

”Evaluation of IT”

IT architecture and User Driven Software Design(BUITA)

17. april 2018

Keld Bødker





Evaluation – in learning theory

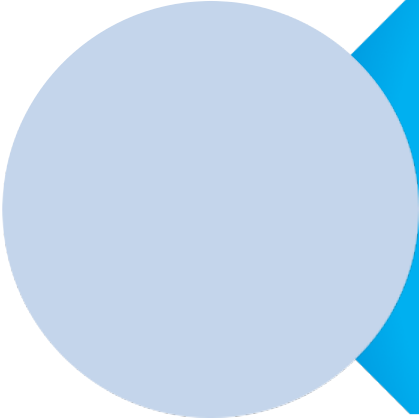


Evaluation – in informatics

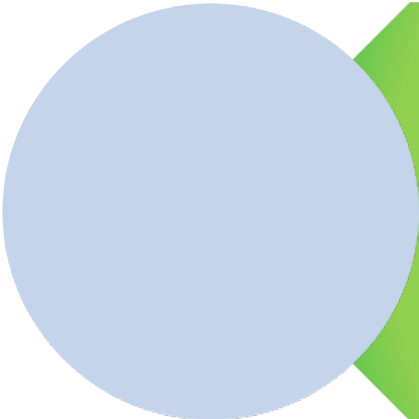


Pilot implementation

Articles:

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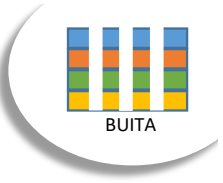
Hertzum, Bansler, Havn and Simonsen
(2012): Pilot Implementation: Learning from
field experiments in IS Development.
CAIS, 30(1), 313-328

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Simonsen, Scheuer and Hertzum:
Accreditation and Participatory Design in
the Healthcare Sector,
Proceedings of the 38th Information
Systems Research Seminar in Scandinavia

Learning goals

- Know the role and the elements of it evaluation within informatics
- Know the core concepts of it evaluation
- Know methods and techniques of pilot implementation

