Digital Health Intervention Prototyping

Daniela Wurhofer
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Agenda

• Gaining a shared understanding

• Introducing example prototypes

• Reflection & Take Aways
What are Digital Health (DH) interventions?

- Digital and mobile technologies for supporting health system needs
- Digital functionality for clients, healthcare providers, health system managers, data services

What are prototypes?

• Clear idea of end product in a scaled-down version

• Purpose: Representation of usability, functionality, design
  → e.g., discussion with different stakeholder groups, proof of concept

• More or less advanced prototypes
Why do we (LBI) develop prototypes?

- Gain knowledge / new insights (from scientific point of view)
- E.g., self-empowerment, motivation, sustainable behavior change
What did we develop?

- “Rough prototypes“ to “advanced prototypes”, having different foci
- Researching on specific aspects, focusing on specific groups, trying them out, evaluating them, putting them into clinical studies
- Exemplary prototypes
Aktivplan – concept video

LBI-DHP aktivplan app - concept video
Aktivplan

Plan and document regular heart-healthy exercise together with your health professional!

- Encouraging CVD patients to make physical activity part of their daily life, empowering patients to perform exercises independently, supporting shared decision making of health professional & patient

- Long-term engagement, habituation, digitally supported shared decision making, user empowerment, individually adapted messages
Active Waiting

*Use waiting times for short exercises – every move counts!*

- Making use of waiting times, integrating physical activity into everyday life, contributing to healthy lifestyle with “exercise snacks”

- Acceptance, barriers, user experience
Shared Achievements

*Form a team, collect your steps and climb the Untersberg together!*

- Increasing physical activity by common group goals
- Social aspects and shared attention, motivators for physical activity
Active Audio Adventure

Be part of an outdoor adventure! Listen to the story and collect hints by performing exercises to master the adventure!
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• Getting up from the couch & out into fresh air, motivating them to explore their environment, performing exercises in a playful way

• Audio games, narrative gamification, exercising, immersion
MORE

Set up & manage studies, collect sensor-based and survey data

• Platform for investigating digital health interventions

• Example of ambitious development with many stakeholders
MORE – video of MVP

MORE

a modular and open research platform
Reflection & Take Aways

“It’s a process” – what we have learned along the way…
Involve “Real” Users

• User input is always useful!

• Ask about users’ concerns and take them seriously!

• The earlier the better in terms of quality assurance and acceptance…, but trade-offs have to be made in practice, user involvement on different levels

• Keep user burden low – think when and how to involve users (idea and concept generation phase – final evaluation)
Understand & Communicate

- Get a context understanding
- Users are not users – empathy
- Group work – a lot of people standing behind one prototype – world and language different
- Communication takes time and patience
- Personas as a means for improving communication
- Question personal biases – throw away pre-assumptions
Tailor your prototyping strategy to your goals

- Different ways how ideas evolve and prototypes come into life (specific needs, other projects’ input, funny ideas, …)

- Depending on goals, more or less advanced prototypes are needed → from sketches to click prototypes to MVPs

- Challenge: find the right level of detail
  - Working prototype: Errors in interactions are easily recognized, complexity increases, changes difficult, personal attachment
  - Paper prototype: less effort, easy to throw away ideas and generate new ones, triggering initial communication
Don’t aim for perfection

• Don’t aim to make it perfect the first time

• Don’t reinvent the wheel, use existing

• Avoid Feature Creep (Featuritis) – focus on core functionality
  → Maintain the balance, keep the focus

Source: https://twitter.com/marvelapp/status/833871120495497218
Be open-minded and ask why

• Creativity evolves best in an open-minded environment
• Explore & find out versus thinking in pre-defined solutions
• Positive error culture - errors as important part of process
Prepare for the unexpected

• Think about potential pitfalls/errors – prepare accordingly (development, studies, human-human interaction, …)

• You can't always foresee everything - don't take it personally

• Deal with others’ expectations, e.g., make clear that development takes a lot of time
Keep your focus

You do not have to be everyone’s darling ;(-)
THANKS FOR YOUR ATTENTION!

Ludwig Boltzmann Institut für digitale Gesundheit und Prävention
Lindhofstrasse 22
5020 Salzburg, Österreich

Tel: +43 (0) 57 255 82701
Email: daniela.wurhofer@dhp.lbg.ac.at
Web: www.lbg.ac.at/lbi-dhp