
Expecting the Unexpected in Participatory Design

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ABSTRACT

Participatory Design (PD) provides unique benefits in designing technology with and for specific target audiences. However, it can also be an intensive and difficult process, with unexpected situations which can arise at any stage. In this Special Interest Group (SIG), we propose that PD researchers may exchange “war stories” about their unexpected and difficult experiences with PD. This will facilitate reflective discussions and the identification of possible solutions, and enable future PD research to plan for similar situations, thereby making difficulties a little less unexpected.

KEYWORDS

Participatory Design; PD; co-design; difficulties; unexpected

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DEFINITIONS

An *unexpected situation* is used here to refer to any PD-specific activity or occurrence during PD that did not work as originally planned, but not necessarily where outcomes were below expectations. For example, a certain PD method did not facilitate balanced power among participants, but on-the-fly solutions or adjustments re-established the balance.

An unexpected situation in which outcomes were below expectations will be called a *failure*. For example, recruiting the target participants was not possible in the allocated time, participants did not engage in the process or cancelled their participation for various reasons, or the PD methods were not appropriate.

INTRODUCTION

Participatory Design (PD) is an intensive process, requiring input from and involvement of users at a variety of levels and in a variety of ways. PD provides unique benefits in designing technology with and for target audiences, including increased: understandings of users and context of use, fit for purpose [6, 7], ownership [5, 10] adoption of technology [1, 12], and higher user satisfaction [2, 13]. PD also creates opportunities for some user groups (e.g. children) to develop increased self-esteem and confidence [4, 8, 9], collaborative, communication and problem solving skills [8, 9]. In addition, there is evidence that PD has the potential to enhance lives [3, 14], and alter social attitudes [11].

Despite these advantages, PD can be difficult to “get right”, especially when working with groups with special needs [7]. Unexpected situations can arise related to ethical considerations, attracting and retaining participants; supporting the engagement of all participants; extracting design information from PD activities; ending PD projects, and managing resources.

We propose a Special Interest Group (SIG) to discuss *unexpected situations* and *failures* encountered by PD researchers – something rarely discussed in publications. Each of the organisers of this SIG has been able to report anecdotally on difficulties they have encountered, and their on-the-fly solutions and adjustments to planned activities to accommodate unexpected developments and salvage prospective failures. This SIG will provide a venue for PD researchers to share their experiences with PD when it did not work as it should, as well as their work-arounds and solutions. We encourage discussions of other possible approaches that could have been taken, as a learning experience for the future.

Table 1: Planned Schedule of Discussion

| Time | Activity |
|---------|---|
| 15 mins | Introductions of organisers and attendees, identification of PD experience through active “move around the room” activities |
| 15 mins | Solicitation of unexpected experiences from attendees & sorting into related topics using big paper, sticky notes, and affinity diagramming |
| 25 mins | <p>Discussion of common or novel unexpected situations and failures in each “phase” of PD in small group discussions, including topics such as:</p> <ul style="list-style-type: none"> • Ethical considerations • Attracting and retaining participants • Supporting participants’ engagement • Extracting design information from PD activities • Ending PD relationships • PD resource management |
| 25 mins | <p>Group reflection & sharing</p> <ul style="list-style-type: none"> • Common causes of unexpected situations and failures • Preventing or managing unexpected situations and failures • Back up plans vs adaptation on the fly • Summary and concluding remarks |

TOPICS OF DISCUSSION

Attendees of the SIG will be asked to reflect upon and share their unexpected experiences of PD, as the basis of discussions about solutions which have been or could be used in similar situations. Special attention will be drawn to solutions relevant to multiple PD audiences. Likely topics include:

- Ethical considerations of PD
 - Obtaining ethical clearance
 - Power differentials between researchers and participants, and between participant groups
 - Continuous informed consent through a range of activities and potential goal changes
- Attracting and retaining participants
 - Finding participant groups in short-term research timeframes
 - Communicating with participants and gatekeepers/knowledge-holders
 - Ensuring long-term commitments from participants
 - Networking and trust-building
- Supporting participants’ engagement and involvement in PD activities
 - Managing dominating participants and encouraging reticent participants
 - Collaborating and communicating across barriers of power, culture, language and experience
 - Supporting all participants to participate to the fullest extent of their abilities
- Extracting technology design information from PD activities, especially in fantasy contexts
- Ending PD relationships
 - Production of prototypes or technologies
 - Ownership of PD artefacts, design information and ideas generated
 - Closing PD projects
- Resource management within PD
 - Identifying the correct size and composition of a PD team
 - Identifying the correct length and number of design sessions/activities for a PD project

CONCLUSION

Our primary aim in this SIG is to stimulate reflective discussions and practice-sharing among PD researchers in relation to the unexpected situations and failures which may be experienced during PD. A further aim is to facilitate the identification of possible solutions to unexpected situations and failures, and enable future PD research to plan for similar situations, thereby making difficulties a little less unexpected.

