be able to make conscious use of these methods in their own teaching.

EXERCISES WITH DRAWING, CERAMICS, AND HAND EMBROIDERY
One major advantage in working with students is that they can be included in lecturers' research and development work.[2] Their first year of their bachelor's degree studies includes several material-based periods, including a five-week period in drawing, ceramics, and textiles. Students take all three periods in turn. Each group (A, B, and C) consisted of 17–21 students who were required to collaborate on solving challenges related to the task and the practical work. They learned different activities during these periods and studied individually for most activities. To meet the curriculum for these material-based periods, the research-based training on cooperation and collaboration included the introduction of techniques and materials. They learned the craft, including artistic and formal issues; were able to be creative; and were able to test new ideas on short notice.

The lecturer's role in the project switched between facilitator/observer and designer/ researcher. The study was an introductory task for the students to become familiar with OsloMet and to become known at OsloMet. The projects took from two days to three weeks, depending on the material. The main goal was to learn cooperation and collaboration in groups—a professional didactic approach using practical material work.

Drawing together: An exercise
The three-step exercise called *Drawing Together* was given during the start of the semester. Getting to know each other was therefore an underlying motive for establishing interaction between the students. The purpose of the assignment was twofold. Along with promoting drawing skills in observational drawings, the exercise showed how they could explore and participate in drawing processes where in-

teraction and improvisation were promoted, and how others' drawing skills and ideas could include, inspire, and challenge.
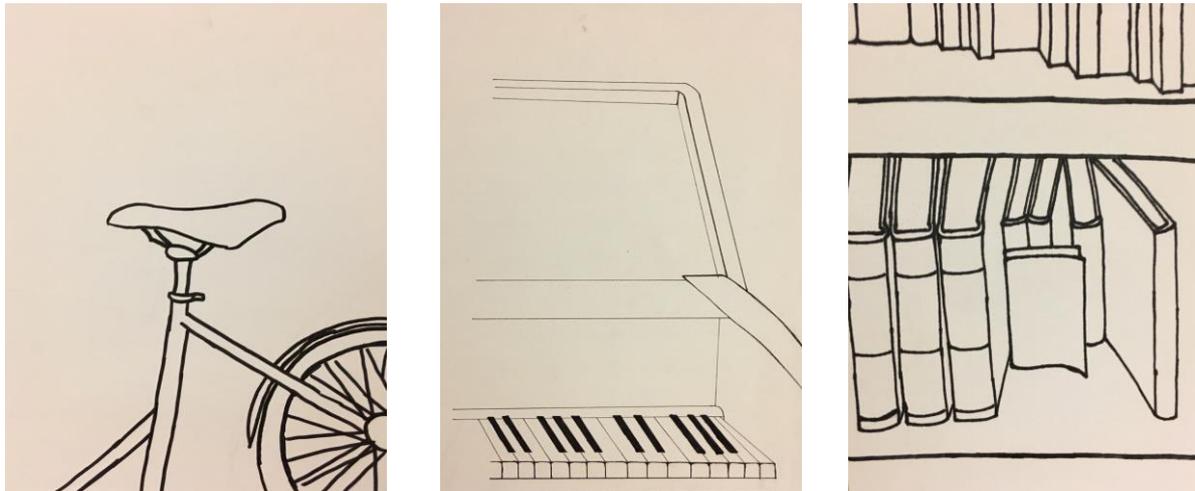

FIGURE 3. Step 3: Ink and marker on paper. Photo: © Ingeborg Stana, 2018.

Working individually
In step 1 of the exercise, the students chose a motif and worked alone. The aim was to draw pictures from the area outside OsloMet's buildings. The teacher's instruction consisted of the practice-based terminology of composition to explain the organisation of visual elements. Each student worked for 30 minutes on individual sketches using graphite pencils and size A5 paper.

Working cooperatively
In step 2, the students formed groups. The size of the groups depended on the size of the class, and the teacher determined how students would be arranged in groups as needed. Together with the students, the teacher analysed the drawings, which included naming and discussing the use of visual elements. The students found common topics, mood-creating elements, and a suitable title for the drawings they planned.

