



# Mind-keys

Some practical applications  
within the Fase-3-project /  
Cognitique

*”When the brain is  
empty, the hand is still”*

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# The need of NEW TOOLS in educational training

“In conclusion, we can expect that in the future, cognitive science will supply man with *new tools, electronic or not*, that will be better suited to our cognitive needs and that may increase the quality of our lives.

In many areas, it is not technology that sets the limits but rather our lack of understanding of human cognition works.”

Cognitive science from computers to  
anthills as models of human thought

Peter Gärdenfors  
Professor Cognition research, Lund, Sweden

## The 10 Illusions

1. More resources are a prerequisite for better business.
2. We are unable to develop our business, without outside help.
3. Our imagination is insufficient to find new grip.
4. All others are better than we are.
5. No one is listening to the new ideas that we produce.
6. It is never too late to implement something new.
7. We must have more skills development in order to implement this.
8. Probably, this is someone else's task.
9. What I am doing is probably not so odd.
10. Right now, it is not convenient for this.

All wrong – and the following explains why...

# About Cognitique – a new innovation

Cognitique is a cognitive philosophical concept that was registered as a trademark by the Swedish Patent Office in 2003. The concept is, by definition, a “teknofofi” for operational, dynamic and thinking for entrepreneurs – that is to say, a technology and philosophy at the same time.

A popular-definition is mental logistics, because the aims and objectives to large parts conform with logistics, as well as for logistics is a well-known and frequently used technologie in business and manufacturing industry. A use of the concept in mental structures can increase an individual's ability to think as mentally steering gear in different situations-what Edward de Bono calls Operacy - operability. This often means savings in time and money. Cognitique is a universal “teknofofi” that can be used in many different areas, regardless of the user's gender, age, education or profession, and universal structure in thinking.

Through the knowledge and use of structures can increase the ability to:-solve problems-create new ideas-improve the individual's creative approach to developing various forms of thinking-initialize change processes-achieve innovation and-avoid misunderstandings and mistake the operating gear is 123 different so-called Given keys (mind-keys, each of which describes a intellectual operation symbolically). Seven of the key features of the method are called Master keys, and assigned a more comprehensive and essential function. Examples of keys is Adaptation (what is possible, and provide optimum outcomes?) Action (what initiates the activity and initiatives?) Analogy (what is similar to this?), Inversion (how modify, combine, rearrange?), Reversion (Reapplying!) and Synectics. (the creative questions? Where? How? Why?)

The keys are a number of concepts describing various mental processes. Examples of these concepts are deliberately managed change Navigator (function), selection (selection of the most important and most relevant information in a flow) and Serendipity (the ability to detect the advantage of an element in a process in which it was originally been looking for something different). De Bono's Six Thinking Hats, action research, the Toyota Production System (TPS), the basic elements of the philosophy of "lean production" etc can be said to be similar examples of processes with a view to streamlining the activities under the model more value for less work. The stuff of Cognitique can individually or together with others-as parts of the above processes.

According to the author is resources limited (and often negative) in modern society, and thus have an increasing part of the development efforts of various kinds-including in all training-focus on resource utilization. The main objective is to improve the individual's mental resource utilization and structural thinking to see and further develop the link view-handling in an optimum manner.

References Patent Office/trademark protection 0367344

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Dahlqvist, Folke (1999), Think! Almqvist & Wiksell, Stockholm, ISBN 91-17855-0

Dahlqvist, Folke (2008) Factor X Pedax Production, Jönköping

External links

[www.121.nu/onetoone/varumärke/1496848\\_kognitik](http://www.121.nu/onetoone/varumärke/1496848_kognitik)

[www.sbi.kb.se](http://www.sbi.kb.se) [www.pedax.se](http://www.pedax.se)

# The 10 postulates of Cognitique.

All philosophies and techniques based on certain conditions. This also applies to our “teknofofi” Cognitique. We have chosen to build the concept of 10 postulates:

1. Society in the Western world has within most areas left the static state and wholly or partially released into a dynamic society.
2. This new society and a further development of it-requires new tools, both physical and mental. Educational society has largely not realized this.
3. The society that is now in production stage between static and dynamic life experience a polarization of society so that the "Academia" simply a descriptive function without ambition to promote operational and field outside the academic institutions are so busy to solve all the practical day-to-day problems that they only rarely apprised of any theoretical news. In the "white field" between these disparate areas the Cognitique has its special place.
4. Constructive documents requires a systematic and constructive thinking that includes all the new ways of thinking-for example, the lateral thinking-presented the last few decades, but that the education system has taken them to themselves.
5. New challenges require new action patterns and these in turn requires new ways of thinking. Cognitive structures of various kinds is good support for targeted mental activity and, by extension, operational (action aiming) thinking.
6. Operacy (de Bono) has its central concept in the Cognitique. The term describes the individual's ability to apply an operational approach which requires an active, dynamic, constructive and creative thinking.
7. The concept Operacy should be given equal educational space as numeric (numeracy) and verbal training and skill (literacy).
8. “Given keys” is an example of symbolic cognitive structures that can be used separately or in various combinations and whose features are easy to learn and use.
9. Since the total resource collection cannot be greater in the Western world and especially in certain countries-such as Sweden which, under most already have a high tax-must continue to focus on the possibilities of using resources-a better and more efficient use of resources. Didactics is such a concept within the educational area. Logistics is a similar transport theoretical concept and the cognitique on the way to take responsibility for both general personal resource utilization.
10. One of the main tasks of Cognitique is to focus on the individual's own mental operations-both for its own part, but also for the public. No chain is stronger than its weakest link!

## From University to Innoversity



First Literacy,(yellow) then numeracy (blue) and in the future operacy (green)

But here comes another innovation  
– The Mind-Keys!!! (red)

# If costs and resource usage views

Sweden is located for many years in the top when it comes to high taxation and the extent of the public sector. Positive for opportunities to organise quality interventions in public, less good when many illicit work arises which neither benefit society benefits, or the individual citizens situation.

We often talks about the extent of society's resources, less often on principles for more efficient use of resources and the least about what the private individual can – and should – contribute when it comes to society development and growth. In recent years, however, we have seen some changes — for example, take responsibility for their environmental efforts as garbage sorting and the like.

What draws the social machinery ahead is, of course, all involved in non-profit work and efforts, to rise up in the morning, go to a hopefully attractive job, earn their monthly salary and pay a reasonable tax which goes to the society of public expenditure. The forces striving in the other direction are those who think that occasional fatigue is a reasonable reason to take days off, unnecessary activities and all the "organic friction" that hamper development and process speed both organisational as group and individual level.

In our society has developed a number of different ways to study usage in various forms. In the transport industry, logistics, in the construction sector is subject to daily news that 40%-sector consumes just 40% of both the society's material asset that energy access. Within the Organization's services are constantly new models in order to enhance the efficiency and even in the educational arena, for example, the conception didactics is probably something that should receive our teachers to reflect on what the main methods are, and where the focus is on different processes-an active form of teaching educational resource management.

In a situation in which we can more resources, we must be better to use them we already have. How do we do this? In education are not very many exercises to think and act with the intention to get more done, more less resources, in less time, with less help and with higher quality. To solve this "impossible equation" is a new way of thinking!

One of the few who have worked long and hard on the issues is Edward de Bono. His six thinking hats is well known among those who opened a book on Department Doe – cognitive psychology. But there are several ways!

# Theory X and theory Y- some facts about McGregor

Douglas McGregor took the view that the traditional organisations with a centralised decision-making, hierarchical structures and external control apparatus emanated from a particular human beings which he titled Theory X.

Assuming people according to the Theory X was:

1. Work is congenital repugnant to most people.
2. Most people are not ambitious, do not want to take responsibility and prefer to be controlled and told.
3. Most people have little opportunity to creatively contribute to resolving the major problems such as organisations problems
4. People are motivated only by natural factors and factors of safety.
5. Most people need to be monitored closely, and often have to be forced forward to the Organization to achieve its objectives.

McGregor questioned Theory X. He proceeded from the Maslows Maslow's hierarchy of needs and social-development and argued that people today have better education and more opportunities to take responsibility for themselves and for their actions. If people's basic needs and security needs have been met, requires leadership that speaks to people's social and individual needs. The theory underlying the modern leadership known as McGregor for Theory Y.

