Facilitating Labs for Innovating Cross-sectorial Collaborations in Teacher Education

Kristine Høeg Karlsen
Faculty of Teacher Education and Languages
Østfold University College
Halden, Norway
kristine.h.karlsen@hiof.no

Joakim Karlsen
Faculty of Computer Science Engineering and Economics
Østfold University College
Halden, Norway
joakim.karlsen@hiof.no

Lisbet Skregelid
Faculty of Fine Arts
University of Agder
Kristiansand, Norway
lisbet.skregelid@uia.no

Abstract—Teacher education programs should equip future teachers with the knowledge and experience needed to engage in cross-sectorial collaborations with external partners. Within our teacher education programs, we have strategically planned and organized multiple labs to explore how such learning activities should be designed. In this article, we present and discuss the implementation and impact of the three labs from the perspective of the project leaders. By using the design choice framework for co-creation, we shed light on the decision-making process undertaken by project management to facilitate these labs as third spaces.

Keywords: co-creation; cross-sectorial collaboration; teacher education; third space.

I. INTRODUCTION

External partners increasingly seek and gain access to Norwegian schools to provide learning activities. Examples of initiatives organized as Cross-Sectorial Collaborations (CSCs) include The Technological Schoolbag, Young Entrepreneurship, and The Cultural Schoolbag (TCS). To ensure value for both the external partner and the school, both parties need to take active roles in organizing teaching activities. The skills needed to actively participate in such collaborations need to be considered in teacher education. This increases the likelihood that student teachers will be able to create value from these partnerships as future professionals to a greater extent.

In the current article, we elucidate the findings of our research project, *pARTiciPED*, led by Østfold University College (ØUC) and funded by the Research Council of Norway. As part of this project, we have carefully planned and organized multiple interventions for student teachers to acquire new skills, perform new roles, and become confident in cooperation with external partners. The work undertaken by project leaders (management) has focused on orchestrating "co-creation processes" that emphasize active participation and mutual learning, situated in dynamic and democratic frameworks, or "third spaces" [1, s. 205]. To understand the many design choices that we have made to support the learning activities undertaken in this project, we present and discuss them according to Lee et al.'s [2] *design*

framework for co-creation. The framework, with its roots in participatory design [3] and action research [4], supports the democratic values pursued in the pARTiciPED project and systematizes the main aspects that have been considered by the research team.

In the following, we examine the design and implementation of three labs where stakeholders from multiple sectors have come together to co-create courses in teacher education, with the objective of empowering student teachers in CSCs as future professionals. The following research questions guided the analysis:

What are the merits of the design choices made when implementing labs to understand and innovate CSC within teacher education?

The present article follows a six-section structure, as follows: Section II describes our empirical context—TCS—an example of CSC in teacher education. In Section III, we delve into the details of the three laboratories. The labs aimed to engage participants in dialog and co-creation. In Section IV, we gain insights into the various decisions made by project leaders to facilitate "third spaces" using the design choice framework for co-creation. Finally, Section V discusses the implications of the innovating labs for both practice and the field of research, culminating in the final remarks in Section VI.

II. THE CULTURAL SCHOOLBAG AS THE EMPIRICAL CONTEXT OF THE STUDY

In the three labs, TCS is utilized as an example of a CSC, representing the most extensive third-party collaboration with Norwegian schools. Since 2001, the program has been part of the government's culture policy, offering arts and culture to every primary and secondary school in Norway, which encompasses literature, music, visual arts, performing arts, film, and cultural heritage. Internationally, there are similar arts-in-school programs that provide arenas for pupils to experience professional arts and culture, such as the *Skapande skola* (Creative School) in Sweden, the *Lincoln Center Institute* in New York City, and *Listaleypurin* on the Faroe Islands [5][6][7]. According to Breivik and

Christophersen [6, s. 27, authors translation], these "programmes, and others in for example, Denmark, the United Kingdom, and Australia, are however less comprehensive and reach out to fewer pupils." Due to its widespread coverage, TCS stands as "one of the largest programmes in the world that aims to bring professional arts and culture to children" [8, s. 33].

Nevertheless, research indicates that teachers often perceive themselves as having limited influence on TCS activities they participate in [9], that they lack a clear understanding of their role [10], and that there is an asymmetric power relationship between schools and cultural institutions in TCS [11][12][13][14]. The tensions that may arise in connection with TCS school visits could be rooted in different perceptions of the status quo [15]. These challenges may hinder the fulfillment of the government's requirement for TCS, which clearly assigns teachers the responsibility of "enabling students to have enriching art and cultural experiences, while also deriving academic benefits from DKS visits." [40]. As a result, it is crucial to prepare future teachers to take active roles when collaborating with artists and cultural workers, thereby creating value for their pupils.

