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The research group Embodied Making and Learning at the University of South-Eastern Norway

INTRODUCTION

There is no *one* history of the research group Embodied Making and Learning (EMAL). EMAL is an interdisciplinary research group that addresses the phenomenon of embodied making and learning. We work together to achieve three main aims: to enhance quality in our research, to further community and cooperation between researchers, and to contribute to developing our field nationally and internationally.

Many events led up to EMAL's founding, and many people were involved in its creation. However, here follows one version of the history, written by one who started the group, who navigated local and national academic and political currents to develop and get the group afloat, and who found happiness in working closely with her colleagues while doing so. My name is Marte Sørøbbø Gulliksen, and I led the group through its first decade until Camilla Groth took over the tiller in January 2021.

HISTORICAL CONTEXT, PERIOD 1938-2012

At the time of its formal founding in February 2014, the origin of the EMAL research group was in what was then called the Department of Art Education (*Institutt for forming og formgivning*), campus Notodden, at Telemark University College, Norway. This department has a tradition of teacher education and education within arts and craft dating back to 1938, when Statens Sløyd og Tegnerlærerskole (SSTL, The National Teacher Training Institution for Sloyd and Drawing) were established in Notodden under rector Rolf Bull-Hansen, who was influenced by the trend to ground pedagogy and education in research (Forvaltningsdatabasen, u.å). Theories developed by, for example, Kerschensteiner, Eng, Cizek and Britch were the central scientific basis for the new national curricula in 1933 (Kjosavik, 1998, p. 99) and similarly central for the new teacher training institution.

In 1976, the institution, now under the name Statens lærerskole i forming, Notodden (SLFN, Norwegian Teacher' College for Arts and Crafts, Notodden), was accredited to offer studies at the graduate level, Hovedfag i Forming (from 2006, Master i forming og formgivning/arts and craft, today Master i design, kunst og håndverk/design, arts, and craft). As one of very few Hovedfags-accredited

institutions in Norway outside of the traditional universities, this signaled that the government considered the institution to be a high-quality research environment with solid Nordic and international networks.

Starting in the 1990s, the institution made the strategic decision to encourage faculty members to pursue doctoral degrees, even though no institution in Norway offered doctoral degrees in the subject area of forming at the time. Therefore, faculty members attended doctoral programs in related disciplines, for example, in pedagogy at Oslo University, art communication at Bergen University, or engineering at Oslo School of Architecture and Design (AHO). In the spring of 2000, for the first time, the department was awarded one of the University College's research fellow positions funded by the Ministry of Education to be enrolled in the doctoral program at AHO. This was where I entered the faculty. I was offered this position as a doctoral student and moved back to my alma mater in Telemark from Stavanger, where I had worked since gaining my Hovedfag [Master] degree in 1997.

By now, the field of knowledge developed in Notodden since 1976 had matured. However, this research had little influence on other research areas and policies. The reports *The Wow Factor* (Bamford, 2006), *Arts and cultural education at schools* (AECEA, 2009), *Art for Art's Sake* (Winner et al., 2013), and *Arts and Cultural Education in Norway* (Bamford, 2012) document that this was a challenge shared by many. Following this report, the international research environment in the arts and crafts was challenged to find ways to communicate knowledge to researchers in other areas. There was a need to explore to what extent the knowledge and skills developed in the arts were relevant in other subjects. As an active research environment in a growing institution, the faculty members in Notodden wanted to address these challenges.

In 2012, the department organized an international conference called "Making, Materiality and Knowledge," here in collaboration with the Nordic research network NordFo (Gulliksen & Homlong, 2013). I was the head of this conference. This conference attracted 173 participants from 16 countries. A total of 109 peer-reviewed papers were presented from a variety of research fields, which resulted in special issues in three different scientific journals. This massive undertaking indicates how important the faculty members thought it was to be a part of a research community and develop their own voices. At the same time, there was a drive in the institution to develop a doctoral program of its own in this field. This work gained traction in 2000, when a group of faculty members and leaders was tasked to develop the first draft for a new Ph.D. program in the field of culture studies in the institution, now called Telemark University College (HiT). This work was mentored by international experts, for example, Halina Dunin-Woyseth from AHO, the central person behind the Making Disciplines (Dunin-Woyseth & Michl, 2001). In 2012, the Ph.D. program was accredited by NOKUT. The research environment in what was now called "Department of Arts and Craft Education" in Notodden was now one of four core partners in providing a doctoral education.

