Reflections on the heuristic experiences of a multidisciplinary team trying to bring the PCA to Participatory Design (with emphasis on the IPR method)

Matthew Bates, Sarah Kettley, Richard Kettley
Nottingham Trent University, UK
Background: Hart’s Ladder

Levels of participation:

- Child initiated and directed
- Child initiated, shared decisions
- Adult initiated, shared decisions
- Consulted but informed
- Assigned but informed
- Tokenism
- Decoration
- Manipulation
- Non-participation

Participation, citizenship, empowerment
Interest: an interdisciplinary approach

- Computer Science (co-design model)

- Textiles (drawing on craft/making approaches to design)

- Person-Centred Approach (relational therapeutic model)

- Goal: create an environment which is non-directive and open-ended, and ultimately guided by the participants
Derivation: co-design objectives

*from games-based learning research (2008-2010)*

<table>
<thead>
<tr>
<th>#</th>
<th>Objective</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Familiarisation</td>
<td>- introduce digital design tools</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- discuss project design objectives</td>
</tr>
<tr>
<td>2</td>
<td>Conceptualisation</td>
<td>- conduct co-operative enquiry into game concept</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- use low-tech prototyping tools</td>
</tr>
<tr>
<td>3</td>
<td>Creation</td>
<td>- use discussions to agree upon new resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- implement ideas into digital resources</td>
</tr>
<tr>
<td>4</td>
<td>Modification</td>
<td>- present digital resources using tools available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- discuss modifications and improvements</td>
</tr>
<tr>
<td>5</td>
<td>Presentation</td>
<td>- reflect on design process and discuss roles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- prepare and deliver presentation of product</td>
</tr>
</tbody>
</table>
Direction: for participatory workshops

Weeks 1 - 5
- Deconstruct game examples
- Use simple tools to create quick game idea

Weeks 6 - 10
- Present new prototype
- Apply changes, add new ideas
- Discuss new area of design

Co-operative Enquiry

Participatory Design
## Considerations: for participatory workshops

<table>
<thead>
<tr>
<th>#</th>
<th>Participatory design</th>
<th>Person-centred approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Familiarisation</td>
<td>Psychological contact</td>
</tr>
<tr>
<td>2</td>
<td>Conceptualisation</td>
<td>Establish relationship</td>
</tr>
<tr>
<td>3</td>
<td>Creation</td>
<td>Meaning making</td>
</tr>
<tr>
<td>4</td>
<td>Modification</td>
<td>Awareness of self</td>
</tr>
<tr>
<td>5</td>
<td>Presentation</td>
<td>Autonomy</td>
</tr>
</tbody>
</table>

Table X: Key considerations for both participatory and person-centred approaches to design
Heuristics: workshop design (pilot study)

- Introduction
- Familiarisation
- Creation
- Conceptualisation
- Presentation/modification
- Finishing

Group Agreement
- Enjoy it!
- Hear people’s experiences
- Confidentiality
- Anonymity
- Respectful of other’s opinions/views
- Non-judgmental
- OK to be creative/make mistakes
- Feel free!
- Be constructive
Output: experimentation from pilot study
Output: data collected from pilot study

- ‘Feel like I’ve learned a lot about myself as well as smart textiles’
- ‘Nice to have a framework for listening and sharing with the group’
- ‘I found this (being involved in the group) comforting, as there wasn’t any pressure or prescriptive way to be’
- ‘It was nice to do something creative without being judged on it’
- ‘Encourages participants to share ideas and communicate their feelings’

- People’s reactions from the ‘internet of soft things’ meeting were that it made people relax and enjoy 3 hours as escaping working life.
Case study: data collected from pilot study

Selected output from pilot study

Examples of constructing meaning through physical artefacts included making items of clothing such as scarves and gloves.

Example scarf inspired by prototyping methods demonstrated by facilitators

Artefact included pressure sensors to create a ‘smart scarf’ with an anthropomorphic pom-pom attachment to express mood (according to the participant’s specification). Via a snap-fastener, this could be attached to the garment and compressed to express happiness or feelings of contentment.
Considerations for IPR

- design of wearable articles was driven by participants’ topical experiences
- subsequently realised via discussion with facilitators on a one-to-one basis
- design and making of objects promoted discourse between participants
- allowing efficient problem resolution associated with design and function
- IPR allowed participants to explore these ideas post-session
Reflections on IPR from pilot study

• The resultant working environment proved rich with discussion and debate, enabling researchers to capture data via audio recordings and post-session questionnaires. These data capture methods were supplemented with Interpersonal Process Recall (following initial consultation and agreement with each participating pair), enabling post-session reflection and analysis of thought, feeling and motivation. This process enabled participants to revisit and review their interactions from different perspectives and encouraged reflection both their experiences from the workshop and of participation with IPR as a process. The following reflective account of the activity is written by the collaborating computer scientist functioning as a participant to the pilot study.
Reflections on IPR from pilot study

