Seoul, South Korea

Storytelling Technique for Building Use-case Scenarios for Design Development

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KAIST
Overview
Storytelling Technique

Use-case Scenarios for Design Development
1. Literature Review

- Research on preexisting works

2. Empirical Research

- Storytelling-selection Workshop
- Priori Coding (Storytelling Technique)
- Open Coding (Key Factors of Use-case Scenario)

Qualitative Coding Analysis
Research Opportunity
To investigate how the functions of storytelling technique can help build use-case scenarios on a more detailed and holistic level.
Research Aim and Research Gap

To investigate how the functions of storytelling technique can help build use-case scenarios on a more detailed and holistic level.

Communicate User Insight
(Grimaldi et al, 2013)
Research Aim and Research Gap

To investigate how the functions of storytelling technique can help build use-case scenarios on a more detailed and holistic level.
Research Aim and Research Gap

To investigate how the objectives of storytelling technique can help build use-case scenarios on a more detailed and holistic level.
Storytelling techniques for use-case scenarios
Storytelling Process
1. Idea
An aging patriarch
2. Logline

The aging patriarch of an organized crime dynasty transfers control of his clandestine empire to his reluctant son.
3. Plot
4. Change of protagonist
Use-case Scenario Process
1. Phenomena
2. Definition of target user and design problem
Process of Use-case Scenario

3. User-product interaction
4. Change of user (life/experience)
Empirical Research
Process of Empirical Research

- Storytelling-Selection Workshop
- Scenario-building Workshop

Priori Coding (Storytelling Technique)

Open Coding (Key Factors of Use-case Scenario)

Qualitative Coding Analysis
Storytelling Technique Selection
Storytelling Techniques

Blake Snyder’s Beat Sheet

Christopher Vogler’s Hero’s Journey

Larry Brook’s Story Structure

John Truby’s 22 Step Story Structure
Storytelling Techniques

Narrative Theory

Blake Snyder’s Beat Sheet

Christopher Vogler’s Hero’s Journey

Larry Brook’s Story Structure

John Truby’s 22 Step Story Structure
Storytelling Techniques

Narrative Theory

- Story Centered
  - Blake Snyder’s Beat Sheet

- Hero Centered
  - Christopher Vogler’s Hero’s Journey

- Hero Centered
  - Larry Brook’s Story Structure

- Story + Hero Centered
  - John Truby’s 22 Step Story Structure
Storytelling Techniques

Narrative Theory

Story Centered
Blake Snyder’s Beat Sheet

Hero Centered
Christopher Vogler’s Hero’s Journey

Larry Brook’s Story Structure

Story + Hero Centered
John Truby’s 22 Step Story Structure
Application to Use-case Scenario
Insight 1-1

‘Ally’ can be used to portray design features of the solution which fulfills user needs in use-case scenarios.
Insight 1-1

‘Ally’ can be used to portray design features of the solution which fulfills user needs in use-case scenarios.
Insight 1-1

‘Ally’ can be used to portray design features of the solution which fulfills user needs in use-case scenarios.
Insight 1-2

‘Attack by ally’ : 1) To investigate which design features need improvement
                2) Competitors’ solution which can be benchmarked

Scenes from *The Godfather* | Attack by Ally : Kay criticizes Michael for working for his father.
Insight 1-2

‘Attack by ally’: 1) To investigate which design features need improvement
   2) Competitors’ solution which can be benchmarked
Insight 1-2

‘Attack by ally’
1) To investigate which design features need improvement
2) Competitors’ solution which can be benchmarked
Insight 2

‘Fake-ally opponent’ can be used to deal with overcoming user inertia for building use-case scenarios.
Insight 2

‘Fake-ally opponent’ can be used to deal with overcoming user inertia for building use-case scenarios.
Insight 2

‘Fake-ally opponent’ can be used to deal with overcoming user inertia for building use-case scenarios
Insight 3

‘Moral decision’ can be employed to depict the user’s perception of a design based on social and political values.

Scenes from The Godfather | ‘Moral Decision’ : Michael’s moral decision is when he decides to kill of his rivals and his brother-in-law after becoming an actual godfather to the man’s child.
Insight 3

‘Moral decision’ can be employed to depict the user’s perception of a design based on social and political values.
Insight 3

‘Moral decision’ can be employed to depict the user’s perception of a design based on social and political values.
Conclusion & Contribution
Conclusion

Storytelling techniques on a stage-by-stage level:
Detailed and holistic use-case scenario for design development

- Status Quo
- Social / Political Values
- Design Features of New Design Value
Contribution

- Designers in practice for building enriched contents of use-case scenarios
- Researchers investigating factors for building use-case scenarios
Thank You
A. Integration of Narrative and Storytelling in Design Process

- Attempts to use narrative as a tool during the design process
  - Ganoz (1999): Predict a possible reaction of space occupiers and assist designers to make concrete decisions
  - Danko (2006): Narrative Inquiry used to derive meaning from human experience.

→ Use-case scenario:

- Defining what narrative means in design
  - Grimaldi (2013): 1) conveying information, (4) empathy and identification, and (6) memorability

The element of user insight is considered important because the design process focuses on the user, and what kind of contextual situation the user is placed in (Best, 2010)
B. Storytelling-selection Workshop Process

- Retrieved from 16 design methods (43 stages) of building use case scenarios

- Workshop (3 Design Process Experts + 1 Storytelling Expert participated)
  • Went through the process of ‘KJ Method’
  • Grouping each stage of design method by its objective to identify key requirements of use case scenario
  • Focus Group Interview conducted: Hierarchy of the key requirements were set

- Identified key requirements of use case scenario will be used as criteria for selecting representative storytelling technique.