Aligning institutional needs and department's situation 2012–2013

In Norway, at this point in time, there was a national reform of higher education underway (Meld. St. 18 (2014–2015)). This reform aimed to enhance quality in higher education by creating larger and fewer institutions. University colleges would be asked to consider merging with other institutions and become universities. To be accredited as a university, quantitative and qualitative criteria were set on research activities, faculty members' qualifications, number of graduates every year, and the institution's international research network. For example, to become a university, the institution would need to have at least four doctoral programs (NOKUT, 2015). HiT was adamant in being at the forefront of meeting these expected criteria. The development of the Ph.D. program in culture studies was included as a part of this movement. The research environment linked to this Ph.D. program differed in maturity, and some, including the research environment in the IFF department, were challenged to do better, especially in quantitative measures for research outputs like number of publications, faculty members on first and top level, and international cooperation.

On November 21, 2012, faculty members and the leadership in the Department of Art Education were called to a meeting by the vice-rector of research, Pål Augestad. The topic was how the depart-

ment could do better with these quantitative measures for research. I was tasked to make an introduction to the core challenges facing the faculty's research output, and I mentioned the following three:

1. *Practical challenges*: The need to have sufficient time to do research, cooperate more, and develop larger research projects.
2. *Research quality challenges*: The need to receive courses in how to write publishable articles and to get feedback from experts during the writing process.
3. *Research content challenges*: The need to discuss and find ways to manage the department's disciplinary issues, such as defining the department's research area, managing a diverse group of researchers with different disciplinary identities, and practical issues of how to combine theory, practice, research, and artistic exploration.

In December, directly after this meeting with the vice-rector, the faculty members in the department met and discussed these challenges in more detail. The main topic was this third issue from the last meeting: that of the academic discipline or how to define the research content in our area. This, I argued, was the most complex and urgent of the three issues. I was tasked with making another introduction in this meeting, and I described in more detail this third challenge. Previous and current research and studies on the different syllabi in our courses have documented that the courses were built on different disciplinary perspectives (Bruner, 1960; Gulliksen, 2003). Because of this, the courses would necessarily have different internal logics and divergent learning outcomes stemming from these different disciplines. This is a key feature of subjects in schools and higher education, and arts and crafts subjects are no exception (Borgen, 1995; Brønne, 2009; Digranes, 2009). The department's research also was facing a similar challenge, and disciplinary discourses and conflicts were to be expected. My presentation of this challenge drew on the ongoing work I was involved in, together with my colleague, Professor Finn Hjordemaal. We studied faculty members' reasoning behind their choice of content and methods in arts and craft teacher education and identified and discussed how the faculty navigated these disciplinary diverse waters (Gulliksen & Hjordemaal, 2016). I presented a visualization of these different disciplinary positions, showing the different disciplines involved as different colored boxes, as shown in Figure 1a (Gulliksen, 2003, p. 162). Later, I developed this model further based on these initial discussions, drawing on the theories of educational psychologist Lee E. Shulman (Gulliksen, 2014, p. 4), as shown in Figure 1b.

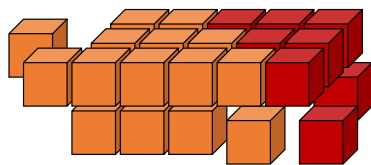


FIGURE 1a. Model from 2003.

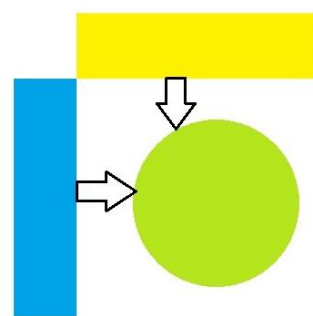


FIGURE 1b. Model from 2014.

When presenting the model, my main point was to emphasize that, to define the research content, we needed to acknowledge the diversity in our research fields and its inherent tension. We did not need to choose one position or another. Indeed, this was impossible because of the complex nature of our fields. Rather, we needed to identify and map out the relevant disciplinary discourses, for example, through such models, and find ways to acknowledge and overcome potential conflicts of interests inherent in the faculty. In this meeting in December 2012 and in the months that followed, this theme was an important topic of our discussions.

Another topic discussed in this meeting was how art education could be used to improve teacher education in general, here following up on the need to become more relevant within other subjects. In my presentation, I referred to the KEA report (KEA, 2009), to the EU's initiative on education and training (EUC, 2007; European Commission, 2013) and to AECEA's report, which all emphasize the need to improve teacher education: "It is important to look at who teaches the arts subjects in the different European countries and how these teachers are trained" (AECEA, 2009, p. 65). Further, the presentation referred to the importance of being active makers, making art and craft objects, and how making processes were core parts of research projects and parts of becoming a teacher.

The following discussion in the meeting could be distilled into three identified needs:

1. A need to make an inclusive definition of how the field was defined, or at least to find ways to bridge terminological differences to clarify the focus of the department's research.
2. A need to find ways of publishing research that reach a broader audience and make the department's research more relevant and more communicable to other fields.
3. A need to increase cooperation within the department, as well as stronger networks with other institutions and groups nationally and internationally.

