Human-Computer Interaction

Class Code: BSCS-F2015A

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HCI in Software Process

PRISMA & Co-Design

The Mud-flinging Approach

How?

- Throw mud at wall, hope it sticks; if it slides off its no good.
- Analogous: throw design out into user community, hope it is usable; if not, oops! try again!

- **Advantage**: new designs are rapidly developed

- **Major disadvantages:**
  - Loss of customers (the best ones who are most eager and come early to your site/products
  - Loss of reputation even if you fix it the next time - web start up companies are a good example, e.g. boo.com

Ather Nawaz liked **Lene Byskov**'s comment on this

Ather Nawaz • 1st
User Experience Designer | Agile UX | Mentor | Lecturer | Doer | PhD | Senior ...
2d • Edited

Should a User Experience (UX) designer change his decision taking style depending on the project or organization?

There are different ways for taking UX and design decisions in organizations. For example in some organizations, the decisions are based on consensus. You will fail if the decisions or not based upon the user research and user interviews. On the other hand if the organization is of hierarchical nature, and you start to take interviews and want to find the consensus between the stakeholders, people will think that you do not know what you doing.

In Ørsted, the design decisions are based on the outcome of users research, and usability testing of prototypes.

What is your design decision taking style?

#design #userexperience #designthinking #userresearch #ørsted

15 Likes · 5 Comments

Like Comment Share

Casper Knudsen • 2nd
Jobsøgende jurist indenfor IT-ret/GDPR/ Udbud/ IPR og ansættelses ...
1d

Hi Ather ! As you know , I am not a not web designer but in my opinion as a Master of laws specialised in IT law, I think you should do user research in order to ensure that the design matches the user ´s needs. As you write, there is risk of people thinking that you do not know what what doing if you do user research, but if you do not do user research to support your web design, there is a risk of not matching the needs of the user´s . Therefore , I think that the more analytical approach to web design by doing user research is better. It is better to be safe than sorry. Best regards Casper. (edited)

1 Like | 1 Reply

Ather Nawaz • 1st AUTHOR
User Experience Designer | Agile UX | Mentor | Lecturer | Do...
13h

You are right that lack of focus on user research results in creating solutions which do not align with need of user.

PRiSMA

A Participatory Software Development Methodology for building quality software applications for underserved communities

Underlying Motivation

- To explore **appropriate methods** to engineer suitable ICT applications in community;
  - Building good quality and relevant software system

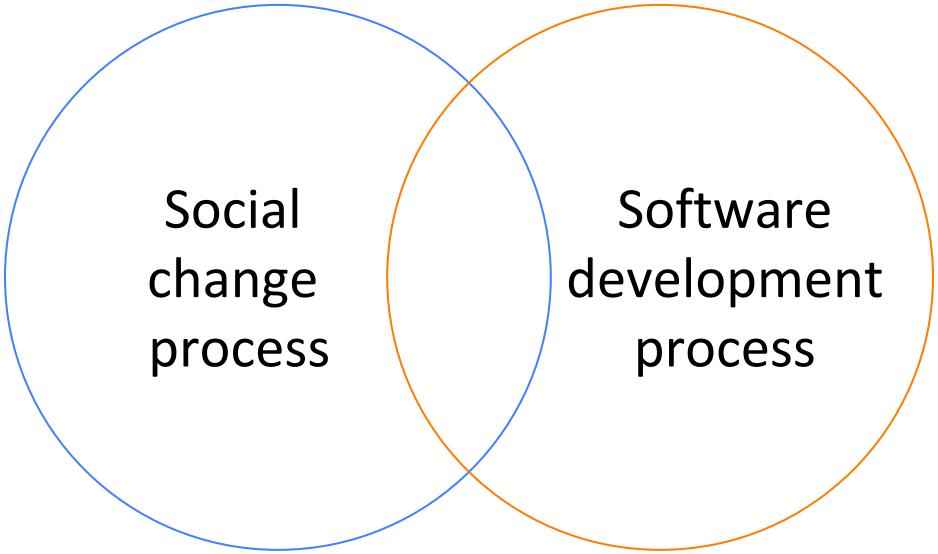
- Obtain **good requirements** based on the rural **community needs**, **strengths,** design and build technology to support and **improve livelihood** of the rural communities.

