



Educational Studies



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Spring

▶ **Creative Thinking Techniques**

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Module (2)

Creative Thinking Techniques



Lesson (1)

Introduction

➤ Objectives:

- ✓ Identify your attitude towards learning.
- ✓ Distinguish between critical thinking and creative thinking.

Lesson (2)

Critical Thinking

➤ Objectives:

- ✓ Identify The Meaning of Critical Thinking.
- ✓ Identify How to be A Critical Thinker.

Lessons (3)

Brainstorming

➤ Objectives:

- ✓ Identify The Process of Brainstorming, its Origins and Kinds.
- ✓ Apply the Brainstorming Skills Order to Solve Problems.
- ✓ Examine the Mind Maps as A Technique for Creative Thinking.

• What have we learned?

- Origin of brainstorming
- Benefits of brainstorming
- Steps for brainstorming
- Rules for brainstorming
- Rules for a successful brainstorm session
- Tips for Successful Brainstorm Session Preparation
- Rules for running an effective group brainstorming session.
- Group/individual brainstorming

- **Examples for brainstorming**

- Company cut costs

A company may need to cut costs in order to meet budgetary requirements. The department heads may meet to brainstorm on how to reduce expenses without sacrificing resources.

- **Examples for brainstorming**

- Company new product

A company has an idea for a new product, but they aren't exactly sure how to market the product to the public. Members of the marketing team may brainstorm innovative marketing ideas that will ensure the product's success .

- **Examples for brainstorming**

- Family member

A family member may be in financial crisis. Members of the family may brainstorm to develop a solution for the family member in trouble .

➤ **Evaluate ideas in 2 steps:**

- ✓ Step 1: Define the criteria.
- ✓ Step 2: Score the results on the criteria.

➤ **At the end of the session:**

- ✓ Discuss steps needed to implement ideas.
- ✓ If this is complicated, do another brainstorming session on how to implement ideas.

Summary

- Brain Storming is effective when done right.
- Brain Storming Can help to create unity.
- Brain Storming Helps to take routine away from the office.
- New ideas get generated for possible solutions.

Individual Brainstorming

- When you brainstorm on your own you will tend to produce a wider range of ideas than with group brainstorming.
- you do not have to worry about other people's egos or opinions, and can therefore be more freely creative.
- You may not, however, develop ideas as effectively as you do not have the experience of a group to help you.

Individual Brainstorming

➤ When Brainstorming on your own, it can be helpful to use a kind of mind map to arrange and develop ideas.

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* IT'S WEIRD, I KNOW, BUT HE DOES COME UP WITH SOME OF OUR BEST IDEAS THAT WAY. *



Examples

- A professional businesswoman in her thirties wants to change her career.
- She doesn't know exactly what she wants to do, but she knows she isn't happy in her current line of work. She conducts an intense brainstorming session to determine which fields she should pursue.
- A son wants to get a very special gift for his parents' fiftieth anniversary, but he's not sure what to get them. He brainstorms different gift ideas to find a gift that will show his parents just how much he appreciates them.

Examples

➤ A department employee is being considered for a promotion and he wants to prove that he's the best man for the job. He brainstorms different ways to demonstrate his leadership skill, his value to the company and his management potential.

Mind Maps

- Mind Mapping is a useful technique that improves the way you take notes, and supports and enhances your creative problem solving.
- By using Mind Maps, you can quickly identify and understand the structure of a subject, and the way that pieces of information fit together, as well as recording the raw facts contained in normal notes.
- As such, a good Mind Map shows the 'shape' of the subject, the relative importance of individual points, and the way in which facts relate to one another.

Mind Maps

- Mind Maps are useful for
 - ✓ Summarizing information;
 - ✓ Consolidating information from different research sources;
 - ✓ Thinking through complex problems; and
 - ✓ Presenting information in a format that shows the overall structure of your subject.

Drawing Simple Mind Maps: Six Thinking Hats Technique

- Defined by Dr. Edward De Bono.
- Helps you look at important decisions from a number of different perspectives.
- Helps you make better decisions by pushing you to move outside your habitual ways of thinking.



Drawing Simple Mind Maps: Six Thinking Hats Technique

➤ Your decisions and plans will mix ambition, skill in execution, sensitivity, creativity and good contingency planning.



