Gaming simulation

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Overview

- Four uses of gaming
  - Each with an example
- The hype-word: Gamification
Intervention
- Group learning
- Policy intervention
- Five – C’s (Duke and Geurts)

Empirical test environment
- Designs
- Hypotheses
- Behavioural lab

Teaching
- Complexity
- Experiential learning
- Dangerous tasks

Design
- Interactive environments
- Visualization
- Platform function

Gaming simulation
Example: Intervention

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Gaming simulation
Example: Intervention

- Police Force working on Intelligence-Based Policing

- Question: How to turn a reactive organisation into a pro-active?

- Process with many hurdles. Got halted in 2011

- Game with all vice commanders of police of The Netherlands

- Play the future organisation
Example: Teaching

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Gaming simulation
Example: Empirical test environment

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Gaming simulation
Example: Design

- Framework for designing innovations

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Empirical test environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group learning</td>
<td>Designs</td>
</tr>
<tr>
<td>Policy intervention</td>
<td>Hypotheses</td>
</tr>
<tr>
<td>Five – C’s (Duke and Geurts)</td>
<td>Behavioural lab</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teaching</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complexity</td>
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</tr>
<tr>
<td>Experiential learning</td>
<td>Visualization</td>
</tr>
<tr>
<td>Dangerous tasks</td>
<td>Platform function</td>
</tr>
</tbody>
</table>
Example: Design

PSI Framework (Subrahmanian, Reich and Meijer)

- **Product space:**
  Technical parts, new product, other method

- **Social space:**
  How people use it, knowledge, social norms, community

- **Institutional space:**
  Rules that organisations have, laws, procurement structures, etc.
Clarifying “Spaces”

- The spaces are not the physical spaces in which design takes place but...
Clarifying “Spaces”

- The spaces are not the physical spaces in which design takes place but...
- Different design contexts could be characterized in each of the 3 spaces
- Depending on the context, each space may have N dimensions
Example: ProRail

- ProRail is the Dutch railway infrastructure manager
- Gaming simulation to reduce uncertainty in decision making on operational future
- Challenge:
  - 100% extra trains 2020
  - 50% in 2012 regional
  - First: major corridors
  - “Untimetabled traffic”
    - Like a metro system
  - All within 10% of the budget required in the ‘old’ way
What was tested and found out?

- A change in the P space (more trains) led to...
- ...necessary changes in the S space (#perspectives to include in solving a disruption), which then turned to ask for...
- ...changes in the I space (Access to knowledge and public / private balance of the good)
- Gaming is a way to go back and forth between changes.
The hype-word: Gamification

- Trying to influence positive behaviour by making real societal systems a game
- No simulation, but same game elements
- Examples:
  - Photographing license plates of cars that do NOT speed
  - Lottery amongst the ‘well-behaved’
  - Competitions within companies on KPI’s
Thanks for your attention!

Please post any questions on our discussion forum