Assumptions about people according to the Theory Y:

1. Work is as natural as spawning if circumstances supports this.
2. The ability to custom control and responsibility is often indispensable for achieving the Organization's objectives.
3. Creative ability is present throughout society.
4. People are motivated by social factors and the recognition and development factors.
5. People can both autonomous and creative work if justified.

McGregor distinguished ability to independently responsible and to actually be able to live up to this at a given moment. Based on the Theory Y becomes the leader's task is to motivate employees and redeem their creativity and responsibility. As a consequence of the above, we can formulate the Theory Z:

1. All people have a creative potential, although the scale varies.
2. The ability to use this, however, can develop infinity.
3. All people are capable of thinking more operational with the help of cognitive structures.
4. Resistance to equate nature (Operacy/de Bono) with read and improved (Literacy) and numerical ability (Numeracy) can be overcome by appropriate methods!
5. The key method is one of several possible methods to increase their own creativity, the ability to dynamically thinking, problemsolvingcapacity, and the ability to actively and continuously creativity.

# Some cognitive methods

## - Six Thinking Hats

Edvard de Bono

Six Thinking Hats is a good technique for looking at the effects of a decision from a number of different points of view. Seeing things in various ways, is often a good idea in strategy formation or complex decision-making processes.



**Green**

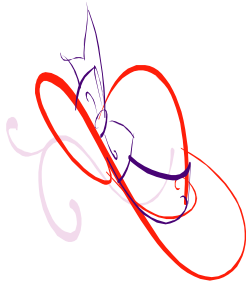
creativity  
ideas

**Yellow**

logical positive  
optimism

**Blue**

metafunctions  
agenda, organizer, overview



**Black**

logical negative  
critic

**Red**

emotions, intuition

**White**

neutral, information  
facts

## Contents:

- **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.
- **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.

- **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.

You can use Six Thinking Hats in meetings or on your own. In meetings it has the benefit of defusing the disagreements that can happen when people with different thinking styles discuss the same problem.

A similar approach is to look at problems from the point of view of different professionals (e.g. doctors, architects, sales directors) or different customers.

# Another angle of incidence - The Key-method

When man needed to calculate and compare he found the figures.  
These figures were symbols of the thinking about quantification.  
When people began to communicate and inform each other, they found the letters.  
By letters, she said, and by those she was meaningful sentences in this way could people communicate with each other over long distances by sending written messages.

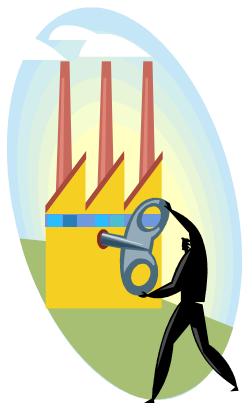
The faster development goes, the more often we must resolve the problems that we have not encountered before. And when we do not have the given answer, one must rely on its capacity to devise their own solutions. Then, you should be aware that there are facilities – for example, in the form of "cognitive structures" that facilitates thinking.

One of these resources is called GIVEN KEYS that you can use as a "given" in different ways. Such a key is therefore a symbol for a certain way of thinking. Because there are 123 keys in base material for Cognitique (see [www.pedax.se](http://www.pedax.se)), describes we all here but have picked out 52 paragraphs which are included in the card deck VIEW deck. Their ordinary numbering shown in the figure on each spread. Given the deck has four parts, like a regular deck;

**DIAMONDS** which stands for organisation and structure,  
**SPADES**, which stands for operability (to get things done), and the selection process (to make the good choice),  
**CLOVER**, which is a good use of resources and finally  
**HEART** stands for empathy (understanding for others), and creativity.

In addition, find the seven JOKERS or "master key":

ADAPTATION,	What is possible, and provide an optimal use of resources?
ACTION,	What initiates the activity and increases the initiative?
ANALOGY:	As similar to this? Have you seen this before? What can you use?
INVERSION:	How can we modify, combine, rearrange?
CONSECUTIVE:	What is the right sequence?
REVERSION:	How to reapply we best?
SYNEKTIK:	How we use the conceptual issues when, where, how and why?



# The seven master-keys

Cognitique is an umbrella-term for a number of methods and techniques that will help the individual to a better use of resources and mentally a more efficient and more constructive relationship between thought and action – Edward de Bono calls it Operacy.