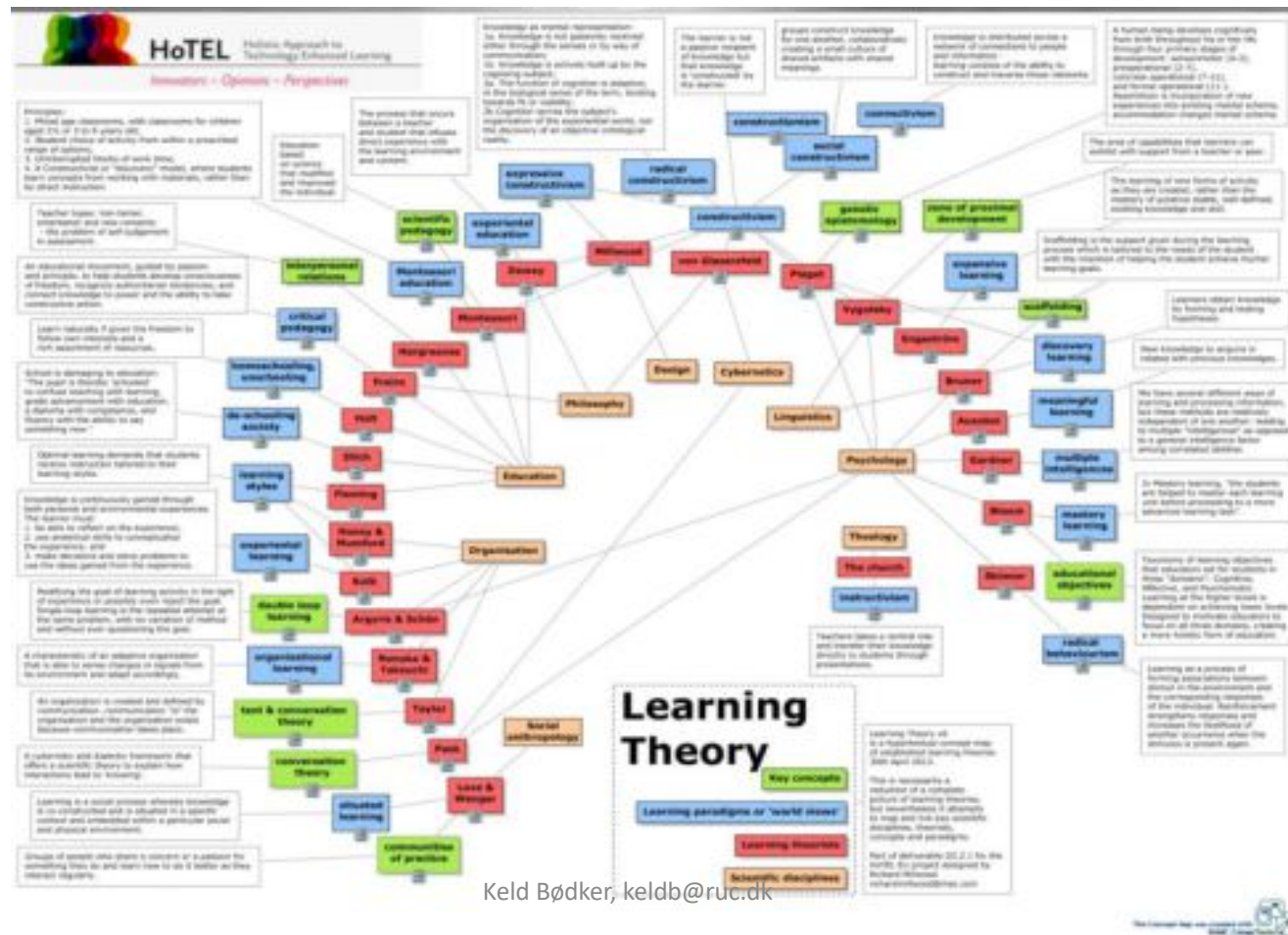


Evaluation of IT

- Evaluation in learning theory
 - Integral part
 - Many approaches
- Evaluation in IS
 - Technical focus
 - Under researched

Learning theories

<http://cmapspublic3.ihmc.us/rid=1LNV3H2J9-HWSVMQ-13LH/Learning%20Theory.cmap>



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Evaluation in learning theory

- Formative and Summative evaluation (Scriven, 1967)
- Evaluation is a prerequisite for systematic learning

	Formative	Summative
Time	During a learning activity	At the end of a learning activity
Goal	To improve learning	To make a decision

Evaluation in Information Systems Development

- Formative and Summative evaluation

	Formative	Summative
Time	During the project	At the end of the project
Goal	To improve the project -product -proces	To make a decision/ judge the outcome

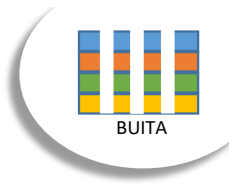
Evaluation in IS Development

- 2x2 framework of possible evaluation strategies (Pries-Heje et al 2008)
- Formative: feasibility study or cost-benefit
 - Generally any evaluation before or during a project implementation
 - Aim: improve the project design and performance
 - Scope: what works and what doesn't
- Summative: looks at the impact
 - Generally any evaluation after or at the end of the project
 - Aim: what did the project achieve?
 - Scope: did the project meet its objectives?

Evaluation in IS Development

- 2x2 framework of possible evaluation strategies (Pries-Heje et al 2008)

Setting\Type	Ex ante (formative)	Ex post (summative)
Naturalistic -many stakeholders -potential conflict -high cost -lower risk of false positives	During the project -real users -real problems -somewhat unreal system	At the end of the project -real users -real problems -real system
Artificial -few stakeholders -less conflict -lower cost -risk of false positives	During the project -unreal users, problem and/or system -proces	Real system, unreal problem and possible unreal users



Evaluation in IS Development/exercise

- In BUITA 6 we discussed various evaluation techniques in architecture, see slide 5-10 for details
- Where would you place these in the 2x2 matrix?
- Do you agree in the characteristics?

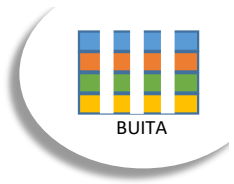
Pilot implementation

- "a field test of a properly engineered, yet unfinished, system in its intended environment, using real data, and aiming – through real-use experience – to explore the value of the system, improve or assess its design, and reduce implementation risks"

Pilot implementation

Characteristics

- Pilot system not fully developed
- Pilot implementation is limited in scope and time
- Pilot implementation is conducted in intended use-environments using real data
- Pilot implementation is conducted to learn about the fit between system and use environment



