

Brain-Storming

Design Thinking & Innovation
Tools



D'source Project




Open Design School



MoE's Innovation Cell

Section: T1, Week 1



**THINK!
DESIGN**

Design Thinking & Innovation (DT&I)

Section: T1
Week 1



**THINK!
DESIGN**

Design Thinking & Innovation (DT&I)

Prof. Ravi Poovaiah
IDC School of Design, IIT Bombay



DT&I Tools

T1 Brain-Storming

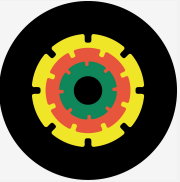
Module T1:

THINK!
DESIGN



T1.1

Brain-Storming + Sorting + Linking



Brain-Storming:

What is Brain-Storming?

Brain-storming is known as the **creative thinking technique** to generate **key-words or ideas** associated with the topic/problem that you are trying to solve.

One **freely storms the mind** to spontaneously generate these **without any criticism**.

Brain-storming could be **used at different phases of the design process**: - to understand the topic, to get a worldview, to generate ideas, and to find alternate solutions.



Brain-Storming:

Individually or in groups?



Brainstorming can be done individually or in a group. It can be even done with large number of participants (30 to 60).

Brainstorming is most effective when done in groups with people from diverse backgrounds and opinions are involved.

The size of the surface needed to do increases with the number of participants.

A4 size paper is fine for an individual, A3 size paper for a small group of participants and a large board or projection screen for large number of participants.



Brain-Storming:

Steps in Brain-Storming:



1. Note down the topic that you have selected for Brain-Storming
(A clear statement of the topic/problem is recommended)



2. Brain-storm for associated key-words and note these down
(as scribbles, on post-it notes, online on Miro/Figma, etc.)



3. Note down the key-words randomly and not in any particular order
(so that cross-relationships, combinations and improvements could be made)



4. Do not criticize anyone – all keywords or ideas should be welcome
(even unusual ones)



5. Do this until one runs out of new key-words
(greater the number, the more the variety)



Brain-Storming:

Key-words for topic: World of Children

Example from a brief brain-storming on key-words for 'World of Children'.

Write down **words** that come into your mind when you think of children – one on each note.

You can stick the sticky notes neatly on a surface – which could be a wall, glass surface, white board or on a large sheet of paper.

TOYS FOR
TODDLERS



Brain-Storming:

Sorting them into groups:

Card Sorting:

The key-words are sorted in different categories by association or similarity. Let the groups form naturally based on their relationships.

(called Open Card Sorting when the category titles emerge out of sorting and categorizing and are not pre-determined)

SENSORY

KITE

CARTOONS

HIDE
SEEK

PLAYFUL

BUILDING
BLOCKS

STORIES

MIMIC

FANTASY

PIGGY
BANK

MUSIC

PLAY
BALL

MAGIC

YO YO

ANIMATION

ROLE
PLAY

TANGIBLE

WATER
TUB

RATTLE



Brain-Storming:

