Counseling for Business & Industrial
<u>Brainstorming in Counseling</u>

9.1   <u>History</u>

The birth of brainstorming is considered to be 1941 when the American psychologist Osborn, advertising director in a company, realized that conventional work meetings inhibited creative idea production. This is why he attempted to develop a set of rules that should stimulate creativity.

The rules he proposed offered people the intellectual and action freedom for idea production. ***"To think up"*** was the original term for the process, which was later known as "brainstorming". In the initiator's conception, this could be defined as a ***"technique through which a group attempts to find a solution to a specific problem by collecting all spontaneous ideas of its members."***

The rules for brainstorming can be synthesized thus:
1. ideas will not be criticized;
2. the quantity and not the quality of ideas is important;
3. other people's ideas can be developed;
4. unusual and exaggerated ideas are welcome.

Osborn noticed that if these rules were obeyed, more new ideas could be generated, and consequently a larger quantity of original ideas led to finding more useful ideas. Quantity yielded quality. Using these new rules, natural inhibitions that had made people consider many ideas ***"mistaken"*** or ***"ridiculous"*** were dropped. Osborn also noticed that ***"childish"*** or ***"stupid"*** ideas could lead to finding truly valuable ones, because they changed people's thinking perspective and view of things.

Developing the technique revolutionized and changed much of problem solving. Details on Osborn's original approach can be found in his book, *Applied imagination* (1971). Brainstorming has spread all over the world and migrated from economy to other fields such as education, boosting innovation. The technique has grown very popular, but not all users know how to apply it correctly. What are the fields where brainstorming is widely used today?

· Advertising
· Marketing
· Research
· Services

- Engineering
- Government policies
- Organizational management
- Investments
- Insurance
- Education

According to Zlate (1982), from the perspective of social psychology, methods of stimulating group creativity are:
- Brainstorming
- Brainwriting or 6/3/5
- Synectics
- Personal notes, sleep-writing, and group notes

In his study on interactive group methods and techniques used in learning, Oprea (2003) groups those leading to problem solving through stimulating creativity thus:
- Brainstorming
- Starbursting
- Thinking hats
- Merry-go-round
- Multi-voting
- Round table
- Group interview
- Case study
- Critical incident
- Phillips 6/6
- Brainwriting (6/3/5)
- Creative controversy
- Fishbowl
- Focus group
- Four corners
- Frisco method
- Synectics
- Buzz-groups
- Delphi method

9.2 Educational Science

From the perspective of educational sciences, Cerghit (1997) includes brainstorming in the category of oral communication methods, in the subgroup of discussions and debates, and Pânisoara (2001) considers brainstorming a modern

educational interaction method. Career counseling has taken over the method and the characteristics of the process, brainstorming being mainly used:

1. as ice-breaker in group sessions;
2. for clarification of specific concepts (e.g.: career, success, personal marketing, life style, etc.);
3. to stimulate the creativity of participants in problem solving;
4. as a way of enlarging perspectives regarding the best alternatives for career planning and entering social and professional life.

The word brainstorming can be paraphrased in lay language by: idea assault, cascade, effervescence, assault of intelligence. Brainstorming is a process of *lateral thinking.* The concept was created and popularized by Edward de Bono, who believed that lateral thinking presupposes ***"confidence in problem-solving through unorthodox and apparently illogical methods", "a set of techniques used to change concepts and perspectives and generate others", "exploiting several possibilities and alternatives instead of using only one approach".***

The techniques of lateral thinking are based on the capacity of thinking to function outside the pre-established, routine-like pattern, specific to *logical / programmed thinking operations.* Using this technique, new and original solutions can be found to situations and problems we face, but it is important to stress that both ways of thinking have advantages and disadvantages. Programmed thinking is based on logic, discipline, algorithm, and it is extremely efficient to improve products and services. Lateral thinking may generate new ideas and concepts, bring improvement to existing systems, but occasionally the solutions found may be sterile or inefficient.

Many thinkers have used techniques of lateral thinking to obtain new and original solutions. Albert Einstein, for example, used the "challenge" technique to generate fundamental ideas in formulating the Theory of Relativity. In Edward de Bono's conception, a creative individual is one who can step back before acting in order to wonder whether there might not be a better solution.

This procedure was named "creative pause". Bono suggests a 30-40 second pause before acting that will eventually become part of one's usual reaction. Discipline and effort are however necessary in personal education in order to use the technique.