To solve these issues was seen as the key to increasing the quality in research projects, publications, and applications and, thus, for meeting the challenge from the vice-rector of research. It also became clear that, to address these needs, it was necessary to make structural changes in how research projects were developed and how time to do research was used in the department. We were well positioned to move forward.

Institutional processes and actions taken

Simultaneously, the institution Telemark University College (HiT) made structural changes to perform better on the quantitative measures of research output. A *five-point strategy to increase external funding* was developed and presented by the vice-rector of research to the institution's Research and Development Board (FOU-utvalg) at a meeting on November 14, 2013. The five points included the following: 1) development of incitement strategies, 2) development of research clusters and coordinators, 3) development of objective parameters for leadership, 4) more focus on research leadership, and 5) changes in organization of research and teaching. Of particular importance for IFF was the second strategy, that is, the need to develop research clusters in the institution. This strategy was described as follows: "Each cluster should consist of about 10 active and dedicated researchers, preferably across faculty and departmental borders" (Høgskolen i Telemark, 2013). This description was crucial in the further development of IFF research.

Directly after this meeting, the vice-rector called for the different research environments at HiT to apply for status as a research group. The deadline for application was set to be February 1, 2014. Thus, the research environment only had two months, including the Christmas break, to develop an application to become a research group.

In the Department of Arts Education (IFF), we were ready. I contacted my colleagues Sissel Bro and Kari Carlsen, and we formed an ad hoc leader group to kick off the development of an application. We rapidly planned and organized two open-invite workshops for faculty in the department on November 26 and November 27, 2013, only days after the vice-rector's call (Figure 2).



FIGURE 2. Workshop November 2013 – identifying scope of the research group. From behind: Kirstine Riis, Kari Carlsen, Jadwiga B. Podowska, and Åsta Rimstad. (Photo: Marte S. Gulliksen)

I also organized meetings with other interested parties outside of the department, for example, with researchers from fields like culture heritage and drama at HiT. Based on the November 2013 workshops and other strategic meetings, I led the work to develop a draft for a five-page description of the group. In a meeting on January 9, 2014, a final draft of the group description was discussed, and the same day, it was sent to the vice-rector of research.

In the next meeting of the institution's Research and Development Board (HiT-FOU-utvalg), on February 20, 2014, the vice-rector informed that 33 applications to become research groups had been submitted, and that he had approved only a handful. EMAL was one of them.

SCOPE, AIMS, AND ORGANIZATION OF EMAL, 2014–2020

The inaugural meeting of the EMAL research group took place on February 25, 2014. I was formally elected as research group leader, and Sissel Bro and Kari Carlsen were appointed as the reference group for the group leader. The other participants in this meeting were Gry Uhlin-Engstu, Anne Solberg, Åsta Rimstad, Sissel Bro, Berit Ingebretsen, Kirstine Riis, and Jadwiga Podowska.

Directly after this meeting, researchers and teachers from the entire faculty were invited to join EMAL if their research interests aligned with the group. An information meeting was held on March 12 and April 3, 2014, and the vice-rector of research participated in officially kicking us off. In this meeting, we presented the background and aims for the group, some of the ongoing research projects, and the activities for spring term 2014. Plans for the next academic year and a 5-year roadmap were discussed. We asked, where do we want to be in 5 years, how do we get there, what do we need to do to succeed?

EMAL's scope: strategic decisions

A core challenge EMAL faced was to bridge the different disciplinary perspectives and mediate the disciplinary and, therefore, also the terminological differences in our research field. To overcome this, we made a bold move: we chose to avoid defining *one* way to define the research area, the discipline, or the subject. Instead, we chose to target *the phenomenon: the process of embodied making and learning*. Our ambition was set to continually map out this phenomenon, study it from a variety of disciplinary angles, and see how the different views on the research field could contribute to generating new insights for all the various subjects or courses the group was currently teaching or would teach in the future.

Using a tension between worldviews as a positive force in the department was an idea conceptualized through the work of Hjordemaal and I, here based on the theories of Theodor Litt (Gulliksen & Hjordemaal, 2016; Litt, 1949). Instead of terminologies like arts, crafts, or others, “*embodied making*” (*deltakende skapende praksis*) and “*learning*” (*læring*) were chosen as a new theoretical common ground. It is important to note that even though we used the word “embodied,” we did not solely draw upon embodied cognition theory. Rather, the first English description of the EMAL research group (spring 2014, published on HiT web pages in 2015) features the following description:

