

TEAMING UP TO PREPARE STUDENTS FOR PUBLIC-SECTOR SERVICE DESIGN

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ABSTRACT

Preparing students to design for diverse communities and complex welfare systems requires authentic collaboration between universities and local communities. This paper explores experiences from a university-city collaboration in which design students taking a service design course worked with municipal staff connected to four child- and youth-service districts. Drawing on surveys and reflections, we identify three interconnected forms of learning supported by the partnership: applied design competence, reciprocal learning across institutional contexts and the more tentative development of institutional literacy. We discuss how such partnerships can contribute to mutual value creation in design education and public-sector practice and propose pedagogical adjustments to make learning more explicit.

Keywords: Institutional literacy, situated learning, public-sector design education, university-city collaboration, service design, design education

1 INTRODUCTION

Although scholars such as Herbert Simon and Donald Schön framed public administration as a form of design decades ago, public-sector design only gained widespread traction much later, with the mainstreaming of design thinking in the 2000s and its uptake across governmental systems and services [1]. Today, public-sector design encompasses diverse practices, including service, policy, participatory, strategic and systems design, which enrich the field while complicating a cohesive understanding of design's evolving role [1]. As Pirinen et al. [2] note, design often enters the public sector with different values and logics, causing friction in practice. For design education, this presents a central challenge: preparing design students to engage with the complexity and institutional realities of welfare systems. Doing so increasingly requires authentic collaboration between universities and municipal partners. Yet there is limited insight into how real-case municipal collaboration contributes to learning across stakeholder groups, and uncertainty remains about what constitutes meaningful “making” in service design education and how deliverables connect to societal challenges [3]. Drawing on empirical material from a service design course conducted in collaboration with a municipality, this paper examines the forms of learning such partnership supports. The study is situated in Trondheim, Norway, and addresses educators, students and public-sector collaborators engaged in university-city partnerships.

We contribute to the field by foregrounding *institutional literacy* as a distinct learning outcome for public-sector design education, alongside applied design competence and reciprocal learning. By this we mean the capacity to read how welfare systems are organised, where decisions are made, and how design proposals connect to ongoing municipal processes. Our empirical material highlights a perception gap, in which students experience institutional uncertainty while partners recognise emerging competence. We argue this gap is part of how such literacy is built, and one public-sector design education should pay closer attention to.

2 BACKGROUND AND EDUCATIONAL CONTEXT

2.1 Conditions shaping public-sector design and learning

Service design, particularly in public-sector contexts, places demands on education that differ from those in commercial product contexts. Public organisations are characterised by complexity, bureaucratic constraints and persistent implementation challenges, requiring designers to work with different forms

of materiality. Rather than physical materials, designers engage with conversations, collaborations, institutional cultures and organisational histories [4]. Studies show that relational and organisational materials shape tensions and frictions in practice [5]. This requires access to real contexts and situated insights, as well as the ability to recognise underlying values, adopt an open mindset and engage in relational learning across professional and cultural boundaries. Co-design has therefore become central in public-sector contexts, providing access to lived experience and expert knowledge, building shared understanding among diverse actors, and delineating a process in which intangible insights are translated into actionable proposals.

Public-sector design is also shaped by how design roles are interpreted within organisations. Designers may be positioned as facilitators rather than practitioners engaged in concrete (re)design [6], reflecting differing expectations about what design should accomplish. Design education must therefore move beyond method training and support students in developing relational and organisational literacy, together with the skills needed to understand how design is and can be positioned in municipal contexts.

