Want Better Solutions?

Think Differently!

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Best Session Award

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Agenda

• The human brain and thinking
• What inhibits creative thought?
• Great solutions and the creative process
• Problems, potential solutions, and tools
• Group idea generation exercise
Thinking and our brains

- We have 40,000 thoughts per day
- Most of our thoughts are ‘negative’
- 75% are the same as yesterday’s
- We are frequently on ‘autopilot’

Result: creative thought is inhibited

Source: Skillpath Seminars
An interesting study

Sisters of Notre Dame, Mankato, MN
Featured in Life (7/1994) and Time (5/2001)

- Aged from 80 to 100+ years old
- Unusually high mental acuity
- ‘Neuroplasticity’ - The brain's ability to reorganize itself by forming new neural connections throughout life. Learning, including any new or challenging experience, increases dendrite length.

Theory: dendrite ‘arborization’ – branching out
Linear or ‘Convergent’ Thinking

- Works effectively for facts & the types of problems we ‘know’ how to solve

**Examples:** history facts, finite math

- Focused on finding the ‘right’ answer

Convergent thinking pursues a pre-determined goal, usually in a linear progression, focused on arriving at a single solution.
Limitations of ‘linear’ thinking

- Quest for a ‘single’ answer
- Reliance on ‘known’ solutions
- ‘Old’ answers may be inadequate for solving ‘new’ problems
- Low neuron/dendrite activity

“You can't solve today's problems at the same level of thinking you were at when you created them”

- Albert Einstein
‘Non-linear’ thinking

- Allows the freedom to explore ideas
- Permits ‘naïve’ solution finding
- Gives ‘permission’ for ‘wild’ and ‘the sky’s the limit’ type thinking
- Helps develop many potential solutions
- Enables combination solutions

“The best way to have a good idea is to have a lot of ideas.”

-Linus Pauling
What blocks our creativity?

The right answer
It’s not logical
The ‘rules’
Be practical
Play is frivolous
It’s not my area
Don’t be foolish
Avoid ambiguity
To err is wrong
‘I’m not creative’

Source: ‘Ten Mental Locks’ from ‘A Whack on the Side of the Head’ by Roger von Oech
‘Creative solutions’

Imitate nature
‘Dream up’ a solution
Ask ‘naïve’ questions
Re-invent the standard
Inside the creative process
adapted from work by Edward de Bono

“When any real progress is made, we unlearn and learn anew what we thought we knew before.”
- Henry David Thoreau

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divergent thinking

creative ‘leap’

Increased dendrite activity!!!

innovation or ‘new way’

steps to be filled in after the ‘new way’ is discovered

single steps
standard development
On creativity...

- We all have enormous creativity
- Many of our talents go unused
- To some degree, we have been programmed not to think

“The things we fear most in organizations - fluctuations, disturbances, imbalances - are the primary sources of creativity.”
- Margaret J. Wheatley
Practical application

Solving Real Problems

- Clear statement of the problem
- Select a tool and generate ideas
- Identify the best (most feasible) and wildest (innovative) solutions

“Lateral thinking is like the reverse gear in a car. One would never try to drive around in reverse gear the whole time. On the other hand, one needs to have it and to know how to use it for maneuverability and to get out of a blind alley”

- Edward de Bono
Thinking ‘tools’

- Brainstorming
- Radial outline
- Innovation transfer
- Assumption Smashing
- Mindmapping
- Six thinking hats

http://www.slideshare.net/ramonvullings/27-creativity-innovation-tools-final
http://lateralaction.com/creative-thinking/
http://www.koozai.com/blog/search-marketing/content-marketing-seo/eight-awesome-creative-thinking-techniques-plus-tools/
What are you trying to solve?

If you are seeking a solution, that implies you have a problem

Before you can develop a solution you need to understand the problem to be solved.

How much time should that take?
Brainstorming

Objective: generate as many ideas as possible in the time allotted

Guidelines:
- clear problem statement
- no judgment of ideas
- capture ideas as they are spoken
- building on ideas is encouraged

“If you can dream it you can do it.” - Walt Disney
What is the problem?

Situation:

Your neighbor raises chickens and they are getting into your vegetable garden and eating your vegetables.
Example of a ‘radial outline’ from
*The Creative Problem Solver’s Toolbox*,
by Richard Fobes
What is the problem?

**Situation:**
When trying to decide what movie or video to watch, the children are not able to agree, leading to stress and wasted time.

**Problem statement:**
Children are unable to agree on what video to rent (or watch)
Innovation transfer

Objective: generate different solutions through analogies

Guidelines:
- list a common problem in column A along with ‘well-known’ solutions
- focus on the target problem and derive solutions using analogies
<table>
<thead>
<tr>
<th><strong>Innovation Transfer Exercise</strong></th>
<th></th>
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<tbody>
<tr>
<td>‘Common Problem’:</td>
<td>‘Target Problem’:</td>
</tr>
<tr>
<td><strong>Computer system performance is too slow</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Solutions:</strong></td>
<td><strong>Solutions:</strong></td>
</tr>
<tr>
<td>1) Add capacity to computer system</td>
<td></td>
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<tr>
<td>2) Buy a new computer system</td>
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<tr>
<td>3) Identify &amp; correct the main cause</td>
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<td>4) Reduce workload on the system</td>
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<td>5) Tune the system</td>
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<td>6) Use a different computer</td>
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<tr>
<td>7) Offer incentives for offshift work</td>
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Do you have a ‘BIG’ problem?

A ‘BIG’ problem I am facing is...

__________________________________________

name_________________________

email:_________________________

www.georgediorio.com
Resources

Books:
A Whack on the Side of the Head, Roger von Oech
The Creative Problem Solver’s Toolbox, Richard Fobes
The Brain Book, Peter Russell

Websites:
http://www.mindtools.com/pages/article/newCT_00.htm
http://creativethinkingtools.com/
http://www.directedcreativity.com/pages/Principles.html
or search on Creative Thinking
http://georgediorio.com/want-better-solutions-think-differently-article/

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