


Chapter 12

Brainstorming and Idea Reduction

- Rules and Objectives of Brainstorming
- Phases of Brainstorming:
 - Idea Generation
 - Idea Reduction




Brainstorming

- Brainstorming is a creativity technique of generating ideas to solve a problem.
 - It may involve spontaneous contribution of ideas from all members of the group
 - **Recall:** A portion of the workshop is devoted to brainstorming new ideas and features for the application
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Benefits of Brainstorming

- It encourages participation by all parties present.
 - It allows participants to "piggyback" on one another's ideas.
 - It has high bandwidth. Many ideas can be generated in a short period of time.
 - The results typically indicate a number of possible solutions to whatever problem is posed.
 - It encourages out-of-the-box thinking; the thinking is unlimited by normal constraints.
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Phases of Brainstorming

- **Idea generation:** The primary goal is to set down as many ideas as possible, focusing on breadth of ideas, not necessarily depth.
 - **Idea reduction:** The primary goal is to analyze all the ideas generated. It includes pruning, organizing, ranking, expanding, grouping, refining, and so on.
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Rules for Brainstorming

- First, all the significant stakeholders gather in one room, and supplies (sticky notes, markers, ...etc) are distributed.
- Then the facilitator explains the rules for brainstorming.




Rules for Brainstorming

- Do not allow criticism or debate.
- Let your imagination soar.
- Generate as many ideas as possible.
- Mutate and combine ideas.



Objective of Brainstorming


- The facilitator also explains the objective of the process by answering the following questions:
 - What features would you like to see in the product?
 - What services should the product provide?
 - What opportunities are we missing in the product or the market?
 - After stating the objective of the process, the facilitator asks participants to share their ideas and to write them down, one per sheet
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Idea Generation

How ... ?




Idea Generation

- When a person comes up with an idea, he or she writes it down on the supplied materials.
 - This is important for the following reasons:
 - To make sure the idea is captured in that person's own words
 - To make sure ideas are not lost
 - To enable posting of ideas for later piggybacking
 - To prevent delays in the creative process that could be caused by a single scribe trying to capture all ideas on a flip chart or whiteboard in front of the room
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Idea Generation


- As ideas are generated, the facilitator collects them and posts them on a wall in the meeting room.
 - Again, no criticism of ideas can be tolerated.
 - It is inappropriate to say, "That's a stupid idea," or even, "We already have that idea on the wall."
 - The sole purpose is to generate ideas.
 - The process tends to have a natural end; at some point, the stakeholders will simply run out of ideas.
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Idea Reduction

1. Pruning Ideas
2. Grouping Ideas
3. Defining Features
4. Prioritizing Ideas




1. Pruning Ideas

- The first step is to "prune" those ideas that are not worthy of further investment by the group.
 - The facilitator asks the participants whether each idea is worthy of further consideration and then removes an invalid idea
 - The presence of ideas that can be easily pruned is an indicator of a quality process.
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2. Grouping Ideas

- It may be helpful during this process to start grouping similar ideas
 - **Name the groups of related ideas.** For example,
 - New features
 - Performance issues
 - Enhancements to current features
 - User interface and ease-of-use issues
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3. Defining Features

- In this process, the facilitator **walks through each idea** that has not been pruned and asks the submitter **to provide a one-sentence description**.
 - This gives the contributor the opportunity to further describe the feature and helps ensure that the participants **have a common understanding** of the feature.
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Example

Application Context	Brainstormed Feature	Feature Definition
Home lighting automation	"Automatic lighting settings"	Homeowner can create preset time-based schedules for certain lighting events to happen, based on time of day.
Sales order entry system	"Fast"	Response time will be fast enough not to interfere with typical operations.
Defect tracking system	"Automatic notification"	All registered parties will be notified via e-mail when something has changed.




4. Prioritizing Ideas

- **Cumulative Voting: The Hundred-Dollar Test.** Distribute \$100 on the ideas.
 - Difficult to use twice






4. Prioritizing Ideas

- "Critical, Important, Useful" Categorization
 - **Critical** means indispensable, suggesting that a stakeholder would not be able to use a system without this feature.
 - **Important** means that there could be a significant loss of customer utility, perhaps even market share or revenue, or new customer segments served without the feature.
 - **Useful** means nice to have.
 - Each stakeholder is given only one-third of the votes from each category.
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Web-Based Brainstorming

- Sometimes live brainstorming is not possible.
 - In these situations, an alternative is to use the Internet or an intranet to facilitate the brainstorming process in a collaborative environment
 - An advantage of this technique is its persistence
 - Ideas and comments can be circulated over a long period of time, with full recording of all threads for each idea.
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Key Points

- Brainstorming involves both idea generation and idea reduction.
 - The most creative, innovative ideas often result from combining multiple, seemingly unrelated ideas.
 - Various voting techniques may be used to prioritize the ideas created.
 - Although live brainstorming is preferred, Web-based brainstorming may be a viable alternative in some situations.
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Reading Assignment

- HOLIS case study in pages 126-130.

