

## How participatory design influences issue framing: a hospital case study

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### ABSTRACT

This study examines the impact of a participatory design initiative on issue framing within a professional setting. In a hospital, a participatory design initiative was organised. Participants shared ideas for a more open and innovative working culture before and after the initiative. Comparing the before and after statements revealed a shift in participants' framing, indicating increased self-efficacy, empathy, and systems thinking. Ideas for change transformed from external dependencies to controllable strategies, reflecting a deeper understanding of organisational complexity and a commitment to enhance stakeholder experiences. This highlights the transformative potential of design training in empowering employees to identify and address challenges effectively.

*Keywords: Professional education; design training; issue framing; open culture.*

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### INTRODUCTION

Creating an open and innovative culture is widely acknowledged as a significant driver of organisational success (Amabile 1998). This is particularly true in organisations where frontline workers (e.g., receptionists or nurses) play a pivotal role in identifying issues early on yet often lack the avenues to influence decision-making processes (Tangirala & Ramanujam 2012). Recognising the importance of fostering an environment that encourages issue-sharing and employee involvement, participatory design initiatives have gained substantial traction (Hansen et al. 2019). These initiatives encompass a range of activities that engage employees in decision-making, often through design workshops and design training. Design workshops involve people in decision-making, leading to more effective and sustainable outcomes while nurturing employee creativity, which contributes to organisational profit and success (Piper et al. 2012). Design training focuses on providing employees with design capabilities and cultivating employee connectedness, job satisfaction, and retention (Edmondson & Besieux 2021). Thus, participatory design initiatives incorporating workshops and training have emerged as a valuable approach to address immediate issues while facilitating larger organisational transformations (Smith & Iverson 2018). Indeed, these larger transformations hinge on amplifying employee voice, fostering an environment where employees take a proactive stance, speak up, and take action regarding needs and opportunities on the work floor (Morrison 2023).

While various studies have connected participatory design initiatives to success for the individual and the organisation at large, how these influence issue framing specifically (meaning how employees perceive, articulate, and approach challenges) remains notably underexplored. This is surprising, considering that how issues are framed sheds light on how participants navigate and make sense of organisational complexities and uncertainties outside the more curated environment of the participatory design initiative, offering insights into how we might better support creative and adaptable mindsets. Additionally, participants need to adopt a frame when conversing with other employees not part of the initiative. The chosen frame shifts these other employees' attitudes, creating either excitement and optimism or triggering resistance and scepticism (Edmondson 2003). Indeed, how change initiatives are framed impacts other employees' desire or ability to support, ignore, or resist these transformations (Edmondson 2018). As such, framing carries great relevance, especially in organisational settings where only a subset of employees is included in participatory design initiatives. Investigating how participatory design initiatives influence framing can provide insight into the potential for more inclusive, sustained, long-term transformations.

This paper aims to contribute to filling this research gap by examining the impact of design training on issue framing within a professional setting. Specifically, we ask:

*“How do employees frame ideas for a more open and innovative working culture before and after participating in design workshops?”*



## THEORETICAL BACKGROUND

Employees' tendency to raise perceived needs that require attention, resolution, or management can be attributed to their internal beliefs and external context (Ford 1996, Eccles & Wigfield 2002). Thus, employees will assess whether the behaviour is worth their effort and will produce positive results (Unsworth & Clegg 2010, Shin et al. 2017). This is a sense-making process assessing the issue's impact, desirability and likelihood of success (Klehe et al. 2021). Issues can be any aspect of the organisation's operations, policies, practices, or external environment that may harm its performance, efficiency, reputation, or overall well-being. They are generally ill-structured, resulting in a wide variety of ways to formulate and address them (Dutton & Ashford 1993).

Because there are multiple ways to formulate and address, employees will, consciously or not, engage in issue 'framing' (Edmondson 2003). Framing involves the cognitive and linguistic processes through which individuals interpret situations and present information, fundamentally shaping their understanding of problems and potential solutions and influencing their decision-making (Schön 1984). Individuals' framing of issues reveals their strategies, actions, and solution space (Paton & Dorst 2011).

In the context of organisations, framing thus reveals how individuals understand the complexity of their organisational context, perceive opportunities, and make sense of organisational challenges. In short, different frames highlight distinct aspects of organisational reality. These frames are reflected in ongoing employee conversations and interactions. Work floor conversations serve as a means of sense-making, knowledge-sharing, and socialisation, contributing to the development and evolution of organisational culture (Hatch 1993). Through conversations, individuals negotiate meaning, establish shared interpretations, and construct a collective understanding of organisational values, goals, and norms (Hatch 1993). Over time, people tend to treat their perspective as the truth (Edmondson 2003), resulting in tunnelling and automatic thinking, reducing critical thinking (Kulkarni et al. 2015, Gurin et al. 2002).

