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QUILT: Designing a values-driven toolkit for surfacing participant-led impact assessment of participatory design and making experiences

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Abstract: Conventional impact assessment tools can overlook subtle sensory, cognitive and interpersonal transformations experienced in participatory design and making interventions by focusing on metrics, often retrospectively, rather than facilitating shared dialogue-based learning. The process of designing the QUILT toolkit discussed in this paper is anchored in a values-based approach that aims to prioritise participant-led narratives of discovery and change. Working with seven researcher-practitioners undertaking active projects in varied interdisciplinary and socially engaged design and making contexts, and their participant groups, we designed and tested questions, presented as a set of cards, for prompting dialogue and co-reflection. Findings highlight a) the significance of moving away from extractive transactions towards reciprocity in generating deeper understandings of impact, and b) the importance of attending to impact emerging at different stages of a project. The paper concludes that designing for impact should aim to be a reciprocal process maximising learning for both participants and researchers.

Keywords: impact assessment; toolkit design; reciprocal learning; co-reflection

1. Introduction

Assessing the impact of participant involvement in civic and creative interventions has become increasingly important for effective reporting on project outcomes (Bowen et al, 2016; Knutz & Markussen, 2019). Yet, engaging with participants in participatory design and making interventions to capture and understand how their involvement impacts on their lives poses challenges for the more convenient metrics-based evaluation tools.

While not dismissing the value of quantitative or metrics-based tools, this paper focuses on the challenges of capturing—or more importantly, better understanding—everyday forms of



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participant involvement in creative interventions (Twigger Holroyd, 2017; Capell & Hughes, 2025). Conventional impact assessment tools often overlook the subtle sensory, cognitive, interpersonal and sometimes emotional dimensions integral to participatory making practices. By prioritising only ‘measurable’ data, often gathered retrospectively once a project concludes, such tools can miss the nuanced and situated impacts that unfold during the creative process itself. Although impact assessment in participatory design and making research is becoming more sophisticated, existing tools remain largely standardised and tend to neglect the more sensitive, relational, and affective aspects of participation (Kettley, 2021). These include, for example, subtle mood shifts triggered by handling materials, increased focused attention during making activities, serendipitous encounters that reshape social relationships, or moments of self-awareness prompted by sensory engagement with touch or sound.

Building on prior methodological work to enhance rigour and confidence in materials-based, participatory design and making research approaches (Shercliff & Twigger Holroyd, 2020; Shercliff et al., 2025), we designed *QUILT: Questions for Understanding Impact and Learning Together*, a set of cards developed to help researchers and participants collaboratively explore and reflect on these subtle, qualitative dimensions of creative participation (see Figure 1).



Figure 1. The QUILT impact assessment toolkit.

This paper reflects on the process of designing the first edition of the QUILT card set, offering us the opportunity to evaluate ways in which values-based considerations informed our design approach (Gulbransen-Diaz & Hepburn, 2024). We also consider how the values that emerged through the participatory process shaped both our learning and the final toolkit. We learned that the discovery and negotiation of values in creative participatory settings are themselves emergent, reciprocal learning processes necessarily anchored in dialogue (Steen, 2013; Leong & Iversen, 2015).

The paper draws from these insights to examine how learning from a values-based design approach enabled us to prise mechanisms of impact assessment away from extractive data collection methods towards more nuanced understandings of personal and social transformation. We argue that the true value of assessing impact lies in this reciprocal learning that occurs between researchers, facilitators and participants in the process of making together rather than through retrospective accounts. In so doing, we offer a contribution that builds on existing tools (e.g. Bos-de Vos, 2020) and extends the potential of social and participatory design values to everyday creative practice.

2. Evaluation and impact assessment toolkits in the literature

The question of impact as it relates to sensory, cognitive, emotional, and interpersonal experience appears differently across art and design disciplines, as well as in public engagement guidance. The examples reviewed here are drawn from several fields to illustrate these varied approaches and set the context for the development of the QUILT impact assessment toolkit.

To begin with, impact assessment and evaluation mechanisms have largely evolved from sectors outside the creative arts and design fields. One such example is the *Public Engagement Evaluation Toolkit*, developed for Queen Mary University of London in collaboration with Fast Track Impact, the National Co-ordinating Centre for Public Engagement, and Dialogue Matters. While the detailed guidance includes some creative tools to support evaluation tasks, it is designed for a wide range of public engagement events and activities and predominantly promotes a metrics-based approach.

The Counting What Counts' *Impact & Insight Toolkit* (2025), originally developed in 2015 with Arts Council England, supports arts and cultural organisations in evaluating the impact of their work on audiences and participants. Available online, the toolkit helps organisations report on the value of their activities and events and inform future improvements. Although widely used and practical, it relies primarily on survey-based, numerical data collection to serve organisations' needs. While the tool can be adapted for a wide range of evaluation tasks, it offers limited opportunities for the kind of nuanced, dialogue-based engagement that small participant groups might require.