EMAL is inter- and transdisciplinary (Nowotny, 2004; Klein, 2001) and relates to different disciplines by drawing on knowledge and methods relevant to the inquiry. Because of this, is artistic research, educational development projects, and methods including an insider perspective included in the research group in addition to traditional research methods and perspectives from science, social sciences, and humanities. Gibbons et al. (1994) describe such an approach as Mode 2 knowledge production. The approach has no limitations in which traditional disciplines could be relevant. (EMAL HiT, 2015b)

The phenomenon or process studied was defined as having two parts:

- The *present basis* for embodied making practice (materials, form, design, quality, meaning, and culture through approaches such as psychology, physiology, biology, phenomenology, existentialism, and others)
- The *practical consequences* of this basis (pedagogy, methods, learning, society, creativity, innovation, culture development, culture production, etc.) (EMAL HiT, 2015b)

The description also specified three possible perspectives:

- *An aesthetic perspective* (both in the sense of aesthetic as being a sensitive experience and as subject areas, thus being more specific than studies of body and meaning in a broad perspective on movement).
- *An educational perspective* (which consequences embodied making has for change, learning, and teaching of children or adults as opposed to, for example, a social science or culture theoretical perspective).
- For some: *a participant perspective* (studying the phenomenon through practice-led research) (EMAL HiT, 2015b).

By rewriting the research area with these theoretical perspectives, the research group aimed to be inclusive of other disciplines represented in the faculty. The focus and theoretical foundation developed in these first workshops and meetings still stands today. However, there has been—and still is—a discussion in the group on how to address the ambiguities in the description, for example, about the relationship between epistemological and ontological terminologies used.

EMAL's aims

EMAL's main aims were founded on the identified needs described above and were done so within this broad inter- and transdisciplinary scope and ambition. Three separate main aims were developed as guidelines for the group's work:

1. to enhance the *quality and impact* of the member's research output, by
2. generating more *communication and cooperation* in the institutions' research community and their networks, which in turn will
3. contribute to *developing the research field* nationally and internationally

The first aim *to enhance the quality and impact of the member's research output* was the overarching goal of the group. A main purpose was to find ways to make sure each research group member's research effort was of a high quality and contributed to the bigger picture. Therefore, the meetings in the research group aimed to clarify focus, map out the terrain, and inform one another on what has been done and what could be done next. These activities were done to ensure that each activity contributed strategically and part by part. Techniques like Zip analysis were used, as were the annual communal development of a map over the knowledge landscape.

From day one, five-year plans were developed both for the entire group and for each member. Career-development plans and courses were developed based on the needs identified in the Zip analysis and the mapped knowledge landscape.

The second aim, *to generate more communication and cooperation in the institutions' research community and their networks*, was addressed in monthly meetings for all participants. Minutes were written and made available to those who could not attend. More importantly, the research group defined three different types of membership in the group to make sure that the right persons who wanted to be active felt invited to the group. In contrast to more typical research groups that perhaps were organized around specific projects or around one professor's topic, the EMAL research group wanted to have a nonhierarchical organization, like that developed by Gibbons' "Mode 2 knowledge production" (1994, 2001) or Bammer's Integrative Applied Research (2013): the idea was that the group should invite and include not only researchers, but also those who mostly taught or made development work with the practice field outside of the university. We argued that this would enhance quality through a clear division of labor, cooperation, and communication (EMAL HiT, 2015a). The three different groups are described in more detail below.

The third aim, *to contribute to developing the research field*, was addressed by ensuring that we became visible as a research group in the international field. The group initially selected a few key conferences in the relevant fields. We made sure that more than just one person went to these conferences, and we also expected those who went to the conferences to report back to the group. Next, we organized our own theme sessions in key conferences. This drew attention to our group and our studied phenomenon, and it also ensured that our topic was communicated clearly to scholars in relevant fields. These sessions were developed together with international researchers and were open to external participants.

All the activities and publications in the group were recorded and written up in yearly reports. These reports were used by the members to visualize everything that had been done and to check that the part-by-part knowledge building was on track. We distributed these reports to our department and faculty heads to inform them of our progress, even though this was not expected at the time.

Organizational structures in the period 2014–2020

From the start, the research group was organized as an umbrella organization with an emphasis on the research conducted by individuals or small groups, such as Ph.D. projects and post-doc-level projects. In its first term, EMAL had 17 members, and the monthly meetings were arenas for sharing status, discussing topics, and supporting each other. Soon, however, the group grew rapidly in number. Because of the strategic choice of a research topic outside traditional disciplinary borders, several of

the faculty members in the institution applied for membership, and as stipulated in our statutes, everyone who wanted to become a member was admitted. A new organizational structure was soon needed.

