

The three-headed lecturer

Perspectives on the lecturer's role in co-activity in design, art, and craft education

Randi Veiteberg Kvellestad & Gunhild Vatn

This article discusses education in clay and embroidery and reflects on exercises used for these activities in the Teacher Training Programme in Design, Art, and Crafts at Oslo Metropolitan University, Norway. In the study, the students participated in a practice-based qualitative research project, during which they collaborated in material-based activities. Collaboration and productivity were important for the students' learning outcomes. They worked with personal and unique artistic expressions. By using co-activity methods, their learning outcomes became enriched. This article includes the students' reflections on the education and their experiences with co-activity in the practical work. In general, personal qualities, such as participant patience, manual skills, creativity, and artistic abilities, were stimulated through practical teaching and guidance. Furthermore, the discussion between the students, and with the lecturer, became significant for the results of the assignment. Adapting practical teaching is a challenge in academia. Limited time for training and large student groups influence and limit the academic level of learning attained. As lecturers, we experience these challenges. To uncover the lecturers' distinct roles in progression and interaction in an education context, we use the a/r/tography methodology; artist, researcher, teacher, not only to reflect on and examine the three separate roles but also to understand the connection between these roles and the benefits of combining them.

Keywords: teacher training, co-activity, clay, embroidery, a/r/tography

Introduction

Oslo Metropolitan University's (OsloMet) Strategy 2024 has set great demands and expectations for the university to 'play a leading role as a provider of research-based knowledge related to the welfare state in Norway and abroad' (Oslo Metropolitan University [OsloMet], 2017). The lecturers' role in a design, arts, and crafts institution is to train students to develop their creative abilities in the same processes as well as practical skills in techniques and materials. It is also to guide them towards grasping creative concepts. In a wider context, it is also their task to support critical innovation and raise awareness of sustainability. Specialised teacher education has a double role that focusses on how to be professional in crafting techniques and materials and on how to facilitate learning among pupils. In the future, our students will be teachers, and they must follow the curriculum and adapt the knowledge in question to the target group. The epistemology of practice highlights both reflection-in-action and reflection-after-action (Schön, 1995). In this article, the basis for our academic research is the activities in our education and professional practice.

Lecturers have an important role in ensuring that the conditions in the education system do not affect students' learning outcomes and their opportunities to participate actively in research projects. It is a challenge to organise training and guidance in the classroom to ensure that teaching maintains the academic standards, set by the National Qualifications Framework for Lifelong Learning that was introduced in Norway in the year 2011. The framework concerns both professional/academic and societal benefits (Ministry of Education and Research, 2011). Learning both on campus and in the community is emphasised, and this will help improve learning overall.

OsloMet (2017) wants to meet the needs of society and employers and offer programmes based on research and innovation, contact with professional practices, and the stimulation of active forms of learning among students (through Strategy 2024). Harald Jarning (2011) claims that the educational institution should uphold a knowledge triangle, with these pillars: education/research/knowledge, sharing, and innovation. In OsloMet's Strategy 2024, there is an interaction between research, professional and artistic development, and experiences. A professional employee can use the time allocated for research and development work. Doing so would provide opportunities for diverse and active work. Jarning warns against trends being followed in the Norwegian education race that attempt to remove practical work from education. He points out that conducting more research at the expense of gaining experience leads to practical skills and training becoming less valuable (Jarning, 2011). The education of teachers in design, art, and craft at universities has changed in terms of its content. Students receive a versatile education; they cover more academic topics and learn to write reports, and the societal purposes of this education have become more visible (Kvellestad, 2021).

Another significant point is that the number of teaching hours has been reduced, and more material is to be submitted in a shorter time. This reduction has occurred in both Swedish and Norwegian textile education. Similar instances are found in other craft subjects (Holmberg, 2009; Kvellestad, 2021). In Norway, we have seen demands being made for more efficiency in our educational institutions. This leads to less teaching time and far more students in each class. A large case study published in the *Journal of General Education* in 2010 found a significant positive relationship between professor availability and perceived student learning as well as a significant negative relationship between class size and perceived student learning. Yet, the learning does not occur in a vacuum. Instructor variables and the quality of instruction also affect learning outcomes, which can also be said about facilitating opportunities for students to become involved in faculty research outside of class (Chapman & Ludlow, 2010). We have witnessed changes in our work of lecturing at the university with less time and resources being left aside for teaching and guidance. Through research and development, we have the possibility of harnessing students' experience, knowledge, and skills in research-based topics situated at the intersection of art and education.