Similarly designed for evaluating engagement in cultural events, the *Wheel of Change* (Neelands & Garcia, n.d.), informed by the Centre for Cultural Value's (2025) evaluation principles and structured around a theory of change, provides components to help arts and cultural organisations plan for and assess impact. Like the *Impact & Insight Toolkit*, it is useful within the competitive arts funding landscape and supports arts professionals in meeting planning and reporting requirements. However, advancing on the *Impact & Insight Toolkit*, it emphasises the importance of including “the responses of audiences and participants, as well as artists, creatives and other engaged professionals” (Neelands & Garcia, n.d., p.1). That said, the *Wheel of Change* still primarily prepares organisations to plan for and measure impact, largely relying on quantitative data, rather than to enter into open-ended dialogue with participants about how engagement may impact them and their lives.

The *CreaTures Nine Dimensions* framework (Vervoort et al. 2022) goes further in embedding a values-driven approach to understanding creative practice and its change potential. It promotes reflection and co-reflection through methods such as interviews, focus groups, observation, and surveys. Importantly, it foregrounds the sensory, cognitive, interpersonal, and expressive dimensions of creative participation, aspects which are often overlooked by more conventional evaluation methods, and provides themed prompts to aid reflection. It is a valuable and refreshing addition to the toolkit portfolio for creative practitioners and researchers, but nevertheless it adopts a macro perspective, aiming to generate narratives around salient trends for project design or post-project analysis. A gap therefore remains for tools that can generate participant-led data to feed into these broader narratives.

Also informed by a theory of change framework, the interdisciplinary Living Lab model (European Network of Living Labs et al., 2025) proposes a twofold approach to impact assessment combining traditional, top-down key performance indicators with a bottom-up, participatory evaluation process inviting participants to contribute:

Stakeholders involved in the Living Lab define their own assumptions about change, and these assumptions are validated and iterated throughout the project. This allows for a more flexible and co-creative approach to impact assessment, enabling the identification of unforeseen outcomes or side effects and providing a more accurate reflection of the actual impact of Living Lab activities. (European Network of Living Labs et al., 2025 p.31)

In the field of social design, the value of collaborative projects to society, industry partners, and local networks is widely recognised (Bowen et al., 2016), yet the question of how to capture and understand impact remains a central concern. There is growing consensus that “creative methods can offer a higher level of engagement to a wider audience than traditional evaluation techniques” (Owen et al., 2022), and a move toward conceptualising impact assessment as something conducted with participants rather than on them. The 2024 Social Design Symposium at ImaginationLancaster highlighted the need for more in-depth

evaluation to demonstrate social impact, suggesting the role that creative tools can play in this process (Perez & Kwon, 2024). Like the Living Labs approach, values-based design is favoured, promoting a more flexible and co-creative approach. However, such frameworks still tend not to address the potential transformative value of the sensory, cognitive, and emotional aspects arising from engagement in materials-based participatory making.

More recently, *The Cake Index* (Asnani, 2025) has moved closer to this ambition through its focus on the small-scale, everyday transformative impact and a shift away from impersonal metrics toward values-driven, meaningful dialogue. Asnani (2025) advocates reframing engagement “not as an extractive transaction, but as an act of co-creation, where knowledge flows in multiple directions.” Although developed within the context of public engagement and proposed as a form of participatory design, it does not yet directly address the material and tactile dimensions of making.

Across this landscape of impact assessment, emphasis is gradually shifting from outcomes to process (Bowen et al., 2016; Bødker et al. 2022), from numbers and statements to iterative conversation and glimpses of self-acknowledged transformation. There is appetite and scope for a values-driven approach to everyday, small-scale impact assessment, but this is complicated by the experiential nature of materials-based participatory making, in which the effects on participants—and researchers—are often subtle and embodied. It is well understood that engaging in participatory making activities can influence people’s attention, mood, and sense of discovery through tactile and sensory interaction with materials (Shercliff & Twigger Holroyd, 2020). Yet, these forms of transformation remain notoriously difficult to articulate with precision (ibid).

3. QUILT project aims

The QUILT project set out with two overarching goals. First, to understand better how creative participatory making activities impact on the lives of individuals and their communities; and second, to design and develop a prototype tool that helps researchers and facilitators identify and communicate these shared moments of mutually understood impact experienced through creative participatory making. It asks: what does impact look like and feel like, and how can it be meaningfully communicated? This framing problematises the very notion of impact, prompting a series of guiding questions:

- What does engagement in materials-based creativity do to people?
- How can we assess the impact of participants’ involvement in participatory design and making interventions?
- Given that such impact may be small and incremental, or deeply transformative, what kinds of questions should we ask participants, and crucially, when should we ask them?

Informed by the literature, three core values, or guiding principles, shaped the early stages of the investigation:

- **Attention to subtle nuances of everyday experience:** to address engagement in creative participatory design and making at a granular, ‘everyday’ level, capturing sensory, emotional, and relational aspects that are typically difficult to articulate.
- **Participant agency:** to create conditions where participants feel comfortable and confident reflecting on their involvement.
- **Openness and contextual sensitivity:** to employ open-ended questions that allow for nuanced, context-dependent responses, recognising that the same activity may affect different groups in distinct ways.

