Problem-solving approaches

Susanne Hall

Have you ever felt stuck for an answer or challenged by a particular problem? Susanne Hall introduces a number of problem-solving models that can help pave the way for new perspectives and ideas.

I shall briefly define lateral thinking, and how it differs from linear thinking, before providing an overview of five useful models that may help with the creation of new insight. While some examples are given within the text, further applications are mentioned at the end of the module.

Brief overview of the structure of the brain (linear vs lateral)

Research suggests that our left brain is focused predominantly on logical, sequential thinking while the right brain, by contrast, is more directed towards creative, emotional and lateral thinking.

Lateral thinking, a term coined by Edward de Bono, is concerned with changing perceptions and concepts. It requires a willingness to look at things in different ways and presumes a range of possible solutions. Also, it involves a deliberate effort to switch from existing patterns through newly gained insight (in which it is similar to Stephen Covey's paradigm shift[1]).

Differing from creativity, lateral thinking is not based on premature judgement. As in brainstorming, within lateral thinking evaluation follows the exploration phase while an idea is only categorised creative if it actually appeals to a person.

Given the above, which is your favoured side of the brain?

Key differences between left-brain and right-brain thinking

Left: linear thinking	Right: lateral thinking
Structured	Emergent
Solution from related field	Solution from unrelated field
Rational	Emotional
Logical	Intuitive
Audio focus	Visual focus
'Right'	Different
Concrete	Abstract
Literal	Symbolic
Following preference	Transformation

Exercise

Take a few moments to complete this exercise. Draw a pie shape. Using four straight lines, divide this pie to get the highest number of pieces you can.

Did you get 8, 10, 12 or more? Please don't read on until you have finished.

Did you draw the pie so that it was uni-dimensional or three-dimensional? Where did you place the lines? The exercise was meant to show that we often follow our unconscious assumptions when looking at a problem, which then prevents us from finding a more creative solution.

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PMI

Most of us would consider ourselves relatively objective in most circumstances. However, we may sometimes find that our thinking is simply used to confirm an opinion that has already been formed through first impression, preconceptions and tradition.

Edward de Bono's PMI (**P**lus, **M**inus, **I**nteresting) model counteracts the above by fostering structured exploration. For example, a suggestion might be to lengthen the school day to 5:00pm.

Ps could be:

- easier for parents as more in line with their working hours;
- no longer need a childminder; children can learn more.

Ms could be:

- children will possibly be more tired;
- restriction of freedom to choose;
- traffic is worse.

Is – it could be interesting to see:

- what arrangements would be put in place by schools;
- who would support the suggestion;
- how much it would cost.

This technique, while easy and straightforward to apply, is surprisingly powerful in terms of re-evaluating prejudiced views, as all items, once mentioned/written down, will feed into the final decision. For example, you might find that when a group is asked to evaluate matters such as the closure of a division or changing the number of school terms from three to two, that the 'in favour' and 'against' score will differ (potentially quite significantly) before and after the PMI method has been employed.

This tool can be used by individuals or groups, and each complete evaluation need take no longer than two to three minutes.

Practical applications

Imagine if no one ever questioned our current thinking and practices. Would the universal law of gravitation have been discovered, or the telephone or aeroplane invented? Would we still think that Earth is flat?

The problem-solving tools introduced in this module provide us with a way of channelling our thinking and therefore avoiding the shackles of our obsolete beliefs, unexamined values and assumptions, prejudices and habits.

As shown, the models have wide-ranging business applications – such as decision-making, inspired innovation, conflict identification and resolution and planning.

For example, board committee members might want to explore the future direction of the company, and a manager might want to consider whom to employ in order to balance thinking styles and increase team effectiveness.

These attention-directing tools also have a place in social interactions and coaching. Friends and family might use Points of View or PMI as the basis for discussion, and a coach might use the Thinking Hats® to help clients generate new perspectives and understanding: the coach could ask the client to wear the white hat to look at reality and information, the green one to generate options, and the yellow one to create inspired motivation.

