

Methodological issues in an practice oriented research project

Presentation Zurich University of Applied Sciences
International dialogs amongst research and
practice: Getting insight and focusing action



Self-tracking devices and sustainable labour participation

Hanze University of Applied Sciences:

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Self-tracking devices and sustainable labour participation

Hanze University of Applied Sciences:

Honoursstudents:

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Christhy Fels

Esther Storteboom



Self-tracking devices and sustainable labour participation

Program:

- Introduction by Hilbrand Oldenhuis
- Contribution by honoursstudents
- Group assignment
- Presentations
- Lessons learned by Louis Polstra



Self-tracking devices and sustainable labour participation

Context:

- Retirement age is increasing
- (Working) population is getting older





Self-tracking devices and sustainable labour participation

Context:

- Sustainable labour participation: the degree to which individuals are able and willing to perform their current and future work in a healthy, valued way (van Vuuren, 2011; van der Klink e.a., 2010)

Self-tracking devices and sustainable labour participation

Sustainable labour participation:

- **Vitality:** high levels of energy, vigour, and resilience while working and the willingness to keep investing energy in the job during trying circumstances
- **Employability:** the ability to keep on performing the different tasks and positions in the current and in future organizations and sectors
- **Workability:** the degree to which an individual is mentally, physically, and socially capable of working

Self-tracking devices and sustainable labour participation

Healthy older workers may suffer (perceived) loss of vitality, workability and employability:

‘For how long will I be able to keep on performing my tasks? And will there be enough opportunities for me to adapt my working environment to my needs as an older worker?’



Self-tracking devices and sustainable labour participation

Possible solution:

Self-tracking devices can be used to increase self insight and self-efficacy concerning health behavior and help to alter behaviors if necessary (Sundar, Bella & Jia, 2012)



Self-tracking devices and sustainable labour participation

This project, part of Interreg project iAge (partners in Norway, Germany, Denmark, Scotland, Belgium, the Netherlands)

Self-tracking devices as a means to increase self insight and self management when it comes to health behavior.

Result: higher level of sustainable employability, because workers are more self confident and are better equipped when it comes to health behavior



Self-tracking devices and sustainable labour participation

General aim of this project:

Increasing sustainable labour participation of older workers by using self-tracking devices

In a broader context (EU-goals):

- (early) prevention of drop-out of older workers
- contributing to healthier lifestyle of (older) workers, while workers themselves are the main 'actors'



Self-tracking devices and sustainable labour participation

General aim of this project:

Increasing sustainable labour participation of older workers by using self-tracking devices

(possible) stakeholders:

- Governments
- Employers
- HR-consultants
- Insurance companies
- Scientists



Self-tracking devices and sustainable labour participation

Aim of this pilot more specifically:

Finding out which challenges arise when investigating the effects of self-tracking devices on employees' sustainable labour participation in 'real-life settings'



Self-tracking devices and sustainable labour participation

Why this pilot?

Integration of disciplines: ict and psychology of life style intervention in a working environment

Not many experiences until now

Self-tracking devices and sustainable labour participation

Participating company: 'Museumtechnische werken'





Self-tracking devices and sustainable labour participation

Participating company: 'Museumtechnische werken'

'Museum-technical products':

- Small company
- Supporting management



Self-tracking devices and sustainable labour participation

Global overview of the project:

Twelve workers, varying in age, choose one of 5 domains to be measured ('big five for healthy life', QSI):

1. Daily physical activity
2. Food and nutrition
3. Sleep
4. Stress
5. Social interaction



Self-tracking devices and sustainable labour participation

Global overview of the project:

- Preparation phase (Oct. 2013 – March 2014):
 - Selection of participants
 - Choice of self-tracking devices
 - Design of execution activities (additional self-report measures, how to integrate theoretical principles, etc.)
 - First measurement of relevant variables

Self-tracking devices and sustainable labour participation

Global overview of the project:

- Execution phase (April 2014 – June 2014):
 - Participants use and test the selected self-tracking devices during three months
 - Monitoring the results; adapting the devices/data-display if necessary
 - Supervision of an (external) coach
 - Final measurement of relevant variables



Self-tracking devices and sustainable labour participation

Global overview of the project:

- Evaluation phase (July 2014 – Oct. 2014):
 - Evaluation of the results
 - Writing-up the final report



Self-tracking devices and sustainable labour participation

Right now:

- Participants have used the devices:
 - 4 'fitbits' for daily physical activity
 - 5 'withings' for sleep and daily physical activity
 - 1 'inner balance' for stress
 - 1 'zeo' for sleep
 - 1 'emwave' for stress
- Participants are supervised by an external 'vitality-coach' during those three months