The active tools is a key associate with 123 Given keys that each describes a cognitive structure which embody the ideas which, for example, for a process forward, addresses a problem or enhance a routine.

52 of these keys is part of a single deck – Given the deck. This is the traditional groups of diamonds – which stands for the organisation and structure, spades – which stands for operability (to get things done), and the selection process (to make the good choice), clover – which stands for the right resources and a high level of resource utilization, and finally the HEARTS of empathy and creativity.

In addition, there are seven Jokers or master keys are:

Adaptation	What is possible, and provide an optimal use of resources?
Action	What initiates the activity and increases the initiative?
Analogy	As similar to this? Have you seen this before? What can you use?
Inversion	How can we modify, combine or rearrange?
Consecutive	What is the right sequence?
Reversion	Feedback! Analysis! New strategy?
Synectics	The creative questions: when? Where? How? Why?

One of the main problems today in modern society is how to get the resources to be sufficient. The universal solutions applied since the second world war – that of A and B select both and to raise taxes – is no longer applicable, but must be complemented by other, more creative and constructive solutions. These are – contrary to current practice-not primarily of administrative or organisational nature, but usually they improve their actions that each individual can make in its internal through a more efficient way to imagine! And this is the most important measures to train themselves in nature, and creativity. The Cognitique points out a number of these opportunities.

Do you want to know more see a summary of the PowerPoint that can be downloaded from Pedax Productions website [www.pedax.se](http://www.pedax.se) and named "the fourth piece".

Good luck!

# More about the Master-keys

## Adaptation

The concept of Adaptation includes detailed inventory of the resources available, formally but also go through the resources that are not formally specified yet available for the taking up or implement a process. Key also includes the ability to use resources in a way that these are not normally used. In the concept of original significance – to adapt to the environment – is the ability to benefit from local expertise, special abilities and dexterity and depth of experience within a narrow range. The specialist may use the generalist to see the big picture of a process, and vice versa. It is the quality of communications between these stances that determines the final result.

## Action

Action questions to ask:

- \* What can be done?
- \* Why shall it be done?
- \* How shall it be done?
- \* When shall it be done?
- \* From which point of view?

## Analogy

There is almost always more than one way to solve a task!  
Hitting a nail with a hammer?

Wear one litre of water without a bucket?  
Generate tones without an instrument?  
Frequent leaking water pipe until the plumer pops up?  
Get a potted plants that live for a longer abroad?  
Employing dinner guests awaiting a late dinner?

## Inversion

Inversion is an infinity key to change. There are of course many ways to change. Additionally, we perform all change methods in several ways, or combine them with different options.

Example:	Different	Magnify	Rearrange
	Process	Shrink	Opposite
	Modify	Replace	Combine

## **Consecutive**

This infinity key is of key importance when the creative base of all people should consist of a large number of policy options that all are kept current and available. Consecutive is the key to understanding of the appropriate order in a process. There are various possibilities whose relevance may be assessed on a case by case basis.

Linear order: to do things in a predetermined order to this perceived subjectively or objectively have been found to be the best.

Example: adding the yeast in the dough at the particular time.

Reverse order: to do things in the reverse order in relation to a theoretical model.

Example: write the outline when the paper is complete.

Reverse order: That of special reasons to change the order in the process.

Example: Movie recording, where for example weather hampered footage which presupposes certain weather conditions.

## **Reversion**

People in North-West Europe commit according to recent studies 11 mistake a day. This can have various causes such as disease, poor judgment, poor planning skills, lack of imagination or empathy, forgetfulness, stress, carelessness, etc.

Because many people mistake takes seconds to perform but hours, days, or years to repair is certainly a viable feedback mechanism, the best investments ring in a new life with a high feedback capabilities.

Quantitatively, this resource will be able to provide two hours of profit per week for each worker which would mean economic profit in society of over 60 billion kronor annually. This is a great argument for a regular and active view training as key method already in the compulsory school!

A good template is this:

1. What failed?
2. Why did it fail?
3. What I would have done to not fail?

## **Synectics**

The creative process, the main element is the art of asking good questions – both to himself and to others. We incorporate this into the key Synectics. This key has a clear focus on both the divergent matters synvergent process unlike education sector's most widely used process – the convergent thought process. See also key 23 Divergence.