The organisers of the SIG propose to create a report based on the SIG outcomes, identifying unexpected situations during PD (including failures), as well as solutions to overcome these situations. We hope that this report will form the basis of a future CHI Workshop.

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REFERENCES

- [1] Jérémy Albouys-Perrois, Jérémy Laviole, Carine Briant, Anke Brock, and Anke M Brock. 2018. Towards a multisensory augmented reality map for blind and low vision people: A participatory design approach. (2018). <https://hal-enac.archives-ouvertes.fr/hal-01801116>
- [2] Muneera Bano and Didar Zowghi. 2015. A systematic review on the relationship between user involvement and system success. *Information and Software Technology* 58 (2015), 148–169.
- [3] John M. Carroll and Mary Beth Rosson. 2007. Participatory design in community informatics. *Design Studies* 28, 3 (2007), 243 – 261. <https://doi.org/10.1016/j.destud.2007.02.007> Participatory Design.
- [4] Aurora Constantin and Juan Pablo Hourcade. 2018. Toward a Technology-based Tool to Support Idea Generation during Participatory Design with Children with Autism Spectrum Disorders. In *Proceedings of the 20th International ACM SIGACCESS Conference on Computers and Accessibility*. ACM, 385–387.
- [5] Allison Druin. 2014. Inclusive ownership of participatory learning. *Instructional Science* 42, 1 (2014), 123–126.
- [6] Jerry Alan Fails, Mona Leigh Guha, and Allison Druin. 2013. Methods and techniques for involving children in the design of new technology for children. *Foundations and Trends in Human-Computer Interaction* 6, 2 (2013), 85–166. <https://doi.org/10.1561/11000000018>
- [7] Christopher Frauenberger, Judith Good, Wendy Keay-Bright, and Helen Pain. 2012. Interpreting input from children: A designerly approach. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. ACM, 2377–2386.
- [8] Mona Leigh Guha, Allison Druin, and Jerry Alan Fails. 2010. Investigating the impact of design processes on children. In *Proceedings of the 9th International Conference on Interaction Design and Children*. ACM, 198–201.
- [9] Jessica Korte, Leigh Ellen Potter, and Sue Nielsen. 2017. How design involvement impacts Deaf children. In *2017 International Conference on Research and Innovation in Information Systems (ICRIIS)*. 1–6. <https://doi.org/10.1109/ICRIIS.2017.8002527>
- [10] Ann Light and Yoko Akama. 2014. Structuring future social relations: The politics of care in participatory practice. In *Proceedings of the 13th Participatory Design Conference: Research Papers-Volume 1*. ACM, 151–160.
- [11] Alan F. Newell, Margaret E. Morgan, Lorna Gibson, and Paula Forbes. 2011. Experiences with professional theatre for awareness raising. *Interacting with Computers* 23, 6 (Nov. 2011), 594–603. <https://doi.org/10.1016/j.intcom.2011.08.002>
- [12] Britt Östlund, Elin Olander, Oskar Jonsson, and Susanne Frennert. 2015. STS-inspired design to meet the challenges of modern aging. Welfare technology as a tool to promote user driven innovations or another way to keep older users hostage? *Technological Forecasting and Social Change* 93 (2015), 82–90.
- [13] Stephen Uzor, Lynne Baillie, and Dawn Skelton. 2012. Senior designers: Empowering seniors to design enjoyable falls rehabilitation tools. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '12)*. ACM, New York, NY, USA, 1179–1188. <https://doi.org/10.1145/2207676.2208568>
- [14] John Vines, Rachel Clarke, Peter Wright, John McCarthy, and Patrick Olivier. 2013. Configuring participation: On how we involve people in design. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. ACM, 429–438.