Recently, there has been a notable increase in the number of studies offering valuable insights into TCS within the context of teacher education, addressing various aspects, such as codesign [16][17], educational design [18], educational dissensus [19][20][21], and evaluations of course design [22][23][24]. However, few studies have attempted to develop concepts and principles that not only describe but also elucidate how CSCs can be facilitated in teacher education. This underscores the need for further research to advance this field.

III. THREE LABS FOR STRENGTHENING THE RESEARCH-BASED FOUNDATION FOR TEACHER EDUCATION

The three laboratories led by the three authors of this article all aimed to strengthen the research-based foundation for TCS/CSC in teacher education and thus promote change, pursuing a research strategy summarized by Lars Mathiassen as "engaged research" [25]. The three laboratories were involved in two different types of teacher education in Norway from 2021–2022.

Laboratory 1: Performing Arts (Lab Art) invited participants from teacher education, art education, and primary schools to co-create a mandatory course unit in teacher education. The unit provided fourth-year student teachers, studying to become educators for grades 1–7, with the opportunity to team up with professional art students to develop and implement a TCS-performing art project as part of their placement practice in primary schools. The first phase focused on sharing practices and finding common ground; subsequent sessions utilized a multimodal choreography-informed method to design the first parts of the course units; and the final stage centered on implementing and evaluating the course module as a whole.

Laboratory 2: Cultural heritage (Lab Museum) included an interprofessional design team with participants from teacher education, museum education, technology design education, and primary education to co-create and

implement a course unit for fourth-year student teachers to becoming educators for grades 5 through 10. In the co-creation of the course unit, most of the time, they were accustomed to finding common ground and negotiating roles and making contributions to the plan and the course materials. In the course itself, the student teachers first obtained insights into the museum's collections, topics, goals, and aspirations to consider how these resources could fit with the requirements for their teaching. In the next activity, they used a design game, here using bespoke design cards, to co-create learning experiences requiring museum/school partnerships and collaboration in schools. Finally, the students tried some of these ideas in secondary schools in the county as part of their placement practice. Both the Lab Art and Lab Museum were constructed at a university college in southeastern Norway.

Laboratory 3: Visual art (Lab Dissensus), which included a range of partners in a forum, was initiated in an earlier phase prior to pARTiciPED. The Forum consisted of representatives from teacher education at a university in southern Norway, a teacher, an artist, and researchers who collaborate on and discuss on a local level how the inclusion of TCS in teacher education can lead to a better integration of art in general and TCS in particular in schools. In the first phase, the students participated in a TCS visual art project. The experiences were reflected on and discussed in the Forum and influenced how the next TCS project was organized for the student teachers. Here, master's students in arts and crafts responded to and discussed observations with pupils taking part in the project. Based on that, they brought these responses to the Forum, which was used to inform further realization of the project for student teachers.

The three laboratories were organized and implemented with the aim of establishing "third spaces" where participants learned from each other through dialog and co-creation. The staging of such a *third space* aimed to invite researchers and practitioners to "come together to rehearse 'the possible'" [1, s. 205]. The notion of the third space is found in a range of writings [26][27]. In the literature on education, for example, it is used to describe the gap between the knowledge that is disseminated at school and the knowledge that students bring with them themselves [28]. Recently, the concept has been adopted in art educational contexts [21][29] to provide fresh ground for exploring the space between art and pedagogy and between artists and teachers [30][31][32].

TABLE I.   THE DESIGN CHOICES FRAMEWORK FOR CO-CREATION [2]

Group	Design choice	Brief explanation
Project preconditions	Openness of the brief	Decides the degree of flexibility available for interpretation and innovation within the requirements of the design project.
	Purpose of change	Decides how the co-creation activities seek to achieve change.
	Scope of design	Scope of design decides what is to be designed in the co-creation workshops.

Group	Design choice	Brief explanation
Participants	Diversity in knowledge	Assemble participants who, collectively, encompass all the necessary knowledge and practice-based expertise relevant to the practices impacted by the co-creation.
	Differences in interests	Accommodate for differing interests between the participants.
	Distribution of power	Equalizing power asymmetries between the participants.
Co-creation events	Types of activities	Deciding types of activities.
	Setting for co-creation	Selecting the appropriate setting.
Project results	Outputs of the project	Immediate deliverables.
	Outcomes of the project	Long-term impact.