**Problem definition**

User Needs / Goals

- Contextual Situation
- User Actions
- User Thoughts
- User Sentiment

**Solution**

- Contextual Situation
- User Actions
- User Thoughts
- User Sentiment
C. Scenario-building Workshop Process

- To identify the relationship of the storytelling technique (22 Step Story Structure) & use-case scenarios
- Workshop x 5 (4 Design Experts + 1 Storytelling Expert participated)
  ➔ Examine on how each stage of the 22 Step Story Structure could be used to build use-case scenarios

• Semi-structured interview: To identify & define the key factors of use-case scenario (Appendix C)
D. Key Factors of Use-case Scenario : Identified from Scenario-building Workshop

<table>
<thead>
<tr>
<th>User’s Contextual Situation</th>
<th>Context of the situation of which user is in.</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Needs</td>
<td>Sought out outcomes of which the user will reach goal.</td>
</tr>
<tr>
<td>User Goal</td>
<td>Desired changes within user’s current situation.</td>
</tr>
<tr>
<td>Social and Political Values</td>
<td>Social and political views of the user which affects the user’s choices.</td>
</tr>
<tr>
<td>Problem and Opportunity</td>
<td>The issues concerning user needs and contextual situation. These issues can be also the source of inspiration for possible design solutions.</td>
</tr>
<tr>
<td>User Perception</td>
<td>The way user will notice intrinsic and extrinsic factors prior to the interaction of intrinsic and extrinsic factors.</td>
</tr>
<tr>
<td>User Interpretation</td>
<td>The way user will understand intrinsic and extrinsic factors during the interaction of the factors.</td>
</tr>
<tr>
<td>User Interaction</td>
<td>The way user will communicate with intrinsic and extrinsic factors.</td>
</tr>
<tr>
<td>Status Quo</td>
<td>User’s bias / opinion.</td>
</tr>
<tr>
<td>Alternative or Competitor’s Solution</td>
<td>Other solutions which serve the needs of the user. Within or out of the design development’s product range.</td>
</tr>
<tr>
<td>Designer Revelation</td>
<td>User insight gained by designer.</td>
</tr>
<tr>
<td>Design Feature</td>
<td>Important elements of the design.</td>
</tr>
<tr>
<td>Solution</td>
<td>Solution of which will satisfy the needs of the user.</td>
</tr>
<tr>
<td>Changed Life</td>
<td>User reaching his or her goal due to the interaction with design solution.</td>
</tr>
</tbody>
</table>
### E. Results of Co-occurrence Analysis

<table>
<thead>
<tr>
<th>A. Stages of 22 Step Story Structure</th>
<th>B. Key Factors of Use-case Scenario</th>
<th>The role of A within the context of B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Self-revelation, need, and desire</td>
<td>User needs, User’s contextual situation</td>
<td>The background of the user which functions to identify the initial user needs and what the user’s present contextual situation is.</td>
</tr>
<tr>
<td>2. Ghost and story world</td>
<td>Problem and opportunity User interaction, User interpretation,</td>
<td>Trigger points of the user journey which allows change to the user.</td>
</tr>
<tr>
<td>3. Weakness and need</td>
<td>User goal</td>
<td>What the user wants to ultimately achieve.</td>
</tr>
<tr>
<td>4. Inciting event</td>
<td>Alternative or competitor’s solution, Design feature, Solution</td>
<td>1. The solution’s design features which fulfills the needs of the user 2. The strengths of the alternative or competitor’s solution which can be benchmarked for the development of design</td>
</tr>
<tr>
<td>5. Desire (goal)</td>
<td>User needs,</td>
<td>The weaknesses of the alternative or competitor’s solution used as design guidelines of which not to follow, or as design research factors that needs further investigation to be solved to fulfill user needs.</td>
</tr>
<tr>
<td>6. Ally or allies</td>
<td>Problem and opportunity, Problem and opportunity, Alternative or competitor’s solution, Design feature, Solution</td>
<td>1. The problems of which the user is experiencing 2. How the user perceives the design solution can be carried out to be key insights for design development</td>
</tr>
<tr>
<td>13. Attack by ally</td>
<td>User needs,</td>
<td>The perception of the user concerning the solution</td>
</tr>
<tr>
<td>11. Opponent and/or mystery</td>
<td>Problem and opportunity, Problem and opportunity, Alternative or competitor’s solution, Design feature, Solution</td>
<td>The actions the user takes when interacting with the design solution</td>
</tr>
<tr>
<td>10. Plan</td>
<td>Status Quo</td>
<td>The point of what causes the status quo, which can be used as a design opportunity</td>
</tr>
<tr>
<td>9. First revelation</td>
<td>Problem and opportunity, Design solution, User perception</td>
<td>The designer gaining insight for design development.</td>
</tr>
<tr>
<td>15. Second revelation</td>
<td>User interaction</td>
<td>The interaction between the problem and the user</td>
</tr>
<tr>
<td>17. Third revelation</td>
<td>User perception</td>
<td>The social and political values of the user which affect the choices and actions of the user</td>
</tr>
<tr>
<td>12. Drive</td>
<td>Problem and opportunity, Status quo</td>
<td>The expected changed life of the user after the user has interacted with the solution</td>
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<tr>
<td>14. Apparent defeat</td>
<td>Designer revelation</td>
<td></td>
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<tr>
<td>16. Audience revelation</td>
<td>Gate, gauntlet, visit to death</td>
<td></td>
</tr>
<tr>
<td>18. Battle</td>
<td>User perception, Social and Political Values</td>
<td></td>
</tr>
<tr>
<td>21. Moral decision</td>
<td>Solution, Changed life</td>
<td></td>
</tr>
<tr>
<td>22. New equilibrium</td>
<td></td>
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</tbody>
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