4. Methodological approach

Between July 2024 and July 2025, we convened four online workshops with seven researchers and practitioners experienced in participatory design and making within interdisciplinary settings. Each co-researcher was also running, or had recently completed, an active participatory design and/or making project. Their expertise spanned a variety of materials-based creative interventions with diverse participant groups including women with experience of the criminal justice system, autistic adults, visually impaired elders, and local LGBTQ+ community democracy initiatives. We deliberately assembled co-researchers with substantial experience of working with “seldom-heard groups” (Hughes, 2022) to ensure a broad understanding of how impact may manifest in varied contexts, and to draw on their knowledge of engaging participants who might otherwise reject or find it difficult to respond to conventional questionnaires.

Because our co-researchers were undertaking active participatory projects, they were able to test draft versions of the impact assessment toolkit in live settings with their participant groups. Throughout the design and development process of the QUILT card set, they held workshops—both in person and online—with their participant groups, trialling the question prompts and cards at different stages and gathering feedback. This feedback from the trials in live settings, from both participants and co-researchers, was brought to our subsequent meetings with the co-researchers and used to iteratively review and refine the toolkit (see Figure 2). Steps 2, 3, and 4 were repeated three times across the four phases. This iterative participatory design process was intended to help us address power dynamics and embed participant-centred values into the development of the toolkit (Iversen et al., 2012; Bratteteig & Wagner, 2014; Owen et al., 2022).

We used the online whiteboard platform Miro to facilitate meetings, workshop tasks and discussions with co-researchers, collate the feedback in one central location and generate the data that informed the toolkit’s development.

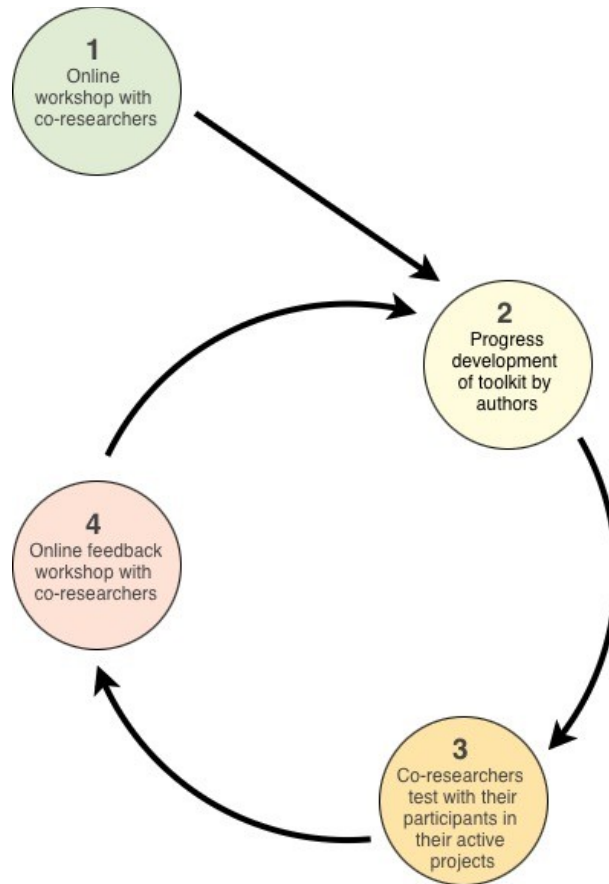


Figure 2. Diagram illustrating the iterative research design process.

4.1 The four phases of the project

The project evolved over four phases. In an iterative research design process, learning from one phase fed into the next (Kapiszewski et al., 2022), culminating in the design of the QUILT impact assessment toolkit (see Figure 3).

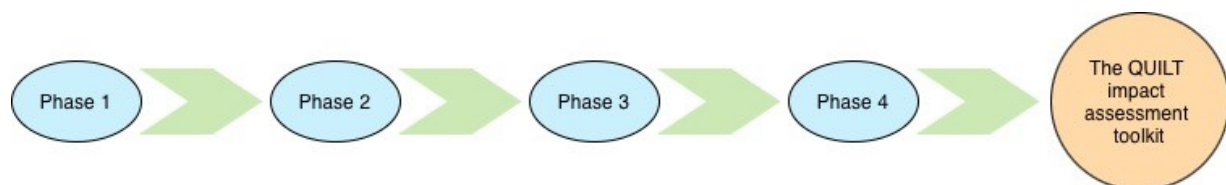


Figure 3. Diagram illustrating how each phase informed the next across the four phases of the project.

4.2 Phase one: Identifying and testing the question prompts

In the first workshop, we shared the project's core principles, as listed above, with co-researchers and drafted an initial set of question prompts for testing with the participant groups. We began by focusing on three thematic areas:

- **Creativity:** participants' understandings of everyday creativity, self-expression, and engaging in activities outside the "norm."
- **Participation:** participants' feelings about joining in, connecting with others, forming support networks, and navigating power hierarchies.
- **Making:** the physicality of materials-based design and making, sensory experiences, dexterity, and learning skills.

These themes anchored the questions within our field of creative participatory design and making, enabling us to draft concrete question prompts to explore potential changes or transformations arising from participation (see Figure 4). This workshop also introduced researcher reflexivity into the approach, prompting us to examine our own assumptions from the outset (Finlay, 2002; Kara, 2018).



Figure 4. Detail from the Miro board, showing draft question prompts.

Following this workshop, we composed an initial set of 68 question prompts organised around the three starter themes—1) being creative, 2) the making activity, and 3) participating in a group—with an additional set exploring the experience of being part of the research project.