Self-tracking devices and sustainable labour participation





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Self-tracking devices and sustainable labour participation





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Self-tracking devices and sustainable labour participation





Self-tracking devices and sustainable labour participation

Data:

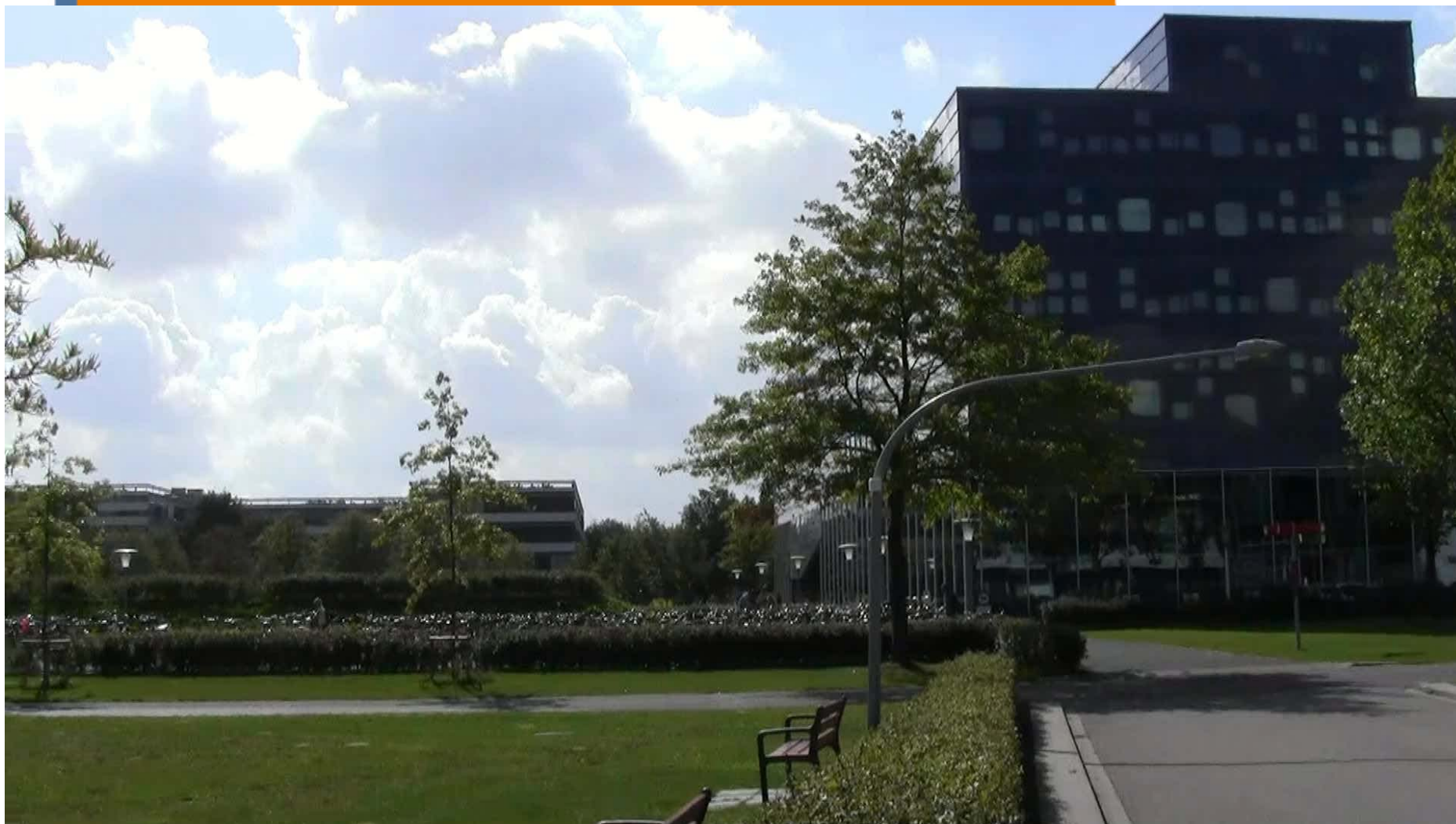
- Logbooks of the participants
- Interviews with participants
- Questionnaires before and afterwards (QoL, self efficacy)
- Data retrieved from devices
- Interviews with coach and report of the coach
- Interviews with the employer
- 'Observations' within the company



Self-tracking devices and sustainable labour participation

Some preliminary observations:

- Moderate to high values of satisfaction (according to logbooks and interviews afterwards)
- ‘Subjective’ behavioral change for some participants
- Two devices lost...
- Coach: valuable project, however, devices can be ‘distraction’ of ‘real’ problems





Self-tracking devices and sustainable labour participation

Preliminary conclusion:

Yes, self-tracking devices can lead to higher level of employers' sustainable labour participation

but.....