2.2 University-city collaboration in design education

University–city collaborations represent an important arena for developing the kinds of design capabilities that public-sector and municipality contexts require. While public-sector design operates with materials such as conversations, collaborations, institutional cultures, responsibilities and organisational histories [4], municipalities increasingly emphasise that collaboration must create both public purpose and public value. This means that partnerships between universities and municipalities must move beyond the formulation of goals, missions and visions, and instead cultivate the capacities, methods, learning processes and institutional shifts that make value creation possible in everyday practice. Recent public reports highlight precisely these systemic and strategic needs, pointing to the forms of competence and capability-building that are necessary for long-term societal change, including cross-sectoral coordination, citizen-oriented approaches, and iterative, learning-based practices as articulated in the national societal mission for inclusion [7] and in a local ten-year innovation programme [8]. Such reports operate on a strategic level; in our collaboration we translate these ambitions into concrete collaborative settings where students, municipal staff and community partners jointly explore how new knowledge, collaborative practices and everyday work methods can be developed within real municipal contexts. At the same time, such collaborations might strengthen municipalities' own epistemic capacities, their ability to create, share and act upon knowledge in dynamic and uncertain environments. As Kattel and Mazzucato [9] argue, innovation policy in Europe is shifting from a normative focus on direction-setting to an epistemic focus on how public organisations learn, interpret problems and mobilise diverse forms of expertise. Situated collaboration with students supports precisely this epistemic turn by fostering organisational reflexivity, shared sense-making and collective learning. Thus, university–city collaboration functions not only as an educational intervention, but also as a mutual platform for developing future-oriented skills and capabilities, relevant both for emerging designers and for public sector professionals engaged in societal transformation. Such collaborations also align closely with 21st century skills [10], including complex problem solving, critical and systems thinking, interdisciplinary collaboration and communication. Designing in municipal contexts requires students to navigate ambiguity, reconcile diverse professional logics and engage in reflexive, relational work, competencies that extend beyond method training and mirror contemporary skill frameworks.

2.3 Educational context and collaboration setup

The collaboration was conducted within a third-year introductory service design course in a five-year engineering master's programme in Industrial Design at the Norwegian University of Science and Technology (NTNU), in partnership with Trondheim Municipality. The 15-week course (7.5 ECTS) involved 28 students working in six groups and combined foundational perspectives on service design, sustainability and public-sector contexts with practical training in user research, co-creation, sense-making and prototyping. Throughout the project, students were expected to apply The Everyday Journey as a guiding framework [11], a step-by-step structure for developing environments and services that support active, social and meaningful everyday lives through insight work, co-creation and prototyping. The course aimed to prepare students to engage with complex societal challenges through situated, practice-based design work.

The overall task invited students to explore how local services might support meaningful everyday lives in four child- and youth-service districts in Trondheim marked by socio-economic challenges, limited

meeting places and a weakened sense of belonging. The municipality positioned children, young people and families as key actors and pointed to untapped potential in existing buildings, public institutions, voluntary resources and intergenerational relations as foundations for inclusion and participation. After an initial phase of theoretical framing and reflection, the course progressed into a practice-based collaboration with the municipality. A one-day Design Jam [12] served as the collaborative kick-off, bringing together students, municipal staff and voluntary-sector representatives to frame local challenges and establish shared project directions (Figure 1).



Figure 1. Design Jam (Photos: Amanda Jørgine Olsen Haug)

Throughout the following weeks, municipal practitioners contributed contextual and professional insights, facilitated access to local stakeholders and offered feedback on emerging service concepts. The course was run for the second consecutive year within this university-city collaboration format.

The six resulting service proposals illustrate the range of concepts developed across the four districts:

1. A resident-driven neighbourhood café, reopening a familiar local venue as a low-threshold, hybrid meeting place that combines affordable food, volunteer involvement, intergenerational encounters and multiple languages to strengthen local identity and ownership.
2. An open youth area in a future relocated library, designed as a flexible, modular space staffed by two young employees alongside an adult supervisor, providing a safe and inclusive meeting place for adolescents on the user group's own terms.
3. A school-based intergenerational after-school programme for fifth-grade pupils. Developed with a local volunteer centre, easing the transition from organised after-school care by connecting children with volunteer seniors in familiar school premises.
4. A transformation of a town hall into a multi-use community hub, building on existing facilities by relocating current activities to the upper floor and opening the ground floor for shared community functions such as library, music room, creative workshop, café and stage.
5. A cross-sector conversational service building on an existing social sustainability initiative, connecting the municipality, a local volunteer centre, schools and cafés through a locally designed cup that signals openness to conversation, supported by an annual school design competition and regular community café events.
6. A participation-oriented service activating local everyday nature, lowering the threshold for residents to engage in shaping their own neighbourhood through information, meeting places and simple tools that connect existing community resources and green areas.