Working collaboratively
In step 3, the students drew together on the same piece of paper and created a selection of sketches using pen, ink, and A1 paper (Figure 3). The step resulted in a large image created from a selection of sketches. In the summary and review of the students' work, the students analysed the results and examined the pros and cons of using graphite and ink. The teacher asked the students to implement instruments through academic language and to compare and explain the difference between cooper- ation and collaboration, drawing either individually or together.

Challenges (Pros and Cons)
In terms of results, the main differences between steps 1, 2, and 3 of the exercises consisted of two different approaches. In the first phase (steps 1 and 2), the teamwork was focused on working together to create a product; however, doing so required that all participants contribute individual work. In other words, cooperation was initiated if all participants did their assigned tasks and contributed individual drawings. The second phase (step 3) was characterised by collaboration and involved direct interactions between people to produce an end result: a big picture. Being challenged by others' ideas and defending their own ideas made the students vulnerable. In the end, however, the process forced the group of individuals to complement their weaknesses and build on their strengths. The process was a synchronised activity in which the participants continuously tried to develop a drawing; the activity involved negotiating, discussing, and listening to each other's perspectives. The two approaches to

collaboration amongst the students had two main effects. First, drawing together on the same piece of paper created new insights into the drawing skills of everyone involved; second, drawing together was a way of capturing creativity. Creativity is often seen as something extremely personal that is done by one person only. While working together on the same picture, the students gained a new understanding of creativity; that is, the final drawing was different from what they could have produced on their own.

Drawing on clay: An exercise with ceramic colours and glazes
In the ceramics portion of the project, the students worked with two-dimensional expressions. Each student made a ceramic tile to be assembled in a common composition. The purpose of this exercise was to improve their ceramic skills by drawing with ceramic colours on a clay tile and then glazing and firing it. In this exercise, sketches from the first drawing task in the OsloMet's buildings served as the starting point for the drawing on clay task. They were encouraged to use other artists as inspiration in their creative process; Keith Haring and Andy Warhol were given as examples. The process started with an introduction in which all the techniques for making the ceramic tiles were demonstrated, including how to use ceramic colours. The various criteria for the design, size (18 × 18 cm), and motif were explained as well.

Working individually
In step 1, the students contributed individually; every student processed his or her motif into a clay tile with ceramic colours (Figure 4). They worked individually with their tiles in accordance with commonly agreed-on guidelines and worked towards a common goal.

Figure 4: Examples of individual work in clay. Photo: © Gunhild Vatn, 2018.

Working cooperatively
In step 2, to make an interesting composition, the students determined common rules for the design and colour on each tile; a joint strategy for the choice included the use of certain visual elements and colours. Everyone cooperated and made their own tiles for a common purpose, where each student was responsible for his or her own part of the common design (Roschelle & Teasley, 1995). All the students had their tiles ready in time, and they were motivated to do their individual share because those who did not finish in time would be excluded from the rest of the process.

Working collaboratively
In step 3, after the ceramic tiles were finished, the students worked collaboratively to create a common composition of the tiles((Figure 5).This phase featured a discussion of various strategies for the common design and the use of visual elements. The students had to listen to and reflect on each other's perspectives in order to complete the composition, which was included in the exhibition at the end of the project.

Figure 5. Members of the group discussing composition. Photo: © Gunhild Vatn, 2018.

Challenges (Pros and Cons)

A challenge concerning group dynamics in the collaboration part was in making the students participate equally, especially in large groups. Disagreements arose about the criteria for the composition, and often the majority decided. Some of the students may have been afraid to raise their voices in discussions. The students also pointed out these challenges in their reflections.