We work at a university as lecturers, and it is a great advantage to conduct research over several years. In particular, first-year students in teacher-training programmes in the fields of design, art, and crafts at OsloMet take three material-based courses: drawing, clay, and embroidery. The embroidery course has been a part of research topics since 2017, and in the 'working together' study from 2018–2021, we expanded the topic and included drawing and clay. These studies reflected both the value of working together and the distinction between cooperation and collaboration. We enable collaboration or co-activity throughout our project to reach our research objectives; the students gained a new understanding of creativity, and the result from the material-based area was different from what they could have produced individually. This strengthened the collaborative method (Kvellestad, Stana, & Vatn, 2021). Nevertheless, this study did not reflect on how our facilitation of the assignment or our role as lecturers and supervisors affected the results of the learning outcomes. This is something we want to develop further to enhance the lecturer's role with the students.

As documented in this article, we continued to develop the project from 2018, but now, we want to reflect more on the lecturer's role. Tone Kvernbekk (2011) discusses the value of theory in classroom practice. Didactic theory can describe what happens and why it happens and consequently establish and stimulate it for reflection. We wish to use the a/r/tography methodology to reflect on our practice, and our roles as artists, researchers, and teachers. This methodology is used to describe the phenomena and explain the relationship between these three roles in our practice. We do not use a/r/tography as a recipe; rather, we use it to understand the link between different roles to improve our artistic, teaching, and research practices. Our research focus is to highlight the lecturer's three roles in design, art, and craft

education and to be aware of and improve students' learning outcomes through co-activities and stimulate research-based teaching. We also consider how the facilitation of the assignment, student group size, and time limitations affected the result of the co-activity.

The metaphor of the three-headed troll

The three-headed troll is a figure that has its origin in Norwegian fairytales. Each of this troll's heads is meant for specific tasks; the troll needs all its heads and benefits from being able to combine all the distinct qualities of the three heads. We use the expression 'three-headed' as a metaphor for the three roles of an artist, researcher, and teacher. Similar to the troll, we benefited from being able to combine all the competences we had in our positions at the university. Hopefully, the totality of these competences could help us develop research-based teaching and improve learning outcomes in design, art, and craft education projects.

When students were included in our research, it provided us with an unique opportunity to reflect on the lecturer's three roles. Our experience was that research-based teaching developed the field and contributed new insights for both students and lecturers. In the creative practice of art and design linked to practical techniques and materials, there was a distinction between learning methods when students worked as individuals or as collectives. As artists, teachers, and researchers by equal measure, we had an opportunity to analyse, improve, and change the structure and content. The didactic comparison was valuable.

Artistic practice

We will briefly present our individual art practice in personal statements to reflect on the value of our art practice and how we use this competence in our roles as teachers and researchers.

Randi Veiteberg Kvellestad

Since 1999, embroidery has been my artistic work. I have received public assignments to sew church textiles, and I have participated in exhibitions. I mostly use wool fabrics at the bottom and different silk fabrics and silk yarn for decoration. In art-based assignments, I like to build my embroidery layer by layer. The stitches are embroidered on top of each other, or it may be that the fabric in the background appears between the embroidered stitches. The stitches lie like varnish on top. I use this technique when I must shape decorative symbols – for example, on priests' robes. In such a case, I use many colours, placing great emphasis on the interaction between the colours on the robe and those in the room's decoration.



Figure 1 and 2. Details from Priest Robe, Embroidery, Randi Veiteberg Kvellestad. Photo: Bjørn Tønnesen 2010 and 2016.

Embroidering is a slow process; it takes time and makes time visible, and this visibility gives a sense of nobility to the embroidery and the slow activity (Robach, 2012). The small, embroidered stitch is interesting, and despite its size, it can create expressive variations in embroidered fabric surfaces. In picture series of synthetic leather pieces with silk yarn, I used only one colour, either white-on-white or red-on-red, with the intention of taking the stitch seriously. I challenge the stitch by working with its length, density, and direction in exciting variations and possibilities. These materials are not an obvious combination, but they increase the material contrast in a new and challenging way and provide a deeper understanding of the material through experience and reflection in designs and crafts.



Figure 3 and 4. Synthetic Leather and Silk, Embroidery, Randi Veiteberg Kvellestad. Photo: Fredrik Stige 2016.

Embroidery exploration continued in dialogue with the simple stitch and by looking at previous work. The material's dull surface resisted the needle, and when the stitches tightened, there was relief, resulting in embroidery rising from a two-dimensional surface (Kvellestad, 2018). Further exploration could mean choosing unknown materials and unusual themes to expand borders. In addition, while working with students, the unusual appeals to their creativity and arouses their curiosity. The students must explore the materials and utilise their fabrics and stitches. Ultimately, art-based possibilities lie in small stitches.

