A Study on Creativity Support in Ideation Software
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Agenda

- Motivation
- Theoretical Analysis
- Practical Evaluation
- Evaluation Criteria
- Rating Mechanism
- Results & Overview
- Outlook
Why bother with creativity?

Creativity is…

• a key factor for innovation

• important for companies:

Innovationsausgaben in der Elektroindustrie in Deutschland in den Jahren 1998 bis 2014 (in Milliarden Euro)

Innovationsausgaben des deutschen Maschinenbaus in den Jahren 2008 bis 2012 (in Milliarden Euro)

Weitere Informationen:
Deutschland; Unternehmen ab 5 Beschäftigte

Quellen:
BMWi
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Why bother with creativity?

Ideation tools are…

… meant to promote creativity

Do those tools offer support for distributed teams?
Research Approach – Theoretical Analysis

Literature covers:

• Psychology principles
• Brainstorming Tools and Team Work
• Ideation Tools

However close to no studies about available ideation tools
### Research Approach – Theoretical Analysis

<table>
<thead>
<tr>
<th>Phase</th>
<th>Model</th>
<th>Wallas</th>
<th>Osborn &amp; Parnes</th>
<th>Amabile</th>
<th>Basadur et al.</th>
<th>Vogt et al.</th>
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<td>Problem finding</td>
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<td>Fact finding</td>
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<td>Problem definition</td>
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</table>
Research Approach – Theoretical Analysis

Creativity Support Process

- Start
- Problem definition
- Research
- Idea Generation
- Idea rating
- Idea Clustering
- Idea Filtering
- Solution Proposal(s)
- Solution Implementation
- End
Research Approach - Practical Evaluation

7 Scenarios
Evaluation Criteria

Mandatory Features

23 features

Additional Features

12 non-ratable features

18 ratable features
<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
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<tbody>
<tr>
<td>0</td>
<td>The tool does not offer any support for the feature</td>
</tr>
<tr>
<td>1</td>
<td>No direct support from the tool, available workaround</td>
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<tr>
<td>2</td>
<td>Indirect support from the tool through other features</td>
</tr>
<tr>
<td>3</td>
<td>Indirect support from the tool, easily executable</td>
</tr>
<tr>
<td>4</td>
<td>Full support from the tool</td>
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</table>
Submit Your Idea

Name your idea (300 characters max.)
A catchy one that wraps up your idea

Describe your idea
Dive into the details

Upload a picture

Upload a Local File

Web address of the picture (URL)

Upload from Web

No picture selected

Take a Camera Picture

Cancel
Submit idea
Evaluation Results

Overall Results

- Yutongo
- Ideascale
- brightidea
- stormboard
- groupmap
- brainreactions.net
- mindmeister
- hype.go
- cognistreamer
- ideaclouds

Legend:
- Mandatory Features
- Additional Features
- Overall Result
Evaluation Overview

- Good communication in-between team
- User friendly
- Customizable for own needs

- Most do not implement a creativity technique
- New market, many promises, few actual solutions
• Continue evaluation of the tools presented in the Forrester Report (Gliedman et. al, 2013)

• Empirical study to see the impact of ideation tool based vs. non tool based creativity sessions

• Critical analysis of the used creative process in comparison to real life creative sessions
Any questions?


Wallas, Graham (1926): The Art of Thought


Research Questions

- Which categories of ideation tools are available on the market?
- Which principles from psychology influenced the design of those tools?