The ceramics field in general evolves through faults. Technical challenges often occur when working with clay. However, through working a great deal, making mistakes, and using different ways of approaching the clay, artists gain new insights and experiences. In this project, the accident occurred when the students received the wrong type of clay, which led to a series of problems, including more than half of the tiles exhibiting large cracks. The accident was useful for learning, however, both professionally and didactically. It was interesting for the students to experience how a mistake became something positive through joint interaction in composition. During the collaborative process, the idea arose of using the crack as a formal element in the artistic process (Figure 6). Despite the crack, the creative process led to something new and unexpected, where the negative became a positive impulse. The students found their own tiles to be less valuable because of the cracking, but their attitudes changed during the collaboration part, when they composed a whole out of all the individual tiles. The students experienced that the whole became better than the sum of the parts. In the exhibition (see Figure 11 later in this article), the audience and the artists' fellow students expressed great interest in the cracking.

FIGURE 6. The final composition result from Class B. Photo: © Gunhild Vatn, 2018.

Textiles: An exercise in co-design embroidery

During the textile period, the students were given a task in hand embroidery, where the aim was to practice embroidery and make a design via co-embroidery. The thesis was based on similar tasks that were given to first-year students in 2013–2016 (Kvellestad, 2017) but now with a different task. In a two-step exercise entitled *Close in Close*, each class (A, B, and C) of students was divided into two teams. Team 1 worked cooperatively, and team 2 worked collaboratively. Each class was provided with one piece of off-white wool and different black threads.

Working individually

The students had drawn individual sketches of objects in OsloMet's building that served as the starting point for the embroidery.

Working cooperatively

In step 1, team 1 discussed, picked out sketches, and made a joint composition of the figures. They cooperated on the selection of sketches, composition, and stitches. Each member of the team then embroidered each figure from the composition (Figure 7). Everyone used black thread, but they varied the stitches and thread types.

Working collaboratively

In step 2, team 2 discussed, chose, assembled, and embroidered flat patterns between the figures; the goal was to make the characters appear tied together. Team 2 had to collaborate on and embroider the same pattern (Figure 8). They were very busy because the composition from team 1 had few figures,

and they were small. The work of linking the characters together led the students to physically sit together and embroider, paying attention to each other and discussing, changing, and approving the work. Exploration continued via their dialogues about simple stitching and by looking at previous works. As many of the students wrote in their reflections, this process became collaborative (Figure 8).

FIGURE 7. Members of team 1 cooperating and discussing sketches and composition. Photo: © Randi Veiteberg Kvellestad, 2018.