IV. FACILITATING THE LABS

To gain insights into the various decisions made by project leaders to facilitate the use of labs as third spaces, we use the *design choice framework for co-creation* developed by Lee et al. [2]. The framework comprises 10 design choices categorized into four groups (Table 1).

A. Navigating design choices for project preconditions

The design choices pertaining to project preconditions, as outlined by Lee et al. [2], is openness to the brief, purpose of the change and the scope of design. In all three labs, the project team started with a predefined brief with the clear aim of strengthening student teachers in future collaborations with the art and cultural sector. The mode of inquiry and the level of flexibility afforded were, in accordance with Lee et al. [2], limited, because there was little openness to thinking outside the box regarding the objectives and problems the laboratories were meant to address. The main reason for this was that the laboratories originated from pARTiciPED, an externally funded project, and the project leaders had received support specifically to address challenges in teacher education regarding CSC.

According to Lee et al. [2, s. 21], instigating change through co-creation activities can be directed at diverse levels (from individuals to organizations) or extend across multiple organizations. The overarching goal across all three laboratories was to make contributions to innovation processes and instigate transformative practices spanning the various sectors in the domains of art, culture, and education. In all three cases, the main purpose of change was to strengthen student teachers' ability to take new roles in TCS. Although the Lab Art and Lab Museum sought to challenge traditional roles in which artists create art and teachers handle the preparations and follow-up of TCS workshops, the Lab Dissensus chose to innovate in other novel ways and did not seek to contest these role understandings.

According to Lee et al. [2, s. 21–22], the scope of design varies from tangible components, such as service touchpoints, to more abstract and comprehensive elements, such as cross-organizational collaboration models. Across the three laboratories, we provided the materials, structure, and content for TCS learning activities where student teachers could explore multiple collaborative modes in TCS.

B. Design decisions shaping how participants were engaged

Design choices related to participants, as proposed by Lee et al. [2], encompass critical decisions regarding making room for diversity of knowledge and interests and the distribution of power in co-creation activities. In all three laboratories, essential stakeholders with expertise in their respective fields and domains actively participated. In line with Lee et al. [2, s. 22], these participants collectively possessed comprehensive knowledge about the processes they were developing, along with extensive understanding of the practices affected by their co-creations, spanning performing arts (Lab Art), cultural heritage learning (Lab Museum), and visual art (Lab Dissensus). Labs 1 and 3 included student teachers, teacher educators, teachers, and professional artists. The Lab Museum included museum educators and design researchers, in addition to student teachers, teacher educators, and teachers.

In a co-creation project, participants will "have different degrees of power because of their different knowledge levels, interests, roles, societal, and organizational backgrounds, and so on" [2, s. 23]. It is imperative for Lab leaders to thoroughly assess how various participants are engaged and accommodated in sharing their perspectives, thoughts, and reflections, irrespective of their knowledge levels, backgrounds, or roles. In the establishment of the Forum in Lab Dissensus, all involved stakeholders gained a voice in the discussion regarding how the inclusion of TCS in teacher education can enhance the integration of art, both in general and specifically within TCS. Student teachers were also provided with the opportunity to share their perspectives on the Forum, ensuring that their opinions were voiced.

Reflecting on the Lab Museum, several of the student teachers would have benefited from additional preparatory tasks and lessons in history. This would have enabled them to engage with the historical topics and material with more confidence and to motivate them to try a more equal role in relation to the museum educators. This is, of course, a well-known issue in the participatory design (PD) literature—the importance of providing training to less-knowledgeable parties in the design process to equalize power relations when they are unbalanced.

In Lab Art, all participants were afforded the opportunity to present their approaches to learning and teaching and/or to the learning and teaching of art, aiming to establish a foundation for co-creation. However, challenges arose early in the project because the participants' opportunities to influence workshop plans were not clearly articulated from the outset. When disagreements about workshop activities surfaced, the group found itself lacking the necessary tools to resolve them.

C. Facilitating effective co-creation events

The three laboratories strategically framed a range of co-creation activities to ensure that the project goals could be

achieved. In the Lab Art and Lab Museum, tools and techniques from PD were chosen, while a forum was established in Lab Dissensus. Across the three laboratories, the teacher education campuses served as the main venues, but also included excursions to art institutions and museums. The Lab Art and Lab Museum utilized schools in the region as venues for experimenting with and implementing new collaborative modes for TCS production.