When hearing about change initiatives, employees 'frame', or make sense of, these situations through assumptions based on their history, usually without fact-checking (Argyris 1993). Especially in ambiguous situations, when the final result is unclear, people tend to choose more defensive or self-protective frames, which hinder growth and learning (Schön 1984). Approximately 70% of change efforts fail (McKinsey 2015), and to this day, resistance to change is the most common reason, according to Dempsey and colleagues' (2022) review of change initiatives from 2006 to 2021. Indeed, Edmondson found that in implementing hospital changes, whether people invested in framing the

implementation carefully was a key factor in predicting success.

In the design field, framing is a well-known concept used to explicate what to include or exclude from a complex design challenge (Dorst 2015). As such, it makes biases and assumptions visible, creating room for discussing them. Often, designers will explore multiple frames by adding more divergent perspectives to challenge their assumptions before converging to one, and they will revisit framing regularly, an activity referred to as reframing. Indeed, design tools support people to create a discontinuity intentionally and reveal potential tensions while ensuring psychological safety (Forsythe 2021). As such, framing is relevant to, on the one hand, reveal personal biases and, on the other hand, assumptions to challenge and make sense of them, influencing issue acceptance. As a core activity of a participatory design initiative, it can be expected that employees participating in these activities develop a better sense of how to frame challenges, not just for themselves but also when sharing their ideas with others. This study explores how design training has impacted issue framing in a hospital context.

## METHODS AND DATA

A regional hospital adopted a new strategy to support a more open and innovative culture. Leadership representatives stressed the importance of staff happiness, engagement, and safety to deliver high-quality care. To achieve this, they emphasised the need for floor staff to take ownership and drive change. Employees had been disempowered to use their voice by the previous leadership, which took a more traditional and hierarchical approach. Considering the sizeable transformational change, this can be viewed as an extreme case. Extreme cases can be particularly useful for studying rare or complex phenomena (Jahnukainen 2010). Aware of the magnitude of this challenge, the hospital leadership asked the author to conduct a participatory design initiative (targeted at reducing patient and family aggression toward employees) to which all employees were invited. Twenty-eight employees signed up for this project: frontline workers (e.g., nurse, social worker, orderly, or paramedic) and desk workers (e.g., HR manager, occupational health and safety officer, or board member). The initiative consisted of a one-hour one-on-one introductory interview with each participant individually and four full-day workshops with all participants together, each one month apart (Table 1).

**Table 1.** Workshop themes and general topics and exercises covered.

Workshop	Contents
<i>Introduction to design training</i>	Project introduction, exercises communication and collaboration, exercises

	and theory design thinking, discussion case studies design thinking in healthcare
<i>Empathise and define design workshop</i>	User description, user journey, pain point identification, formulating design challenges
<i>Ideate and prototype design workshop</i>	Splitting design challenge, generating ideas, combining ideas, developing concepts, storyboarding, desktop walkthrough prototype
<i>Creating change design training</i>	Reflection on process and methods, deciding what to change, pitching change ideas

In the introductory interview, participants were asked what was needed to create a more open and innovative working culture in the hospital and why. In the ‘creating change’ training, participants were asked to reconsider what was needed to create a more open and innovative working culture and briefly pitch their ideas to the group. Both the interviews and their pitches were recorded and transcribed verbatim. Due to the flow of the interview and incomplete attendance at the final workshop, not every participant shared ideas in both the interview and the ‘creating change’ workshop. In total, 19 ideas were shared before participating in design workshops and 22 after. These issues were analysed, described in one-sentence statements, and categorised based on thematic similarity to reveal themes. This was done through an iterative sense-making process leveraging an in-depth understanding of the context and participants while reflecting critically on the themes that emerged from the data (Sundler et al. 2019). As a next step, these themes were captured in overarching dimensions.

## RESULTS

Of the nineteen ideas shared before the workshops, eleven connected to a need for additional resources, five to a need for a shift in ways of thinking, and three to a desire for other ways of working (Table 2).

**Table 2.** Pre-workshop themes and dimensions for a more open and innovative working culture, in brackets the number of ideas.

Themes	Dimension
<i>Need for more staff to either complement skills, or to free up time, improve care (5)</i> <i>Need for more physical resources, such as better layout, transportation options, or beds (4)</i> <i>Need for more time to reflect, think, and improve (2)</i>	Need for additional, different resources (11)
<i>Need for more kindness amongst staff (2)</i> <i>Need for more buy-in, willingness to change (2)</i> <i>Need for less aggression from patients (1)</i>	Need for shift in attitude, ways of thinking (5)
<i>Need for more equal opportunities amongst staff members, e.g., to meet, suggest ideas, claim resources (3)</i>	Need for shift in work practice, ways of working (3)

In the introduction interview, most issues described a need for **more resources**. These issues most commonly came from frontline workers, who lamented having insufficient time or mental capacity to provide excellent care or to reflect and think.