• Initially, the concept of IPR was unfamiliar to me as a research technique. Video-capture has been used in my previous work as a method of recording and transcribing presentations of project results from the perspective of the participant. These presentations have involved several participants (target learners, teachers, stakeholders) and so the use of video capture was beneficial here as the visual cues could be used to identify and discern between different speakers and contributors during these activities.
Reflections on IPR from pilot study

• When approached by IOST workshop facilitators to engage with a process of IPR, I was enthusiastic to participate with the activity in order to revisit the interactions which took place as part of the design workshop (the event) and the IPR process in general (the objective). As the IPR activity took place the morning after the event, I was able to recollect some information relating to my aims and objectives for participation. I decided however not to use or refer to researcher notes either before or during the activity in order to be open-minded about the approach and my recollection of events.
Reflections on IPR from pilot study

- The IPR activity was also attended both my co-designer from the workshop event and two therapists from the project acting as investigators. At the start of the activity, I immediately attempted to make sense of the images by trying to recall what I was doing (action) and my thought process at the time (motivation). The audio recording was unfortunately distorted and so the audible discussion topics were no immediately obvious. This initial lack of stimulus encouraged me to describe the visible interactions and attempt to explain and rationalise them in the presence of my co-designer. This dynamic of reviewing the recording as a pair made the process of discussing the activities with investigators much easier as each observable interaction could be discussed from multiple perspectives.
Reflections on IPR from pilot study

- The process also allowed us (as participants with IPR) to continue to share our thoughts about the creation of the wearable article beyond the shared space of the design workshop. This created opportunities for me in particular (as participant to the workshop activities) to acknowledge the support and assistance I had received during the workshop and to share my appreciation for the ease with which the garment was assembled, something which I was originally surprised had occurred. Comments expressed at the time such as ‘it felt like the idea had been validated and that really gave me the push to go forward and complete it with your assistance’ support this view.
Reflections on IPR from pilot study

• The IPR activity also presented me with an opportunity to review the wider process of working in a person-centric environment (an activity new to me at the time) by comparing the tangible outputs of the workshop process to my initial expectations going into the pilot study. Upon reflection, I found the IPR activity useful as it served to both improve my understanding of IPR as a tool and to strengthen my relationship with my co-researchers as part of a multi-disciplinary approach to designing and working. Comments expressed at the time such as ‘I felt so comfortable with the working environment and with the working relationship that once we had actually tackled those initial problems, how to attach the circuit to the garment, the rest of it seemed to fall into place quite naturally’ support this view.
Bates, M., Brown, D., Cranton, W., and Lewis, J. (2011). Formulating a serious games design project for adult offenders with the probation service. *International Journal on Games-Based Learning, 4*(1) 1-10.


Reflection on Individual IPR

interaction between recaller and another person or group AV captured

video reviewed by recaller prompted by the inquirer
the individual recaller is recorded engaged in an activity (eTextiles)
Interest: craft research

- Tacit knowledge hard to get at
- A recent history of protecting the silent ‘magic’ of craft practices
- AV used to capture situated ‘choreographies’ of practice, possibly demonstrating distributed cognition
- Many directions for research in epistemologies of craft
Experience of IPR

- Anxiety felt in the activity to ‘perform’
- Recall revealed state of ‘flow’
  - “it felt like two minutes – it just went really fast” (of a 10 minute period)
- Emphasis on materiality of practice
  - “grainy and harsh” pencil
  - “and then I’m back in the masking tape and the fabric again”
- Relationship between concept and material played out
- Meta levels of academic interest
  - craft research background
- Revealed multiple roles in the group
  - PI; UG tutor; PhD DoS; esteemed Co-Is; spouse; participant with lived experience
My experience of IPR

- Awareness of self as ‘creative’
  - and different disciplinary constructions of creativity present in the room
- Allowed reflection as PI on the state of the project
- Experienced as a simple process in the role of recaller
  - in contrast to the protocol for doing IPR
  - felt supported by the inquirer
  - felt in control of the playback of the video and my experience
- Length of time surprising
  - spent 45 minutes recalling 3 minutes of footage
- Some awareness of IPR before being a recaller
  - through relationship with Richard Kettley and his MSc research process
  - was effectively part of the research design process that led to us using the method
- A need to reflect on the debrief as well
TAKE AWAYS

- Time consuming
- Extremely rich data generated
- Personal growth is supported
- Works for all roles within a team
- May not be suitable with mental health service users
  - where they have already stepped out of comfort zones to participate in a research project
- Can be flexible with regards numbers of participants
  - group interactions; individual practice, pairs; mutual recall etc
- A Person-Centred Approach is necessary for recaller feelings of safety
- Voluntary participation is key
QUESTIONS

• Who should have control over stopping the tape?
• Is the inquirer the same person as the researcher?
• What difference does a time lag between initial interaction and recall session make?
• What difference does it make to recall with another person (mutual recall)?
• What difference does it make if the recaller has an awareness of the method before taking part?
• What are the implications if other people view the video footage?
• Who does the transcribing?
• Who analyses the data?