Exploring Lab Art, the process started with a future workshop and subsequently advanced through two full-day dialog-based workshops. During these workshops, various stakeholders shared their perspectives, theories, and methodologies. Choreopattern [16], a PD method, was then developed by the PhD candidate, together with the other teacher educators, aimed at co-creating the course unit. However, disagreements arose regarding this method, which ultimately led to its abandonment after two iterations. Subsequently, the design team convened regular meetings to develop the final days of the course. In this course, student teachers collaborated with art students to develop and implement a performing art TCS project in primary schools within the county. This involved 45 student teachers and art students, seven schoolteachers, and approximately 175 pupils. During placement practice, the design team closely followed the projects in the schools. The course concluded with a collaborative evaluation on campus, in which both art students and student teachers were invited to reflect on the completed curriculum. Subsequent iterations of the course in the following years integrated additional art forms, such as literature and film, involving new cohorts of student teachers, artists, educators, and pupils.

In the Lab Museum, the design team organized four preparatory workshops before the course, with the goal of exploring the participants' competencies and knowledge. As part of the course, the student teachers participated in three full-day workshops to plan and prepare their placement practices. The first day focused on exploring the materials provided by the museum educator, the school curriculum, and relevant AR/VR technologies for use in cultural learning designs. On the second day, they designed concepts for AR/VR learning activities using crafted design cards [17]. On the third day, they explored a prototype for engaging with historical images, together with *reacting to the past* historical role-playing framework [33]. They used all the outputs from the full-day workshops in planning and implementing multimodal cultural learning activities in their classrooms during their placement practice. Overall, approximately 70 student teachers, 15 schoolteachers, and 376 pupils were involved in this process. Similar to Lab Art, this lab persisted over the subsequent years, incorporating new art forms, students, and pupils.

In Lab 3, a forum similar to a local advisory board was established, holding regular meetings throughout the project duration. The members of Forum who were directly involved in the two TCS productions of this lab planned, realized, and discussed the initiatives and brought these discussions to the Forum meetings. During these meetings, the stakeholders had the opportunity to comment on what was shared and to contribute ideas about upcoming events. The student teachers participated in two types of TCS productions focusing on visual art [21]. This was carried out very similarly to what was done for the children in school. The responses from students taking part in the workshop contributed to how these productions were realized for the student teachers in the following years. Members of Forum and students from master's in arts and crafts who observed when carried out for pupils thought the workshop should be altered. In line with principles in action research, preliminary results from the first intervention led to an action and change in the second intervention. Approximately 300 student teachers participated in the workshops over the two years.

D. Design choices related to project outputs

The immediate outputs from the three labs are multifaceted. Across all three laboratories, a significant achievement was in the development of course designs that center on art and culture framed by TCS. The course designs emerged through collaborative efforts within the design teams and were subsequently integrated into the respective teacher education programs. All courses reflect knowledge, outcomes, and activities stemming from the diverse domains of the interprofessional design team. This integration was pivotal for empowering student teachers to take part in the design and implementation of TCS projects in schools together with art students (Lab Art) and museum educators and designers (Lab Museum). The present study provides valuable insights into the use of TCSs as CSCs in schools (all three laboratories).

V. DISCUSSION

In the following section, we will discuss the merit of the design choices made in facilitating three labs for strengthening future teachers in CSCs. Because the context of this contribution is a research project, we frame this according to Matthiassen's [25] framework for engaged scholarship.

A. Contribution to practice

A key objective of the laboratories, here aligned with Mathiassen [25, s. 19], was to ground the research in a real-world problem, specifically addressing the challenge faced by teachers who occasionally perceive a lack of influence and involvement during the TCS visits. This situation can lead them to disengage from their assigned responsibilities and encounter challenges in helping them create meaningful experiences for their pupils. In the three laboratories within the pARTiciPED project, we have strived to engage student teachers in various ways. First, on an emotional level, they are allowed to experience art and culture (Labs 1–3). Second, we provide firsthand exposure to how TCS projects can be developed through collaboration with professional artists and museum educators (Labs 1–2). The subsequent discussion will outline this in more depth.

As project leaders of the three laboratories, our initial step was to explore and identify new ways of *working* together in teacher education based on principles, methods, tools, and techniques from PD. The project thereby chose an antiauthoritarian and multivocal approach to innovation and

problem solving to ensure that the experts, in our case, the teacher educators, were not the sole makers of the curriculum. Finding common ground is not always straightforward, however, and disagreements and conflicts arose because of the diverse knowledge, interests, and power dynamics among the participants in the labs.

Another essential component of our work was the establishment of TCS courses in teacher education programs as part of the three labs. In the Lab Art and Lab Museum, these courses are mandatory. Since 2021, student teachers in their fourth year (of their five-year program) have taken a one-year unit, including a placement practice, where they are required to contribute to the implementation of a real TCS project that tours schools. The course is given in collaboration with the local TCS in the municipality and involves a wide range of professional artists from various fields. In 2023/2024, students, for example, had the valuable opportunity to collaborate with the film director Carl Javér on the implementation of the documentary film "Reconstructing Utøya," [41] as well as interact with Madam Pysj, the theater troupe behind the playful production "Star Wårs (med å)" [42].