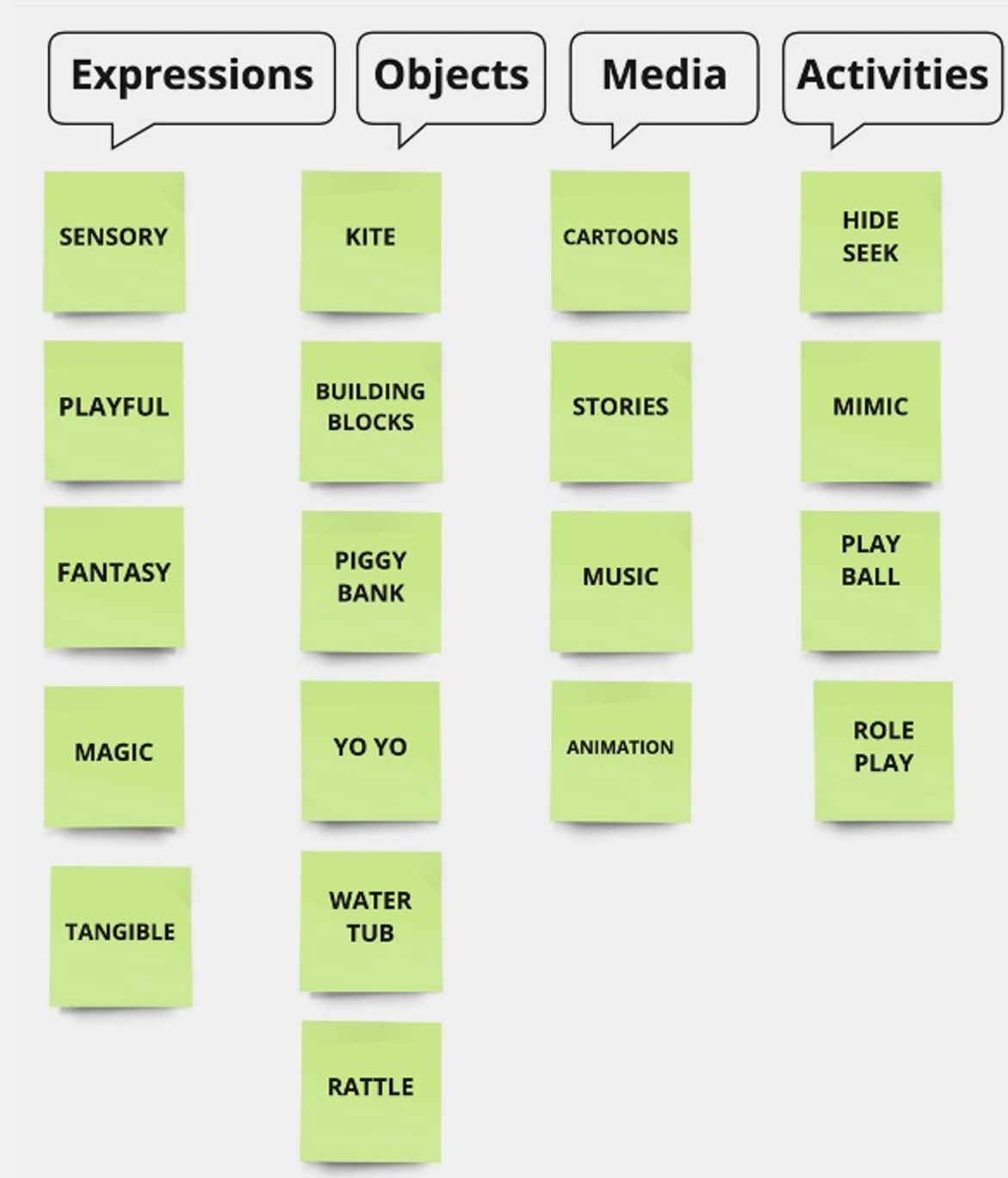
Title for the groups:

Naming the group:

Find a title for each of the groups.

Give the group a name that captures the meaning of the group.

This **Heading** or **Title** for each of the groups will indicate how many major categories are present in the topic of 'The World of Children'.





Brain-Storming:

Affinity Links:

Look for connections:

Look at each of the Key-word from one group and see if there is a connection to another key-word in another group.