On 26 September 2015, the group had 28 members, and a decision was made to expand the organizational structure to the three types of membership (EMAL HiT, 2015a):

1. Membership for faculty members *engaged in a defined research project* alone or in a group, for example, researchers, artists, and Ph.D. students. These members supported each other in conducting, progressing, and finishing their projects. They contributed to quality in each other's project by discussing content, problem, aim, theories, and so forth. They kept each other informed on the development in their respective fields. They were primarily responsible for their own projects but were also expected to support others in their projects.
2. Membership for faculty members *interested in but not currently doing research* who taught research-based courses or would like to do research. These members were encouraged to participate in meetings as often as possible to listen and contribute to discussions, to contribute to recruitment and policy development externally, to suggest themes for discussions, and to discuss project ideas from other members so that these ideas indeed were relevant for the practice fields. They were primarily responsible for contributing teaching experiences so that EMAL research could be as close to the needs of the practice field.
3. Membership for faculty members who had the *time and ambition to develop new projects and apply for external funding*. Both existing members of EMAL and outsiders were included in so-called "task forces"—limited in time and scope toward specific deadlines and projects, such as research funding and new Ph.D. positions. These members were tasked with identifying and prioritizing researchable problems, keeping tabs on possible external calls, and inviting others to participate in developing new projects.

These three types of membership were developed to ensure that each member knew what was expected and had room to create their own role and limits for their contribution. This was seen as important for achieving a secondary aim of the research group: *the joy of research* [forskningsglede]:

A side effect of EMAL is that we want to contribute to the joy of doing research within our field. We do this by contributing with our different special expertise, having trust and respect for each other's differences, being generous with academic and social support to each other, and celebrating each other's successes. (EMAL HiT, 2015a)

This organization with three types of memberships worked well for a time. By June 2017, the group had 32 members. Each year, the knowledge field was remapped, and monthly meetings gathered all members to share the status of their projects. However, the growing number of members meant that it became increasingly difficult to get everyone to attend meetings and have the time for equal contributions of each member in the limited meeting time. The administrative burden on the group leader became increasingly problematic. It became especially difficult for the leader to maintain a supportive role for all these researchers, and the task of gathering and checking the quality of the yearly reports had become huge. Thus, a third organizational structure was developed.

In August 2017, an idea to change the organizational structure to a more decentralized version started to take hold. The idea grew from how the group member's research was clustered around specific themes. Thus, on September 13, 2017, the first design of a thematic cluster organization was presented to the group (Figure 3).

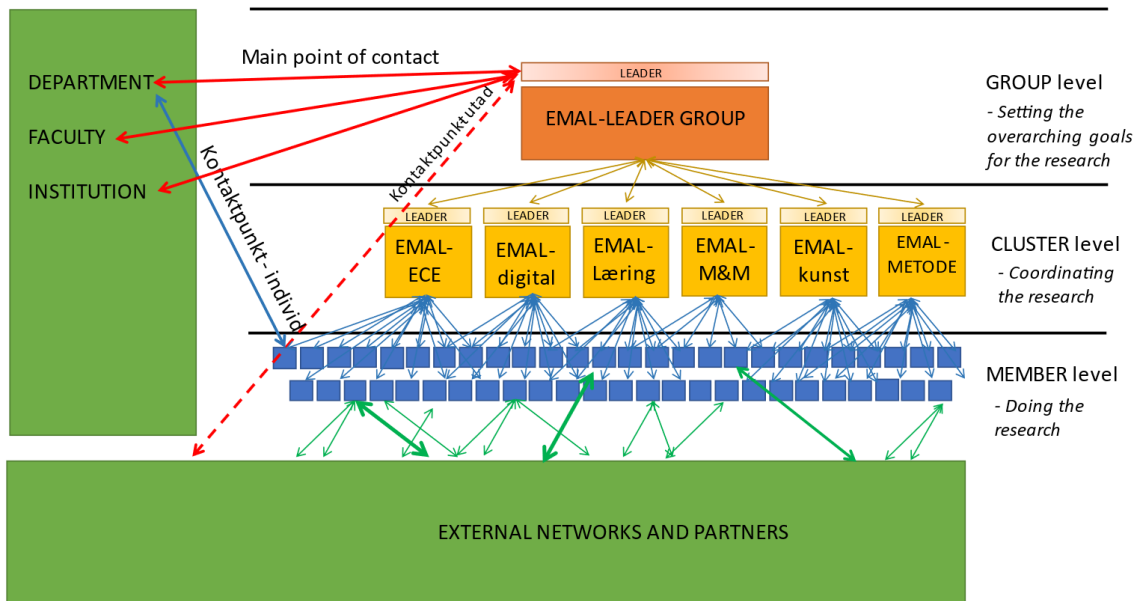


FIGURE 3. Organizational chart of the thematic clusters in EMAL, 2017.