.... more research is needed....



Methodological issues

‘There are only two types of research: good research and bad research’



Methodological issues

'There are only good research
and bad research'



Methodological issues

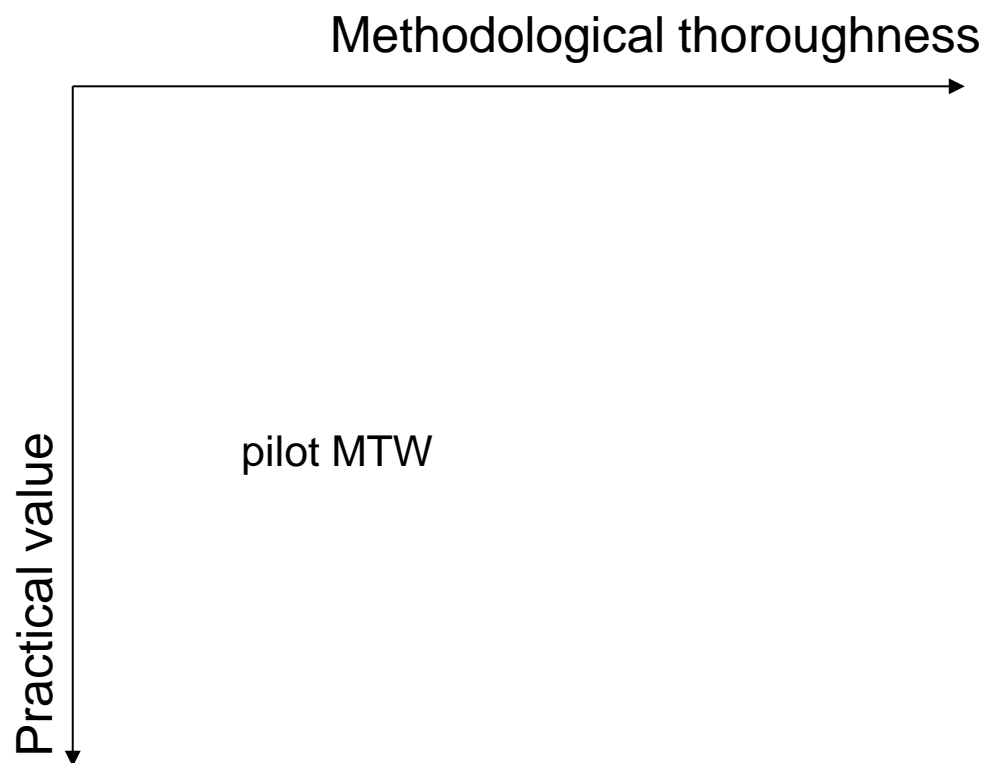
Practice oriented research (HBO-raad, 2007) :

- **founded in professional practice regarding research questions and knowledge that it produces**
 - often multiple disciplines are involved
 - methodologically
 - strongly related to other activities besides research
 - takes place within networks of external partners
 - different types of research, publications, products and networks in which it takes place



Methodological issues

Practice oriented research:



Methodological issues

Practice oriented researcher: researcher, designer and change agent at the same time

Dilemma's: objective and independent vs. convincing and dependent

- meeting with participants in which they had to be convinced to use the devices
- warm, friendly relationship with the employer
- time pressure leads to trade off between objective measuring of long term effects (also in the long run) and producing an end product



Methodological issues

Methodological issues in (design-based) practice oriented research:

- Dilemma's: objective and independent vs. convincing and dependent
 - internal politics and employer-employee relation are very important parameters
 - possible contradiction between participating and observing



Methodological issues

More practical/methodological issues:

- Participants' own choice leads to unstructured, 'non-comparable between-subjects' data
- Time-series analysis requires baseline phase...
- Formation of control group is problematic
- Sessions with the coach were not videotaped because of privacy considerations
- Multidisciplinary: integration of ict and (social) psychology