Gunhild Vatn

I am a ceramist and a sculptor, and I exhibit my artwork in galleries and museums. My work is represented in several museum collections. I have been deeply devoted to porcelain ever since I first tried sculpting with this material. I mostly create porcelain objects combined with various materials and different expressions. Through my sculptures, I seek the illusion of industrial precision combined with the white and delicate elegance of porcelain. The sculptures are cast in plaster moulds and carefully mounted together, turning into complex porcelain sculptures.



Figure 5. Grand Speculum, Porcelain and Stainless Steel, Gunhild Vatn. Photo: Gunhild Vatn 2000.

My artwork derives from an interest in politics and ethical dilemmas, and art as a socio-political critique is often a motivation and inspiration in my projects (Vatn, 2020, p. 92). Crafting in porcelain is a slow process. This contrasts with today's rapidly changing discussions and exchanges of views on social media. As a ceramicist, I have often questioned the socio-political potential of contemporary crafts. I am searching for the creative and expressive potential of craft due to its ambiguous position between art and design (Vatn & Berg, 2021). My sculptures normally originate from an object with a certain function, but they are recreated in porcelain to express a conceptual meaning that is used as a metaphor to express something else.

In a design object, function plays a significant role in defining the object and its use. As for visual arts, the meaning of an object often becomes a metaphor for something else, like a conceptual function, yet it is fundamentally different from the pragmatic function of the design object. With its ambiguous character, craft can combine conceptual and pragmatic functions (Niedderer, 2005, p. 47–49). Working with clay and porcelain, which are fragile materials, requires a lot of experience, skills, and patience. In my profession as an artist, I have gained valuable experience and skills that are useful in my position as a researcher and teacher of the arts and crafts. Our students also need to acquire this competence; they are encouraged to develop their skills, creativity, and curiosity by exploring and practising art within the material.



Figures 6 and 7. Penance Practices, Porcelain, Brass, Gunhild Vatn. Photo: Anders Bergersen 2018.

Theoretical and methodological perspectives

To reflect on our role as artists, researchers, and teachers, we use the term *a/r/tography* because it provides a structure that elucidates the boundaries between these roles. The term does not have a standardised set of criteria; it remains dynamic, fluid, and non-stationary in a continuous reflective and reflexive stance against engagement, analysis, and learning (Irwin & Springgay, 2008, p. xix). The term *a/r/tography* represents or speaks for the three roles of artist, researcher, and teacher, but there are interesting spaces between these roles. The process of making art can be seen as an act of researching in a way that it is grounded in writing; the relationship between the writing process and the creation of art can develop a new way of understanding the world (processes) via experience (Pourchier, 2010, p. 741). The term originates in the word's *art* and *graphy* – image and word. The space that arises between art and writing can visually and textually extend, reinforce, and complement each other (Springgay, Irwin, & Kind, 2005, p. 900). *A/r/tography* is an inquiring process that appears in the spaces between these three roles and may engage emotional, intuitive, personal, spiritual, and embodied ways of knowing. Moreover, it includes the private, public, and professional selves (p. 902). Our use of the term refers to living a contiguous life that moves between and connects the three roles in working processes and teaching situations.

In our study, the term reflects on and considers our education in a critical way. We want to understand what happens in the classroom and diagnose problems, deficiencies, and conflicts, among other issues, in our educational organisation. The practice leads the way in research-based thinking (Kvernbekk, 2011). The concept of *a/r/tography* defines how practice proceeds in material education. Furthermore, the term can alternate between (1) theories and practice and (2) the art-based and educational modes of different interests. The concepts are expressed in various ways.

One example of this is Mari Ann Letnes (2017) and how she uses a reflexive methodology; she has analysed her own creative, visual experiences. She has applied the concept of *a/r/tography* in visual representation and called the three identities: practitioner identity, researcher identity, and teacher identity. She believes she is all three, but one of them will always be in the front seat as the driver during different projects. When she analysed her earlier projects and practices, she found that she used the methodology in a retrospective way. Another example is Ann-Hege Lorvik Waterhouse's (2021) thesis connected to kindergartens. She designates herself as an *artographer* and thus connects the artist, researcher, and teacher in one person. She emphasises this by writing the term like so: *a-r-tography*. Further, she describes *a-r-tography* as a moving methodology with creative practice and performative pedagogy as its constituent parts, and this rarely follows a linear direction. They burgeon in different directions, connect events and phenomena in different ways, and both transform themselves and become agents of transformation to others (p. 174). She tries to develop the methodology and includes performativity and creations in her research process (p. 184).

In our context as lecturers at the university, the term *a/r/tography* was relevant and made us aware of our attitudes and identities while engaging the students in the activities. We defined the three identities as *roles*, and in our positions as lecturers or associate professors, we moved between these roles. The spaces between them gave us time to reflect on and develop our professional potential. In these spaces, the students' participation, comments, and work were important. We learned from their activities, reflections, and experiences.

