



DUNCAN JONES

Hexagon Innovating

*Driving growth by
optimizing innovation efforts*

Text/ Cell: 416 301-6700

duncanjones@hexagon-innovating.com

www.duncanjones.ca

www.hexagon-innovating.com

TEDx McMasterU 8/Mar/2015

Foster Your Innate Creativity for Maximum Impact

Creativity applies to all endeavours, not just the Arts.

On being creative:

“Creative thinking - in terms of idea creativity is not a mystical talent. It is a skill that can be practised and nurtured.” Edward deBono, creative thinking guru, author and teacher

On the value of creative thinking:

“A creative mindset is in increasingly high demand: employers are vying for workers who are able to dream big and deliver big with the next must-have product. Creative thinking fuels innovation, it leads to new goods and services, creates jobs and delivers substantial economic rewards.” Jim Hunt, ex-Governor of North Carolina and technology promoter.

We live in a knowledge-based economy, where creative thinking is needed at work and in daily life to identify opportunities, meet challenges and resolve issues.

A model for creativity:

Knowledge from education, experience, curiosity, life-long-learning, observation, reflection, experimentation, and discussion.

- + Need from opportunities, challenges, issues and problems.
- + Spark from your effort and energy to explore the possibilities.

“Creativity is just connecting things. When you ask creative people how they did something, they feel a little guilty because they didn't really do it, they just saw something. It seemed obvious to them after a while. That's because they were able to connect experiences they've had and synthesize new things.” Steve Jobs, cofounder and CEO of Apple, Inc.

Most techniques follow a two-step process:

- 1) Divergent thinking - suspending judgement and developing as many ideas/solutions as possible (even seemingly bad or silly ones).
- 2) Convergent thinking - analyzing the ideas/solutions and selecting a few of the best for further consideration (often another iteration of divergent thinking).

Creative thinking can be done:

- Fast as pressure can jump start your imagination, or
- Slow as this gives your subconscious time to work on it.

“Discovery consists of seeing what everybody has seen and thinking what nobody has thought.” Albert Szent-Gyorgyi, 1937 Nobel laureate for his discovery of vitamin C.

Techniques:

- 1) Brainstorming by Alex Osborn (1953)
 - A group of people shout out solutions which are recorded often on a whiteboard.
 - The focus is on quantity while withholding criticism.
 - Unusual, even silly ideas are welcome and participants are encouraged to combine and improve on the ideas of others.
- 2) The “List of 100”
 - Individually or in a small group, list 100 (yes, 100!!) solutions on a piece of paper.
 - Again the focus is on quantity and don’t worry about having a few duplicates
 - Upon completion, the first 1/3 tend to be obvious, the next 1/3 interesting and the final 1/3 truly inspirational
- 3) Lateral Thinking by Edward de Bono (1967)
 - Select a random word from the dictionary or a list, like “Ice cream.”
 - Make a list of ideas that link the random word to the challenge at hand.
- 4) SCAMPER by Bob Eberle (1970’s)
 - A provocative form of lateral thinking
 - The acronym stands for Substitute, Combine, Adapt, Modify, Put to other uses, Eliminate and Reverse
 - Apply variations of each of these provocations to the problem at hand.
 - Ex. How might you ADAPT the Uber mobile-app-based transportation model to your situation?
- 5) The Idea Box by Fritz Zwicky (1969) and Michael Michalko (1991)
 - Select 4-6 relevant parameters, like location, size, duration, audience, material, cost.
 - Generate a table listing 6-10 variations of each parameter.
 - Examine combinations of one variation of each parameter.

00-04		Filter	Ice cream	Pepper	Cellphone
05-09	Bike	Moon	Paper	Pizza	Plug
10-14	Knot	Pencil	Pirate	Fish	Painting
15-19	McMaster	Cave	Gas	Chimney	Water
20-24	Pin	GPS	Marauders	Dogs	Calculator
25-29	Crane	Rock	Team	Telescope	Switch
30-34	Keyboard	Noise	String	Bones	Wall
35-39	Tree	Cookie	Treadmill	TEDx	Glasses
40-44	Arm	Sissors	Liquid	Oar	Chair
45-49	Fence	Dirt	Classroom	Sunshine	Carpet

LOCATION	AUDIENCE	DELIVERY	TOOLS
N. America	General	18'	Searchable
Asia	Students	3'	Transalation
Africa	Business	Blog	Ratings
Local	Children	e-Book	Tweet Q&A
Global	Seniors	TV	Packages
Webcast	International	Radio	Accreditation
YouTube	Neighbours	Daily	Transcript

- 6) The 5 Why's by Sakichi Toyoda (1920's)
 - Perform 5 higher and higher level iterations of asking "Why?"
 - The resulting iterations of cause and effect relations helps get to the root issue or solution.
 - Ex. Why am I at University? -> to learn -> to become competent -> to get a good job -> to earn money doing interesting work -> to live a happy and rewarding life.
- 7) Post-it™ Notes (1977)
 - A convergent technique using the output of other techniques.
 - List each idea/solution on a separate Post-it™ note
 - Post them on the wall, which allows you to visually group, sort, rank, combine and add ideas.

Summary:

- We can all be creative and need to be/ are expected to be whatever our endeavours.
- You can improve your creative thinking abilities by continuing to build your knowledge base, practicing creative thinking, and using techniques to spark your imagination.

Some references and links:

- a) Lateral Thinking: Creativity Step by Step - Edward de Bono (1970)
- b) Serious Creativity: How to be creative under pressure and turn ideas into action - Edward de Bono (2015)
- c) Six Thinking Hats - Edward de Bono (1985)
- d) Thinkertoys 2nd Ed.: A Handbook of Creative-Thinking Techniques - Michael Michalko (2006)
- e) How to Think Like Leonardo da Vinci: Seven Steps to Genius Every Day - Michael Gelb (1998)
- f) A Whack on the Side of the Head: How You Can Be More Creative - Roger von Oech and George Willett (2011 - 25th anniversary Ed.)
- g) Kick in the Seat of the Pants - Roger von Oech (1986)
- h) Creative Whack Pack Cards - Roger von Oech (1993)
- i) <http://www.brainsparker.com> - iPhone app
- j) *Hundreds of other books on Amazon and ChaptersIndigo*
- k) <https://litemind.com> - articles
- l) <http://www.mindwerx.com/> - articles
- m) <http://en.wikipedia.org/wiki/Creativity> - overview
- n) http://en.wikipedia.org/wiki/Creativity_techniques - list of techniques
- o) <https://www.ted.com/topics/creativity> - TED Talks
- p) <https://www.psychologytoday.com/basics/creativity> - articles
- q) <http://www.mindtools.com> - techniques, articles and more
- r) <http://creativesomething.net> - articles
- s) <http://www.brainstorming.co.uk/> - techniques
- t) <http://www.sparringmind.com> - articles
- u) *Thousands of other sites on the internet including Slideshare*