Our co-researchers then tested the prompts with small groups of two to five participants involved in their active participatory projects, allowing for in-depth qualitative responses. They were free to select the questions most relevant to their context and activity (as shown in the example illustrated in Figure 5), although two co-researchers trialled all question prompts. The aim was to test the questions for clarity, relevance, and potential repetition, and to invite the project participant groups to suggest new or rephrased prompts to enhance accessibility.

QUESTION SET 1: ABOUT BEING CREATIVE

To learn about creativity in your life:

How is creativity a part of your daily life?

What does creativity mean to you?

Have you ever done something creative like this before?

How does being creative make you feel?

QUESTION SET 2: ABOUT THE MAKING ACTIVITY

To learn about the physical effects you experienced whilst making:

Have you discovered something you can do physically through the making which has surprised you?

QUESTION SET 4: ABOUT BEING PART OF THE (RESEARCH) PROJECT

To learn about why you joined the project:

What got you interested in this project? Why did you join?

To learn about what you need in your environment to be creative:

What do you need to be creative?

To learn about the creations you have been making:

How would you describe this work?

How have you been able to be creative?

QUESTION SET 3: ABOUT PARTICIPATING IN A GROUP

To learn about how you felt being in a group with other people:

How do you feel about being in a room with other people?

To learn about how your experience of working with others in a group might enable you to make connections:

How does participating in this group give you a support network?

Figure 5. Sample selection of question prompts used with co-researcher's participant group.

4.3 Phase two: Feedback from participant groups & question selection

The second phase focused on evaluating feedback from the participant groups on the initial draft question sets and from co-researchers on their experience of discussing these questions with their participants. While our primary concern was ensuring clarity of language, we also wanted to determine whether we were asking the right kinds of questions, i.e. those capable of generating meaningful insights about impact. Co-researchers were invited to code the questions using predefined categories (see Figure 6) and provide qualitative observations from their work with their participant groups. This feedback allowed us to refine and select the most effective questions, remove repetition, and reflect on our own assumptions, thereby assessing the accuracy of our anticipated responses and integrating participant-held values that surfaced during conversations (Bratteteig & Wagner, 2014).



Figure 6. Example of draft question prompts coded by co-researchers.

4.4 Phase three: Revising the question prompts, embedding values & structuring the toolkit framework

With a selected pool of questions in place, the next phase focused on refining their phrasing for clarity, organising them into a framework flexible enough to capture the evolving nature of impact across a project, and ensuring it accommodated both internal (personal) and external (social) relational transformations. We also aimed to embed the values identified in the previous phase into the toolkit's user guidance. Again, using the Miro whiteboard, we tested the revised question classifications with co-researchers (see Figure 7).

featuring a single question prompt. Researchers and participants can choose which cards to use, tailoring discussions to their specific context.



Figure 8. The prototype card deck.

4.5 Phase four: Towards the toolkit & revising the core values

The final workshop presented the opportunity to gather feedback on both the form and content of the card deck as well as suggestions for accompanying notes and user guidance. Based on their workshop discussions with their project participants—with whom they had tested out the card deck—co-researchers were asked to offer final observations on the clarity of language used in the questions and their effectiveness (see Figure 9).

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Task 1: Are the questions clearly understood, and do they generate meaningful responses?

Baseline questions

- How do you feel today?
- Have you ever done something like this before?
Tip: Specify what 'this' refers to (e.g., project, workshop, etc.).
- How did you get involved in this [project/workshop/activity/group]?
*Useful tip: select the term that you think best describes your set-up
- What does creativity mean to you?
- How is creativity part of your daily life?

Connecting questions

- How do you feel about what is happening in the room?
- How do you feel about the activity people are doing?
- How do you feel about being creative in a group with other people?
- How do you feel about what the group has made?
- How do you feel about being part of this group?
- What have you learnt about the group?

Making questions

- How do you feel about starting to make something new?
- How do you feel about doing something creative?
- How do you feel about what you are making?
- Does this* remind you of anything? If so, what? How does that make you feel?
* Useful tip: you may wish to specify your particular project or activity or artefact where it says 'this*' to ensure participants know what you are referring to
- How do you feel about what you have made?
- How do you feel about showing the group what you have made?
- How do you feel about displaying your work in public?

Learning questions

- How do you feel about learning or improving a skill?
- How do you feel about what you have learnt to make or do?
- Does this* inspire you to continue making [...]?
* Useful tip: you may wish to specify your particular project or activity where it says 'this*' to ensure participants know what you are referring to.
[...] Useful tip: fill in the blank with an appropriate description of what the participant is making.
- Do you feel this* might be useful for you in the future? If so, how?
* Useful tip: you may wish to specify the relevant skills or techniques or experience where it says 'this*' to ensure participants know what you are referring to

Wrap up questions

- What did you get out of participating in this [creative project/class/workshop/activity]?
* Useful tip: select the term that you think best describes your set-up
- What do you feel helped you to be creative?
- Has anything surprised you in unexpected ways?
- What have you learnt from doing this*?
* Useful tip: you may wish to specify your particular project or activity where it says 'this*' to ensure participants know what you are referring to
- Have you noticed change in yourself since participating?
- What did you learn about [yourself/your community/other participants]?
* Useful tip: select the term you think most appropriate for the type of experience the participants have had
- How might this experience help you in the future?
- Have you learned something you might share with someone else outside this group?