Co-activity in the design, art, and craft process

Our artistic research made it possible for us to involve students in our projects. The value of working in groups or communities is significant (Wenger, 1998). Small communities emerged when students discussed their sketches, materials, techniques, and results, and this dialogue played a significant role in training and preparing them for the teaching profession. Interaction with materials provided

unimaginable possibilities, and they had to dare try. By working even closer, preferably with the same material, the students learned even more about collaboration and about one another's limitations and ideas. Thus, it would be possible to yield results that are richer. We expected great learning outcomes based on our own competence as artists. As a matter of fact, the dialogue between thought and action had the potential to develop design processes. Richard Sennett (2008) states that creating qualitative work depends on curiosity about the material. To 'hunt for quality', it is necessary to use the 'possessed energy' in a good way (p. 245). After working for years as a lecturer at the university, we agree with Sennett; he states that if students are curious and inspired by the material, they will have energy and strengthen their creativity. This energy gives them patience and courage in the creative process.

We chose co-activity and collaboration for the group work because we wanted to further develop previous research and teaching experiences where students collaborated, discussed, and listened to each other's knowledge (Kvellestad, 2018). The collaboration gave rise to common creative energy. The group size and the teacher's interaction affected the students' learning outcomes and their experiences of working together. These experiences, background knowledge, and the theoretical framework contributed to a deeper understanding of the lecturer's role. Subjective experiences created pre-conceptions for the study (Nilssen, 2012).

We made teaching arrangements; gathered observations, notes, photographs, and questionnaires; and obtained facts about our education style. As researchers, we looked for a wholistic perspective on the reality in education and its connections to reality (Nyeng, 2017). Since we built on previous projects and our experiences from this, we were subjective researchers with a pre-set understanding of the new project. Working closely with the students on research projects involved qualitative methods that were developed and interpreted in retrospect (Nilssen, 2012). Waterhouse describes her role as a participating observer when she works with children to learn from them and follow them in principle and practice. When she works closely with children, she affects events that, in turn, lead to a sharp-minded view of her own research position (Waterhouse, 2021). In our research, we had a dominant position as a facilitator of education and research. We must consider whether this position affects the results of our research, and this perspective will be a topic of discussion.

During the co-activities, the students sat together, engaged in discussions, and made joint decisions. The method was characterised by communicative and relational processes. The project established small communities among the students, both for clay and embroidery. This organisation had features common to those in Etienne Wenger's (1998) social theory of learning, which can be used to describe and understand elements in a partnership. According to Wenger, learning is created by a social act or during a process between a few or many people (Kvellestad, 2018). The students were inspired by art and drew sketches. Learning and training with materials and skills were important parts of the task. Both art and crafts were essential for their progress in this education.

A symbiosis of lives, artistic practice, artistic research, and teaching commitment

As artists, we work in a symbiosis with the outside world, influenced by the lives we live, our attitudes, interests, political views, and beliefs. The link between our lives, our practice, and our competences is important and becomes clear through our research. To understand the premise for the way we work and develop our artistic processes, it is natural to reflect while drawing sketches and writing in parallel with our work in the studio. When we alternate between writing and creating, we achieve a deeper understanding, which is an important part of our research. At the same time, the art processes and our reflections become clearer both to us and to readers, viewers, and students. Whether we are working on an assignment or an art exhibition, we hope to convey something unique through our materials. Often, the creative process is long and goes in circles. Innovative ideas arise if we have patience and endurance. It is necessary to rethink our ideas, ask questions, make changes, and then start again. We passed on these experiences to our students. We are closely connected to our material through our art practice, and

this will affect its dissemination to our students. Facilitating education in design, art, and craft is a process of enquiry, where 'questions may permeate a life and engage emotional, intuitive, personal spiritual, and embodied ways of knowing' (Springgay et al., 2005, p. 902).

Empirical material, arrangement in clay and embroidery

Involving students in our research project has been a unique and valuable experience in this teacher education. Students who work within the design, art, and craft fields have a special approach to their tasks and value their products as highly personal. Therefore, co-activity involving their artwork turned out somewhat differently compared with the interactions in other disciplines that are characterised by more objective answers. In our research, we wanted to shed light on this aspect of co-activity and emphasise various factors that influence the students' work. We asked them to reflect on how the premises and limitations of the assignment affected their work and learning outcomes. Furthermore, they reflected on the interaction in the group as well as on their teachers' input and guidance. The teachers' overall goal was to determine how to formulate precise and instructive tasks in clay and embroidery.

