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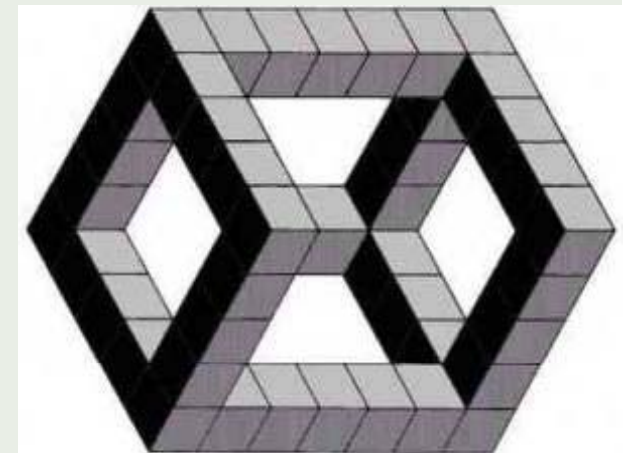
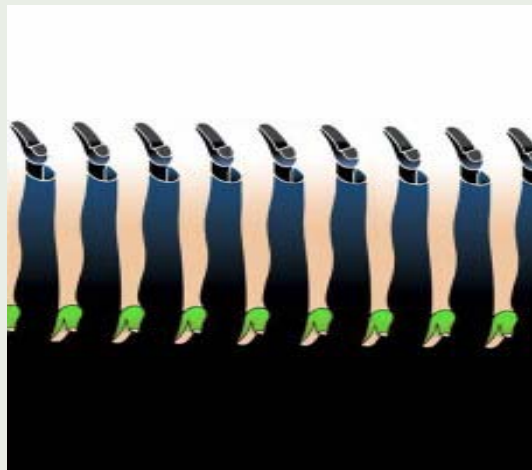
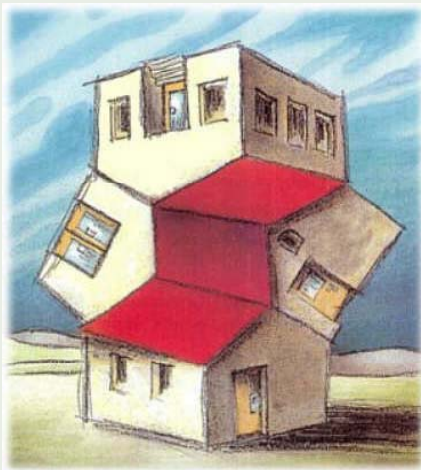
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Dr. Gabriele Hoeborn

Jennifer Bredtmann

Jannicke Baalsrud Hauge

Creative Methodologies for Problem Solution



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To be creative



Creative Methodologies for Problem Solution



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Europe Germany

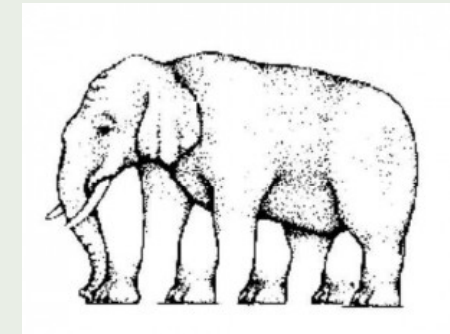


Wuppertal





Project: Developing and producing a cellular phone



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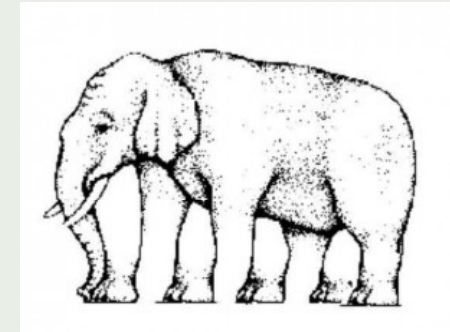
Problems:

No more ideas, run out of budget, no team spirit, no engagement, non inspiring working atmosphere, lost of trust



Creative Methodologies and their application require a specific working atmosphere

- we need space and time
- we need materials
- and most of all we need to trust each other
- nothing is wrong
- everyone may talk
- no one may interrupt or give negative statements
- all of us listen to each other

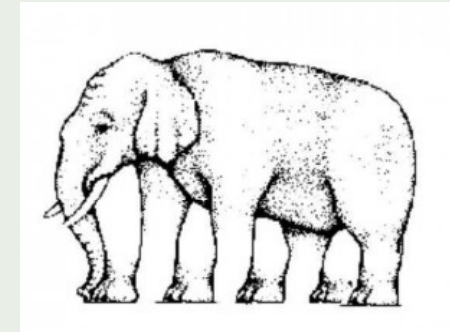


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Let's create our working atmosphere

- everyone is going to **present herself**
- **talk about yourself**
- give us **some information** about you
- point out **three main statements** about you, but
- only **two** of them are **true**
- The **third** one is a **lie**
- all of us will try to **figure out** which one is not going along with you, we will vote for the lie



