



TECHNIQUES

G. Reversal

1. What is Reversal?

The **reversal procedure** provides an easy way to make people view a problem differently [2]. This tool requires an issue, idea or goal to be reversed or stated in a negative form in order to gain more ideas of what could be causing a given problem. This thinking process allows a team to generate ideas about a problem or view a problem in a novel way by reversing assumptions. **Assumptions structure social reality**. When changing assumptions, reality changes. Different assumptions produce different consequences.

The procedure aims to:

- Identify the less obvious ideas for problem resolution,
- Expand the list of ideas developed during a classical brainstorming session,
- Search for additional process or quality improvement opportunities,
- Recover from an unproductive brainstorming effort,
- Further clarify a problem to gain more potential solutions [3].

Benefits driven by the reversal technique are focused on the fact that it helps participants to escape from their normal way of looking at situations. Reversing the order of things is one way of escaping from normal tendencies and thought patterns [5]. It **enhances the ability to trigger new ideas** and “force” people to think “outside of the box”. Typically, a group has great fun with this visionary technique. It results in vigorous exchanges over the possibility of the reversals.

It can be used as both an individual and a team technique and it can be used easily by both. This method is mostly recommended for problem solving decision making, overcoming obstacles and other aspects of dealing with general problems. It is not recommended for new product development, as in this case it is not considered very effective [1]. Other experts agree that **assumption reversal is a useful technique for any kind of problem solving**, but advocate that it is also particularly useful **in a new product development session**, where you seem to be getting all the same ideas and so need to spend some time questioning your assumptions. For instance, if someone was to design a car, the most basic assumptions would be: It has four wheels, it uses petrol, etc. The designer could ask himself about each one of these assumptions [8].

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It can be used by managers of all levels, personnel, educational trainers and trainees, researchers, etc. It is typically used by research, engineering, project management, marketing, manufacturing, service/customer, quality metrics and change management departments [3].

2. How it is implemented?

Step1.

State your challenge. The problem is clearly and simply stated to all group members and it is recommended that all participants write it down. The facilitator could describe the problem in detail and may answer possible questions

Step2.

List your assumptions and issues relevant to the basic problem. Participants could write them down to a flipchart

Step3.

Reverse the assumptions and the direction of the problem statements. The reversal doesn't have to be a direct reversal of any particular problem aspect. Participants may change the verb, the goal, or any words in the definition. Thus, reversal is defined broadly as any change in a problem statement. Write down the opposite of each one [4].

For example here are some reversals:

If the requirement were to improve the company's position in a published league table, the reversal would be to think "what can we do to make our position in the league table worse?" If the problem is how the company can improve the communication within it, then the reversal would be "what can we do to make communication fail in our company?" [1]

Step4.

The group uses each reversal as **a stimulus for new ideas** and records all different viewpoints. The facilitator asks the participants to ask themselves how each reversal can be accomplished [2], [4].

Practical Example: Suppose you want to start a new restaurant and are having difficulty coming up with ideas. To initiate ideas, try the following reversals:

1. List all your assumptions about your subject

Some common assumptions about restaurants are:

- A. Restaurants have menus, written, verbal, or implied.
- B. Restaurants charge money for food.
- C. Restaurants serve food.[4]

2. Reverse each assumption. What is its opposite?

The reverse assumptions could be:

- A. Restaurants have no menus of any kind.
- B. Restaurants give food away for free.
- C. Restaurants do not serve food of any kind. [4]

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3. Ask yourself how to accomplish each reversal. *How can we start a restaurant that has no menu of any kind and still have a viable business?*

A. A restaurant with no menu.

Idea: The chef informs each customer what he bought that day at the meat, fish and vegetable markets. He asks the customer to select items that he or she finds appealing and creates a dish with those items, specifically for that customer.

B. A restaurant that gives away food.

Idea: An outdoor café where customers pay for time instead of food. Use a time stamp and charge by the minute. Selected food items and beverages are free or sold at cost.

C. A restaurant that does not serve food.

Idea: Create a restaurant with a unique décor in an exotic environment and rent out the location. People bring their own food and beverages (picnic baskets, etc.) and pay a service charge for the location. [4]

4. Select one and build it into a realistic idea. *In our example, we decided to work with the “restaurant with no menu” reversal. We’ll call the restaurant “The creative chef”. The chef will create a dish out of the selected ingredients and name the dish after the customer. Each customer will receive a computer printout of the recipe [4].*

3. What are the success factors? (Do’s & Don’ts)

The technique can be successful if the facilitator and the participants follow the following tips:

- The facilitator should prepare what is needed such as flipcharts, the definition and clarification of the problem and maybe handouts with the problem statement [2].
- The facilitator should make it clear to the participants that assumption reversal is not looking for one right answer but a different way of looking into existing information [4].
- Sometimes assumptions seem so basic, so fundamental, that we never think to challenge them. But sometimes, many things are taken for granted and we forget that assumptions can be challenged [4].
- It is recommended that the group consist of four to seven people [2].
- The facilitator needs to emphasize that a reversal does not have to be a direct or literal change. Changing any aspect of a problem is often all that is required [2].
- It is very important for the group to remember not to stop at the reversal of the problem, but to use this reversal in order to stimulate new ideas regarding the problem.
- The facilitator should be aware as to whether the group feels comfortable using this kind of technique. If the group feels discomfort then it might show negative emotions [7].

