

Creative and Scientific Thinking

Prepared by Prof. Shereen Taie

CRE252

Information Technology Department

Lecture 9



Creative and Scientific Thinking

Lecture 9

CRE252

Information Technology Department

Prepared by
Prof. Shereen Taie

Learning Objectives:

- Decision making
- Decision making steps
- Types of decisions
- Techniques for decision making

Decision Making

WHY DO WE NEED TO MAKE GOOD DECISIONS?

- ❑ To achieve your goals.
- ❑ To avoid mistakes.



“No one makes the right decision every time. But by developing your decision-making skills, you can **increase your success rate!**”

Chapter

04

Decision Making Definition



Decision Making Definition

- Is a task you perform when there are different things you can do and you pick one of them.



Decision Making Steps:

- Some decisions are easy like what to eat in breakfast??? what to wear?
- Some decisions are difficult like _choosing a career, changing a job
- In every situation you have to search for....How to make right decisions??

Decision Making Steps:

- Example:
- Ronnie wants a new phone. Unfortunately, the one she wants costs 1500, and she has only 1000. She wonders she will get the rest of money?

Chapter

04

Decision Making Steps



Decision Making Steps:

1. Relax
2. Say something positive
3. Identify the problem
4. What are the choices

Decision Making Steps:

5. Consider the consequences of your solutions
6. What is important
7. Make the decision

Decision Making Steps:

Step 1: Relax

Step 2: Say something positive

- I Can do this
- I Can deal with this

This gives you confidence and makes you feel good about yourself.

Decision Making Steps:

3. Identify the problem

Try to search out actual problem



Ronnie does not have enough money to buy the phone.

Decision Making Steps:

Step 4: What are your choices ????

- Think of all the possible solutions
- Come up with list of possible solutions
 - Save her money until she has enough money
 - Borrow money from her parents or friends
 - Buy a cheaper phone



Decision Making Steps:

Step 5: Consider the consequences of your solutions

- List both the negative and positive consequences
 - Assess the positive aspects of each proposed solution
 - Assess the negative aspects of each proposed solution



Decision Making Steps:

5. Consider the consequences of your solutions:



Save her money until she has enough money	
-VE	+VE
She has to wait	She will be proud after her accomplishments; she will get the phone she really wants

Decision Making Steps:

Step 6: What is important to you ????

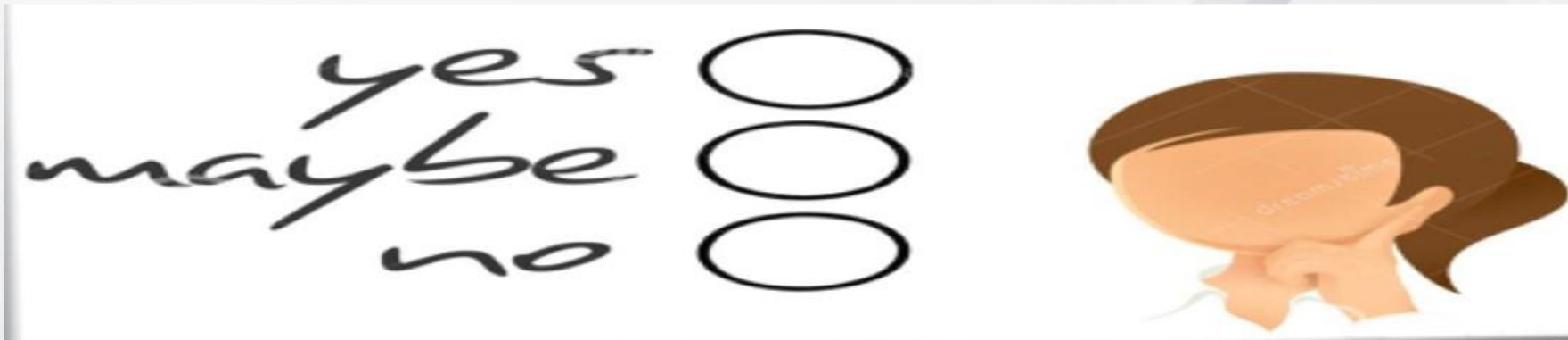
- Getting the phone she really wants??
- Getting the phone right away?
- Not borrowing money

choose what is important



Decision Making Steps:

Step 7: Make the decision



Ronnie decided to wait in order to save some more money for phone

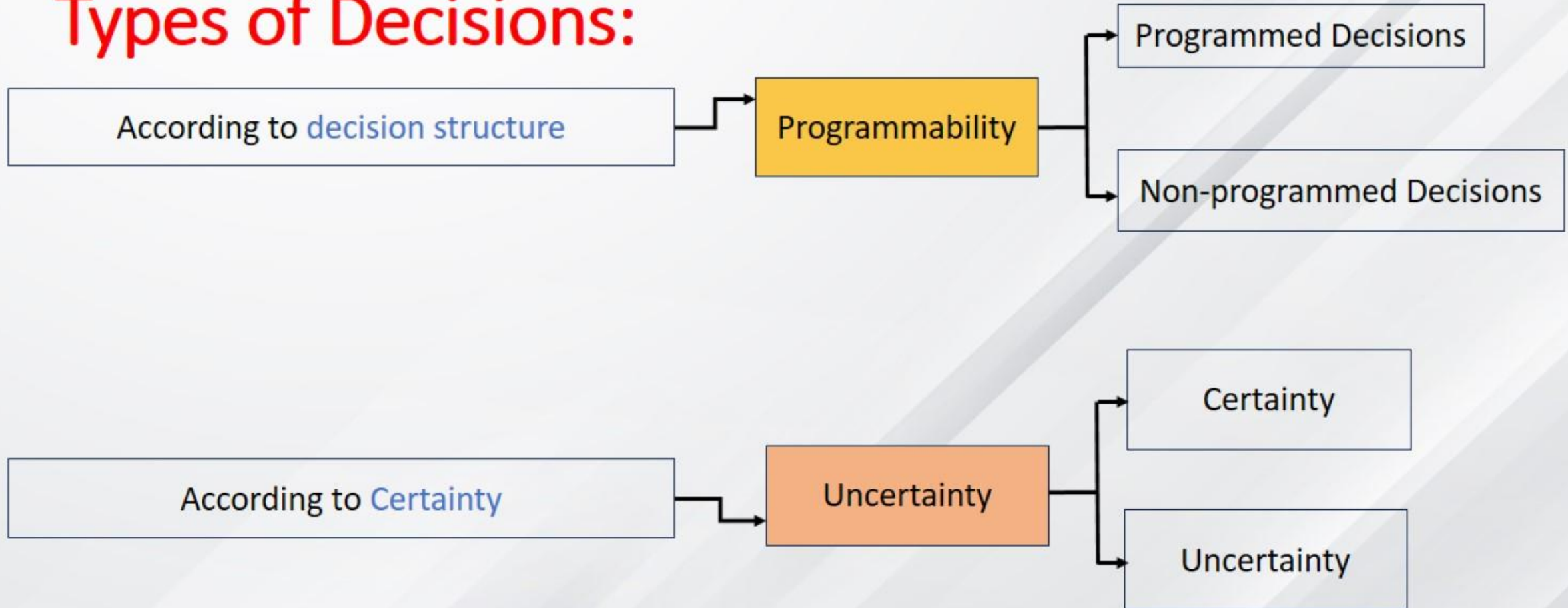
Chapter

04

Types of decisions



Types of Decisions:



Types of Decisions: Programmed:

Programmed decisions:

- Are highly routine decisions
- Deals with frequently occurring situations.

Types of Decisions: Programmed:

Example:

- Monthly salary payment, absence of employees.

Types of Decisions: Non-Programmed:

Non-Programmed decisions:

- Decisions about a novel problem.
- Situations for Non-programmed decisions are unique

Types of Decisions: Non-Programmed:

Non-Programmed decisions:

- Example:
- Opening a new branch for the company, decrease sales

Organization level according to decision type

- Top level managers are responsible for Non- programmed decisions
- Low level managers are responsible for programmed decisions



Decisions' type according to Certainty:

- Different views of types
- Certain decisions (eg. Salary calculation)
- Uncertain decisions (eg. Climate change)



Three Things Every Executive Should Know About Risk

01



Properly taking risk into account in decision-making is a straight forward matter.

02



Using a high hurdle rate is a bad way to adjust for risk.

03



Most large corporations destroy value by setting their risk appetite too low.

Chapter

04

Techniques for decision making



Techniques for decision making:

- Brainstorming
- 6 Hats To Thinking

Using Brainstorming Technique for decision Making:

- Nowadays, brainstorming is critical for the growth of creative business ideas.

Using Brainstorming Technique for decision Making:

- It is a technique of using ideas from a group of people to give ongoing encouragement to that group to generate more fresh ideas.

Steps



Step #1

Set a time, place, and invite list

- For example, if you want ideas on how to increase learning outcomes at schools, invite teachers and curriculum advisors.



Step #2

ask the participants to get ready before the session

- Participants must do a mind mapping session before the brainstorming session and to read up about the problem



Step #3

Hold the session in a fun, relaxing environment

- Select a new creative space. Unless the space is different, people will bring their stress and worries with them. Book a cool space or simply use some decoration.



Step #4

Start the session by grounding people in the facts.

- This will help getting people on the same page with you



Step #5

Set the rules for the brainstorming session

- Make sure people understand that criticizing is not allowed. Encourage that all voices be heard.



Step #6

Facilitate the brainstorming session

- write the ideas down so they are visible. The visual aid helps people build ideas on top of each other.
- ask people to raise their hands, and call on them one at a time

Points to keep in mind while planning the brain storming session

1 Use An Inspiring Space

Fill the brainstorming with interesting & motivational posters and enables the space to be organized in around table format.