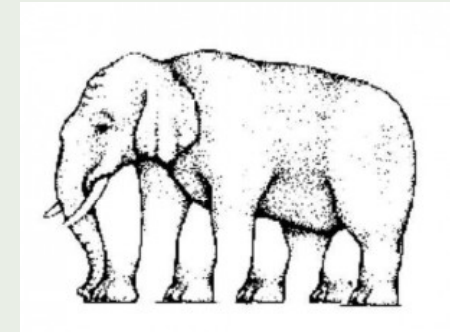
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Let's create our working atmosphere

Gaby

- I am a Swim Coach.
- I am a good tennis team player.
- I did an apprenticeship to become a cook before studying.



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Your expectations within our working atmosphere

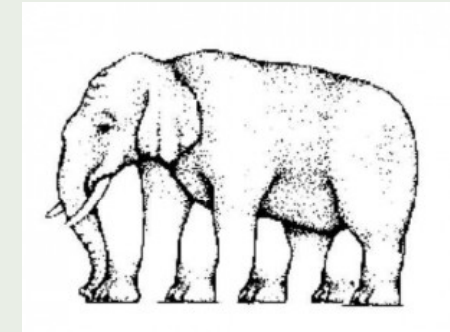
What do you expect this class to be?

What do you want to learn?

What and where do you want to apply the class content?

What do you expect Gaby and Jennifer to be like?

Are there special wishes and requirements?



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Our expectations within this working atmosphere

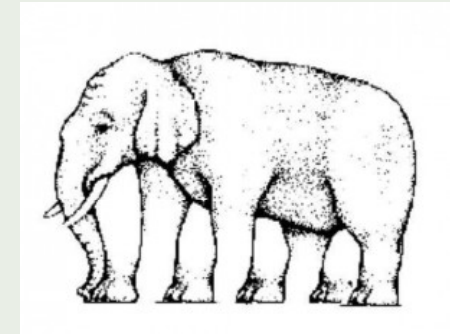
We expect you to be in time

We expect you to participate in all exercises

We expect you to have fun

**We expect you to enjoy your time with us and this
class**

**We expect you not to forget about the application
of creative methodologies**



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Methodologies of Creativity

Brainstorming
Mind mapping
CNB Method
635 Method
Synectic method
Six thinking hats



Brainstorming

Methodology to gather and to develop ideas, used for product development e.g.

Procedure

Diverse group, introduction by group leader into problem

Phase 1 – finding and collecting ideas

Phase 2 – evaluation of ideas (results)

4 main rules

Combining and continuing of already mentioned ideas

Commands, corrections, and critics are forbidden

Many ideas within a short time (5-30 min)

Free associations (connotations) and fantasies are allowed



Brainstorming

Advantages

- Possibility to get innovative ideas and unexpected problem solutions
- Low costs
- Can be used in 'dead ends'
- Easy to do
- Use of synergy effects caused by group

Disadvantages

- Influence by participants and their ideas
- Group dynamics conflicts
- Depending on participants
- Group may go off on a tangent
- Elaborative evaluation and selection of ideas



Group work

Project: Developing and producing a cellular phone

Please split into two groups!

Task: Carry out a brainstorming for about 10 minutes to collect ideas what your cellular needs to have and be.

Take another 10 minutes to evaluate your collection.

Present your results!



General Rules for Presentation

- Definition of goals
- Clear structuring
- Adaption of participants
- Appropriate visualization
- Consideration of communication rules
- Creation of possibilities to discuss



LEGO Racers Championship

- As you may know, the LEGO racing team is the best in the world, but in order for the team to stay that way, they will need your help. The reason why the team is number one is that they have the most stable cars in the world. However, before the next race they will need three new cars and that is where you come in. Because of your expertise, The LEGO racing team has hired you to select the three new cars.



LEGO Racers Championship

The game is divided into two phases:

- a **preparation phase** and
- an actual **race phase**

Preparation phase: chose the cars and prepare for race

Race phase: you attempt to score as many points as possible

Duration is 20 Minutes, including both phases, for example if you spend 12 minutes on preparation, you have 8 minutes left for the actual race and vice versa.



LEGO Racers Championship

Preparation Phase

- The **track**: you have to start at the launch area and to reach the bull's eye (scoring the most points)
- The **preparation phase rules**:
 - select **three cars**,
 - you may use the **given materials** –scissors, cardboard, boxes e.g.- to build whatever construction you might like to help the cars hit the bull's eye
 - only allowed to **build within the launch area**
 - you may **change the construction at all time** during this exercise
- The team leader: **I will choose the team leader** when I am done explaining the rules.
- Only the team leader can **start** scoring points process by clapping into his/her hands and saying **'Go!'**



LEGO Racers Championship

The Race

- The **three cars** you have chosen must all be used in the race, and they **must take turns**.
- The amount of points you score depends on where the **front wheels** of the car stop. Both wheels have to be inside the same ring.
- You can **lose points**:
 - If the car stops outside the bull's eye you will lose **1,000** points.
 - You will lose **5,000** points if you touch a car in motion.
 - You will lose **5,000** points if you damage a car.
- You have to administer your time! Total amount of 20 minutes!