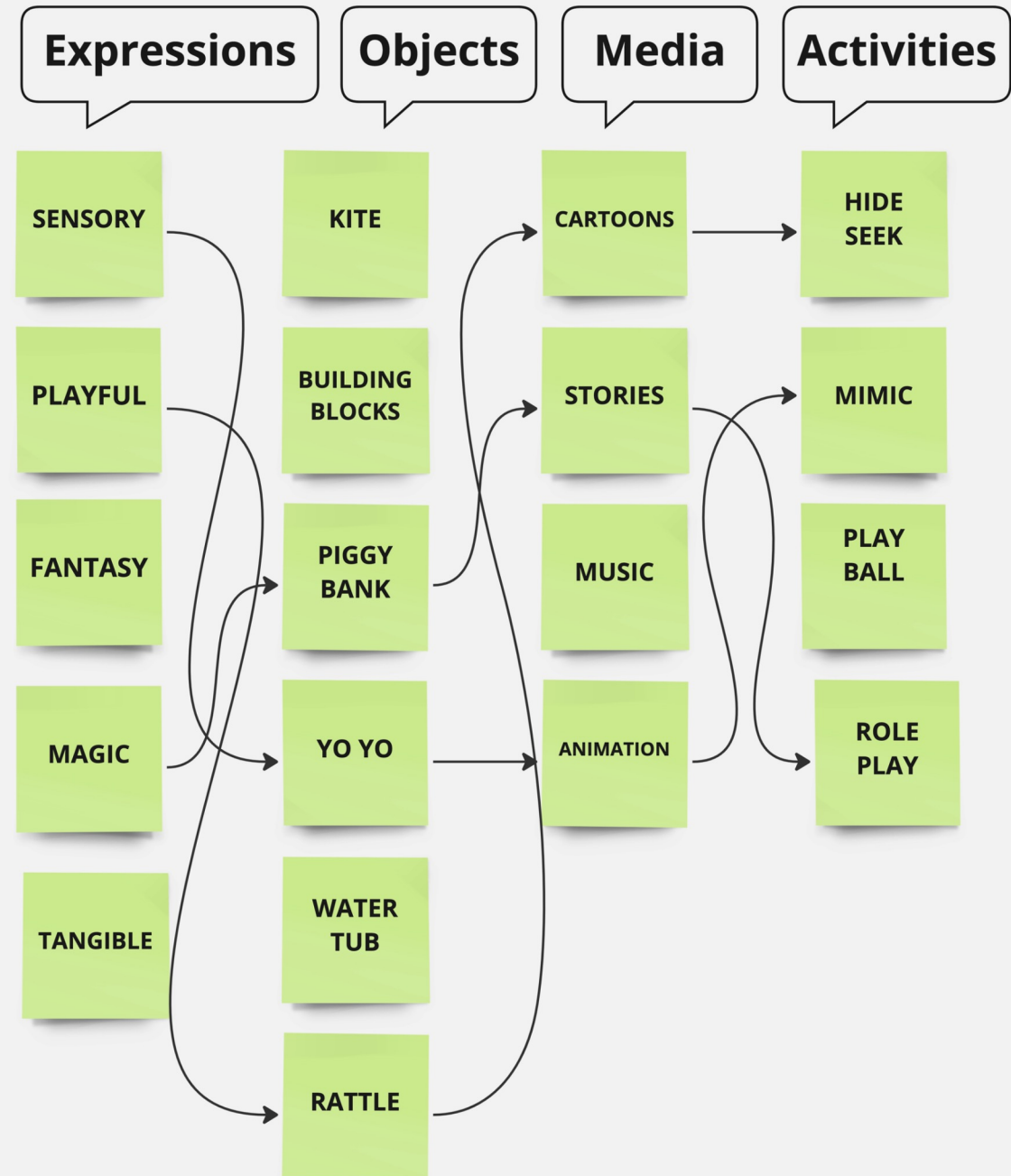
If you find connections, draw lines with arrowheads to make this connection.

This connection is known as '**Affinity Links**'

Affinity Links point towards Ideas.

For example, a Playful Rattle can be part of a Cartoon to play the game of Hide and Seek.

Or, Magic makes a Piggy bank tell stories so that they can Role Play the characters.





What did we learn?

1.

Key-words can be used to **jot down issues, thoughts or ideas**

2.

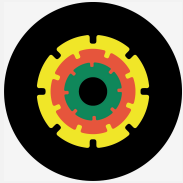
The key-words can be arranged according to similar groups which are known as **Card Sorting** or as **Affinity mappings**

3.

You can give a **heading or Title** to each of the groups

4.