Basic Idea

- At a given phase in the discussion everyone is looking from the same angle onto the problem, the group takes one perspective (all in the meeting wearing the same hat at a given time).
- Because everyone is focused on a particular approach at any one time, the group tends to be more collaborative than if one person is reacting emotionally (Red hat) while another person is trying to be objective (White hat)

- **Who Needs Six Thinking Hats?**

- Anyone who wants:

- A meeting facilitation tool that surfaces hidden agendas and achieves objectives without conflict
- A way to make sure that all sides of an issue are addressed
- A tool that works well in different cultures around the world
- A sharpened ability to think clearly, objectively, systematically, and creatively

Examples

- HR Professionals
- Project Managers
- Meeting Facilitators
- Engineers
- New Product Developers
- Team Leaders & Members
- Trainers & Consultants
- Sales & Marketing Professionals
- Advertising & PR (Public relations) Professionals
- Patent Attorneys (محامي براءات الاختراع)

Basic Idea

- The colors of the hats indicate the view that is taken.

- Purely the Facts (white).
- Emotional Thinking (red).
- Positive Thinking (yellow).
- Critical Thinking (black).
- Creative Thinking (green).
- Big Picture (blue).



Purely the Facts

- Focus on data available
- Look at information you have
- See what you can learn from available information
- Look for gaps in your knowledge and try to fill them
- Ask for white hat thinking
 - ✓ What information do we have?
 - ✓ What information is missing?
 - ✓ How do we get the information we need?



Examples

- **Know the facts:**

“The dates of employment for each position on this applicant’s resume shows that she has never held a job for more than 18 months.” (Note: we don’t jump to conclusions, we just note the fact.)

- **Information That We Would Like to Have**

“It would be nice to know how this applicant would cope if George retires early and she is left to sort out his recruiting system on her own.”

Examples

- **Information That We Need**

“We have to find out if this applicant has experience in integrating social media into a marketing plan before we put her in the final running.”

- **Information That is Missing**

“We do not know why this candidate has never held a job for more than 18 months.”

Examples

- **Sources for Getting any Missing Information**

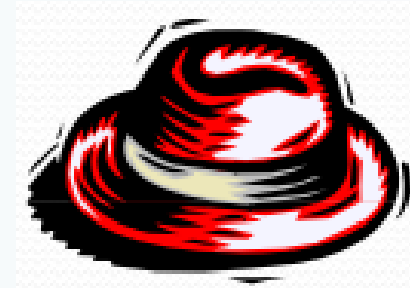
“We could ask people who have worked with her in the past.”

- *White Hat Conclusion:*

- *White Hat Thinking is very important because the quality of any decision made depends on the quality of the information on which it is based.*

Emotional Thinking

- Use intuition, gut reaction and emotion.
- Think how other people will react emotionally.
- Understand the intuitive responses of people who do not know your reasoning.
- Ask for red hat thinking.
 - ✓ What do you like about the idea?
 - ✓ How do you feel about this?
 - ✓ What don't you like about this?



Examples

- **Considering Feelings in Decision Making**

“The facts do not support going ahead with the plan, but my Red Hat feeling is that we should explore it further.”

- **Recognizing a Range of Feelings**

“I’m excited that we’re meeting today and can’t wait to get started.”

“My Red Hat is annoyance.”

Examples

- **Signaling feelings**

“My Red Hat feeling is that I resent the email that was sent out.” (Notice that no reasons are given. It is difficult but important not to explain the reasons.)

Positive Thinking

- The optimistic viewpoint that helps you see all the benefits of the decision and value in it.
- Spot opportunities that arise from the idea.
- Helps you get going when everything looks gloomy and difficult.
- Ask for yellow hat thinking.
 - ✓ What are the benefits?
 - ✓ Why should it work?



Examples

- **Reasons for Optimism**

“If we include home décor along with our outdoor sporting equipment, we could attract people who don’t actually get out much, but who like to feel that they lead a healthy, active lifestyle.”

- **Feasibility**

“How could we feasibly expand the public school system downward to cover children aged three and up?”

Examples

- **Concepts**

“This idea is not very attractive but the underlying concept of creating an online store as well as setting up distributors has a lot of potential.”

“We agreed to hold this meeting to target the customers most likely to keep buying our products during an economic downturn.”

Critical Thinking

- Look at things pessimistically, cautiously and defensively.
- See which ideas won't work Highlights weak points in a plan and allows you to eliminate them.
- Alter the approach.
- Prepare contingency plans.
- Ask for blue hat thinking.
 - ✓ Will it work?
 - ✓ Does it fit?
 - ✓ What are the dangers and the problems?



Examples

- **Exploring Lack of Fit**

“Following this suggestion won’t fit recent changes in the tax laws. It’s no longer to our advantage to do it this way.”