Drawing on clay: An exercise with ceramic colours and glazes

The students worked with ceramic tiles and two-dimensional expressions. The purpose of this exercise was to improve their ceramic skills by drawing ceramic colours on a clay tile and then glazing and firing it. The process started with an introduction in which all the techniques of making ceramic tiles and using ceramic colours were demonstrated. The various criteria for the design, size (18 × 18 cm), and motif were explained. This task was instructively described and had strict rules: The students were to make a tile in clay, and they were required to use a reptile as a motif. The artist Keith Haring was to be an inspiration in their creative process, and only three colours were allowed. The students were organised into groups of two. First, Student 1 was to create a reptile on their tile and thus became strongly attached to the art expression before Student 2 could start working. Then, Student 2 was given sole responsibility for the background on Student 1's tile. They were strongly advised to work together with sketches and a common plan involving both foreground and background before starting their work. When students create works, they normally have sole control over their artistic expressions. In this task, they were challenged to let go of the control to create something together.



Figures 8 and 9. Student Works, Ceramic Tiles. Photo: Gunhild Vatn, 2019.

Embroidery task: An exercise with wool fabric, black contour, and coloured yarn

The students worked in small groups of four or five. Each group received white wool (22 × 63 cm) and black thread. Half of the groups received coloured thread as well. Every group used sketches from an introductory task at OsloMet to create a joint composition. Each member embroidered an element of the composition with black; students had to use three dissimilar stitches to create expressive lines in the contour. Afterwards, they discussed how to fill the surfaces and create textures between the lines.



Figure 10. Student Works. Photo: Randi Veiteberg Kvellestad, 2019.

Organising the work was easier in small student groups and on small panels, which was an advantage because time was limited. The compositions included varied contour lines, and creating surfaces was challenging. However, it provided students with important knowledge about both technique and design, in addition to creative thinking. The two approaches to collaboration among students had two main effects. First, embroidering together on the same textile created new insights into the embroidery skills of everyone involved. Second, it was a way of capturing creativity. The final embroidery was different from what the students could have produced alone.

The questionnaire

We administered a questionnaire about the education project to the students. They reflected on four questions. Below, we summarise their reflections by distinguishing between clay and embroidery. The last question, focussing on the pros and cons of co-activity, combines their reflections on both.

1. How did you experience having strict rules for the task?

Summary for clay

Many of the students experienced strict rules positively. They argued that it was easier to understand the task; they could start quickly, and they also felt it was easier to dispose of the time. One student answered as follows:

I liked the strict rules in the task and felt that it was easier to get started. I think we had enough freedom within the limits that we could still be creative.

Some of the students considered it good, as they knew from whom they were to seek inspiration, while a few believed the strict rules inhibited their creativity, especially if they did not like the artist.

Summary for embroidery

Most students were satisfied and expressed that the task was precisely formulated and specific to everyone in the class. They should use sketches from an earlier task with motifs from OsloMet. They could then start to embroider quickly after the decision on the composition was made. Since the task

was described instructively, everyone knew how to start. Therefore, the time given was well utilised. This is an important part of a good start in education. A couple of students commented as follows:

It was a good plan to use OsloMet sketches for embroidery because we didn't sit alone too long thinking and planning. We had drawn these sketches before and started embroidery immediately.

Some of the groups worked with both black and coloured thread, whereas the remaining groups worked only with black thread. The 'coloured thread' groups related that they developed the sketches further; thus, they used creativity. The black thread groups worked and studied how to obtain different surfaces and textures with only one colour. The limitation of one colour annoyed them at first, but then, they worked systematically and experimentally. They used thick and thin threads and different stitches that were both short and long and went in different directions. Professionally speaking, the material limitations stimulated creativity.

2. How did the co-activity with your fellow students work out?

Summary for clay

In general, the students emphasised that it was important to have a fair and equal distribution of tasks and to discuss the work along the way. Many students pointed out that it was easier to collaborate with one student than with several, especially when they knew each other well. They also pointed out that it was easier to collaborate when the assignment was presented as an exercise without grades. In cases where the collaboration worked well, the students trusted each other's judgments. Trust and respect were highlighted as things the students learned a lot from. However, this could also lead to challenges if one student dominated the other, while the other was more insecure. Most students highlighted that they could achieve more through collaboration and co-activity. In contrast, some students felt this was limiting; they did not dare to unfold or throw themselves into outlandish or creative solutions because they felt a responsibility for their fellow students to be satisfied:

The fact that the partner was working with the background of my tile was a fun way to do the task. Two brains think twice as creatively, and this made it possible to provide input and respond to each other's ideas, which gave a cool result.

It was nice to leave responsibility to someone else and have faith that the result could be as good as if you had done it yourself.

It is also important to listen to each other and not be disappointed if something goes wrong, although it can be a challenge sometimes.

