
Optimising Engagement in Digital Health Co-Design



Digital health is positioned to improve access, quality and personalisation of care, yet success depends on more than bringing users into the room. Participation alone does not ensure usable or effective solutions. Engagement—the motivations, concerns and actions that shape how people think, speak and act during co-design—matters to both process and outcome. An investigation embedded in a multisite co-design project in Québec, which aimed to develop a tool to help caregivers of older adults find support resources, mapped how engagement surfaced across roles and sessions. Using an activity analysis lens, the work shows that what participants find significant at given moments shifts with task, facilitation and context, and that configuring activities to prompt appropriate action can strengthen focus on design without neglecting collaboration and participation.

Participants and Analytical Lens

The parent project brought together 74 participants drawn from caregivers, health and social service professionals and community workers. Testimonies from 20 participants were collected through self-confrontation interviews that prompted reflection on recorded session moments. Engagement was analysed qualitatively within the course-of-action framework, which attends to lived experience, expectations and referential knowledge, then organised into themes and examined across participant categories and sessions with support from mixed methods analysis. The approach was grounded in a pragmatism paradigm, enabling complementary perspectives on engagement. Ethics approval covered the observational recordings and interviews, participation was consented, and data were anonymised.

Co-design activities unfolded across eight regional workshops interspersed with three advisory committee meetings. Regional sessions combined plenary segments with small facilitated groups that focused on subcomponents of the session aim, while advisory meetings convened in Québec City to reconcile decisions, align progress and steer iterative prototype development. A distinctive feature of one workshop was a shared paper prototyping task undertaken by all small groups, in contrast with the more exploratory distribution of tasks in other sessions. Across the wider parent project, the co-design effort produced a prototype website with sections for caregiver search and service provider inputs, though the engagement analysis focused on how participants oriented to activities rather than on usability outcomes.

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Within this setting, the analysis traced what participants considered significant as sessions progressed. Engagements and expectations were reconstructed into complete chronicles of action and reflection, then coded into emergent themes. This method captured more than what was said in the room, surfacing how participants made sense of their own moves and concerns. It also supported comparisons across roles and time, showing where engagement clustered and how it shifted with activity design.

What Drove Engagement Across Roles and Sessions

Three themes characterised engagement: tool design, participant needs and contextual situations. Caregivers and professionals showed broadly similar distributions across these themes. Community workers oriented more to needs than to design, reflecting a focus on professional aims and distinct concerns within their organisational context. Engagement varied markedly across sessions. When tasks centred on design artefacts—such as paper prototypes, mockups, clickable prototypes and usability discussions—engagement with the tool became more prominent. Specific sessions showed this pattern clearly, with higher salience of design engagement in designated workshops and lower salience in sessions organised around plenary deliberation or reconciliation of requirements.

Plenary-heavy formats tended to draw attention to personal preparation, professional aims and situational dynamics, including time available, clarity of objectives and the tenor of interaction. Small group formats sometimes created homogeneous mixes by role, sometimes heterogeneous mixes, which influenced how needs and situational considerations came to the fore. The advisory pathway, tasked with decisions on conflicting inputs and validation against prior session outputs, surfaced differences between service providers and community actors that required careful facilitation. Notably, the analysis did not report power conflicts between researchers and participants, yet it did observe tensions among participant groups that underscored the importance of shared purpose, mutual respect and adequate time to complete objectives.

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Examples drawn from session chronicles illustrated how participants tracked comprehension of process steps, sought alignment on objectives and weighed the likely use of features by caregivers. They also highlighted concerns about preparation for specific tasks, expectations for a positive participation experience and the need to keep information presentation manageable. Across these moments, engagement was modulated by expectations, prior experience and the immediate cues provided by the activity at hand.

Activities as Affordances for Focused Participation

A central insight concerned the role of affordances. Activity designs acted as cues that suggested appropriate action, steering engagement toward particular dimensions of co-design. Sessions that moved participants quickly into action with tangible design tasks channelled attention to the artefact and its information architecture, interaction flow and content boundaries. Sessions that foregrounded presentation or open deliberation channelled attention to readiness, professional positioning and the conditions of collaboration. Effective facilitation therefore required configuring activities to balance design, collaboration and participation rather than privileging one dimension.

The analysis proposed practical avenues to enable participants to benefit from involvement while sustaining focus on the product. Acknowledging personal and professional engagements, creating time and space for them to be voiced, and addressing expectations for preparation supported relevance and contribution. Establishing shared objectives early, including all interest holders, and allowing enough time improved the experience and productivity of sessions. Ensuring participants had the knowledge needed to understand artefacts and decisions, for example through preparatory materials, helped them engage with the right elements at the right moments. Maintaining a respectful environment supported constructive interaction when perspectives diverged. Prioritising design-led activities, encouraging swift transition into active modes and drawing on best practice in design facilitation supported creative contributions to the tool while keeping the process participatory.

These strands reinforce a view of co-design as an intersection of design, collaboration and participation in dynamic tension. The patterns observed across sessions suggest that altering the affordances of activities can help balance those tensions. Doing so allows engagement to be distributed across needs, situation and artefact in ways that fit the aims of each session while respecting the diversity of participant perspectives.

The Québec project shows that engagement in digital health co-design is not a simple by-product of attendance. It is shaped by what participants find meaningful at specific moments, by how sessions are structured and by the cues that activities provide. Caregivers, professionals and community workers bring different priorities, and those priorities shift with task and context. Designing sessions as affordances for action, while recognising personal and professional aims and maintaining a positive environment, can channel engagement toward productive design work without losing sight of collaboration and participation. Configuring activities with engagement in mind can help align contributions, reduce friction and improve the chances that outputs are both usable and useful.

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