At Lab Dissensus, all student teachers in year three participate in TCS workshops on campus, which are carried out in the same way as for pupils in school. As part of the course, the student teachers were invited to reflect on and discuss their participation in TCS workshops. Examples of production include "Tapeorama" (orig. Tapeorama) workshops in 2021 (21) and "To build new buildings" (orig. "Å bygge nye bygg") in 2022. It is worth mentioning that the course is part of an interdisciplinary holistic framework that covers various subjects to ensure that teachers gain relevant knowledge beyond their specific subjects.

The courses that have been developed as part of Lab 1-3 have both gained national recognition [34] and have raised awareness among other teacher educators [35][36]. Furthermore, the activities undertaken across the three laboratories have contributed to several articles, sparking fresh insights into our understanding of CSC within the context of teacher education [16][17][21][24][36]-[39].

B. Contribution to the field of research

When we conceptualized the pARTiciPED project, our intention was for the laboratories to contribute knowledge that extends beyond the immediate context of the co-creation activities (the local workshops conducted during Labs 1–3). Thus, these laboratories can be viewed as a scientific inquiry approach, generating new knowledge and contributions to a broader *area of concern* [25, s. 19]. As proposed by Mathiassen [25, s. 25], this area should align with the context of the problem, allowing for a two-way knowledge contribution from the area to the problem and from data collected in the setting to the area. The three laboratories in pARTiciPED have significantly deepened our understanding of three key areas: i) cross-sector collaboration, ii) interprofessional practice, and iii) the role of art within schools. Following this, we elaborate further on the particular contributions made by these labs, which can serve as a foundational basis for enhancing teacher education.

First, our laboratory provides a clear contribution to understanding how *CSC* can be understood in the context of teacher education. The labs provided knowledge about the organizational context, including frameworks, opportunities, and challenges for new collaborative models to emerge in TCS. The active forward oriented facilitation of co-creation activities supported new modes of collaboration that articulated how such modes could and should be supported.

Second, our labs contribute to how we perceive *interprofessional practice* in teacher education. The labs provide insights into the goals, values, and skills of all stakeholders (i.e., student teachers, artists, arts educators, cultural workers, and teacher educators) and how these matter in developing new interprofessional practices in teacher education. Furthermore, we have learned about co-creation as a process and collaborative model, explored resources and conditions (opposition and collaboration forces), communication, and, importantly, role understanding in interprofessional collaboration.

Third, our labs contribute to understanding the role of art in schools. The labs have provided insight into how TCS program can enrich *art education* and inform the implementation of aesthetic approaches to teaching, highlighting opportunities and challenges within teacher education. Lab Dissensus, for example, contributes to what could be referred to as the pedagogy of dissensus, an arts-based pedagogy informed by the dissensual and what can be referred to as the disturbing characteristics of art [29]. At Lab Dissensus, discussions about what art can offer education are initiated. The student´s experiences often center around how art, with its processual and open-ended character, has the possibility to challenge existing norms and habits and contributes to new ways of seeing oneself, others, and one's surroundings. Placing art at the center and enabling dissensus in education can contribute to a contrast to the dominating policy led by economic ambition and competition.

VI. CONCLUSION AND FUTURE WORK

In pARTiciPED, we explored core concepts and principles to elucidate how CSCs can be effectively organized and implemented to empower student teachers to be confident, interested in, and actively engaged in such collaborations. In this article, drawing upon Lee et al.'s [2] design choice framework, we explored how CSCs in teacher education, particularly centered on TCS as the main platform, can be organized and planned within interprofessional teams comprising stakeholders from the education and cultural sectors to provide student teachers with the knowledge and experience needed to take more active roles in TCS. Across all three labs, various TCS productions have either been developed or refined to align with the context of teacher education. Through this work, we have developed a critical understanding of how co-creation activities, facilitated as "third spaces" [1, s. 205], can strengthen the research-based foundations for teaching CSC in teacher education.

Future research can take two distinct directions. First, future research can contribute by providing concrete tools

and techniques that project leaders can employ in the case of conflicts. Such contributions would be valuable additions to Lee's [2] design choice framework. Second, research can enhance our understanding of laboratories as a research methodology; this involves delving into the fundamental essence—the ontological and epistemological foundations—of utilizing co-creation labs as a research approach. Only by doing so can laboratories become dynamic spaces where future teachers forge the knowledge and experience necessary to actively participate in CSC to the advantage of students in school.