Figure 9. Extracts from final round of feedback.

5. The QUILT impact assessment toolkit

The finalised impact assessment toolkit, QUILT: Questions for Understanding Impact and Learning Together, was shaped directly by feedback from our seven co-researchers and their participant groups (Leong & Iversen, 2015). It is designed for facilitators, practitioners, and researchers to use in creative participatory design and making projects, supporting understanding of the subtle, nuanced ‘everyday’ impacts of participation on individuals and their communities. The toolkit promotes an approach to impact assessment that emphasizes reciprocal learning as a mutually beneficial process (Sanders & Stappers, 2008) rather than an extractive exercise biased in favour of the impact agenda.

QUILT comprises 50 cards, including introductory ‘scene-setting’ information; guidance on using the toolkit; the revised core values (or guiding principles); baseline questions; prompts on making, connecting, and learning; wrap-up questions; and blank cards for noting additional questions (see Figure 10).



Figure 10. The QUILT impact assessment toolkit, the question groups and a selection of the question prompts.

Designed for use in the field, the cards enable researchers, facilitators and practitioners to capture subtle shifts in participants' perspectives, emotions, ambitions, and social

interactions. They provide a structured yet flexible approach that balances the value of shared discovery between researchers and participants by creating time and space for reflection and interpretation (Steen, 2013).

Guidance for use aims to inform the mindset of the user rather than offer step-by-step instructions. First, we outline the kind of impact the question prompts aim to explore and give a few examples to aid orientation, such as feeling less isolated; increased social confidence; acquisition of new skills; or greater awareness of self and others. Next, we suggest practical considerations for selecting and asking the questions, emphasizing the importance of 'reading the room' and adjusting timing, tone and focus accordingly. Establishing a range of very informal baseline questions early on in a project helps to orient both participants and researchers to the specific context they find themselves in and their reasons for taking part. These can be returned to subsequently throughout the project as a way of 'checking in' and gauging changes in mood, expectations and learning. We remind users of the importance of exchange within this reciprocal learning process and to adhere to appropriate ethical procedures for documenting the ensuing discussions. Finally, we offer a list of sources providing further information and resources to support users.

The emphasis throughout is for assessment of impact to be a co-constructed dialogue with participants. As such we have refrained from suggesting a structured workflow for the implementation of the toolkit in the field. Instead, we stress the importance of adapting it as appropriate to the context and recommend involving participants in this process.

6. Discussion: values for designing guiding principles

We use the *Framework for designing for divergent values* (Bos-de Vos, 2020) as a basis for analysing the values that emerged through the design process of the project, not by retrofitting the framework to the activity but rather to compare our learning and see what new insights we have to offer. Of the types of value proposed by Bos-de Vos (2020), we concentrate on 'cultural values' as the focus there is on values held in community settings. Our observation is that values can be generated at the outset of a project and explicitly acknowledged, but we also highlight the importance of attending to an awareness of values as they emerge through a multidimensional process of engaging with participant and co-researcher feedback (Steen, 2013; Iversen et al., 2012; Leong & Iversen, 2015). To complement this, we note how researcher reflexivity has been important for acknowledging assumptions and resolving tensions between different understandings or interpretations of impact and move closer to levelling the power imbalance between researcher and participants (Finlay, 2002).

6.1 Phase one

Discussions during phase one highlighted several opportunities to reflect on factors shaping the composition of our questions. For instance, perceived power hierarchies in researcher–

participant encounters are mediated through language. Academic terminology may be interpreted very differently by participants from other contexts. The initial draft questions exposed some of these assumptions, and by shifting the language towards participants' own vernacular, we aimed to redress this imbalance and create a more egalitarian basis for discussing impact (Twigger Holroyd, 2017).

Beyond language, we recognised the inherent bias involved in formulating and asking questions. Such bias can prioritise certain modes of communication, like reading and speech, or constrain engagement through leading or reductive questions (Kara, 2022). This prompted further discussion about how to support inclusive participation (Sanders & Stappers, 2008).

Even in this first session, we found ourselves reflecting on how facilitators and researchers might be surprised by what they learn about themselves, about participation, and about the activity itself. A reflexive approach helped us confront tensions between researcher and participant values, and our desire for equity and openness in understanding impact assessment (Finlay, 2002). The notion of reciprocal learning began to emerge, positioning question prompts not merely as tools for extracting information but as structures that support mutual exchange (Sanders & Stappers, 2014).

6.2 Phase two

Phase two centred on gathering feedback from participant groups and co-researchers on the draft questions. This proved a steep learning curve, generating productive discussion and revealing several emerging 'value fronts'.

Attending to detail in the moment of making: We anticipated a strong connection between making, emotions, and expression, and this was confirmed. Questions probing links between practical and interpersonal skills highlighted 'how physical making in a community group relates to fostering relational social skills'. Attending to detail in the shared encounter of making "engage(s) the whole person, as both substantial (self-realising) and relational (in time, with others and the world)" (Kettley, 2021).