Summary for embroidery

The questionnaire showed that the co-activity led to several good moments: Sitting together allowed honest communication to arise, and the brief time given to it led to more effective collaboration and good professional discussion. Moreover, the students documented their work on digital media, such as Facebook and Messenger. This was an effective way to avoid misunderstandings, distribute time for embroidering, and ensure the work progressed. Some students supported the collaboration and said:

Everybody had to participate, and many produced ideas that were new for the others.

Good discussions in the group led to stronger collaboration.

No loud voices, no exam, and everybody worked independently.

3. How did the teachers' guidance in the assignment affect your work?

Summary for clay

The students described the training and introduction to clay techniques as thorough. They highlighted the teacher's advice and guidance and commented that the teacher was experienced and skilled, and this was important for their development and contributed to a more positive perception of the co-activity. Some of the students did not need much guidance along the way, whereas others pointed out that input and support from the teacher were significant for their learning outcome. The students appreciated clear and distinct guidelines for what was expected, how tasks should be done, how time should be allotted, and what was to be done by whom in the group. This created predictability for the group and helped to avoid conflict. It was crucial to bring out the best in each student and elicit the expression they wanted. Some student reflections are as follows:

The teacher's input was good but did not necessarily affect any of the creativity. We learned the techniques and gained the knowledge we needed to complete the task.

I like that the teacher demonstrated the exercise thoroughly before we started. I also like that there was room for experimenting, as well as room for making mistakes when we practised.

It was important to listen to the teacher's input, as she has a lot of experience.

Some students complained that the teacher had limited time to give personal guidance to the students. Nevertheless, input and discussions with fellow students were helpful, as one student pointed out:

There were many students in the class, and it seemed almost impossible for the teacher to be able to help everyone. The task, however, was not particularly challenging, and I received general tips and advice along the way. This helped me understand the process better, and I avoided making unnecessary mistakes. Input from my fellow student also felt nice.



Figure 11. Student Works, Ceramic tiles. Photo: Gunhild Vatn, 2019.

Summary for embroidery

Some students found it necessary for the task to be explained by the teacher. It was important to give professional advice about colours and the use of different stitches as well as to recall the premises of co-activity. In addition, it was necessary to talk about varied embroidery lines, the technique, and the background of the composition.

Some students mentioned that they received concrete advice to further develop their ideas and stay on track. The task was demanding, but it was also enjoyable because free composition was allowed. Furthermore, the teacher gave regular updates, and thus, the students met their deadlines:

Every morning, the teacher encouraged the groups to talk about composition and embroidery. To be given time to talk was a promising idea and helpful for collaboration and development.

Input from the teacher made us understand the task better. We were not confused. On the contrary, we had more freedom to make well-done compositions. This made the task more interesting and fun, as well as more challenging.

The teacher did not influence us. Professional advice was necessary in the process.

4. Advantages and disadvantages of the co-activity

The last question in the questionnaire for the students asked them to list one advantage and one disadvantage of the co-activity. The reflections of the students working with clay and embroidery coincide, and we do not distinguish between them in this summary.



Figures 12 and 13. Student Works. Photo: Randi Veiteberg Kvellestad, 2019.

Summary of advantages

All students highlighted good communication as an important factor in successful co-activity. The small groups and knowing each other well were emphasised as prerequisites for success in group work.

Using written academic tasks and listening to teachers' explanations were major advantages. Students needed to ask questions because they had little time to complete the task. The co-activity was easier to implement when everybody knew their tasks. In the clay activity, two students collaborated, and this was more effective than in the textile activity, where four to five students worked together. However, in bigger groups, many innovative ideas arose both for the individual embroidery and for the group. The students also specified that they achieved a greater variation in the result; they developed new perspectives and innovative ideas in the co-activity process. Other ideas led to new and unexpected results that differed from what they had expected. In relation to this, the students made the following comments:

In a co-activity, it is less work per student than when we work alone.

We learn to collaborate; the result has bigger variation, and we solve the task faster.

In co-activity, we learn to respect and be careful with our fellow students' work.

A positive thing about working in a group is that you get a lot of innovative ideas and input, and it is a little nicer to work with someone who is so helpful and willing to work.

Summary of disadvantages

When the co-activity did not work well, the students highlighted poor communication as the main reason. It was also a major challenge to relinquish control over their own work; another obstacle that they faced was the fear of destroying their fellow students' work. Embroidering took too long because the students had to embroider on the same fabric. Participants had to wait for their turns. If there was bad communication in the group, the embroidery became more complicated; they were afraid to hurt each other and get into conflict. Another problem could be that one of the members would involuntarily take on a leadership role. In relation to this issue, the students commented as follows:

It is difficult to work on compositions that someone else has made. It is like a barrier inside us. We do not know the plans for the artwork, and we are afraid of destroying it.