Brainstorming – definitions and characteristics:

· solving a problem through spontaneous discussion to find new ideas and solutions (*Oxford Talking Dictionary*);

· "artificial separation of creative thinking from critical thinking, in the initial problem solving phase", "liberating from inhibition those whose task is to find new solutions, from criticism of their own ideas or those of others, from the fear of making mistakes and placing themselves in an unfavourable light before the group" (Rosca, 1972);

· a process that yields a maximum number of ideas regarding a topic or field of interest;

· a technique that develops the ability to generate new ideas by abandoning inhibitions and social rules;

· part of the problem-solving process that requires generating a large number of new ideas without initial reference to their usefulness, and in the absence of analysis or critical evaluation;

· free association of ideas or concepts in order to create new ones.

9.3   Analyzing and Assessing:

According to Zlate (1982), there are numerous factors preventing creative manifestations:

1) *educational*: especially in traditional education, pupils are considered passive, receptive, and the dominant, active, teaching / information passing role falls upon the teacher. Pupils are not taught to play an active part in learning, formulate questions, and find new solutions. Reproductive memory is encouraged rather than creative thinking;

2) *psycho-individual*: intelligence, low motivation, avoiding commitment, isolation tendencies and individualism, prejudice, etc.;

3) *psycho-social*: pertaining to the relationship between the individual and the other members of the group (fear of ridicule, tendency of submission to the leader, undiscriminating approval of ideas issued by an authority, etc.);

4) *organizational*: rigid organizational rules and norms meant to make work more efficient, etc.

Brainstorming is also called *deferred judgment* because it "dissociates idea production time (phase 1- idea production) from evaluation time (phase 2 – critical consideration of ideas)" (Cerghit, 1997). Thus, brainstorming follows two main stages:

9.4   Stages & Rules

Stage 1:
a) *Constituting the group and designating the person who keeps track of the ideas.* The person chosen to write down ideas may be the moderator or a group member (positioned so as to allow every participants to see what is written down).
b) *Introducing the topic.* It can be a general topic, a concept, a question needing an answer, or an element of general activity.
c) *Setting rules.* There are a few *rules* that must be taken into account in this stage of brainstorming (the rules are created and detailed on www.brainstorming.co.uk – 1999-2003 – *Internet and computer resources for creativity and brainstorming*).
d) *Setting work time.*
e) *Drawing up final suggestion list.*

Rule 1: *Postpone Judgment - Analyzing and assessing the ideas produced will only be done after the complete closure of the idea generation session.* No statements of the type will be permitted: "This idea is no good, has negative effects, it is downright bizarre". All ideas are potentially good and will be written down as such in the first phase. Discussing the ideas should be avoided since this involves critical or positive remarks on the applicability, realism, usefulness, etc., which is only permitted later on.

All ideas must initially be seen as potential solutions / basis / starting point for finding new solutions. Even apparently childish, ridiculous, or unrealistic ideas may generate valuable ideas. For this very reason it is exceedingly important not to judge / evaluate ideas in the first phase, laying stress on quantity, generating as many ideas as possible. All ideas must be written down. There are no good or bad ideas initially. This rule is important to diminish the influence of inhibiting factors (shyness, fear of mistake). The effect of a brainstorming session is all the more powerful as more ideas are generated initially.

Rule 2: *Exaggerated and unusual ideas are encouraged -* It is much easier to turn a far-fetched idea into a positive and realistic one than find an optimal or valid idea at first shot. This is why the less usual an idea, the better. It is important to issue even bizarre ideas that will apparently not work, in order to see later what viable results they will lead to. No idea is ridiculous or too odd. Even far-fetched, non-conformistic, unconventional ideas must be written down, original or not, illogical, unrealistic, that no one has ever encountered, and that go beyond the patterns of thinking.

Rule 3: *Quantity beats quality in the first phase -* It is very important to find as many ideas as possible at first, leaving their assessment for later. The discussion must be oriented towards producing ideas in the time set. The more ideas there will be at the end of this period, the bigger the effects of the exercise. If the number of ideas written down at the end of the brainstorming session is very large, there is a bigger chance of finding a truly good idea among them. It is important that the idea be presented briefly, without any details, only in synthesis. Brief clarification can be requested. In this phase it is important to think fast and reflect analytically later.

Rule 4: *Build on the ideas of others -* Continuing the ideas expressed by other members of the group and developing other ideas on their basis is encouraged. It is proposed to use the ideas of others as inspiration to produce new ideas, as well as combine old ideas to explore new possibilities. It is just as valuable to be able to adapt or improve the ideas of others as to generate original ideas that themselves open new perspectives.