LEGO Racers Championship

Advice

- You can buy an advice from me at any time during the game.
- An advice in the preparation phase will cost you 500 points.
- An advice in the race phase will cost you 5,000 points.

Buying an advice from me might be very helpful.



C(ollective)N(ote)B(ook)Method

Creative methodology of brain writing

Main idea: each participant gets a notepad to gather ideas

Preparation phase (leader)

Definition of problem

Chose participants

Prepare notepads

Realization phase (participants keep the notepads with them)

Make notes on these notepads

Daily notes

Each participant writes a summary



CNB

Advantages

- React spontaneously and make notes
- Low cost
- Always applicable
- Easy to do
- No influence by other participants

Disadvantages

- No communication between participants
- No use of synergy effects caused by group
- Elaborative evaluation



635 Method

Creative methodology of **brain writing**

Main idea: each participant develops further given ideas

Preparation phase (leader)

Definition of problem

Choose 6 participants

Prepare 6 pieces of paper having 3 columns and 6 lines

Realization phase (participants sit at a table)

Each participant writes down 3 ideas, one for each column, 5 min time limit

Papers are handled to neighbour clock-wise

Each participant develops further the given ideas, notes them in the line below, 5 min, continue this way till the lines are filled



635 Method

Advantages

- Direct feedback
- Many ideas within a short time 6 participants x 3 ideas x 6 lines = 108 ideas
- Ideas are not discussed into death

Disadvantages

- Difficult to realize
- Elaborative evaluation
- Rigid, fixed procedure may disturb creativity



635 Method

Project: Developing and producing a cellular phone

Task: Which special feature should your cellular offer?

Collect your ideas by using 635 method!



Application of creative methodologies in every day life

Define a problem or an aim

Choose creative methodologies to find solutions
Choose partners if necessary

Look for possible transfer/application/realization of solutions



Six thinking hats

This tool was created by Edward de Bono in his book "6 Thinking Hats".

How to Use the Tool:

To use Six Thinking Hats to improve the quality of your decision-making, look at the decision "wearing" each of the thinking hats in turn.

Each "Thinking Hat" is a different style of thinking.



http://www.mindtools.com/pages/article/newTED_07.htm

,Six thinking hats

White Hat:

With this thinking hat, you focus on the data available. Look at the information you have, and see what you can learn from it. Look for gaps in your knowledge, and either try to fill them or take account of them.

This is where you analyze past trends, and try to extrapolate from historical data.

Red Hat:

Wearing the red hat, you look at the decision using intuition, gut reaction, and emotion. Also try to think how other people will react emotionally, and try to understand the intuitive responses of people who do not fully know your reasoning.



Six thinking hats

Black Hat:

When using black hat thinking, look at things pessimistically, cautiously and defensively. Try to see why ideas and approaches might not work. This is important because it highlights the weak points in a plan or course of action. It allows you to eliminate them, alter your approach, or prepare contingency plans to counter problems that arise.

Black Hat thinking helps to make your plans tougher and more resilient. It can also help you to spot fatal flaws and risks before you embark on a course of action. Black Hat thinking is one of the real benefits of this technique, as many successful people get so used to thinking positively that often they cannot see problems in advance, leaving them under-prepared for difficulties.



Six thinking hats

Yellow Hat:

The yellow hat helps you to think positively. It is the optimistic viewpoint that helps you to see all the benefits of the decision and the value in it, and spot the opportunities that arise from it. Yellow Hat thinking helps you to keep going when everything looks gloomy and difficult.

Green Hat:

The Green Hat stands for creativity. This is where you can develop creative solutions to a problem. It is a freewheeling way of thinking, in which there is little criticism of ideas. A whole range of creativity tools can help you here.

Blue Hat:

The Blue Hat stands for process control. This is the hat worn by people chairing meetings. When running into difficulties because ideas are running dry, they may direct activity into Green Hat thinking. When contingency plans are needed, they will ask for Black Hat thinking, and so on. ‘

Text out of http://www.mindtools.com/pages/article/newTED_07.htm



Six thinking hats

You are the director of a cellular company and you are looking at whether you should construct a new office building to offer a place for employees working creatively. The economy is doing well, and the amount of vacant office space is reducing sharply. As part of your decision you decide to use the 6 Thinking Hats technique during a planning meeting.

- 6 people being the six hats
- people observing and taking notes



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contact!

Dr. Gabriele Hoeborn



Quelle : www.lesenetzwerk.at/uploads/pics/Teil1_Auf.jpg

contact!

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