FIGURE 8. Members of team 2 collaborating with a flat pattern between the characters. Photo: © Randi Veiteberg Kvellestad, 2018.
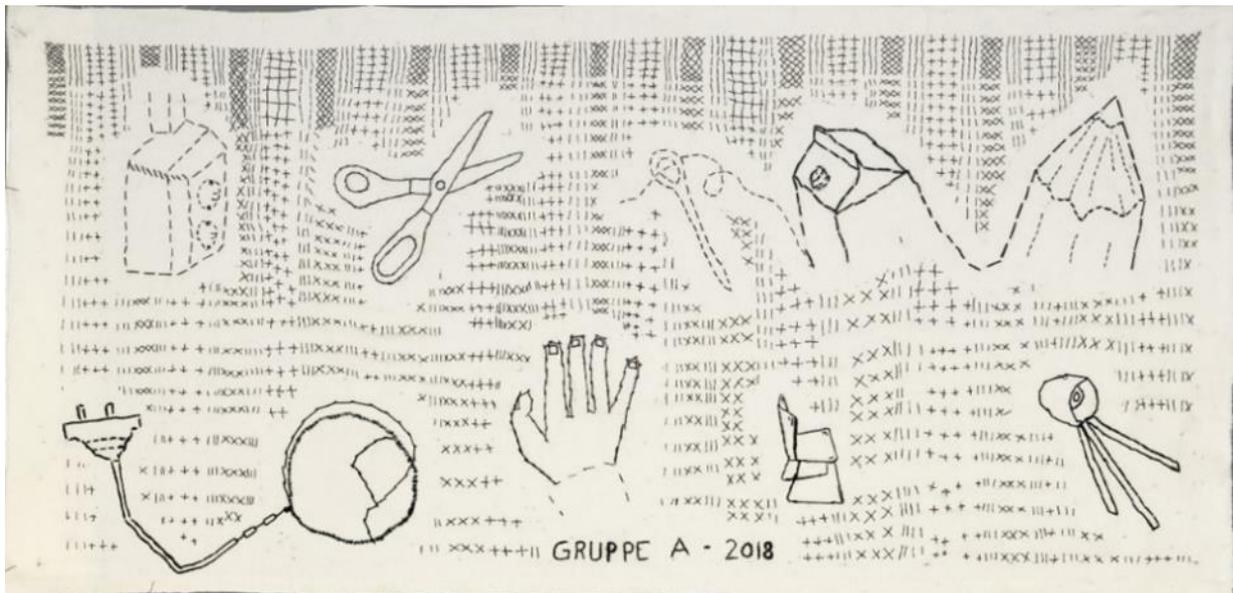
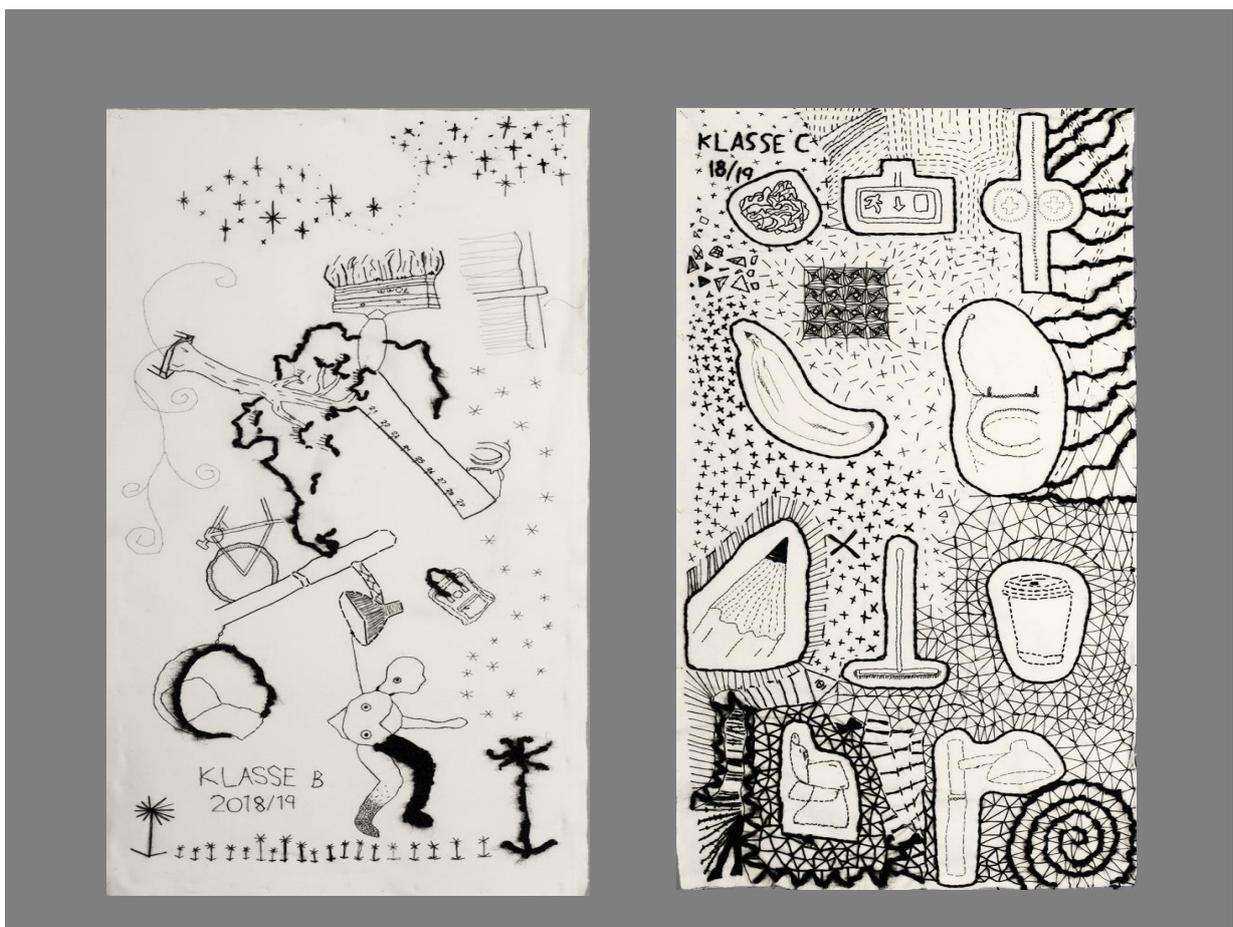**FIGURE 9.** Class A's finished and signed embroidery, 50 × 100 cm. Photo: © Helle Stølevik, 2018.