3 METHODS AND DATA

The empirical material draws on three complementary data sources collected at different stages of the collaboration. First, a short post-Design Jam evaluation was conducted on-site immediately after the workshop. Of approximately 50 participants, 31 completed two reflection cards [13] addressing their experience of the session and its perceived value. Collected at the end of the workshop, this material provides a situated snapshot of impressions formed through direct engagement in the co-creation

activities. In addition, two structured online surveys were distributed at the end of the semester: one to students (11 of 28 respondents) and one to municipal and community partners (12 respondents). The surveys combined Likert-scale items and open-ended questions addressing learning outcomes, collaboration quality, contextual translation and areas for improvement. Given the limited response rates, the survey findings are treated as indicative rather than representative, while the Design Jam reflection cards offer a broader empirical base.

4 FINDINGS: FORMS OF LEARNING

The university-city collaboration appeared to support the development of *applied design competence* in public-sector contexts. Students reported high perceived learning (median 4 of 5), with 9 of 11 saying the collaboration helped them develop collaborative skills to some or a large degree. A similar share, 8 of 11, reported being able to translate the municipal context into design choices, and partner respondents largely confirmed this, with 8 of 12 assessing that students translated contextual insights into relevant service concepts to a large extent. All 12 partner respondents answered that students incorporated feedback and applied co-creation methods to a large or very large extent, and 10 of 12 experienced that students made their design competence clearly visible. Students appreciated working with “*real problems*” and “*real partners*,” finding it motivating. They also highlighted having “*many things to consider for implementation*,” the opportunity to collaborate with “*actors who are not students*,” and access to relevant user groups. Together, these responses point towards the value of authentic, situated learning within real municipal contexts.

Reciprocal learning across university-city boundaries emerged particularly through the Design Jam, which was rated as highly valuable by 9 of 11 students and 8 of 12 partner respondents. Students described it simply as “*fun*,” while partner respondents pointed to “*a useful outside-in view*,” highlighting the role of student-driven exploration in reframing familiar issues. Based on the post-Design Jam reflection cards (n=31), respondents from both groups characterised it as a meaningful and energising collaborative arena that enabled new perspectives and productive dialogue. Several noted that the process “*challenged established assumptions*,” and, as formulated by one respondent, made it possible to “*broaden our understanding of the issue together*,” signalling the reciprocal nature of the learning. Participants also described a strong sense of being able to contribute through sharing contextual knowledge, offering local insights or supporting the students’ developing concepts. At the same time, some participants suggested that clearer framing at the outset could have strengthened the experience, noting that “*it would have been helpful to understand roles and expectations earlier in the process*.” These insights help illuminate which aspects of the Design Jam format foster engagement, clarity and mutual learning, and where refinements could further enhance the collaboration.

Institutional literacy, appeared to be more tentative and unevenly distributed: 10 of 11 students reported only a small or partial grasp of municipal roles and decision pathways, with comments such as “*I have very little idea of how the municipality works*” and “*it would have been helpful to receive an introduction to municipal roles and decision pathways, so that one can more easily design a solution that can actually be implemented with existing resources*.” Partner respondents, however, viewed the students’ systemic understanding more positively, with 8 of 12 rating this to a large extent. This divergence between student and partner ratings reflects a perception gap.