“This proposal to change the specs for building that addition would be less costly. But it doesn’t fit the building codes.”

- **Assessing Yellow Hat Output**

“We found a lot of benefits to this idea; now let’s black hat it.”

Examples

- **Looking at faults**

“If we order these items in larger quantities to take advantage of the volume discount, we will have the expense of renting more storage space to warehouse the inventory.”

- **Scanning for Potential Problems**

“If we describe our product in detail on the website, it may be an open invitation for others to copy our design.”

Critical Thinking

- Stands for creativity.
- Develop creative solutions to a problem.
- Freewheeling way of thinking where there is little criticism of ideas.
- Ask for green hat thinking:
 - ✓ Exploration of the ideas.
 - ✓ Proposals and suggestions.
 - ✓ Alternatives.
 - ✓ New ideas.
 - ✓ Provocations



Examples

- **Expecting Creative Effort**

“This is a difficult situation. Let’s spend three minutes using the Green Hat. Jot down your ideas individually. Then we’ll see what we’ve come up with.”

- **Adopting a Creative Attitude**

Here’s one alternative: We could bundle some of the slower selling items in with more popular ones and sell the combination as a package. What are other options?”

Examples

- **Green Hat Thinking in Problem Solving**

“Could we implement this idea in such a way that it improves customer satisfaction?”

“Awarding a bonus for employees at their five-year anniversary may motivate them.”

The Big Picture

- Stands for process control.
- Worn by people chairing meetings.
- When running into difficulties because ideas are running dry.
- Direct activity to green hat.
- When contingency plans are needed.



Ask for black hat thinking

- What sort of thinking is needed?
- Where are we now?
- What is the next step?
- Where have we been?

Examples

- **Setting out the Agenda**

“Okay, Blue Hat, everyone. We have the conference room for one hour. What hat sequence would make the most of our time?”

- **Maintaining Discipline**

”That is a good Yellow Hat point. Right now, however, we are using Green Hat Thinking and listing all of the alternatives we can think of.“