FIGURE 10. Class B's and Class C's finished and signed embroideries; both are 50 × 100 cm. Photo: © Helle Stølevik, 2018.

OUTCOMES: THE WHOLE BECOMES BETTER THAN THE SUM OF THE PARTS

Completion of the project *Working Together* ended in December 2018 with a collective exhibition at Gallery PP33 at OsloMet (Figure 11). The differences between the resulting pictures were obvious. Some of the motifs from the beginning thesis were visible several times throughout the various materials. Both the audience and the students recognised the motifs, which created a connection in the exhibition. Recognising creates affiliation and coherence in a study programme, especially when time is limited. It was a good didactic idea to have an overall theme over a longer period. Students may bring this experience into their own professions at a later time. A product created by collaboration prepared the students for a synergetic experience in which the whole was greater than the sum of its parts. Differences were notable between cooperation and collaboration, although the role of the lecturers underlines the influence of the group dynamics.

FIGURE 11. From the exhibition at Gallery PP33. Photo: © Randi Veiteberg Kvellestad, 2018.

THE ROLE OF THE LECTURER

Research context always includes reflection and judgement. During the project, the lecturers' communication with the students played an important role by initiating the activity and precisely articulating the tasks. The role switched among tutor, observer, and researcher. A binding working relationship existed between the tasks and the students. Questions were asked, tests were evaluated, and new tests had to be made, followed by new questions. In this way, the work and research were established. Carnera (2012) writes beautifully about a binding working relationship in the meeting between skill development and experience formation that adds to the learning process an assessment of both poetic and aesthetic judgement. During the project, the students put this lesson into practice with the lecturer; thus, the students' experiences and reflections were an important part of the research material.

The lecturers guided the students towards understanding the concepts that were used to enhance their cognitive abilities. As the interpreters and designers of learning programmes, instructors bridge the gap between learners and the new environment in which students can access learning materials and enhance their knowledge. At the same time, the lecturers were in charge of the administrative process in a class setting where they supervised the students' activities and interactions between learners (Entwistle & Ramsden, 2015).

From this realisation, it is evident that a teacher should use several resources to fill identified gaps by making difficult-to-understand concepts clear. Because students need support when taking in new information, lecturers should assist learners in areas where they experience problems, without demonstrating bias. Students have differing cognitive abilities that require instructors to respond to their varied needs to help them overcome pertinent issues in the learning environment and to participate in entrepreneurship, as one example. As one of the students mentioned, weak communication leads to weak interaction.

To ensure better interaction when the students collaborate, the lecturer's role as leader and supporter is crucial. In this research project, the collaborative phase featured a discussion of various strategies for composition and the use of visual elements, where the students had to reflect and respond to each other's perspectives in order to complete the design. The teacher's influence became especially important in this phase for ensuring proper interaction in which everyone participated equally.

DEVELOP DESIGN LITERACY

Through the students' participation in the project, they learned to compromise and to respect each other's ideas and attitudes. Their professional dialogues about composition and material understanding led to new ideas and design literacy. However, as one of the students said, one of the key challenges in the collaborative tasks was attaining equal participation. Collaborative projects can be both evolving and motivating if the task is well designed, which was confirmed by the students' own reflections related to cooperation and collaboration in a school situation:

> You can get results that turn out to be better than if you'd worked individually. (Student, 1C)

> You learn to create something with other people and to work from a common idea, not just your own thoughts and opinions. The result can provide a new and exciting expression that you wouldn't be able to create on your own. (Student, 1B)