ACKNOWLEDGMENTS

REFERENCES

[1] E. Brandt, T. Binder, and E. B.-N. Sanders, "Tools and Techniques: Ways to engage telling, making and enacting", in *Routledge international handbook of participatory design*, J. Simonsen and T. Robertson, Red., London: Routledge, 2013, p. 145–181.

[2] J.-J. Lee, M. Jaatinen, A. Salmi, T. Mattelmäki, R. Smeds, and M. Holopainen, "Design choices framework for co-creation projects", *Int. J. Des.*, bd. 12, no. 2, 2018.

[3] F. Kensing and J. Greenbaum, "Heritage:having a say", in *Routledge international handbook of participatory design*, J. Simonsen and T. Robertson, Eds., London: Routledge, 2013, p. 21–37.

[4] P. Reason and H. Bradbury, "Introduction", in *The Sage Handbook of Action Research. Participative Inquiry and Practice*, P. Reason and H. Bradbury, Red., London: Sage Publications, 2008, p. 1–10.

[5] J.-K. Breivik and C. Christophersen, "The Cultural Schoolbag - an exploratory note" [orig. "Den kulturelle skolesekken - et utredningsnotat"], Stein Rokkan Centre for Social Studies, Working paper, oct. 2012. https://norceresearch.brage.unit.no/norceresearch-xmlui/handle/1956/7825. Retreived May 1th 2024. Retreived April 13rd 2024

[6] J.-K. Breivik, "The Battle for Art: Artists' Experiences" [orig. "Kampen om kunsten: kunstneres erfaringer"[. In J.-*K*. Breivik and C. Christophersen (Eds), *The Cultural Schoolbag* [orig. *Den Kulturelle skolesekken*], p. 154–178, 2013. Oslo, Bergen: Kulturrådet Fagbokforlaget

[7] L. Rykkja and A. Homme, "Passionate and Enthusiastic: The Cultural Schoolbag's Cheerleading Team" [orig. "Heftig og begeistret: Den kulturelle skolesekkens heiagjeng"]. In J.-*K*. Breivik and C. Christophersen (Eds), *The Cultural Schoolbag* [orig. *Den Kulturelle skolesekken*], p. 85–105, 2013. Oslo, Bergen: Kulturrådet Fagbokforlaget.

[8] A. Bamford, "Arts and cultural education in Norway", Norwegian Centre for Arts and Culture in Education [Nasjonalt senter for kunst og kultur i opplæringen]. Bodø, 2012.

[9] I. Digranes, "The Cultural Schoolbag: narratives and myths of educational practice in DKS projects within the subject art and crafts" [orig. "Den kulturelle skulesekken : narratives and myths of educational practice in DKS projects within the subject art and crafts", PhD, AHO, Oslo, 2009. https://aho.brage.unit.no/aho-xmlui/handle/11250/93038. Retrieved December 8th 2020.

[10] K. Holdhus and M. Espeland, "School and Concert - from Dissemination to Dialogue (DiSko): Production Report" [orig. "Skole og konsert - frå formidling til dialog (DiSko): Produksjosrapport", Center for Creativities, Arts and Science in Education (CASE), CASE 2018/1, 2018. https://hvlopen.brage.unit.no/hvlopen-xmlui/handle/11250/2651977. Retreived December 8th 2020.

[11] E. Aslaksen, J. S. Borgen, and A. T. Kjørholt, "The Cultural Schoolbag – Research, Development, and Evaluation" [orig. "Den kulturelle skolesekken – forskning, utvikling og evaluering"], aug. 2003. https://nifu.brage.unit.no/nifu-xmlui/handle/11250/280512. Retrieved April 13th 2024.

[12] J. S. Borgen and S. S. Brandt, "Extraordinary or Ordinary? Evaluation of The Cultural Schoolbag in Schools" [orig. "Ekstraordinært eller selvfølgelig? Evaluering av Den kulturelle skolesekken i grunnskolen"], NIFU STEP, NIFU STEP-rapport 5–2006, sep. 2006. https://nifu.brage.unit.no/nifu-xmlui/handle/11250/275575. Retrieved March 30 2020.

[13] C. Christophersen, J.-K. Breivik, A. D. Homme, and L. H. Rykkja, "The cultural rucksack. A national programme for arts and culture in Norwegian schools". Bergen: Fagbokforlaget, 2015.