Awareness of context: The context in which the activity takes place, the choice of questions and how they are asked is significant. An understanding of context is relevant to knowing how and why participants become involved in the activity and therefore provides a filter through which to identify (and potentially modify) appropriate questions (Murray et al. 2010). For example, one co-researcher noted that women with experience of the criminal justice system were participating as part of a compulsory community sentence rather than as a voluntary opportunity for creative exploration. In another case, participants with chronic illnesses found questions about bodily sensations uncomfortable—for example, how the body feels when practising or learning a manual skill (i.e. the adjustment of fine motor skills)—as they drew attention to symptoms. As one co-researcher remarked, 'no matter

how we try, questions will land wrong for someone'. Sensitivity to context must therefore guide question selection and adaptation.

Participant agency: As mentioned earlier, co-researchers found that answers to questions could vary considerably in ways we hadn't anticipated, exposing our assumptions, notably the implicit belief that participatory design or making is always a positive experience (Vines et al, 2013; Iversen et al., 2017). Some participants may find aspects of group activity challenging. Asking ourselves, 'how much are we prioritising our agenda to demonstrate positive impact over what matters to participants?' highlighted the need for neutrality and strategies that support participant agency in choosing the questions and shaping the conversation (Bratteteig & Wagner, 2014). Life experiences also influenced interpretation. For instance, the term 'grounding' meant very different things to someone forced to flee their home than to someone without such experiences. Allowing for adjustments to questions where necessary and establishing a set of baseline questions would help to orient both participants and researchers to the specific context.

Informality: Informal language was repeatedly emphasised as crucial. Keeping questions concise, conversational and natural helped participants feel more comfortable in the discussions, making 'the assessment process more genuine', and encouraging participants to respond in their own words (Sanders & Stappers, 2014). This informality helped create camaraderie, allowed researchers to 'read the room', and signalled that opting out of discussion was acceptable.

Distributed expertise: The idea that the researcher is 'not the only expert in the room', and indeed at times may find themselves surrounded by expert participants, surfaced during this phase. Participants may hold deep expertise through lived experience or familiarity with the making activity. This distributed expertise (Björgvinsson et al., 2012; Manzini, 2015) is well-known in these kinds of projects and therefore questions need to act as open invitations for participants to lead the conversation, particularly when they can recommend changes to improve the activity (Sanders & Stappers, 2014). Co-researchers noted that 'participants chose their preferred way of taking part', allowing impact to emerge on participants' terms.

Getting the timing right: Practical concerns about when to ask questions also surfaced. Integrating prompts into informal conversation felt 'less like research', and questions could be introduced at multiple points rather than reserved for a formal endpoint. For long-duration projects, conducted over weeks, months, even years, asking questions repeatedly over time can demonstrate sustained interest in participants' development and potentially provide a mechanism for researchers/facilitators to trace change as it occurs (Iversen et al., 2017). Conventional retrospective assessments often miss when or how transformation takes place. We argue that in 'everyday' participatory design and making, impact can be subtle, happen at any moment, and requires close attunement to participants' journeys to be captured meaningfully (Capell & Hughes, 2025).

6.3 Phase three

Phase three developed the idea of using questions to create a reflective space that supports reciprocal learning and helps evaluate both participant and researcher journeys (Sanders & Stappers, 2008). An emerging awareness unfolded that impact might be understood as an encounter of “relational depth” (Kettley, 2021), offering opportunities to cultivate critical awareness of self, others and the subject of inquiry (including the participatory making itself). We began to consider how such complex, layered transformations concerning shifts in self-perception and relationships with external forces as they intersect through time - for example reflecting on past encounters, responding to the present moment, or projecting an idea of the transformed self into the future - might be represented. For now, this discussion lies beyond the scope of this paper.

Returning to our focus on values, this phase reinforced those identified earlier but moved from an abstract concept of values towards practical applications expressed as guidance notes for the toolkit (see Figure 11). These emphasized, for instance, that all participants are experts in their own experiences of the activity (Bjögvinsson et al., 2012); that facilitators should ‘get the settings right’ for the groups they work with and select questions appropriate to context (Murray et al., 2010; Bratteteig & Wagner, 2014); that assumptions brought into discussion should be acknowledged (Finlay, 2002); that informal, plain language is essential (Sanders & Stappers, 2014); and that additional, unexpected prompts introduced by participants can both strengthen their ownership of the process and provide a mechanism for adapting the toolkit in future iterations (Iversen et al., 2012; Leong & Iversen, 2015).

