

Imagine you are tasked with designing a system to support older adults in getting socially connected.

How would you determine what they **actually** want?

Who gets to decide how technology is designed?

Whose voice and ideas shaped the design?

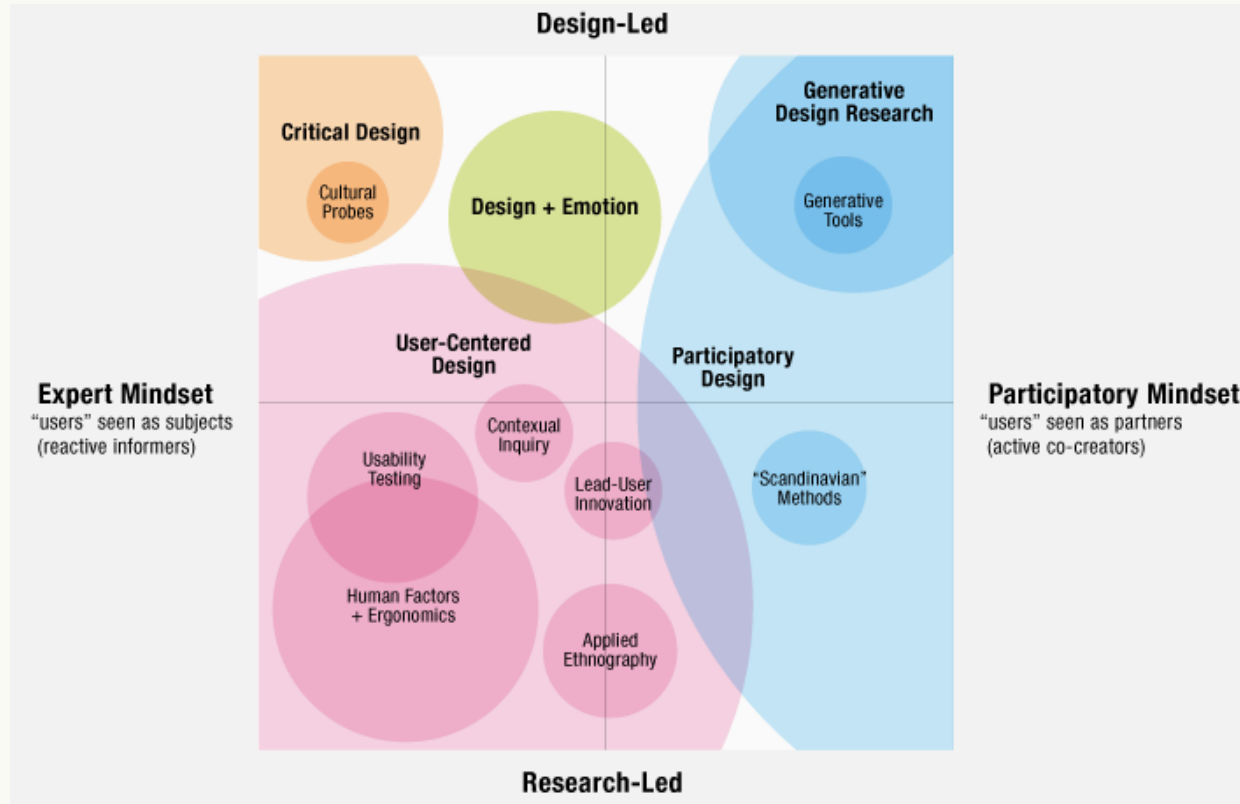


Involve the users actively
in exploring and shaping
ideas with designers

Designing with People: Participatory Design in HCI



Map of HCI Research Method



Origins of Participatory Design (PD)

Emerged in Scandinavia in the 1970s as a part of the workforce democracy movement

Goals:

1. Enable workers to **shape** how technology will be **integrated** into the workplace
2. **Rebalance** the **power** between workers and management



PD in HCI Research

PD is an approach that **actively** involves relevant **stakeholders** (e.g., end-users, designers, developers, managers) in the **co-design** process to ensure that the result **meets** the needs and expectations of those who will be affected by the design



Example 1 (Hardy et al., 2019)

Context: PD was used with **LGBTQ** people in rural places.

Goal: Unpack the **technological** and **informational** needs of rural LGBTQ people and how social technologies would look different if they were designed by rural LGBTQ people.



Figure 1: A participant takes notes for an artificial/virtual reality meeting space for rural LGBTQ people, which was mocked up with LEGOs

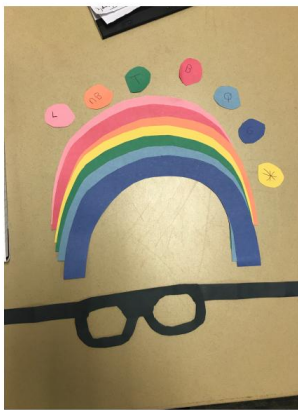


Figure 2: Participants' mock-up of Rainbow Glass

Example 2 (Hussain et al., 2012)

Context: PD was used with **children** using prosthetic legs in rural Cambodia.

Goal: Form a deep **understanding** of how children are affected by using prosthetic legs and how changing the **appearance** of the prostheses can benefit children



Figure 6. Materials brought by the participants and the designer for the second workshop.



PD in HCI Research

Serve three main purposes:

- a) as a **research method** to explore design spaces,
- b) as a **design approach** to develop new solutions, and
- c) as a **research context** to expand the conceptual framing and practice techniques of PD

Key Features of PD

- 01 **Cooperation**
Users, designers, and other stakeholders work together towards shared goals
 - 02 **Democracy**
People (end-users) should have the opportunity to participate in design decision-making
 - 03 **Empowerment**
Designs aim to improve and support users' future use and practice
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- 04 **Mutual learning**
Participants and designers learn from each other's expertise to better inform design
 - 05 **Creativity**
Participants and designers collectively envision new designs and simulate future scenarios

Benefits of PD

Allows the participants a **sense of ownership**, users bring in their knowledge of the context, making PD suitable for designing **community-based interventions**.

PD involves different stakeholders of the community; hence, people understand different parts of the **whole picture** and are open to **exploring** various opportunities.

Challenges of PD

Time and resource intensity

It is difficult to find a good pool of end users

Users are not expert designers

Ensuring genuine participation

Balancing diverse user needs and expectations

Misconceptions of PD

Narrowly Equating PD to Design Ideation or Prototyping

PD is a holistic design development process that emphasizes full user participation throughout the entire design journey, including

- jointly setting design objectives,
- collaboratively analyzing the current situation,
- co-constructing problem formulations,
- codesigning solutions, and
- iterating through testing and deployment

Things to be Considered for PD Practices

1

Purpose

- What problem are you trying to solve?
- What are you trying to understand?

2

Stakeholder/participant group

- Who is your participant? What criteria do they meet to contribute?
- Are they representative of the audience who are impacted by your design/research questions?

3

Activities

- What warm-up activities can help non-designer participants feel comfortable or encourage them to be imaginative and creative?
- What activities can help answer the questions you're asking or aid in the design?

4

Toolkits/artifacts

- What can you show participants to inspire and provoke thinking and idea generation?

In-class Planning Activity

Plan for a PD session/workshop, sketch out the **purpose**, **stakeholders**, **activities**, and **artifacts**. Reflect on whether PD as a method is effective or not for the problem space.

Prompt: Designing to understand or address problems related to human working conditions in the tech industry