Rule 5: *Each member is important and each idea valuable -* Each person has a valid starting point and a unique perspective on possible situations and solutions. It is essential to know everyone's ideas. In a brainstorming session ideas can be found to astound the others and not necessarily to find the final solution. What is important is that everyone should take part, even if some will prefer to note down their ideas on a separate piece of paper. It is stressed that any idea belongs to the group and not to the person issuing it. It is the group's responsibility and an indicator of its ability to participate in brainstorming if all participants feel free and contribute their ideas willingly.

This stage can last between 5 minutes and 2 hours, according to the experience of the participants and the nature of the problem to be solved. A longer session must be divided into sequences of 5-15 minutes with short breaks of activation, relaxation, and encouragement. Pauses must not be imposed rigidly, but made when the group requires them. The freedom to begin or end a sequence is highly important because it dissipates pressure to obtain performance, which the group might feel.

Caution:
- there might be highly creative participants that will monopolize idea production;
- there might appear tendencies of closure from participants who are less involved or who adapt with difficulty to unstructured tasks.

Stage 2:
It presupposes analysis and discussion of the ideas issued and written down. This stage can take place immediately after the preceding one or after a time interval. It is obligatory to keep initially issued ideas (however they were recorded: on paper, audio, video) unchanged. In the "incubation" period, between idea production and analysis, participants are asked not to think about the topic under discussion.

9.5   Practical Experience

Practical experience has proved the efficiency of the method in groups of 20 to 30 participants. Other specialists (according to the topic and the skills of the moderator) hold that the optimal size of a brainstorming group is 4-30 participants. Heterogeneous groups in terms of age, professional qualifications, education, etc. are preferred in order to increase idea diversity and group creativity.

In career counseling it is recommended to form a group of 10-20 participants. Mixed groups (girls-boys, young–adults) yield good results when the moderator makes sure the rules are obeyed, otherwise there is a danger of inhibition or blockage caused by gender or age difference.

Groups larger than 30 people are to be avoided. A large number of participants mean a great diversity of ideas, but it can lead to nervousness and frustration because there is not sufficient time for individual expression.

Examples, case studies, exercises A "traditional" brainstorming session
1) *Preparing for a successful brainstorming.* This stage includes preparation anterior to a session of brainstorming.
   ➢ Why you wish to hold a brainstorming session?

It is very important to choose a field / problem for which you wish to find new solutions and formulate an *aim* (What do you want to obtain?). The aim statement need not contain the solution to the problem, because new ideas may be prevented from appearing.

Once the aim has been set, you will decide whether it is necessary to hold a brainstorming session or no. Sometimes it is more efficient that the time destined for brainstorming be used to verify / implement an already existing solution. Do not plan a brainstorming session if there already are several solutions and you merely wish to decide which is best (this is done through analysis). What has already been said should not be ignored, as it would be a waste of time.

➢ Decide how you wish to organize your brainstorming session. If the aim has been set and you have decided that brainstorming will be of use, it is time to think of the *duration* and *recording* (flipchart, blackboard, audio, video). It is important to adapt the management of the session to the topic broached and the participants.

Choosing a *facilitator / moderator* is another point you must consider before the session begins. The moderator will follow the brainstorming timetable, will make sure the rules are followed and note down all ideas. The facilitator will lead the session (Stage 1 and 2), making sure all participants are comfortable and active. The facilitator is responsible for interruptions and breaks.

Most often the facilitator will be you yourself. It is important not to place yourself in this position automatically and evaluate yourself beforehand. It may be more appropriate to choose one of the group members or invite someone else to fulfil the part.

➢ Preparing the room and materials

Place seats in a half circle so that all participants feel equal. The aim will be posted, for everyone to see. Make sure recording materials are present and functional. In addition, each participant will have a set of coloured sheets to write on, so as not to miss any ideas. Another variant presupposes the existence of a flipchart for every two members, placed in their vicinity. Each will note down their own ideas after first saying them out loud. The facilitator will only stimulate the creative process (and no longer note down ideas).

2) ***The Unfolding Of A Successful Session -*** Post, if possible, the rules of the session. As participants arrive, try to make them feel relaxed and comfortable by engaging them in a pleasant conversation. Open the session by wishing them welcome and present the aim: gathering as many ideas on a subject, field or topic. Answer questions and clarify misunderstandings, but do not suggest solutions and try not to raise barriers in the first stage. Make it clear that anything is possible, anything is permitted in the first stage.