The students were encouraged to be critical and to reflect on the challenges of collaborative tasks. These examples critically reflected the disadvantages of collaborative tasks in a school situation:

> There may be conflicts and unfairness, and some of the students may disagree with the common consensus if they feel they're not being heard. (Student, 2B)

> It may end up that one or more of the groups don't do what they should, so those who remain in the group suddenly end up doing everything. (Student, 3B)

Those who are shy and don't speak loudly don't participate in the discussions. (Student, 2C)

These statements show that a well-functioning collaboration can be stimulated. The students have to be a part of the community, sit together, and contribute in the moment, and then new ideas will arise without being planned. Further, the development of skill-, craft-, or design-related knowledge takes time. All experience and mentorship contribute to insight and understanding. Mentorship enables students to realise their potential and to accomplish specific objectives that will define their careers. In this regard, design education could inspire students to become leaders in society who can formulate good policies and be critically important to addressing problems that affect people's lives.

Løvlie (2011) claims that the foundation of experience is developed within an educational environment when we have a reflective relationship with our own practice. If we participate in a process over time, then innovation and development will occur. The action-research project reaffirms that the teamwork methods stimulate the students' design literacy. However, collaboration helps and inspires the community to achieve a higher result.

BENEFITS OF TEAMWORK IN WORKPLACE AND LEARNING ENVIRONMENTS

In the design process, practitioners take part in collective creativity applied across the entire span of the process. This collective creativity is one of the strengths of the co-activity method (Anderson, 2012). In this case, company managers should identify the strengths and weaknesses of workers when sharing workloads to ensure that tasks will be completed quickly and effectively (McClellan, 2016). Teamwork also promotes innovation in the workplace, which enables individuals to realise their objectives and to develop viable solutions that a company can use in times of crisis.

Designers and lecturers have ideas and begin a project, but when other users, students, or technicians become involved, those ideas will change. New ideas, materials, and technologies that arise in the process then influence the outcome. Co-activity is not rigid or static but rather is characterised by flexibility and fluidity, which allow for change and a greater appreciation of the product (Anderson, 2012). Through collaboration in educational contexts, lecturers lead the students in their actions, guide them in adapting to changes, and provide support for their creations (Kvellestad, 2018). Such inter-actions challenge lecturers to ensure that their students take ownership of their tasks and become users and designers in the process.

A good dialogue involves interactions with mutual enquiry—sharing, exploring, discussing, and weaving new ideas – through which newness and possibilities emerge. In responding to one another, a critical aspect of dialogue is by nature an interactive process (Anderson, 2012). Thus, examining the lecturer's influence on the design process is important.

Individuals are more productive in an organisation when their input is recognised. For businesses, creating an enabling environment for employees where they can interact and approach tasks as a team increases the prospects of a company overcoming competition from other industry players. When the workload is shared amongst employees, they accomplish more than they could achieve on their own: a move that results in employee satisfaction (Driskell, Salas, & Driskell, 2018).

Collaboration allows people to help each other and to approach situations from a common point of view in which employees can focus on their goals and their career objectives. The Working Together project had features common to those in Wenger's (1998) social theory of learning, which can be used to describe and understand elements in a partnership. According to Wenger (1998), learning is created by social acts or within processes between people. Learning is characterised by the situation an individual is in and takes place in every practice community. From this realisation, it is imperative to ensure that the application of teamwork in education or business environments promotes harmony and increases an institution's or organisation's productivity regarding accomplishing specific objectives.

In the learning environment, students are typically encouraged to approach problems as a team because doing so will help them explore viable solutions that they can use to solve immediate issues. Compared to their engagement with instructors or teachers, learners can exchange ideas more effectively and

improve their communication skills when they interact with their peers. Students can understand issues better when their peers teach them, compared to when they interact with their tutors (McCutcheon, Lohan, Traynor, & Martin, 2015). From this observation, lecturers must create an enabling environment where students can interact amongst themselves and solve various problems that affect their learning process. The student groups in this project had a short deadline, and they had to think and act quickly; they may have found it easier if the design had already been planned and drawn before the work began. Routines and rules streamline a creative process. A good example may be found in the children's education context, where having clear tasks is vital: Pupils must know what they are to do and what is expected of them (Kvellestad, 2018).