[14] E. S. Hauge, V. S. Knutsen, and M. R. Ervik, "Closeness, Autonomy, and Democratization: Evaluation of the Direct Municipality Scheme in The Cultural Schoolbag" [orig. "Nærhet, autonomi og demokratisering: Evaluering av direktekommuneordningen i Den Kulturelle Skolesekken"], Oxford Research, Oslo, 2017. https://oxfordresearch.no/publications/naerhet-autonomi-og-demokratisering/ Retreived December 8th 2020.

[15] Oxford Research, "Investigation of DKS and Arts for Young Audiences Norway" [orig. "Utredning av DKS og Kulturtanken"], Kultu- og likestillingsdepartementet, Report, mar. 2023. https://www.regjeringen.no/no/dokumenter/utredning-av-dks-og-kulturtanken/id2970673/. Retrieved April 13 2024.

[16] F. Devonas Hoffmann and K. H. Karlsen, "Choreographic Infrastructuring for Design Things: A New Method for Participatory Design in Teacher Education", in *Proceedings of the Participatory Design Conference 2022 - Volume 1*, i PDC '22. New York, NY, USA: Association for Computing Machinery, aug. 2022, p. 230–240. doi: 10.1145/3536169.3537796.

[17] F. B. M. Newaz, J. Karlsen, and J. Herstad, "Making Technology Matter for Processes of Co-Creation and Innovation in Cross-Sectorial Collaborations", *ACHI 2023: The Sixteenth International Conference on Advances in Computer-Human Interactions* (ACHI). International Academy, Research and Industry Association (IARIA), p. 9–16, 2023.

[18] T. P. Østern, A.-L. Bakken, A. Lund, A. G. Sørum, C. Myhre, and C. W. Nesse, "Arts, crafts, and dance - developing aesthetic learning processes in arts and crafts through a general teacher education and higher dance education collaboration", *Dance Articulated*, bd. 9, nr. 1, Art. nr. 1, Dec.. 2023, doi: 10.5324/da.v9i1.5061.

[19] L. Skregelid, "Tensed possibilities: The Cultural Schoolbag as dissensus in teacher education", *Några Nord. Nedslag*, p. 47, 2020.

[20] L. Skregelid, "Encounters with the World through Cultural Schoolbag Workshops for Teacher Students", *Nord. J. Art Res.*, bd. 10, no. 2, Art. no. 2, may 2021, doi: 10.7577/information.4449.

[21] L. Skregelid, "The Cultural Schoolbag as Dissent and the Significance of Art in Teacher Education" [orig. "Den kulturelle skolesekken som dissens og kunstens betydning i lærerutdanningen"], *FormAkademisk*, bd. 16, nr. 2, Art. no. 2, Jan.. 2023, doi: 10.7577/formakademisk.4806.

[22] K. H. Karlsen and G. B. Bjørnstad, "Artistic Pedagogical Encounters in Teacher Education: A Study of Teacher Students' Perceptions of the Dance Art Project KROM Across Primary School Teacher Education" [orig. "Kunstpedagogiske møter i lærerutdanningen:–en studie av lærerstudenters oppfatning av dansekunstprosjektet KROM på tvers i grunnskolelærerutdanningen"], i *Skaperglede, engasjement og utforskertrang. Nye perspektiver på estetiske-& tverrfaglige undervisningsmetoder i pedagogisk virksomhet*. Oslo: Universitetsforlaget, 2019.

[23] K. H. Karlsen, G. B. Bjørnstad, and H. R. Høeg, "Magic in Movements! The art of teaching creative dance through the cultural schoolbag". In C.S. Nielsen & S. Burridge (Eds.) *Dancing Across Borders Perspectives on Dance, Young People and Change*, p. 179–182. Oxon / New York: Routledge.

[24] G. B. Bjørnstad and K. H. Karlsen, "An artful encounter with dance – empowering future teachers in cross-sectoral collaborations with the

Cultural Schoolbag as an example", *Dance Articulated*, bd. 9, no. 1, Art. nr. 1, Dec. 2023, doi: 10.5324/da.v9i1.5068.

[25] L. Mathiassen, "Designing Engaged Scholarship: From Real-World Problems to Research Publications", *Engaged Manag. Rev.*, bd. 1, nr. 1, jun. 2017, doi: 10.28953/2375-8643.1000.

[26] H. Bhabha og J. Rutherford, "Interview with Homi Bhabha: the third space", *Identity Community Cult. Differ.*, p. 207–221, 1990.

[27] E. W. Soja, "Thirdspace: Journeys to Los Angeles and other Real-and-Imagined Places", *Cap. Cl.*, bd. 22, no. 1, p. 137–139, mar. 1998, doi: 10.1177/030981689806400112.