Urban vs Rural Context (Siew & Yeo, 2011)

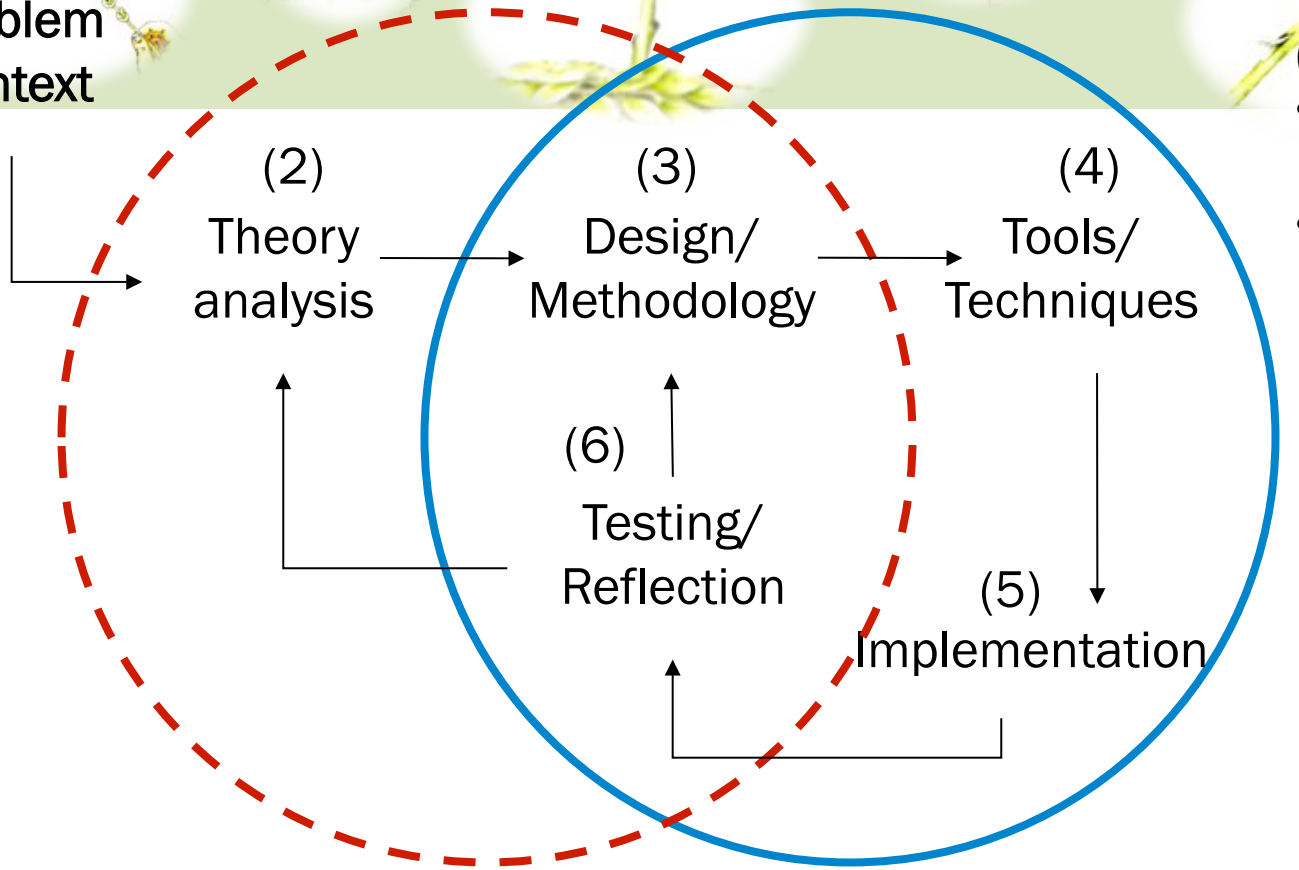
Aspect	Urban Users	Rural Users
Educational Level	Higher	Lower
Computer Literacy	Higher	Lower
Exposure to ICT	Higher	Lower
Specific Roles and Responsibilities	-Established hierarchy -Procedures and work processes -Accountability and resp'ty	different

PRiSMA

Participatory Action **R**esearch **i**n **S**oftware-Development **M**ethodology **A**ugmentation