Pilot implementation - exercise

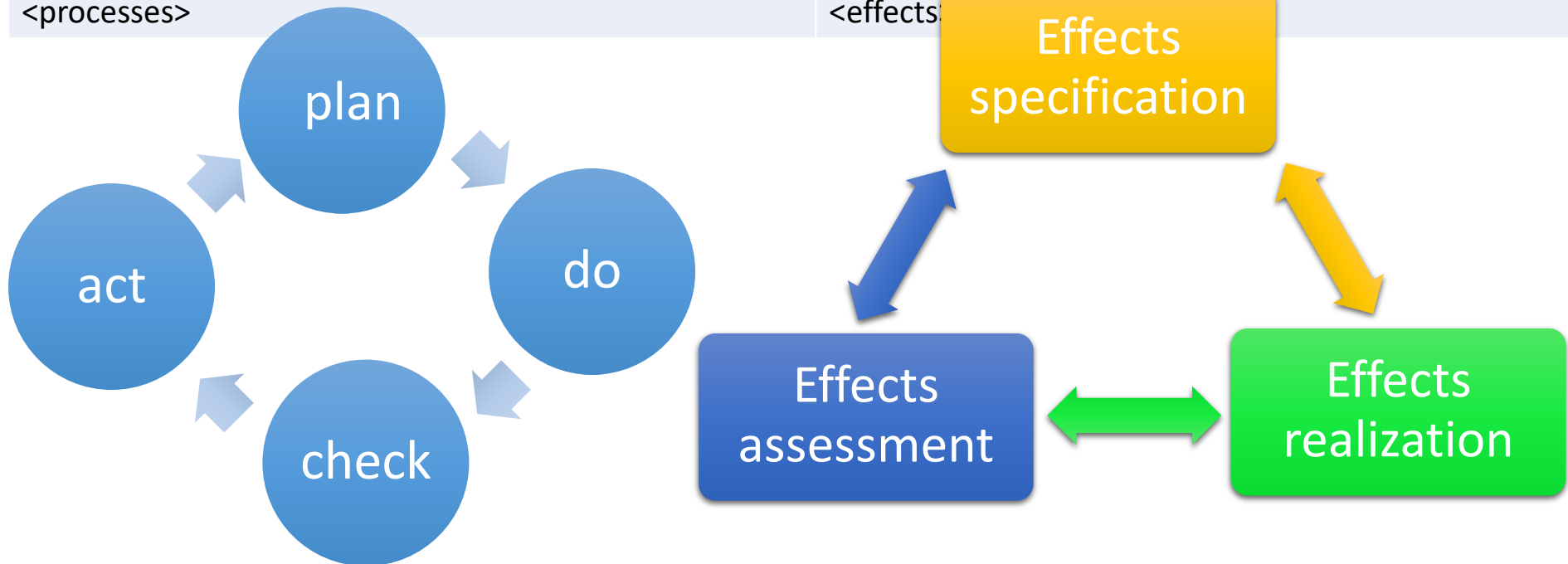
- Where would you place "pilot implementation" in the 2x2 matrix?
- Do you agree in the characteristics?

Table 1. Contrasting prototyping and pilot implementation

	<i>Prototyping</i>	<i>Pilot implementation</i>
<i>Purpose (“why?”)</i>	To learn about the final design by traversing a design space, manifesting design ideas in concrete artefacts, and testing the fit between a proposed design and the user	To learn about the fit between the system and its context in order to explore the value of the system, improve or assess its design, and reduce implementation risk
<i>System (“what?”)</i>	Prototype, i.e. a model, early design or not yet properly engineered system	Pilot system, i.e. a properly engineered, yet unfinished system
<i>Setting (“where?”)</i>	In the laboratory, i.e. separated from real work	In the field, i.e. during real work but limited to one or a few sites
<i>Process (“how?”)</i>	Demonstrated or tried out in brief sessions simulating real use, with test data and test tasks	Used in its intended environment for a limited period of time, with real data and special precautions against breakdowns
<i>Time (“when?”)</i>	During development when it is feasible to test the system design	During development when it is feasible to test the design <i>and</i> its implementation
<i>Duration (“how long?”)</i>	Short, i.e. typically days or weeks	Long, i.e. typically weeks or months

Evaluation in IS Development/ Accreditation vs. Participatory Design

Accreditation/DQM	PD/Effects-driven it development
Plan-do-check-act	Effects specification – realization - assessment
<processes>	<effects>





Evaluation – in learning theory



Evaluation – in informatics



Pilot implementation
Accreditation vs. effects driven it- development