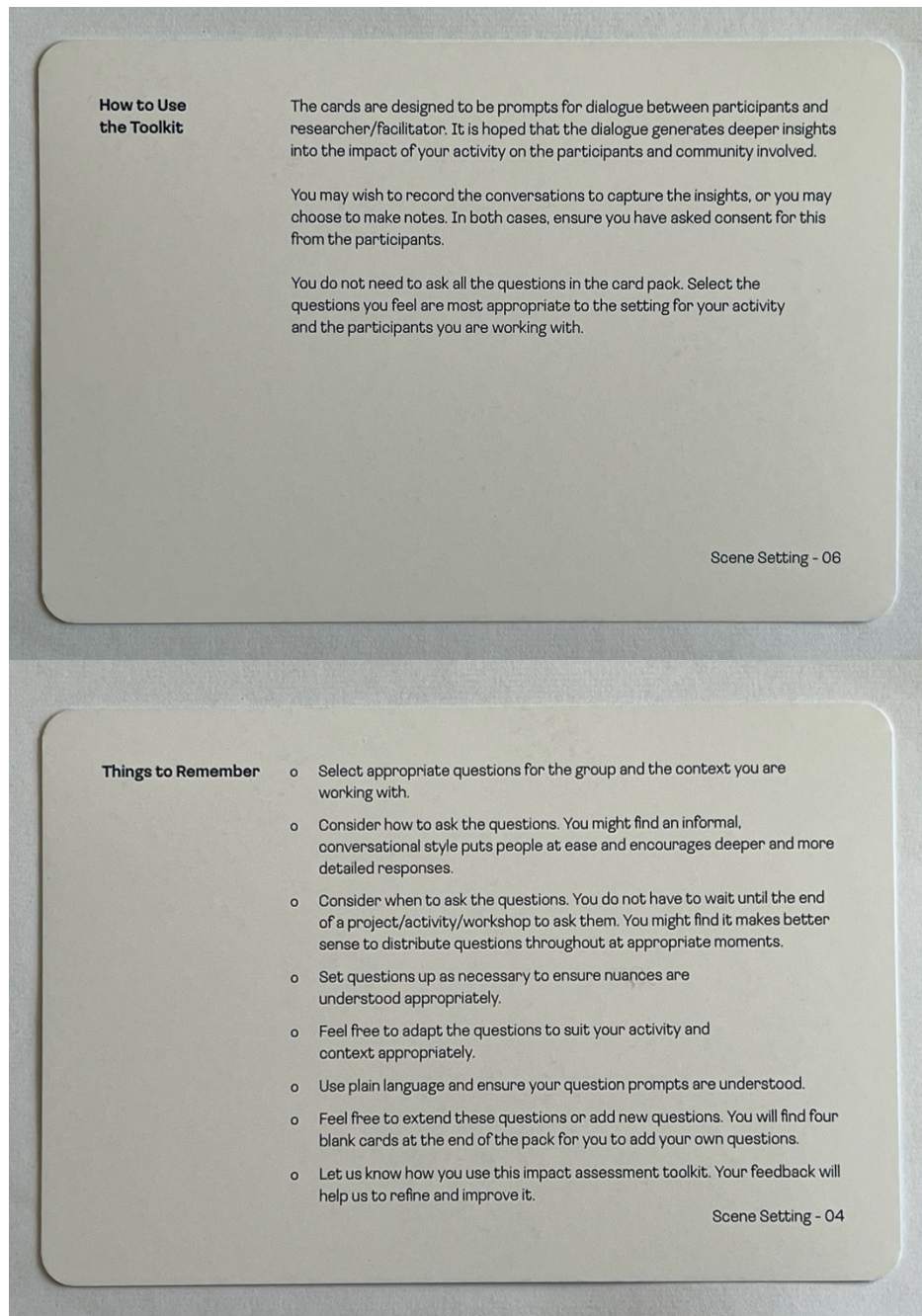


Figure 11. Guidance for users of the QUILT toolkit, presented in the 'Scene Setting' cards.

6.4 Phase four

Testing the prototype toolkit with their participant groups allowed co-researchers to reflect on both the material qualities of the cards and the performance of the question prompts. The tangibility of the deck as something to hold, handle, and pass around was appreciated by participants and co-researchers alike. The act of choosing cards, holding them, and considering questions together reinforced the value of supporting participants to feel comfortable responding to the questions. As one co-researcher noted, 'handling cards keeps eye contact out of the way and facilitates conversation'. The familiarity and physicality of the

cards helped ease tension, enabling more open, fluid dialogue. Their playful quality also suggested the potential to gamify impact-assessment activities (Sanders & Stappers, 2014).

This phase further strengthened participant agency. Co-researchers described how they ‘went through the deck and chose questions that made sense in context, and within this selection gave the selections over to the group/individuals to choose from’. By incorporating wording suggested by participants into the final question set we hoped to move a step closer to levelling power imbalances, ensuring the researcher was not ‘literally holding all the cards’.

A final observation relates to the interpretation of the question prompts. Some cards use ‘this’ as a placeholder to be defined by the users. Participants interpreted ‘this’ in different ways (e.g., knitting as an activity, knitting within the group, or knitting in this specific context). Rather than viewing such variation as a limitation or a barrier to comparability, we suggest it opens up valuable nuance in how participants articulate and understand impact (Steen, 2013).

As a result of our learning through this process the three core principles underpinning the toolkit, introduced earlier, were adjusted:

- Dialogue is the key to building a reflective and reflexive space that encourages reciprocal learning from which impact can be mutually beneficial.
- Everyone involved is an expert in their experiences of the creative participatory making activity.
- Questions are context dependent and therefore you must take time to ensure the questions you select fit the group you are working with and are easily understood.