Other issues related to clarity and expectations would also have shaped the conditions for learning: 8 of 11 students reported that the brief and expectations were clear only to a small or some extent, with comments such as “*it was unclear what was expected from both the lecturer and the municipality*” and that there were “*no clear criteria for either the solution or the collaboration*.” Some students also mentioned uneven communication and delays, noting that “*it is important to receive responses quickly ... the semester is not very long*.” Partner respondents noted the absence of a clear pathway for carrying concepts forward after final delivery.

5 DISCUSSIONS

Our findings indicate that the partnership supported several interconnected forms of learning: applied design competence, reciprocal learning across institutional contexts, and the more tentative development of institutional literacy specifically. They also point to the importance of clearer framing of roles, expectations and follow-through within the collaboration.

The municipal partnership did not only provide the students with a “*real case*.” From the start, briefs were tied to real districts, real staff and real concerns in the city, and those realities stayed present

throughout the design work. Students experienced how designing for society involves not only coming up with good ideas but also shaping proposals that can fit within everyday life and municipal organisational conditions. Much of their work unfolded through what Blomkvist et al. [4] describe as materials of service design, matters such as meetings, messages, and small moments of alignment – listening to employees who know the area, asking questions, checking assumptions, and slowly agreeing on what the real challenge was. The design work became a shared journey rather than a solo “concept sprint,” which may explain why students emphasised learning related to collaboration and feedback.

For example, one group worked with a brief about how a future relocated library could function as a neighbourhood meeting place for a diverse population. In practice, the students came to work more closely with a school rector who helped facilitate access to pupils and shape what was feasible. The design process reflected ongoing negotiation between the young people’s expressed wishes, what available partners could offer and what could be carried “*without a heavy burden on daily operations.*” This kind of relational work, reading institutional cultures, making sense of which conversations were available, working with what partners could realistically commit to, is what working with immaterial materials looks like in concrete terms and also how institutional literacy is built in practice.

The themes the students worked with also made the work feel more serious. Belonging, participation, meeting places, intergenerational contact, and access to everyday nature in culturally diverse neighbourhoods are not simple topics. They touch people’s daily lives and questions of fairness. The Everyday Journey framework helped the students look at everyday barriers and resources, but the collaboration made it harder to hide behind general statements. Students could not rely on generic personas or easy categories; they had to relate their ideas to concrete local realities and to staff carrying long-term responsibility for children and families.

At the same time, many students described only partly understanding municipal roles and decision routes, while partner respondents often considered the students to have developed a good overview. We think this perception gap is telling and understand it as part of how institutional literacy is built: encountering a real system can increase awareness of what remains unclear. What students experience as uncertainty may, from an external perspective, reflect an ongoing learning process. Part of what makes public-sector contexts demanding for newcomers is perhaps that institutional knowledge is rarely made visible to those still learning to see it. This suggests institutional literacy needs deliberate support. Our findings point to specific aspects that could be made more explicit: briefs, communication, roles and pathways for carrying concepts forward. In response, we propose an institutional literacy briefing early in the course: a short, structured introduction making visible who can do what and why within a municipality. Moreover, a post-presentation handover protocol could help ensure a realistic take-up after the course ends.

From the municipality’s perspective, the partnership provided fresh perspectives and visualised concepts that challenged established assumptions. Partner respondents were not only “clients” giving a brief; they helped shape the projects by sharing local knowledge, suggesting relevant contacts and giving feedback along the way. This also required time, coordination and availability alongside ordinary responsibilities. Beyond the design processes and proposals, the collaboration also offered the municipality a space for reflection on its own practices. Taken together, university-city collaboration can be seen both as an educational format and a means of creating value for municipal partners. The potential of such collaboration, however, depends on careful framing, realistic expectations and attention to how student work connects to ongoing organisational processes.

6 FUTURE WORK

Going forward, we aim to continue the collaboration with municipal stakeholders and further develop the format, activities and structural conditions that support meaningful partnership, the development of institutional literacy and longer-term outcomes for municipal practices and service development.

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