The new design was embraced immediately, and researchers stepped up to take roles as leaders of the different clusters, whilst I continued as the leader of the group: Kari Carlsen became the leader of EMAL – Early Childhood, Ingrid Holmboe Høibo the leader of EMAL – Digital, Åsta Rimstad the leader of EMAL – Learning and Teaching, Kirstine Riis the leader of EMAL – Making and Materiality, Jadwiga B. Podowska the leader of EMAL – Art, and Anne Solberg the leader of EMAL – Method. Since then, the group has kept this cluster organization with minor changes: The cluster EMAL – Kunst was first merged with EMAL – Metode and later these topics were included in the other four clusters. Today there are therefore only four clusters in EMAL.

The cluster leaders were a part of the EMAL leadership group, together with the group leader. They each were responsible for coordinating the research efforts of the members in their clusters, monitoring the development in their respective research landscapes, and maintaining contact with external networks. The group’s strategic aims were coordinated by the leader group.

EXTERNAL EVALUATION OF EMAL 2017–2018

In 2016/2017, the Research Council of Norway (RCN) initiated an external evaluation of Norwegian educational research called UTDEVAL. The objective was

to identify and analyze key trends in Norwegian education research, uncover strengths and weaknesses about the scientific quality and capacity of research, strategic focus and cooperation, relevance, and societal impact, and to recommend measures to strengthen these areas in the future (RCN, 2018a).

All educational research institutions in Norway were invited to participate in the evaluation. The institutions submitted institutional self-assessment for those research areas they wanted to be evaluated (faculty, department, center, etc.) The institutions could also choose to submit research groups to be evaluated. At this point in time, the institution EMAL was a part of had merged with another institution and was named Høgskolen i Sørøst Norge/University College of Southeast-Norway (HSN). HSN chose to participate in the evaluation and submitted five research areas across four departments. About 70 staff members were involved. EMAL volunteered to be evaluated, as did two other HSN research groups (“Growing Up and Education,” and “Human Rights, Citizenship, and Diversity”).

The evaluation was done by an expert committee with nine members from across Europe and led by Prof. Mikael Alexandersson from the University of Gothenburg. This group assessed all 16 volun-

teered institutions, their 36 research areas, and a total of 46 research groups (RCN, 2018a). The committee members met with representatives of the evaluated institutions in a series of interviews to check their perspectives on the data submitted and to discuss other issues. I participated in the HSN interview at the Research Council together with the institution's leaders and the leaders of the other two HSN research groups.

The feedback to each institution was written in a separate Institutional Assessment Report, and this included brief feedback for each of the research group. The feedback to EMAL was brief and to the point. Below, it is presented in full:

This research group has a clear strategy building on the department's traditions in arts and crafts. It is well organised internally. It presents a clear structure that helps to develop its main goals as well as a clear plan and building on great experience. The group presents an important publication profile in terms of visibility and relevance internationally, but it needs to enhance its potential, namely in terms of publications in high-quality international journals. Also, the research publications appear to center on a small number of the group members. There is evidence of collaboration and networking especially at the national level – with Nordic and Baltic associations, but the internationalisation of collaboration needs to be more explicit. The research group has an impact on society which is visible in the self-assessment report with a good account of major impact on curriculum policy in Norwegian schools. There is a clear strategy in terms of development. However, there needs to be investment in more international publications (especially international impact factor journals) and international networking. Also, it would be important to better articulate the projects under development within the group to enhance its potential and to attract external funding. (RCN, 2018b, p. 9)

In short, this external evaluation pointed out strong points (clear strategy, well organized, plan for development and clear structure, impact on society, and curriculum policy) and issues that should be addressed (need for more international publications, for more author voices, and to articulate collaborative projects).

EMAL's reaction to UTDEVAL: A two-step strategy

As a result of the feedback from the UTDEVAL evaluation, EMAL developed a two-step strategy for further development: 1) increasing publications and voices and 2) articulating collaborative projects. A major reason for this two-step strategy was that the group recently had developed and submitted applications to both EU/MSC-IF (September 2016, awarded Seal of Excellence), (EU/H2020 (February 2017), EU/MSC-IF (September 2017) and RCN (November 2017), neither of which were funded. The leadership in the group recognized that, to have the strength and competence to write better proposals, more group members needed to have stronger publication track records. More author voices would be key factors to articulate collaborative projects that would be funded.