It was complicated to lead a collaboration. To give up your rules and ideas was difficult. This collaboration method may have been too free, and it felt unpleasant.

It was negative to let go of my ceramic tile and let someone else work on it. This situation made me nervous and uncomfortable.

One disadvantage is that if the collaboration was not flowing, you could have an experience of being stuck.

A problem arose if one or two students were not working – or they wanted to work at the same time.

To conclude, the students' evaluations of the entire project were useful and strengthened our research methods. Their views affected our analysis of the process, in addition to the visual product, which will be further discussed in this article.

Discussion

Research between art and education

The research methods were used to gather information from a practice project in materials. The aim of using qualitative data was to reach an in-depth knowledge and holistic understanding of our education (Klafki, 2014). As artists, we have a lot of competence in our artistic field, and therefore, we had high expectations from the students. The rigid structure around the task with clear instructions simplified the steps and pushed the students to think more thoroughly about the process. Some students experienced the strict limitations as inhibiting their creativity. Nevertheless, a clear explanation of the tasks led most of them to do a better job, and they secured good results. This coincides with Sennett's (2008) theory that good crafting creates positive energy and stimulates quality in one's work. The epistemology for the practice is that knowledge is designed between teachers as researchers and students. Through their responses, both oral and written, their reflections-in-action gave them a perspective on the reality of education. This coincides with Schön's theories, which emphasise that reflections tend to focus interactively on the outcomes, the action related to the material, and the intuitive knowing implicit in this action (Schön, 1995). For this reason, the questionnaire helped the students reflect more effectively on the outcomes and transferable knowledge for their profession as teachers.

Co-activity and group size

Working in small groups gave the students valuable experience in relation to being teachers. They were challenged through their close interactions, and they had to reflect on their experiences in writing. Our

study showed that small groups of 2–5 people had some advantages compared to the large groups of 15–20 people created for a previous study conducted in 2018–2021. In the large groups, there were conflicts in which some students felt overwhelmed, and many withdrew and did not participate (Kvellestad et al., 2021). In the smaller groups (of 2–5 people), we observed a higher work effort and closer dialogue between the students. In groups of two people, there was even greater transparency, and the group members were made responsible and knew exactly what was expected. This created a clear understanding of roles and helped reduce conflict. The students made a great effort to do their best because they were accountable to the other students in the group. They discussed and analysed the expression of their drawings in a close dialogue directly concerning the artistic expression. This led to quality work. The results were more accurate and thorough and showed a higher awareness of the connection between the foreground and background. The disadvantage of a two-person group related to the relational process was that there was less development and limited co-activity. Moreover, because of the transparency, the students were afraid of making mistakes; in some instances, the results turned out to be not so free and expressive. In groups of four to five students, their ideas and expressions could become more developed, and the result could be richer and more expressive. Altogether, they contributed with more ideas and the creative process was enriched. The disadvantages with larger groups were that the division of roles and tasks was not so clear, and the discussion between the members was not very efficient since they often had to wait. In fact, for a few, it was easier to hide away and not contribute.

A dilemma in design, art, and craft education

The work we do together with the students clears some of our dilemmas in our education. The university requires high-level professional competence. Structural changes in the education system in recent years have created pressure on design, art, and craft education. Specifically, the content of the education is extensive, but fewer teaching hours and more modules for self-study have been allotted. Education has become more versatile, but there is a lack of immersion (Kvellestad, 2021). A large public report on the future Norwegian school system concluded that there is a need for more in-depth learning (Official Norwegian Reports, 2015, p. 41). The report also concludes that subjects from the practical aesthetic fields in the future school must be strengthened. (p. 53). We have noticed that pressure on educational institutions leads to far more students being enrolled in each class. We are concerned that this will provide less room for guidance for each student, which could negatively affect the quality of teaching on material-based topics and the depth of learning among students. In our study, the students' reflections confirmed the importance of the relationship between lecturers and students because the students complained about having too little time to seek guidance. Smaller class sizes in educational courses may facilitate better relationships between lecturers and students, enhancing learning outcomes and providing opportunities for students to become involved in faculty research (Chapman & Ludlow, 2010).

The organisation and structuring of education may limit the quality of teaching and guidance. Our experience and research showed that artistic knowledge and skills could have been better utilised if time and space were not so limited. To meet the future requirements for our education, it will be important to conduct further research on how class size and teacher presence and involvement in students' projects affect their results. It is necessary to meet the demands for more in-depth learning in future schools as well as to strengthen practical and aesthetical competences. This is particularly relevant in design, art, and craft classes when the need for personal guidance and classroom facilities suitable for training skills is crucial for learning outcomes. We must consider whether we can demand the same quality standards in relation to results among students when the number of students increases, and resources are limited. This creates new challenges at the academic level. We wonder whether fewer number of hours, less specialisation, and fewer resources force new perspectives of learning in the fields of design, art, and craft.