➢ Present the rules of brainstorming. Stress the importance of their being followed. In addition, explain that ideas may be possible solutions as well as stimuli to develop other ideas. Encourage bizarre, unconventional, apparently impossible proposals. If necessary, you may initiate an ice-breaking exercise before the brainstorming, in order to help participants

relax and escape their inhibitions. After the warm-up, present again the aim and the topic of brainstorming.

Request bizarre, spontaneous ideas, apparently illogical. Remind participants to build from the ideas of others, changing them, exaggerating them, combining them. What is the most unusual way to solve the problem under discussion? Occasionally remind them that you also expect ordinary, everyday ideas. Encourage the expression of all ideas, not just the original ones. Congratulate the participants on their ideas, especially when unusual.

Keep on asking them for their ideas. Do not allow criticisms or remarks of the type "I am shocked by this idea". Look participants in the eyes and smile encouragingly. Try to make the process more dynamic, so as not to leave time for criticism or assessment. Do not address people using their names.

Use the pronoun "we" to create group cohesion. Remind them that it is the effort and responsibility of the group to have a creative atmosphere. There will inevitably be pauses. Go back to the ideas written down, pick an (interesting) one and ask the group to modify / remodel it. After a while, the group will run out of ideas and this is why a break will be necessary or the closing of the session, depending on how much time has elapsed. If only a break is needed, as people to move about, talk to each other, and relax.

Allow participants to talk about anything they like. After the break, suggest their finding other seats than before. Remind them of the rules and begin a new sequence, using other recording variants, as the case may be.

2) ***Closing the Session -*** When you wish to end the session, catch the participants' eye and announce that the session has ended. Thank everyone for their participation and for the "long" list of ideas given. Ask them to write down any further ideas they should get during the day and present them in a future session.

3) ***Assessment of Ideas -*** Technically, the brainstorming (idea generation) is over. Practically, however, the ideas are worthless if not analyzed in the view of use. The same group or a different group can do the analysis.

It is recommended to write all the ideas in one list. There are several analysis procedures, but the most often used is taking each idea in turn. Should an idea lead

to a viable solution, it will be circled. If after the discussions the idea does not yield valid results (cost – time – resource – implementation possibilities), it will not be circled. It is important that an idea should not be crossed out so as not to give a feeling of failure to the group or to the participant with whom it originated. Another way of analyzing ideas is sorting them by three categories:

1) excellent ideas (valid answer and solution, quick implementation);
2) interesting ideas (an answer and solution requiring further analysis);
3) useless ideas (no answers that will help clarify the purpose and cannot be implemented).

Method evaluation Advantages:
· develops group creativity;
· reduces inhibitions in participants;
· makes members responsible;
· creates a positive atmosphere in the organization / institution / group and harmonious relationships between the participants;
· develops a friendly framework to solve problems and better relationships between superiors and employers, teachers and pupils, parents and children;
· reduces conflicts in personal and professional relationships between group members.

Disadvantages:
· reduces the recognition of personal merit;
· cannot be applied individually;
· the success of the technique depends on time, resources, and a creative group;
· some people do not get involved and do not contribute anything, which makes them feel uncomfortable in the group;
· there is the risk that the participants cannot escape inhibition, leading to pauses, discomfort, and poor results;
· there is the risk that strong personalities wish to stand out and take over the discussion.

Possible *causes* leading to a failed brainstorming session:
· some participants do not consider themselves creative;
· there is authority in leading the session, which generates fear and inhibitions to participants;
· the objectives of the session are not set;
· participants are not used to creative thinking or techniques;
· the group is not heterogeneous enough;
· various personality types need various brainstorming types;

· there has not been enough encouragement or guidance;
· no warm-up;
· unfriendly location;
· the ideas of other participants are not used to stimulate the creative process.

On occasion, it is expected that brainstorming yields spectacular results, but the basic rules of procedure are unknown. It is as if trying to play chess without knowing how to move the players. Moreover, it may be decided that brainstorming does not work and it may never be used again! A badly conducted brainstorming may lead to mistrust in the technique or one's own capacities to run a session. This is why it is important that any career counselor, before moderating a brainstorming session, be experienced as a participant in such a group. If the rules are followed, the brainstorming session will yield results, whatever the personality and personal style of the members, because the technique is flexible enough to allow the involvement of each and every participant.

"Advanced" brainstorming can prevent some of the disadvantages of the "traditional" brainstorming. This is an improved technique leading to a higher success rate and involves more creative techniques, as well as information and communication technology as stimuli to increase the diversity and number of ideas.