PRISMA version 2

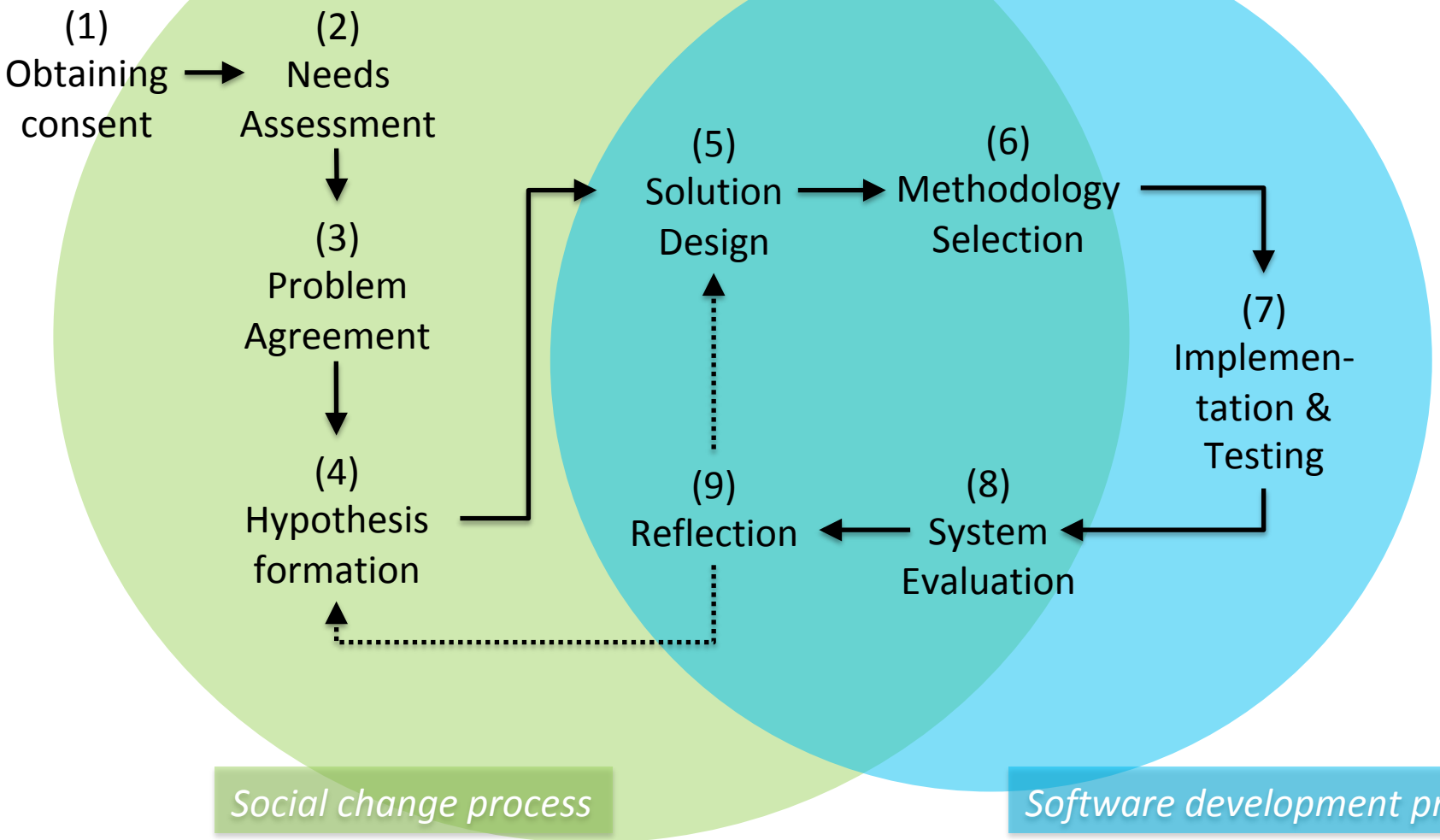


(1) Problem Context

- Underlying causes for change
- Problem researched, make a difference?

Adapted from Avison and Wood-Harper (1991)

PRiSMA v3


(1) Obtaining consent
(2) Needs Assessment
(3) Problem Agreement
(4) Hypothesis formation
(5) Solution Design
(6) Methodology Selection
(7) Implemen-tation & Testing
(8) System Evaluation
(9) Reflection
Social change process
Software development process
feedback

Building software should include:

- Community help define aims
  - Input to objectives
  - Address needs they help identify
- Community as participants
  - Beneficial to community
  - Input from them
  - Sense of ownership
- Community describes the process
  - Community should have real influence
  - Outcome relevant and beneficial (Moseley, 2003)

Case studies

eToro

Homestead

Oroo’