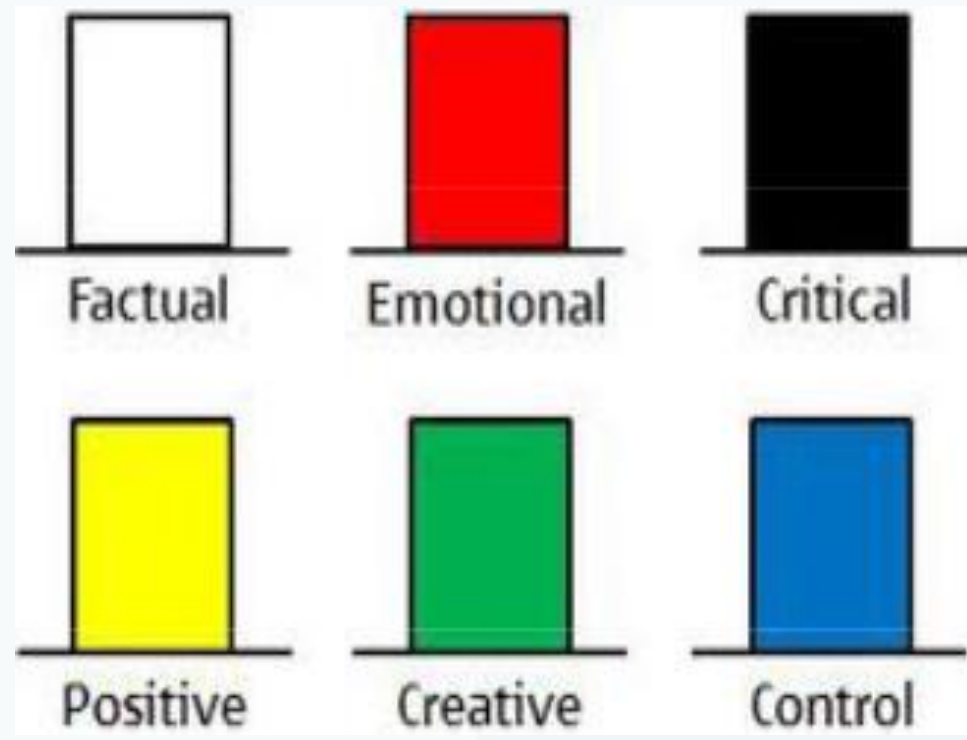
Examples

- **Maintaining Discipline**

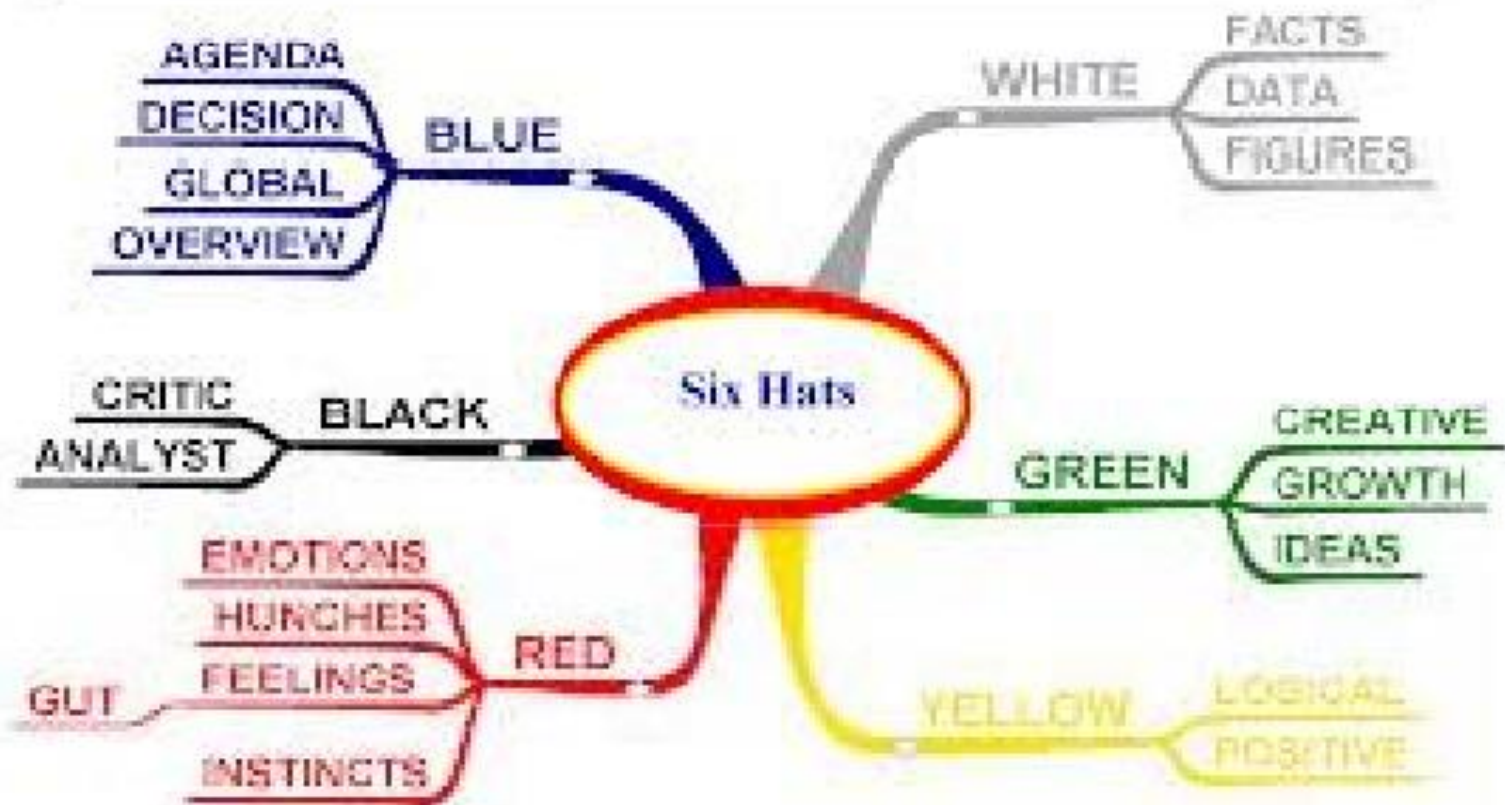
“The focus of this meeting is how to eliminate unnecessary steps in the ordering process. We can change the focus if we all agree, but we don’t want to drift away from it by accident. Let’s stick to the original focus for now.”

- **Noting Conclusions**

“The conclusion is that each sales area should decide on its own promotion and price-cutting policy.”