In summary, problem-solving models allow us fresh insight into an issue, which in today's competitive environment may make all the difference.

References

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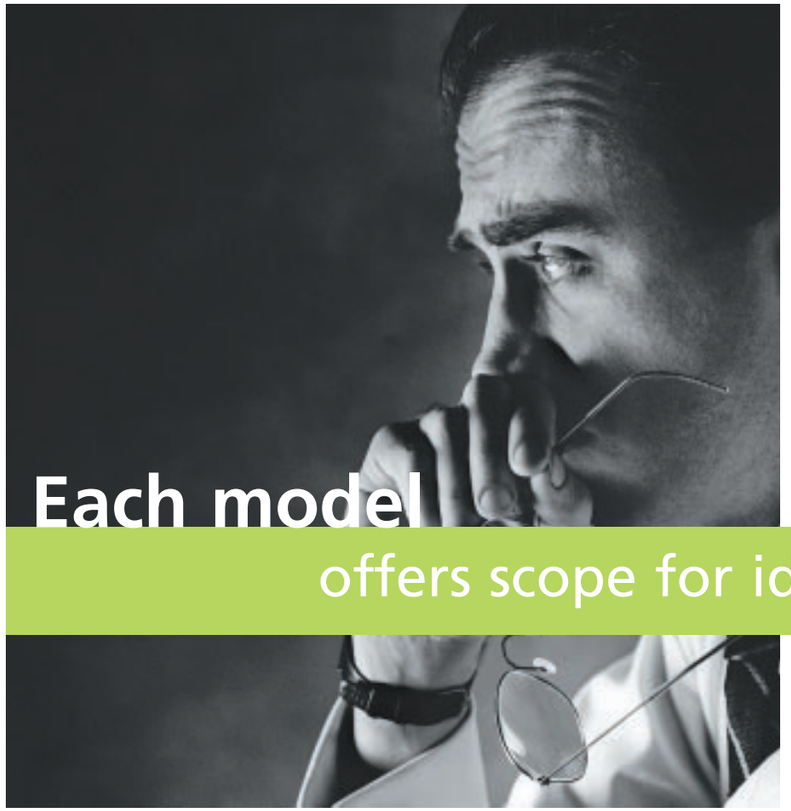

Each model offers scope for idea generation

Some problem-solving models

The following models help us expand upon our assumptions and favourite thinking patterns.

Disney Model

The Disney Neuro Linguistic Programming (NLP) model[2] was developed by Robert Dilts and is based on the creative strategy applied by Walt Disney.

Similar to the process of perceptual positioning[3] three different physical positions are anchored (associated) to three distinct states/roles. These are then used by the individual to look at an issue from different viewpoints in order to stimulate new insight. In practice this would work as follows:

Notice how one of the roles will be easier to access for you than others. This is an indication of your favourite thinking pattern.

Allocate three specific, yet imaginary, places in front of you for you to step into to utilise the strategies of the **Dreamer** (visual focus), the **Realist** (kinaesthetic focus) and the **Critic** (auditory focus).

Choose a problem you want to resolve.

From within the neutral position, think of a time when you were really creative and easily came up with different scenarios and solutions – maybe in previous jobs or non-work related areas. While reliving the experience and noticing what you were seeing, hearing and feeling, step into the **Dreamer** position. This will anchor the resources and strategies you had access to at the time to the physical position on the floor. Once you feel you have experienced the **Dreamer** state sufficiently, step back into the neutral position.

If you have difficulty accessing any of these three roles, think of someone you know who is creative, realistic and/or critical and imagine their qualities as yours; alternatively, ask that person how they get themselves into this state and use this to physically anchor the state for yourself.

Similarly, for the **Realist**, recall a particular situation where you implemented a project or plan realistically, cautiously and successfully. When you are fully reliving the experience, move into the **Realist** position. Then step back to into the neutral position.