“[We need] more staff to allow us to change our ratios and our staffing so that we had a [...] dedicated triage nurse, or triage nurses, and their role is to triage, and then monitor everybody that is in the waiting room.” (Frontline worker)

Other logistical demands, such as improving the layout or adding transportation options, were mainly framed as alleviating nurses' stress to increase headspace. The last two suggestions in this dimension, both shared by desk workers, did not provide any concrete suggestions but indicated more time to think was needed for frontline workers to nurture a more open and innovative working culture.

The second dimension of issues shared before the design workshops were framed as desires to shift **how people think**. Relatively more desk workers shared these issues, ranging from a lack of willingness to change to a lack of kindness in general.

Lastly, three needs reflected a shift in **ways of working**, all framed as increasing equal opportunities.

“[We need] to go into some meetings and share our ideas and feedback and whatever, and that’s where you meet people. I think it’s just that if you don’t know these people, you sort of shy away and go, ‘No, I don’t know her, so I just don’t want to know.’ Like, do you know what I mean?” (Desk worker)

Most of the ideas shared after the workshops connected to a shift in ways of working (17 out of 22). Only three reflected a desire for more resources, and just one described a need for another way of thinking (Table 3).

**Table 3.** Post-workshop themes and dimensions for a more open and innovative working culture, in brackets the number of ideas.

Themes	Dimension
<i>Need for better internal collaboration, or skills-based practice (6)</i> <i>Need for enhancing patient experiences, e.g., by sharing roles, waiting times, or journeys (6)</i> <i>Need for improving own or team’s practice (4)</i> <i>Need for gathering more complete information from patients (2)</i>	Need for a shift in work practice, ways of working (17)
<i>Need for collecting ideas from staff, for example through a suggestion box (2)</i> <i>Need for boards above beds with personal photos or hobbies to support meaningful conversations (1)</i>	Need for resources (3)
<i>Need for more cultural awareness (1)</i>	Need for a shift in ways of thinking (1)

Most issues shared in the project closing workshop described actions to improve their **ways of working**. Predominantly, these reflected better internal collaboration, showing that participants understood the interconnectedness of issues more. Similar to the need for more resources expressed in the introduction interviews, they were often framed as improving efficiency: freeing up time to think about more changes. For example, they felt doctors could improve their practice to improve nurse-patient interactions and reduce their workload.

“We need to make sure there's better communication. [...] So if the medical team doesn't write the med shots, the nurses can't get the meds and it kind of spirals. Obviously, the nursing staff benefit, the patients benefit, but also the doctors benefit because it means that if we're not chasing them, then they're not being hassled, we can do our job, and the patients are getting the treatment, and the care that they need.”  
(Frontline worker)

Another cluster of needs was framed as enhancing patient experiences, with a variety of ideas to improve communication. This, they argued, would then make everybody's job easier, again freeing up time to further nurture an innovative environment. Some pitches were framed as improving their own or team practice specifically, and two employees emphasised the need to gather more information from patients.

Still, some participants pitched for **more resources**, such as a suggestion box or board to easily collect ideas or a whiteboard above patient beds with personal information that could facilitate meaningful conversations. Lastly, one participant framed his pitch as a need to shift **how people think**, in this case, for more cultural awareness.

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## DISCUSSION AND CONCLUSIONS

Ideas for a more open and innovative working culture expressed before and after the design workshops predominantly reflected a need for more time to reflect, think, and improve. However, the needs shared before the workshops mainly described actions they could not influence, such as wanting more resources, others to work differently, or bringing in outside expertise – all to support their work. Indeed, they mainly reflected demands that the participants themselves could not in any way influence. Presenting issues as entirely out of your hands makes it less likely they are received positively (Edmondson 2003).

The needs after the workshops, in turn, showed an increased ability to make changes themselves, included more ideas to improve the experience for others, and had concrete ideas for others to make work easier and more efficient for all. As such, this study suggests that the design initiative supported participants in becoming

better able to push for change effectively through a greater understanding of the complexity of the organisation, having increased empathy for other stakeholders, and gaining a higher perceived self-efficacy.

These changes in framing highlight the beneficial impact participatory design initiatives can have, particularly for organisations undergoing transformational change. Organisational change has a high failure rate, resulting in financial losses as well as employee buy-in and happiness (Yue et al. 2019). The shift in framing indicates increased employee change receptivity (Frahm & Brown 2007).

Evaluating how employees frame their ideas for a more open and innovative culture revealed meaningful themes. However, this study was conducted in one location with a small sample size. More studies in other organisational cultures are needed to explore the generalizability of these results. Additionally, every participant shared only one idea before and after the workshop. It is thus not certain to what extent these abilities were enhanced for each participant. More studies are needed to understand better how it supports them in identifying and addressing issues more adequately. Longitudinal studies are required to capture the long-term impact on both the participants' framing and the perceptions of other employees on these frames. Additionally, evaluating employee change receptivity before and after participatory design initiatives could be interesting. These studies can be executed in professional settings and student courses to understand better how people's perceptions of what should and can be changed shift as a result of engaging with design tools.

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