[28] L. K. Maniotes, "The transformative power of literary third space", PhD, University of Colorado at Boulder, 2005. https://search.proquest.com/openview/d9a6e1ed86b63d6ea9ed7c8320 28c4f1/1?pq-origsite=gscholar&cbl=18750&diss=y. Retrieved April 13 2024.

[29] L. Skregelid, "Dissens and Sensibility: Why Art Matters in Education". Intellect Discover, 2024. https://intellectdiscover.com/content/books/9781789389838. Retrieved April 13 2024

[30] K. D. Gutiérrez, "Developing a Sociocritical Literacy in the Third Space", *Read. Res. Q.*, bd. 43, no. 2, p. 148–164, 2008, doi: 10.1598/RRQ.43.2.3.

[31] E. J. Klein, M. Taylor, C. Onore, K. Strom, and L. Abrams, "Exploring Inquiry in the Third Space: Case Studies of a Year in an Urban Teacher-Residency Program", *New Educ.*, bd. 12, no. 3, p. 243–268, jul. 2016, doi: 10.1080/1547688X.2016.1187980.

[32] K. Zeichner, "Rethinking the Connections Between Campus Courses and Field Ezperiences in College- and University-Based Teacher Education", *J. Teach. Educ.*, bd. 61, no. 1–2, p. 89–99, Jan. 2010, doi: 10.1177/0022487109347671.

[33] E. C. Watson and T. C. Hagood, Red., "Playing to Learn with Reacting to the Past". Palgrave Macmillan, 2018. https://link.springer.com/book/10.1007/978-3-319-61747-3. Retrieved April 14 2024.

[34] M. Glanville, M. "The Cultural Schoolbag into Teacher Education" [orig. "Den kulturelle skolesekken inn i lærerutdanningen"]. Kulturtanken, June 7th. 2022. https://www.kulturtanken.no/aktuelt/2022/den-kulturelle-skolesekken-inn-i-laererutdanningen/. Retreived April 15th 2024.

[35] L. Skregelid, L. and I. Willbergh, "The Significance of Coercion and Freedom in Teacher Students' Encounters with The Cultural Schoolbag" [orig. "Betydningen av tvang og frihet i lærerstudenters møter med Den kulturelle skolesekken"]. Fagseminar: Løsninger? Den kulturelle skolesekken på lærerutdanningene. Kulturtanken, Oct. 19th 2023. Oslo. https://www.kulturtanken.no/kalender/2023/losninger-den-kulturelle-skolesekken-pa-laererutdanningene/ Retrieved April 15th 2024.

[36] G. B. Bjørnstad, K. H. Karlsen, and A. M. Andersen. Vi er alltid der som støtte: Lærerstudenters erfaringer med kunstmøter i utdanningen. Fagseminar: Løsninger? Fagseminar: Løsninger? Den kulturelle skolesekken på lærerutdanningene. Kulturtanken, Oct. 19th 2023. Oslo. https://www.kulturtanken.no/kalender/2023/losninger-den-kulturelle-skolesekken-pa-laererutdanningene/ Retreived April 15th 2024.

[37] K. H. Karlsen, J. Karlsen, and S. K. Stigberg. "Transprofessional course design in teacher education". ACHI-COCREATE: Design Practices for Co-Creation and Learning. May 26, 2024 to May 30, 2024 - Barcelona, Spain. The Seventeenth International Conference on Advances in Computer-Human Interactions.

[38] G. C. Motzfeldt and K. H. Karlsen. « Educating Student Teachers for Interprofessional Collaboration through the Codesign of Cultural Heritage with the Use of Augmented Reality (AR) Technology". ACHI-COCREATE: Design Practices for Co-Creation and Learning. May 26, 2024 to May 30, 2024 - Barcelona, Spain. The Seventeenth International Conference on Advances in Computer-Human Interactions.

[39] F. Devonas Hoffmann. Learning to navigate in the unknown: attuning to affordances in artist visits in schools. 2024. *Pedagogy, Culture & Society*, 1-18. https://www.tandfonline.com/doi/epdf/10.1080/14681366.2024.2338 810?needAccess=true. Retrieved May 10th 2024.

[40] Authors translation of the schools and teachers mandate in TCS at "The Norwegian Directorate for Education and Training" (UDIR): https://www.udir.no/laring-og-trivsel/lareplanverket/stotte/den-kulturelle-skolesekken/ Retrieved May 9th 2024.

[41] C. Javér, (2018). "Rekonstruksjon Utøya". FilmCamp. https://www.filmcamp.no/produksjoner/rekonstruksjon-utoya.

[42] Madam Pysj: https://www.madampysj.no/reportoire/star-wars.