Three roles in education

We used the term a/r/tography to reflect on our practice. By dividing our role into three distinct ones, we reflected more thoroughly on each concept. When working with material-based art and skills, artistic competence is crucial in the search for new knowledge and gaining new experiences in the artistic research process. As lecturers, we used our art qualifications and created activities for the students in several ways. Primarily, we did this because our competence and skills are essential to being good teachers. By giving lectures and writing articles about our art, we gave the students a broader understanding of artistic expression, knowledge, and content.

We utilised the threefold perspectives as critical tools for our profession. These perspectives led to higher expectations. We demanded more in terms of the students' artistic skills, academic level, and pedagogical effort. The students highlighted the teacher's professional knowledge and skills as being vital both for their learning outcomes and the co-activity being perceived more positively.

As researchers, we observed the activities, listened to the comments between students, and noted the progression. The students had to reflect on the formulations in the task about collaboration, the teacher's intervention, and finally, the advantages and disadvantages of the co-activity. To collaborate with each other, students must discuss topics, consider aesthetic expressions, and demonstrate their ideas to be part of dynamic and flexible group work. This experience will be valuable when they become teachers, and therefore, we emphasise the collaborative methods of learning (Kvellestad et al., 2021). Due to the structural changes in the education system in recent years, we still wonder whether the students will have the possibility of implementing collaboration as a key learning method when they become teachers.

Critical perspectives

The study in this article is a 'close study' (Nilssen, 2012) because we worked closely with the students as participants. Only two material groups were analysed as subjects in the research. This may be a weakness that limits our ability to reflect on the project with objectivity and conduct a critical view.

The students benefited a lot from their co-activity, and together, they developed their artistic expression to a certain level. However, this had a limit because they did not yet have the expertise of an artist that they needed. In situations where the students' discussions and works were not utilised well enough, as lecturers, we could participate more actively in a discussion with each student group. We could hence guide and encourage them to develop their work even more in artistic expression. In this situation, we experienced that our threefold competence as a/r/tographers was very valuable, but our limited time did not allow for this as much as we wanted.

Our research has been facilitated by us as lecturers. We organised the research, selected the questions, and decided how the students would work. Further, we created the tasks, and they were quite strict with limited material possibilities. Most students considered this stimulating. However, it is worth speculating whether we might have obtained other research results if the students had been more involved in these decisions and participated more actively in the choice of materials, methods, and content. This may be interesting to explore further in the transition to a new five-year teacher education programme at OsloMet. In this new programme, the students will have more freedom of choice, the possibility of specialising, and in-focus in-depth learning.

Concluding remarks

In this article, we wanted to highlight the lecturer's three roles in design, art, and craft education and to provide an account of the research-based teaching method we followed, where our students worked closely together in co-activities. In addition, we carried out qualitative analyses based on the students' artistic and practical results. The concept of a/r/tography has enlightened us in relation to the importance of artistic competence in meeting the requirement of high-level professional qualifications in this

education. The concept revealed possibilities as well as limitations as we involved the students in clay and embroidery activities as part of our research. The co-activity methods played a vital role in the learning outcomes. Furthermore, our research revealed a distinction between learning methods, where students worked as individuals, and methods, where they worked as a collective. The facilitation of the assignment and group size also affected the outcomes as well as the involvement and guidance from the teacher. Furthermore, we found that the teachers' artistic qualifications and teaching methods were important for the students' learning environment, which will also affect their motivation and effort in skills training and artistic techniques. From this realisation, we believe it is evident that academic research can find scientific perspectives and methods in the field of craft. We consider our 'three-headed' competence as artists, researchers, and teachers important and valuable in our field of study, and we hope this will be an important contribution to future academic research.

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Randi Veiteberg Kvellestad is an associate professor in design, art, and craft at the Faculty of Technology, Art, and Design, OsloMet – Oslo Metropolitan University, Norway. She has worked as a textile artist within the practice of embroidery since 1999, including many churches textile commissions. She is member of the Norwegian Textile Artists (NTK). Kvellestad focusses on linking teacher education, interdisciplinary activity, and research. She has written academic articles about these themes.

Gunhild Vatn is an associate professor in design, art, and craft at the Faculty of Technology, Art, and Design, OsloMet – Oslo Metropolitan University, Norway. She has been a professional artist in ceramics since 2000. She works with various materials, mainly in porcelain, and expressions. She has exhibited in museums and galleries in Norway and abroad. Vatn's sculptures are also showcased in museums and private collections in Norway and beyond. For further information, visit <http://www.vatn.info>.