The first step in the strategy was initiated in early spring 2018, directly after the UTDEVAL official report launch: the research group would develop a mutual publication, a special issue, in the international journal *FormAkademisk*. Led by associate professors Camilla Groth and Kirstine Riis, a plan to invite research group members to participate in this special issue was devised. This plan included a timed calendar with well-structured writing seminars: Year 1: identify topics, generate ideas, develop first drafts for abstracts, and submit and present abstracts at research conferences. Year 2: develop conference papers into articles, submit articles to *FormAkademisk*, receive peer reviews, revise, and resubmit articles. Groth and Riis led this process throughout, and I was a part of the editorial group because I was on the editorial board of this journal. The special issue was published in October 2020. It incorporated 10 articles, of which four of the authors had very few, if any, previously published articles. The second step in the strategy was tentatively initiated in autumn 2018, articulating an interdisciplinary collaborative project that could, in the future, merge into a solid research proposal with more group members as active partners than what was seen in the earlier applications. This project was also led by Groth and Riis in 2018 until Professor Pirita Seitamaa-Hakkarainen assumed leadership of the project supported by Groth and Gulliksen in autumn 2019. In May 2020, a new application was submitted to the RCN: "*Maker-Centered-Learning: Cultivating Creativity in Tomorrow's Schools*" (*MAKER*) in collabor-

ation with Helsinki University and OsloMet. In this project, five group members were written in as active partners in major roles, three others would contribute to the project in minor roles, and the entire research group had been informed and invited to contribute with comments on different stages in the development process. In August 2021, this project was funded by the RCN.

STATUS FOR THE ACHIEVEMENT OF EMAL'S AIMS 2022

As of September 2022, when this essay was written, I have stepped down as leader of the group, and EMAL has achieved many of its original aims.

We have kept the strategic scope: to focus on the phenomenon of embodied making and learning. This has all worked well. The large majority is still from the same research environment in Notodden, but it also includes members from other campuses and other departments. The departmental home of the group is now called the Department of Visual and Performing Arts Education, and the institution has achieved university status and has been renamed University of South-Eastern Norway, USN. Most of the articles and books published, conferences participated in, and similar were within the different arts, crafts, and pedagogy fields. However, the aim to make our knowledge usable in other fields has been emphasized through conference presentations and sessions not only inside the arts and craft field, but also outside in conferences like NERA (2014, 2015, 2016) and Embodied Cognition (2020), and EECERA (2019). Even when we have attended disciplinary conferences within arts and craft fields, the scope of our presentations and sessions has been on the phenomenon: *the process of embodied making and learning*. This has resulted in strong and well-established connections to other relevant fields, for example, through participation in the NOS-funded Nordic network of Embodied Learning and to develop anthologies and COST action applications with experts in this network.

The first of the three specific aims of EMAL was to *enhance the quality and impact of research output*. A review of the yearly EMAL reports submitted to the department and faculty leadership shows a clear trend (Table 1), even though some of this also must be attributed to the increased number of members.

TABLE 1. Publications and members in EMAL 2014–2020.

| YEAR | NUMBER SCIENTIFIC ARTICLES | PUBLISHED PAPERS IN CONFERENCES | PHD DISSERTATIONS | NUMBER OF MEMBERS IN EMAL |
|------|----------------------------|---------------------------------|-------------------|---------------------------|
| 2014 | 2 | 6 | 0 | 17 |
| 2015 | 3 | 12 | 2 | 28 |
| 2016 | 5 | 19 | 2 | 28 |
| 2017 | 9 | 20 | 1 | 32 |
| 2018 | 8 | 13 | 0 | 39 |
| 2019 | 19 | 42 | 0 | 44 |
| 2020 | 22 | 37 | 1 | 50 |

The table also show that throughout these years, six EMAL members have finished their Ph.D. dissertations. This rate of doctoral students indicates two things: first, the group is recognized by the institution as a strong research group that can and will be awarded fellowships; second, the research activity of the group members is very high. There has also been an increase in the percentage of associate professors and constant percentage of full professor/docents, even though the number of members has increased. This indicates a development toward a higher quality level of researchers in the group (Table 2).

TABLE 2. Overview of type of position of members, in percentages (numbers).

| YEAR | % PHD STUDENTS | % ASSOCIATE PROFESSORS | % PROFESSORS OR DOCENTS | % ASSISTANT PROFESSORS | NUMBER OF MEMBERS IN EMAL |
|------|----------------|------------------------|-------------------------|------------------------|---------------------------|
| 2014 | 53% (9) | 18% (3) | 12% (2) | 18% (3) | 17 |
| 2020 | 24% (12) | 36% (18) | 12% (6) | 26% (14) | 50 |

The increasing number of members indicate how EMAL has grown in relation to the second aim: *to generate more communication and cooperation*. The research group has functioned as a source of stability for the research activity and helped us maintain a tight research focus during the tumultuous times of several institutional reorganizations and mergers. In addition, the group worked as a funnel through which to voice the group's combined research output into the merged organization. This was useful, for example, to communicate with new colleagues and prospective partners, and it attracted more members to the group. As Table 2 shows, EMAL has achieved the intended combination of researchers and practitioners, as suggested by Bammer's integrative applied research strategy (2013). Here, 26% of the group members are assistant professors who mostly teach and do development projects. This serves a dual purpose: including those without the highest formal academic education in high-quality research and ensuring that the research conducted by group members is discussed with persons closely connected to the USN courses and practice field. In the long term, therefore, the research conducted by EMAL members should be useful and used in the syllabi in the USN courses. It also supports the development of new Ph.D. fellowship applications, as well as recruitment to new Ph.D. positions by faculty members.