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4. Case Study: Thinkertoys: A handbook of creative-thinking techniques by Michael Michalko, Second Edition, Ten Speed Press, 2006, Toronto, pg.47.

First case study:

Harry Seifert, CEO of Winter Gardens Salads, used reversal to cook up a winning recipe for productivity. Instead of giving employees a bonus after the busy times of the year, he gives them their bonus before the busiest time of the year. Just before Memorial Day, when they have the largest demand for coleslaw and potato salad, Seifert dishes out \$50 to each of his 140 employees to raise their enthusiasm for filling all of the holiday orders as efficiently as possible. Production was raised 50 percent during bonus period [4].



Second case study:

In the 1990s Microsoft dominated the PC application software market. In the late 1980s the leading spreadsheet was Lotus 1-2-3, the leading database dBASE III from Ashton-Tate. The leading word processor was WordPerfect and the leading presentation product was Harvard Graphics. By the mid-1990s these had all been replaced by Microsoft products-Excel, Access, Word and Power Point. Microsoft had an immensely strong market and it dominated the distribution, reseller and retail channels. Anyone trying to introduce a competing product through the conventional channels would have been turned away. But one small company did find a way to bring a new product to market. Netscape ignored the conventional route to market, it gave away its browser, Netscape Navigator, over the internet and charged for upgrades and professional versions.

This fresh approach worked and it became the leader in the browser market. It was as though the distribution channels had been Microsoft's Maginot line and the internet allowed Netscape to outflank the defence and reach the market directly. It took a little while for Microsoft to realize the threat, but once it did, it reacted quickly. Microsoft made its own browser, Internet Explorer, freely available over the internet, then bundled it free with the Windows operating system. Netscape lost its leading role in the browser market and became an internet portal and open software supplier.

The lesson is that you should challenge your assumptions [6].

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5. List of References

Articles/Studies:

- [7] Elspeth McFadzean, 1999, Encouraging creative thinking, MCB University Press, Leadership & Organization, Development Journal 20[7], pg 374 -383
- [8] Mattimore, Bryan W, Mar 1995, Eureka! How to invent a new product, The Futurist, 29[2], pg. 34

Books:

- [1] Instant Creativity, Simple techniques to Ignite Innovation and Problem Solving by Brian Clegg and Paul Birch , Kogan Page 1999, Great Britain & United States
- [2] 101 Activities for teaching creativity and Problem Solving by Arthur B. VanGundy, Pfeiffer 2005, United States
- [3] Tool Navigator, The Master Guide for Teams by Walter j. Michalski, Productivity Press 1997, USA
- [4] Thinkertoys: A handbook of creative-thinking techniques by Michael Michalko, Second Edition, Ten Speed Press, 2006, Toronto
- [5] Business Creativity, Breaking the invisible barriers by Arthur Gogatz and Reuben Mondejar, Palgrave Macmillan 2005, Great Britain
- [6] The Leader's Guide to Lateral Thinking Skills: Unlocking the Creativity and Innovation in You and Your Team by Paul Sloane (Paperback - 3 Sep 2006)

6. Glossary

Brainstorming session: It is a creativity technique formalized by Alex Osborne in 1941 as an effort to produce ideas in a group of people. Osborne's idea was to create an uninhibiting environment that would encourage imaginative thoughts. The usual method is to have a small group of people discussing a problem. (For more information: link to "brainstorming" tool)

Outside of the box: Thinking outside the box is a cliché or catchphrase used to refer to looking at a problem from a new perspective without preconceptions, sometimes called a process of lateral thought. The catchphrase has become widely used in business environments, especially by management consultants and executive coaches, and has spawned a number of advertising slogans.

7. Keywords

assumption reversal
reversal
creative
creativity
creativity technique
creativity tool

8. Questions

Question 1:

What could the "assumption reversal" technique be used for?

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Question 2:

Describe the procedure of the technique in brief.

Question 3:

What do experts advocate about the technique's usefulness when it comes to new product development?

Question 4:

State some of the tips for the successful implementation of assumption reversal.

Question 5:

Reversing an assumption, means:	Tick
You have to make a direct reversal of any particular problem aspect.	
You have to change the verb of your challenge.	
Any change in a problem statement, which has the effect of changing the problem's direction.	

Answer:

Any change in a problem statement, which has the effect of changing the problem's direction.

Question 6:

The facilitator should make it clear to the participants that:	Tick
assumption reversal is not looking for one right answer but a different way of looking into existing information	
they have to make a special kind of reversal	
after reversing the assumption of the challenge, the technique has ended	

Answer:

assumption reversal is not looking for one right answer but a different way of looking into existing information