Our learning from the process of designing the QUILT impact assessment tool offers a contribution to values-driven design approaches by drawing attention to the need for greater nuance and subtlety to participant contexts, past experiences and preferred modes of communication, particularly when designing for divergent values in materials-based participatory design and making settings. Taking up the challenge set by Bos-de Vos that “An interesting direction for further development [of the Framework for designing for divergent values] is to build, test and iterate different types of tools, which could, for instance, be dynamic to allow for nuance and overlap between certain values or include different time horizons” (2020, p.51), we propose expanding the category of “values as guiding principles” to make way for some additional values that emerged from this work (Iversen et al., 2012; Leong & Iversen, 2015; Steen, 2013). The table below (see Figure 11) illustrates how these values might sit within Bos-de Vos’s original framework.

QUILT: Designing a values-driven toolkit for surfacing participant-led impact assessment of participatory design and making experiences

		TYPE OF VALUE	MOTIVATIONAL GOAL	VALUE EXAMPLES
VALUES AS GUIDING PRINCIPLES  Influence strategic decisions related to value co-creation and value capture (Rindova & Martins, 2017)	 OF INDIVIDUALS	Human values (e.g. Schwartz & Bilsky, 1987)	Enjoyment Security Achievement Self-Direction Restrictive-conformity Prosocial Social power Maturity (cannot be actively attained)	pleasure, self-indulgement, gratification, sensuous enjoyment, happiness at work, ... physical safety, psychological / mental health, integrity, ... achievement, competence, success, ... autonomy, self-sufficiency, independence, intellectualism, ... conformity to social expectations, ... altruism (e.g. acting in best interest society/client), benevolence, kindness, love, ... dominance, status, influence, social control, power, leadership, authority, ... wisdom, tolerance, faith in one's convictions, deep emotional relationships, appreciation for the beauty of creation, ...
	 OF GROUPS	Cultural values (e.g. Schwartz, 2006) e.g.: • teams • organizations • economic sectors • nations	Autonomy Embeddedness Egalitarianism Hierarchy Harmony Mastery	<i>Intellectual autonomy</i> : broadmindedness, curiosity, creativity, ..diversity <i>Affective autonomy</i> : pleasure, exciting life, varied life, ... social order, respect for tradition, security, obedience, wisdom, paying attention equality, social justice, responsibility, help, honesty, ..openness, respect social power, authority, humility, wealth, ... world at peace, unity with nature, protecting the environment, ..comfort ambition, success, daring, competence, ..agency
VALUES AS QUALITIES WITH WORTH	 FOR PEOPLE	Use value (e.g. Bocken et al., 2013; Ravasi et al., 2012; Ekstrom, 2011)	Utility Well-being & development Symbolic meaning Emotional meaning	functionality, convenience, usability, efficiency, durability, time management, accessibility, appropriateness, compatibility, ... health, comfort, safety, growth, knowledge development ... expression of identity, signal of social status, prestige, stature, ... historic value, brand value, political value, aesthetic value, ... fun/joy, pleasure, appreciation ...
		Social value (e.g. Boradkar, 2010; Den Ouden, 2011)	Social propriety Social wealth	human health, safety, security, justice, privacy, ... minimize/no labor exploitation, fair living wages, maximize opportunity for workers, efficiency, ...
		Economic value (e.g. Bowman & Ambrosini, 2000)	Money Other economic value	income, profit, wealth, affordability, rents, economic sustainability, ... reputation, competitive advantage, innovation, commercial relationship, ...
	 FOR PLANET	Ecological / environmental value (e.g. Bocken et al. 2013)	Preservation of the planet	emission regulations / reduction, product safety, re-use of existing material, sustainability, long lasting neighborhood, ...

Figure 12. Values (in red) added to Bos-de Vos's (2020) Framework for designing for divergent values.

7. Concluding remarks & further research directions

Taking a values-based approach to designing the toolkit has challenged conventional impact assessment methods that depend on metrics, comparative criteria, and fixed definitions. The toolkit does not aim for quantitative consistency; rather, it opens space for dialogue. In place of metrics, we prioritise reflexive conversations and mutual learning. Instead of comparative criteria, we are developing flexible question prompts that can be used at different stages of a project. And rather than seeking definitive categories of impact, we attend to the nuanced, participant-led accounts of subtle change and what this means for those involved.

We propose that impact assessment can function as a reflective, reciprocal learning process (Sanders & Stappers, 2008), with question prompts structuring the space in which this can unfold. As it stands, the toolkit intends to facilitate awareness and create opportunities for knowledge around impact to emerge, while recognising that even when impact is generated together, it will be interpreted differently by each individual (Iversen et al. 2017).

At the time of writing, the toolkit is being used and tested “in the wild” (Rogers & Marshall, 2017). Field testing the toolkit in this way will allow us to evaluate its effectiveness further, compare results with other available tools and examine how participant agency might be strengthened. For instance, offering a curated set of relevant cards from which participants choose could ‘open up the process in a more co-creative way’. Gamifying the toolkit, such as selecting cards at random at different points in a project, could also shift greater control over the conversation to participants.

A broader challenge still lies beyond this next stage of the toolkit design process. It concerns scaling up the impact of everyday, materials-based participatory design and making activities (Murray et al. 2010). How can such activities influence the values of participants and their communities? While the transformations surfaced through the QUILT toolkit may be small in scale, they are often deeply meaningful to individuals and, when aggregated, may contribute to larger pathways to impact and to a deeper understanding of how involvement in these kinds of creative participatory design and making interventions can inform social and structural change.

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