You can find connections between the groups to make **Affinity links** that point towards **Ideas**



Brain- storming:

3 related Topics:

- Storytelling
- Rituals
- Tools

Example from
a brain-
storming on
key-words for
3 topics:

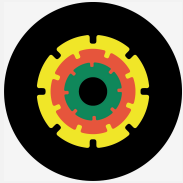
- Storytelling
- Rituals
- Tools





The brainstormed keywords are sorted into different categories and appropriately given Titles.





Brainstorming + Sorting + Affinity Linking:

Example of discovering and connecting Affinity Links between the sorted Key-words.





Brain-Storming for sorting your topic:

Key-words, sorting, linking:

In this exercise, Brain-storming is used to understand the topic, find the components and parts of your topic, and get an overall worldview of your topic.

Brain-storming can again be used as a technique to generate alternate ideas at the Ideation phase of the project.



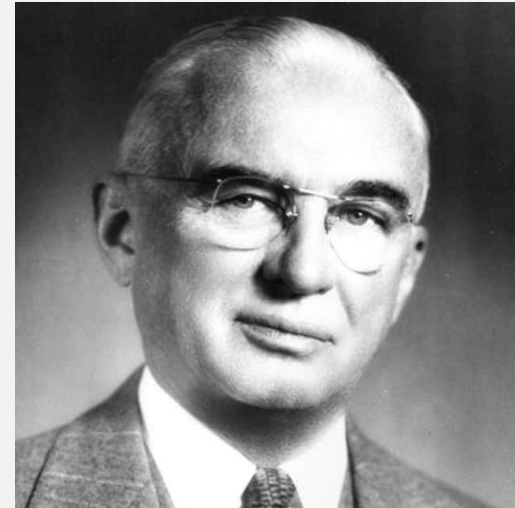
Person behind Brain-Storming:

Alex. F. Osborn:

Alex. F. Osborn (1888-1966) is regarded as as father of brainstorming.

According to Osborn,

“Brainstorming: Using the brain to storm a creative problem - and doing so in commando fashion, with each stormer attacking the same objective”.





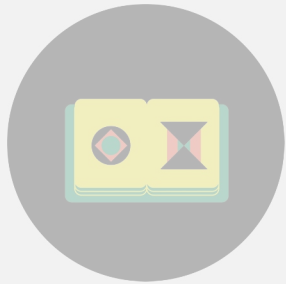
**Thanks for
Listening**

DT&I Tools
Section: T1
Week 1

This presentation content is licensed under
Creative Commons Attribution-NonCommercial-
ShareAlike 4.0 International License

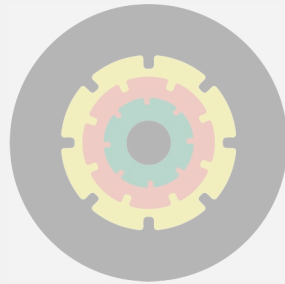


DT&I Course - Week 1:



DT&I
Process
(20%)

- > Structure
- > Intro to DT&I



DT&I
Tools
(20%)

- > Brain Storming
- Key-words +
Sorting + Linking



DT&I
Project
(50%)

- > Select your Topic
for DT&I project +
Do Brain Storming
& Sorting



DT&I
Case Study
(10%)

- > Case Study
Project Jellow



Supporting Organizations:



D'source Project



Open Design School



MoE's Innovation Cell



Credits:

Presented by:
Prof. Ravi Poovaiah



D'source Project



Open Design School



MoE's Innovation Cell



Credits:

Camera & Editing:
Santosh Sonawane



D'source Project



Open Design School



MoE's Innovation Cell



Credits:

Think Design Animation:
Rajiv Sarkar



D'source Project



Open Design School



MoE's Innovation Cell



Credits:

Graphic Icons:
Shweta Pathare



D'source Project



Open Design School



MoE's Innovation Cell



Credits:

End Title Music:
C P Narayan



D'source Project



Open Design School



MoE's Innovation Cell



Credits:

Produced by:

IDC School of Design

IIT Bombay



D'source Project



Open Design School



MoE's Innovation Cell