2 Focus On Quantity

Brainstorming session aims to generate as many ideas as possible

3 Have The Right People

- Staff members who are not too close to the problem
- Someone must represent the client, who is well versed with the client's desires

4 Eradicate Negative Thinking

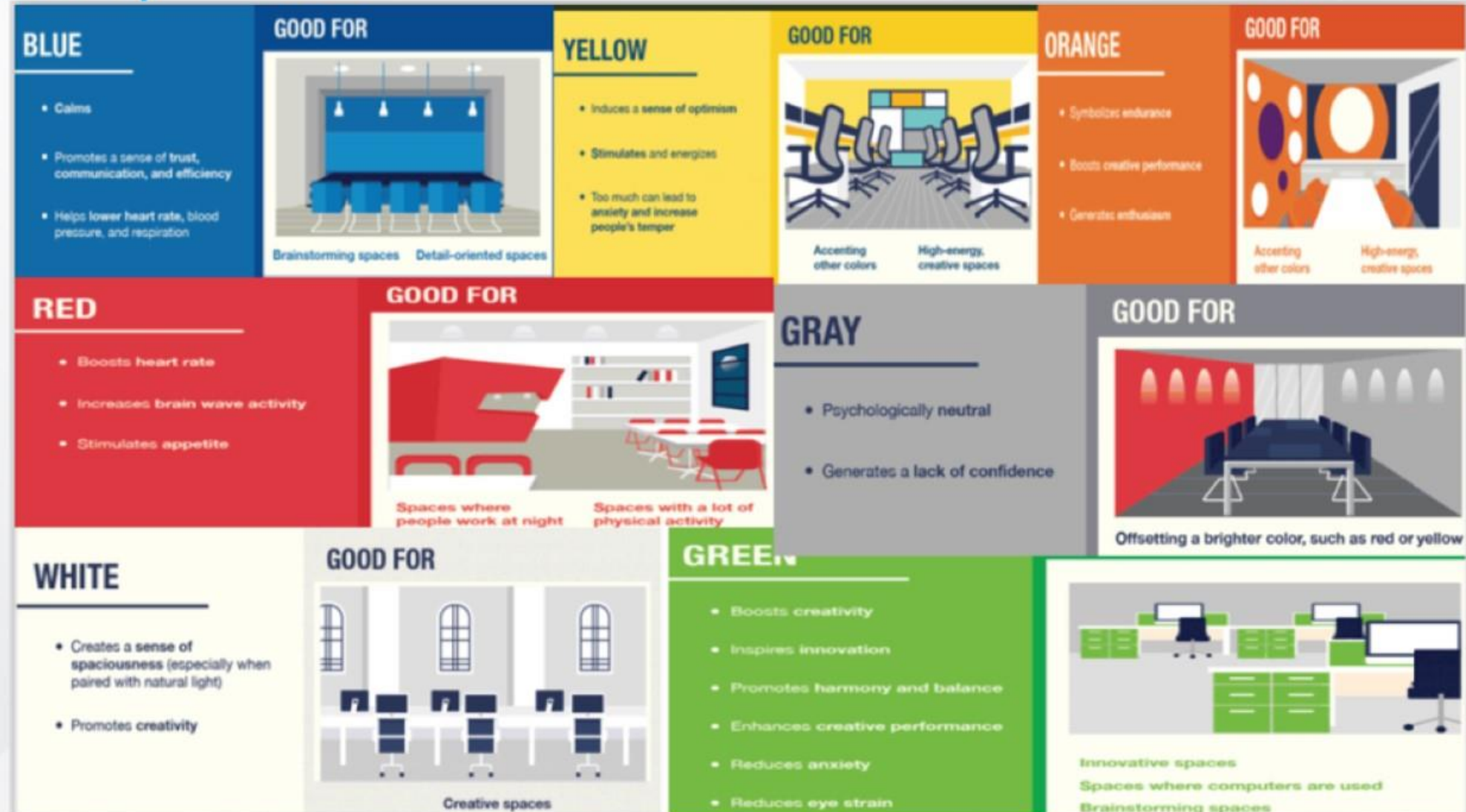
Eliminate negative responses such as: We tried and failed since this type of comments stops creativity.

5 Keep Time Limit in Mind

If the session is stretched to more than 30 minutes it may not be as effective as it needs to be

6 Equal Importance

Use someone other than the boss. The one who can help the session going as nothing kills a brainstorming session than an authority figure.



Brain storming Session

- ❑ Group brainstorming about “how to help student concentrate in lectures?”

Determine

- What is the place and the invite list of your session
- How would you ask the participants to get ready before the session
- How would you make the session a fun and relaxing environment

Exercise:

- Do a brain storming session about one of the following topics:
 - How can we make learning more fun
 - How to stop students from skipping classes
 - How to help student get higher grades

Guide lines

- Use hats to focus the thinking ... one at a time
- Don't have to use all the hats
- Can use some hats more than once
- No debates or arguments ... brainstorm

Guide lines

- Begin with blue
- End with blue
- Keep red brief
- Keep time (3-4 minutes per hat)

Thank You