Summary of Edward de Bono's Six Thinking Hats



Case Study(1)

- Students Talking While Others Are Talking Or Teaching.
- **White Hat: state the facts**
 - students are talking when Mr Mohamed is talking
 - there is noise so that others are distracted or can't hear
 - students don't know what to do after Mr Mohamed has given directions
 - many students get silly or off task

Case Study(1)

- **Red Hat: states the emotions**

- Mr Mohamed feels offended
- Students are frustrated because they can't hear directions
- Those talking enjoy joking around and being heard

Case Study(1)

- **Black Hat: negative aspects**
 - time is wasted
 - learning is compromised
 - those who legitimately have the floor feel that listeners don't care about what they are saying
 - chaos in the classroom

Case Study(1)

- Yellow Hat: positives of the situation are examined
 - everyone gets to say what is on their mind
 - it can be fun
 - you don't have to wait until you speak and therefore don't forget what you what to say
 - not just the "smart" kids get to speak

Case Study(1)

- **Green Hat: creative ideas that come with seeing the problem in a new light**
 - Mr Mohamed will be more aware of the amount of time that he "talks"
 - Mr Mohamed will try to include interaction from many different students, not just the "smart" kids
 - students will work on resisting the need to say everything that comes into their mind. They will ask themselves if this is "on topic" and "if this needs to be shared at this time."
 - students will think about whether their comment will interfere with other people's learning

Case Study(1)

- **Blue Hat: Sum up what is learned**
 - Mr Mohamed learned that he needs to limit the amount of time he uses "Talking" as a form of teaching
 - Mr Mohamed needs to involve all students in discussion. he needs to look for the one who rarely offers comments or is quietly waiting to be picked to answer.
 - Mr Mohamed needs to realize that some students need "think time" before they are ready to contribute to a discussion. Allowing time for these students to think is important part of class discussion so they don't tune out.

Case Study(1)

- **Blue Hat: Sum up what is learned**
 - students now realize that when they talk when others are talking it makes the person talking feel like a fool or unappreciated.
 - students realize that just to "get the laugh" of the moment, they are jeopardizing other people's learning
 - students learned that speaking whenever you want show a lack of self-discipline and that not everything that goes through our minds is worth sharing.

Case Study(2)

- The directors of a property company are looking at whether they should construct a new office building. The economy is doing well, and the amount of vacant office space is reducing sharply. As part of their decision they decide to use the 6 Thinking Hats technique during a planning meeting.

Case Study(2)

- **White Hat,**
 - they analyze the data they have.
 - They examine the trend in vacant office space, which shows a sharp reduction.
 - They anticipate that by the time the office block would be completed, that there will be a severe shortage of office space.
 - Current government projections show steady economic growth for at least the construction period.

Case Study(2)

- Red Hat thinking

- some of the directors think the proposed building looks quite ugly.
- While it would be highly cost-effective, they worry that people would not like to work in it.

Case Study(2)

- **Black Hat**

- they worry that government projections may be wrong. The economy may be about to enter a 'cyclical downturn', in which case the office building may be empty for a long time.
- If the building is not attractive, then companies will choose to work in another better-looking building at the same rent.

Case Study(2)

- **Yellow Hat:**

- if the economy holds up and their projections are correct, the company stands to make a great deal of money.
- If they are lucky, maybe they could sell the building before the next downturn, or rent to tenants on long-term leases that will last through any recession.

Case Study(2)

- **Green Hat**

- they consider whether they should change the design to make the building more pleasant.
- Perhaps they could build prestige offices that people would want to rent in any economic climate.
- Alternatively, may be they should invest the money in the short term to buy up property at a low cost when a recession comes.

Case Study(2)

- **Blue Hat**

- meeting's Chair to move between the different thinking styles.
- He or she may have needed to keep other members of the team from switching styles, or from criticizing other peoples' points.
- Decide.....

The Six Thinking Hats Summary

- White hat thinking identifies the facts and details of a topic.
- Black hat thinking examines the problems associated with a topic.
- Yellow hat thinking focuses on the positive aspects of a topic.
- Red hat thinking looks at a topic from the point of view of emotions and feelings.

The Six Thinking Hats Summary

- Green hat thinking requires creativeness, imagination and lateral thinking about a topic.
- Blue hat thinking focuses on reflection, meta-cognition (thinking about the thinking that is required), and the need to understand the big picture.

Remember

- Mind Mapping is an extremely effective method of taking notes.
- Mind Maps show not only facts, but also the overall structure of a subject and the relative importance of individual parts of it.
- They help you to associate ideas and make connections that you might not otherwise make.
- If you do any form of research or note taking, try experimenting with Mind Maps. You will find them highly effective!



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THANK YOU FOR WATCHING

QUESTIONS?