Co-activity in the classroom context gives students the responsibility of applying the concepts they learn from their instructors. Lecturers can understand the ethical grey areas that should be explored because of their direct impact on learners' cognitive abilities. Thus, learning institutions should encourage their learners to form groups according to their strengths and weaknesses in order to boost their performance in class. In a school situation, teachers influence their pupils by offering advice and suggesting improvements. The same thing happens amongst students. The students in the Working Together project had to have discussions, make choices, and defend their views with professional arguments, just like Petra in Schön's (1983) *The Reflective Practitioner*. In the project, students had to trust people with whom they did not agree. Knowledge was maintained and even evolved within the dialogue structure (Molander, 2015). The lecturer provided advice, but the students had to make their own choices. They helped each other, made compositions together, combined designs, explored material knowledge, and developed design literacy.

FUTURE VIEWS IN DESIGN EDUCATION

Further research on the topics discussed in this article could focus on the teacher's role in teamwork, guidelines for interaction, equal participation, or conflict management. Professional education based on both academic study and hands-on practice is closely linked to educational occupations. OsloMet's goal is to develop and stimulate this interaction. Jarning (2011) characterises the educational institution as a knowledge triangle, with education/research/knowledge, sharing, and innovation forming the three sides. The institution will offer education based on research, professional and artistic development, and experience. Professional employees can apply for time to be allocated for research and development work, which then provides opportunities for diverse and non-stagnant work. Jarning (2011) also addresses trends in today's Norwegian education race in which practical work is in the process of being removed from education; he points out that performing more research at the expense of gaining experience leads to practical skills and training becoming less valuable. Even when educators complete their own research and development work, student participation can help in a practical way as well as allow for research-based teaching.

In a larger didactic context, the present project on teamwork supports the three themes that the Norwegian government has promoted in upcoming subject renovations: democratic citizenship, sustainable development, and health and life skills (Meld. St. 28 (2015-2016)). The last item, health and life skills, will be especially salient in projects such as the Working Together project in which everybody participates, thus stimulating skills and positive attitudes. This knowledge has both academic and social aspects. Interaction is an important activity in almost all professions. Teamwork and participation characterise political work, education institutions, and health services. The international project *Education 2030* is a framework for the qualifications that pupils will need in Organisation for Economic Co-Operation and Development countries by 2030. Some of these skills include professional knowledge, cognitive skills (e.g. creativity, problem solving, critical thinking), and social competences (e.g. interpersonal skills and communication) (Meld. St. 28 (2015-2016). The project can serve as an example of the type of interaction in which these competences are important to the progress of the task.

OsloMet has started an interdisciplinary project called Interprofessional Interaction with Children and Youth (INTERACT) (Trædal, 2019), which has the goal to improve (a) the coordination of services aimed at children and young people, (b) collaboration between professional practitioners, and (c) coop-

eration between children/youth and professionals. The value of the project discussed in this article will be a practical exercise for students before they participate in INTERACT across the studies.

CONCLUDING REMARKS

This project has revealed that the factors of cooperation and collaboration in this instance led to successful teamwork and stimulated innovation. Teamwork plays a vital role in the learning environment when students are allowed to experience challenges that can affect their cognitive skills and design literacy. When the lecturers guided students in a structured manner, the students made informed decisions, found innovative solutions, and achieved higher aesthetic goals. Surprisingly, the project also showed that collaboration was noticeably more effective than cooperation for stimulating their creative abilities.

From this realisation, it is evident that instructors can enhance their students' performance by requiring them to work in groups where students explore each other's strengths while they attempt to accomplish their objectives. For this reason, working together has a significant impact on students' class performance. The students who participated in this project learned how to successfully manage and complete a body of work. By applying this knowledge, they will be able to transform the competences they gained and apply them to teaching pupils of all ages, as well as participate in social tasks in general.

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