Lastly, anchor the **Critic** to the third position. Remember when you constructively criticised a strategy, project or plan, evaluating it thoroughly for weaknesses and strengths. Fully relive and anchor the experience before stepping back into the neutral position.

After following the above procedure, you will be able to consider the issue by first stepping into the **Dreamer** position. Think of all the creative ways in which this problem can be solved, without evaluating or judging any of them at this point. Imagine guaranteed success and use open questions such as 'What if …', 'I am curious whether …'.

Once you have finished your creative exploration, step back into the neutral position before moving into the anchored space of the **Realist**. In this position, consider all the practical implications of putting the **Dreamer's** ideas into action. How can this be done in view of organisation, timings, resources required? Once this has been explored, step back into the neutral position.

Step into the **Critic** position, and constructively consider what might have been overlooked, what problems could arise and whether the idea will be viable. Return to the neutral position.

Next, go back to the **Dreamer** position to dream up more ideas that take account of the issues and points raised by the **Realist** and **Critic**. The cycle continues until the individual stops gaining new insights or the problem has been satisfactorily resolved.

Watch out

Do not proceed from each step until you have successfully anchored yourself to each role.

Whether used individually or in a group setting, remember that the focus of all three roles is on the issue, not the embodied role, and that the points raised should not become personal.

Left-brain/right-brain idea generation

Eliminating interference in view of different thinking patterns, as described in the Disney Model, also works when we just split the two brain skills, as in Ros Jay's[4] following exercise.

A team is divided into two subgroups, according to left-brain/right-brain dominance. Both groups are given a problem to solve and asked to think about it in their favourite way, for example, logical vs more abstract. Each subgroup is asked to list its solutions. After some time, the groups are re-arranged into mixed teams and given the solutions from both. These mixed groups are then asked to randomly combine items from each list and to use these combinations to generate new ideas that help solve the issue.

Thinking Hats®[5]

Again, clarity is achieved by focusing on one method of thinking at a time, before connecting the different ideas produced through each. Edward de Bono's technique involves six distinct thinking types, represented by different coloured hats:

white – neutral, objective, facts/figures;

red – feelings, intuition;

black – negative, devil's advocate;

yellow – positive, optimistic, hopeful;

green – creative, ideas;

blue – organisation and evaluation of the thinking process itself.

This role-play shifts the focus from personal egos and the conflict that may exist between team members. Rather than placing emphasis on the justification of view, it allows for curiosity and unattached exploration.

If this tool is known and adopted throughout the whole organisation, participants can use the hats to voice ideas, criticisms or emotions more freely and without fear of embarrassment (for example, 'with my green hat on I like to talk about …, wearing my red hat I …').

Points of View

Points of View, another reframing model (developed by Dr Harry Alder[6]) can be used to look at problems creatively, particularly when related to people issues. It

> *'Imagine if no one ever questioned our current thinking and practices'*

draws on the use of contrasting words such as good/bad, right/wrong, stupid/smart and better/worse and on justification (= because) to create different meanings. For example, a complaint about an employee might be 'he does not plan ahead.' The points of view that could be generated are these:

It is **good** that he doesn't plan ahead *because* he would lose his flexibility.

It is **bad** that he doesn't plan ahead *because* others don't know what they need to do.

It is **right** that he doesn't plan ahead *because* things always change anyway.

It is **wrong** that he doesn't plan ahead *because* he could avoid so many problems if he did.

It is **smart** that he does not plan ahead *because* he doesn't worry unnecessarily.

It is **stupid** that he doesn't plan ahead *because* he could be more effective.

It is **better** to not plan ahead *than* lose flexibility to change/adapt.

It is **worse** not to plan ahead *than* to get some steps slightly wrong.

This very simple model provides a method of looking at an issue which allows our mind to consider alternatives, rather than falling back on the ingrained thinking fostered by our particular value and belief system. The more bizarre or even humorous the points of view, the greater the chance of unearthing solutions that are new and creative.

Coach the Coach