The answers to the questions synectic can form new constellations which can then be developed for a variety of quarters! See also key 5

Action ex: When? Where? How? Why?

This is a universal truth?

Can I solve the problem in any other way?

What would happen if ...?

Following this a pattern?

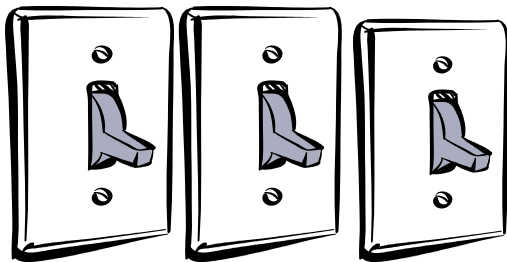
Can I use someone already known model?

## Some examples from Given The Deck

Key 3

Adaptation

Optimal use of resources



The three lights are located to the attic.  
The switches are sitting in the stairs up  
to the attic.

How can you determine the power  
switch to the three lamps if you could  
just go into the attic and verify once?

Key 5

Action

Initiate and activate



Task: You are the first person arriving to a scene of accident  
What do you do? What's the meaning of A-B-C?

Key 7 Alternatives

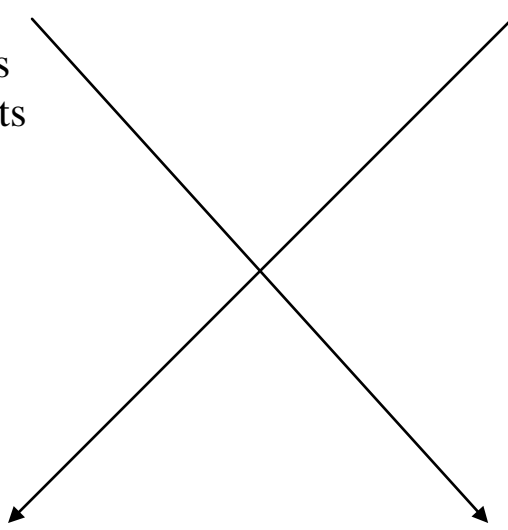
There are almost always more than one right for each question!

**Presented material:**

words  
name  
Sentences  
Statements  
Text  
Numbers  
Tables  
Chart  
Sketches  
Maps  
Images  
Subject

**Sample design:**

define  
pair, compare  
exclude  
arrange by size of the  
arranged by type  
complete  
continue enumeration  
to fill in a gap  
group  
bring together  
criticizing  
draw conclusions,  
calculate



Key 14

Cycle

The recurrent course



Task: You always forget where you have put your car-keys.  
Which measures can you take?  
How do you act practically?

Key 23

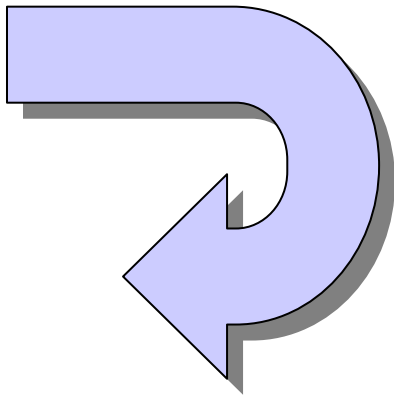
Divergence

Base for creative  
thinking



Task: How many different ways of  
using a brick can you think of?

Key 50 Inversion Modify, combine or reorganize



How many different ways of changing can you think of?

Key 66

Consecutive

The right sequence



Task: These numbers are in right succession.  
Why can you say so?

18,11,15,14,19,16,17,20,12,13

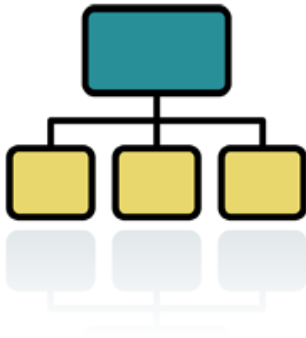
Key 67

Coordination

Structure your assets



Task: Taking the refuse sack down to basement and bring the bag with potatoes up to the kitchen. (Copy!)



Task: You're going out in the forest camping with four fellows.  
You plan to stay overnight in a lovely glade just where the  
fields meet the deep forest.

Devide your different tasks!