In relation to EMAL's third aim—*to develop the research field*—we successfully organized several sessions at international conferences. These sessions helped us and our research to be seen by others in the field, and they attracted other researchers to submit papers to our sessions. As such, we gained opportunities to collaborate with established international researchers, and we co-hosted sessions with them. The list below mentions the most important sessions:

- 2015 Theme session: *Embodied making and design learning* at the DRS/Cumulus LearnXdesign Conference, Chicago.
- 2016 Theme session: *Embodied making and learning* at the DRS Conference in Brighton, UK.
- 2017 Theme session: *Researching embodied making and learning – New methodological vistas on Making* at the MakeitNow Conference in Rauma, Finland.
- 2018 Special interest group (SIG) session: *Experiential knowledge* at the DRS Conference in Limerick, Ireland.
- 2020 theme session: *Embodied reading and learning in natural/analogue and digital environments: Empirical investigations* at the Conference *SPEAKING BODIES- Embodied Cognition at the Crossroads of Philosophy, Linguistics, Psychology, and Artificial Intelligence*, Romania.

In addition to these theme sessions, EMAL members together with Huron University College at Western University, Canada, in 2015 applied to and was funded by the Norwegian Centre for Internationalization in Studies (SIU). Through this project several EMAL members travelled between the countries collaborating on activities relevant for EMAL research. Further, EMAL members participated in several conferences to present research and engage in networking activities to ensure the development of the group's research in the strategically right direction and to maintain contact or establish new contact with the right persons for future collaborations.

The main challenge EMAL faced since its establishment was to maintain a sense of community as the group grew regarding its number of members. As more people became involved, all with busy schedules, it became more difficult to meet in person. This had a negative effect on both our sense of community and ability to map out the knowledge landscape. Also, this made discussions of recent developments in our various fields and their tangent fields more complex, limiting our possibilities to

develop agreements on how to approach and contribute to these developments. In practice, the increased number of members could seem to reduce our possibilities of influencing and contributing to the international field. We approached this challenge through implementing the thematic clusters, and as the group grew even more, we also put an emphasis on smaller groups collaborating on dedicated projects, like the MAKER project funded by the Norwegian Research Council in 2021.

Visions for the future development of EMAL

The future development of the EMAL research group is a high priority for discussions today. There are some big questions on the horizon that we will need to address. Questions include, but are not limited to: Should we keep our interdisciplinary scope on the phenomenon in the future? If we keep the focus on the phenomenon, how do we develop this conceptually? Is the theoretical foundation of embodied cognition our main theory, and thus, should the future mainly include researchers within this theoretical foundation? Should EMAL continue to grow in number of members, or should we start to cap participation? Should we continue with thematic clusters and strengthen the leadership roles of cluster leaders, and if so, how do we maintain the collegium?

My worry, as the person who led the group from the start and until January 1, 2021, is that if we continue in the same growth rate of membership as we have today, we will lose our efficiency and sense of community as a group. We will also lose out on those good experiences where we work together and share, which have been important to develop the joy of research. However, if we narrow down our memberships based on our different scopes, we will lose our strongest asset in EMAL: the diverse competencies and interdisciplinary scope of our members. There might be a possible way forward if we organized EMAL as a research center and made each cluster a separate group of its own under the center's research umbrella. This could, with difficulty, be done while keeping the original scope and three aims.

POSTSCRIPT

I am proud of having had the opportunity to be a part of EMAL's history, and I thank all my colleagues and leaders who trusted me and let me lead this movement. Yet I am sure that if anyone else had written the history of EMAL, their narrative would have begun somewhere else and taken another path. A historian I knew wrote, "*History* is not the same as the *past*, but a narrative made using selected traces from the past" (Nyzell, forthcoming). I have used the traces I have available in my different archives, and I have interpreted those traces colored by what I remember doing and what I remember happened. My horizon is not at all neutral but rather filtered by my intentions, needs, and wants. I am sure I have never seen the entire picture. This does not, however, make my telling of this history false. This is as true a telling of this history as anyone else's. My hope is that, by writing this historical essay in such detail, others can have the chance to see what happened through my eyes. I give you my viewpoint so that the curious researcher and colleague in this field can gain perspective, pick it apart, and contribute their voice.

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