Research and Development Aims

- To bridge the knowledge gap between young and old
- To develop mobile tools with and for indigenous communities to collect, curate and disseminate their own knowledge

→Community-based co-design:

based on our novel Governance Framework

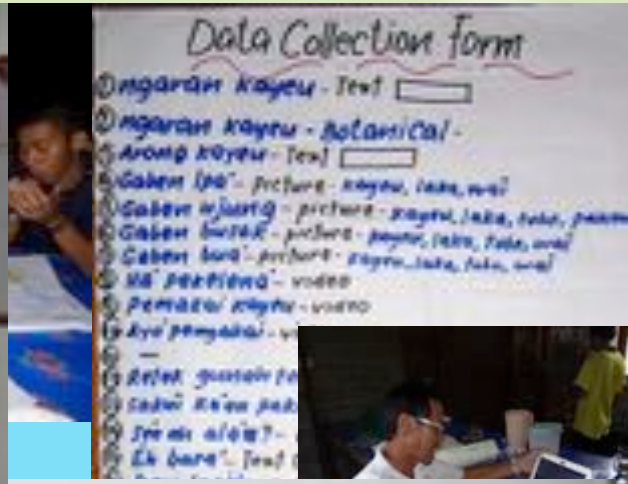
From TORO to eTORO

(1)
Obtaining consent

(2)
Needs Assessment

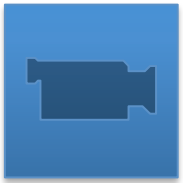
(3)
Problem Agreement

(4)
Hypothesis formation



(8)
System valuation

Social change



Homestead

Winschier-Theophilus, H., Winschiers-Goagoses, N., Rodil, K., Blake, E., Zaman, T., & Koch Kapuire, G., (2013). *Moving away from Erindi-roukambe: Transferability of a rural community-based co-design.* Paper presented at Proceedings of the IFIP 12th International Conference on Social Implications of Computers in Developing Countries, Ocho Rios Jamaica

R&D aims

To develop mobile tools
with and for indigenous communities
to collect, curate and disseminate
their own knowledge

→Community-based co-design

→Indigenous Knowledge system as design context

→promote South-East-North collaboration

How to extract **valid** and **generalizable** research findings from design cases in HCI4D?

Context

The HomesteadCreator

bridging a generational, conceptual and technical gap between the village elders and the urban youth

significance of place, location, and navigation interweaved with social activities

From Namibia to Borneo

Results from Long Lamai

- All participants **easily recognized the objects**
- selected objects most similar to theirs (like houses, trees) for constructing a homestead.
- Participants found **the categorization of objects peculiar**
- The selection and **dragging of objects intuitive.**
- The **gestures requiring two fingers** were only properly managed by the **two of the semi-computer literate** participants.
- One of the participants **engaged for hours** and expressed the desire to use the system as a **landscape planning and management tool.**
- The tool was used **as language learning system.**
- The other participants have clear ideas **which elements of their environment should be represented in the system**, such as medicinal plants.

Digitalising and preserving Oroo', a secret signage language of the nomadic Penans in the rainforest

Collaborators

PictIT

- Based on ‘Pictionary’, to explore representations of local concepts to inform designers

Another example of Participatory Design

Co-designing indigenous musical instruments with Penans in Long Lamai (Northumbria University, Long Lamai and UNIMAS)

Developing User Interfaces for Next Generation Multisensory Internet

Guest Speaker: Kasun Thejitha Karunanayaka

Imagineering Institute, Malaysia

In this talk Dr Kasun will demonstrate Imagineering institute's technologies developed for "digital senses" such as Virtual Smell and Digital Taste. The session will give an insight into the state of the art technologies developed in HCI field.

Schedule
Date: 12 Nov., 2018
Time: 3:00-3:30pm

Introduction of the Speaker

Kasun Karunanayaka is a HCI researcher interested in multimodal interactions, multi-sensory communication and Magnetism. Kasun received Ph.D in Electrical & Computer Engineering from National University of Singapore. His research works has been published in several international conferences such as SIGCHI, Interact, ACE, IEEE VR, BodyNets, ACHI over the years. He also won several international awards including CHI honorary mentioned award in 2015. His Bachelor's degree in Information Technology is from University Moratuwa, Sri Lanka and he served as a software engineer in the IT industry for more than two years. Currently Kasun is working as a Research Fellow in Imagineering Institute, Iskandar, Malaysia.

Thank You