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

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Self-tracking devices and sustainable labour participation

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Self-tracking devices and sustainable labour participation

Program:

• Introduction by Hilbrand Oldenhuis
• Contribution by honoursstudents
• Group assignment
• Presentations
• Lessons learned by Louis Polstra
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Context:

- Retirement age is increasing
- (Working) population is getting older
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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)
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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
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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?’
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Possible solution:

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

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

Not many experiences until now
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Participating company: ‘Museumtechnische werken’
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Participating company: ‘Museumtechnische werken’

‘Museum-technical products’:
- Small company
- Supporting management
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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
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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
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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
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Global overview of the project:

  - Evaluation of the results
  - Writing-up the final report
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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
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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
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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
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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 thoroughness

Practical value

pilot MTW
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 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

1. Design
2. Build system
3. Test
4. Evaluate
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:

Methodological thoroughness

Practical value
Thank you!

Professorship Labour participation