Methodological issues

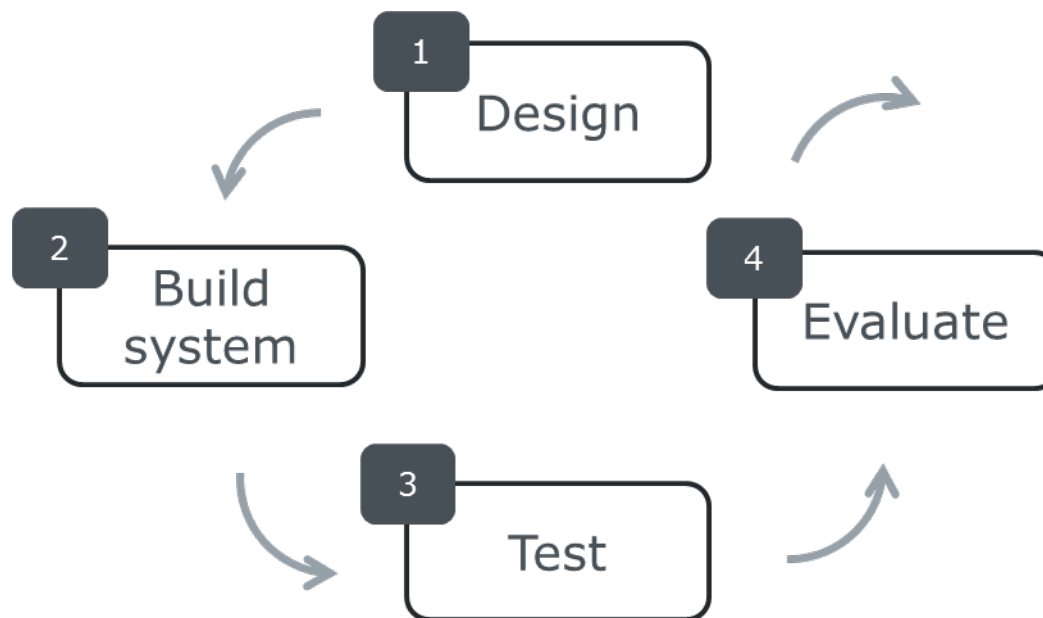


Short group discussion and reflection





Methodological issues





Methodological issues

Follow-up: Fit4Sustainable Employability (Interreg 5b)

- How many companies? What type of companies?
- How many domains? Which domains?
- Number of participants
- Type of data
- International comparisons

Condition: conceptual consistency (as much as possible)



Methodological issues

Assignment (45 min):

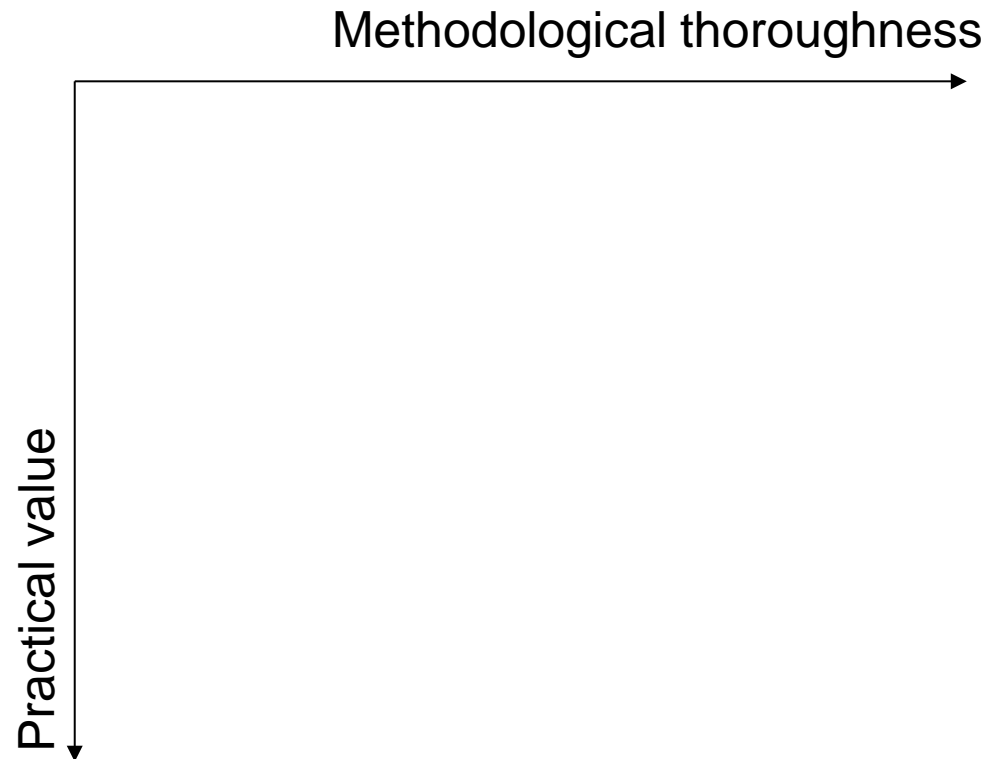
Design (in groups of 4/5) a research design for the Fit4SE follow-up in which you explicitly address the described specifications and reflect on the described dilemma's

Present the result to the rest of the group



Methodological issues

Practice oriented research:



Thank you!

Professorship Labourparticipation

