Design practice into healthcare

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Design Practice in Healthcare

Joe Langley
Lab4Living | Sheffield Hallam University

• Arts@CERN
• Sir Paul Nurse, Richard Dimbleby Lecture; ‘The New Enlightenment’ (2012)
Design Practice in Healthcare

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“For knowledge is limited to all we now know and understand. Whilst imagination embraces the entire world and all there ever will be to know and understand.”

— Albert Einstein —
• Me
• Design
• Participatory Design

Knowledge
- Eliciting / Harvesting
- Translating
- Mobilising
- Evolving
- Adapting
- Synthesising
- Applying
- Exchanging
- Utilising
- Implementing
- Creating

Change
- Technology innovation
- Service innovation
- System innovation
- Social innovation
- Cultural innovation
- Incremental
- Radical / Disruptive
• Me

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Me

Mechanical Engineer (MEng)
Glass Technologist
Mechanical Engineer (PhD)
Design Engineer
Design Researcher
Microsystems Service Improvement Coach (STH)
NIHR Knowledge Mobilisation Research Fellow
Honorary Research Fellow at STH NHS FT
Honorary Research and Innovation Fellow at SCH NHS FT

- The University of Sheffield
- Glass Technology Services
- The University of Sheffield
- Sheffield Hallam University
- Lab4Living
- STH NHS FT
- NIHR CLAHRC YH
- NIHR Devices for Dignity HTC
- TITCH
- SCR LEP Med Tech Group
Me

- Head-Up - a customisable neck support for people with neck weakness (NIHR i4i)
- Design for Rehabilitation - ‘Design Thinking' to improve self-efficacy (Health Foundation SHINE)
- Support4all - dignity bra for breast cancer to aid set-up and reproducibility of radiotherapy (NIHR i4i)
- Personalised NIV - 3D printing customised interfaces for children to optimise NIV therapy (NIHR i4i)
- TITCH - Technology and Innovation Transforming Child Health (NIHR paeds HTC themes)
- NIHR Knowledge Mobilisation Research Fellowship
- 1st dip cleanable nurse call hand unit (Meidplan), a 'pop-up' male urinal (Vernacare)…etc…

- Embedded designers for service innovation (Health Foundation Innovating for Improvement application)
- Virtuality Reality as training preparation for prosthetic arms (NIHR i4i application)
- Personalised inhalers for children - linking usage to Tamagotchi games (GlaxoSmithKline application)
- Virtuality Reality games rehab for toddlers with hand burns - ‘popping balloons’ (NIHR i4i application)
- ‘Print your pain'; chronic pain therapy based on externalisation (NIHR i4i application)
- Female Urinal development (NIHR i4i application)
NIHR Knowledge Mobilisation Research Fellow
- what can participatory design practice offer to knowledge mobilisation?

- generating ideas
- making ‘things’ tangible
• Me

• Design

• Participatory Design
“Creativity” is the generation of new ideas. “Innovation” is the successful exploitation of new ideas. “Design” is what links creativity and innovation. It shapes ideas to become practical and attractive propositions to users and customers. Design may be described as creativity deployed to a specific end.”

“A designer is an emerging synthesis of artist, inventor, mechanic, objective economist and evolutionary strategist.”

- Buckminster Fuller
Design
Design is not a science at all – and nor, incidentally, is it an art. Design is a practice – specifically, an uncertain, paradox-laden, judgement-dependent, science-using, technology-supported practice, catalysed and driven by creativity and the imagination.
• Me

• Design

• Participatory Design
Participatory Design

“If you have an apple and I have an apple and we exchange apples then you and I still have one apple. But if you have an idea and I have an idea and we exchange ideas, then each of us will have two ideas.”

- George Bernard Shaw
Participatory Design

The concept of ‘Cognitive Interaction’
- from ‘How designers work’ by Henrik Gedenryd
Participatory Design

Deduction

What + How = ??

Abduction 1

?? + How = Result

Induction

What + ?? = Result

Abduction 2

?? + ?? = Result

Summary

- Participatory Design Practice supports knowledge mobilisation through:
  - the generation of ideas
  - a culture of ‘making’:
    - making ideas tangible
    - real time synthesis synthesis
    - testing and validation of different stakeholder priorities
    - graphical and physical language for culturally meaningful communication
I am looking for case studies that I can actively engage with to test these ideas…case studies from amongst the CLAHRC YH network of researchers…
Thank you

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