Creative Thinking in a Rapidly Changing Workplace

Welcome to the Course

Creative thinking enriches the quality of an individual's life. It brings more success and happiness. Everyone has creative potential. With the right tools and techniques, you can enhance your creativity and apply it to your personal and professional life.

Why Creativity is Important

1. Creativity improves your daily decision-making
2. It reduces negative emotions
3. It is required to become a better problem solver
4. It provides a competitive edge in the employment market of the 21st century
5. It enhances self-esteem as it provides you with a sense of accomplishment
6. Creativity teaches grit

The Origin of Creative Mind

Creativity is a process. Three factors differentiate a creative idea from a normal thought. :

1. The idea has to be new to you
2. It has to be beneficial to others
3. It needs to possess surprising element

How are creative ideas generated? Our brain generates creative following two steps:

1. Concepts are generated
2. Exploration of value or application of those concepts

The Barriers to Creative Thinking

Following are the obstacles to your creative thinking process.

1. Functional fixedness: Not being able to think beyond the regular function of a product, service, or system
2. Structural fixedness: Not being able to think beyond the regular shape or form of a product, service, or system
3. Relational fixedness: Not being able to think beyond the traditional relations among products, services, or systems

With proper practice you can overcome these barriers and start your creative journey.

The Systematic Inventive Thinking or SIT method

Systematic inventive thinking (SIT):
It finds how a pattern can be used in your chosen product or service, by reapplying the creativity in a systematic way.

This can be explained by the five creativity tools or techniques:

1. Subtraction
2. Task Unification
3. Multiplication
4. Division
5. Attribute Dependency

"Function follows form" Principle

Function follows form principle and is used in each of the five tools of SIT.

Steps of Function follows form:

1. List the functions of a product or service and the functions of each of its components
2. Use any of the five tools on the product or service, to build a new reformed product
3. Ask two questions in this order: "Should we do it?" and then "Can we do it?"
4. Adapt the idea before implementing

These steps are iterative, therefore these steps might need to be repeated again and again for a well formed applicable idea to be created.

Subtraction Technique

The subtraction technique eliminates an essential part of a product and allows it to be used in a different way.

1. Follow each of the steps of the "Function follows form" in the subtraction technique. (To get rid of the fixedness or barrier of thinking)
2. Remove an essential part of a product and then replace it with something else

Example of subtraction technique creativity:
Instant soup and lens were developed by the subtraction technique. Water was eliminated in soup to create instant soup and the frames were eliminated in eyeglasses to come up with contact lens.

Applying the Division Technique

Division technique helps to overcome structural fixedness/barrier.

1. First of all, the Function follows form steps.
2. Apply the division technique, by breaking the product or service into components or breaking down just one component.
3. Another division technique is preservation division. That is preserving the functionality of each of the components broken down,you can also use this technique.
4. After this step again ask yourself the questions “Should we do it?” and then “Can we do it”.
5. Adapt the idea before implementing.

Applying the Multiplication Technique

Multiplication technique is copying a product or component of a product and using it innovatively.
The steps of applying the multiplication technique:

1. List out the components or features of the product or service.
2. Make several copies of any one of the components of that product or service.
3. Think of changes or improvements that can be brought to the copied components.
4. Make a table and list out the component, attribute and then visually imagine and describe the changed product.

Component	Attribute	Virtual Product

5. Ask the questions “Should we do it?” and “Can we do it?” and “Will it be feasible?”
6. Adapt the idea, before implementing it.

Applying the Task Unification Technique

Task unification technique: is when an additional function is added to an existing product or service.

The steps to applying this technique:

1. Make a list of the internal and external components of the product, process or service.
2. Add an additional task to a component besides its normal or existing tasks.This can be done in three different ways:

    a. One of the internal components will perform tasks of another internal component.
    b. An internal component will perform an external task.
    c. An external component of the product or system will perform an internal task
3. Ask the questions "Should we do it?","Will it benefit anyone?" and then "Can we do it?" and "Will it be feasible?"
4. Adapt the idea by reforming and modifying it, before applying the idea.

Applying the Attribute Dependency Theory

Attribute dependency is the dependency of one part of a product on another part of that product.

To apply this technique:

1. Make a list of all of the attributes of the people and environment of the product or service you are thinking of working on.
2. The list can be of two types, physical attributes and characteristic attributes.Remember to include time as an attribute.Number them one,two, three.
3. List out the attributes of the product or service,not its components. And number them in a,b,c.(Component is tangible and the attribute is not. E.g The screen of a TV is a component, it height and width are its attributes)
4. From the two different lists, randomly pick one from each list.e.g number 4 and B. And think that if attribute 4 changes so will attribute B. In this way make many combinations, it will help you to think of different versions of the product.
5. Ask the questions "Should we do it?","Will it benefit anyone?" and then "Can we do it?" , "Will it be feasible?"
6. Adapt the idea by reforming and modifying it, before applying the idea.

How to Create a Creative Team

One good way to boost creative thinking is to do it in teams.
How to create a creative team:

1. Bring very diverse team members
2. The team should consist of maximum 12 members
3. All members must be dedicated and committed to the team and the topic of discussion
4. They must have a sound understanding of the topic
5. Build strong bond with the team members by being available when they need your time and knowledge/expertise

How to Facilitate Group Creativity

To ensure the maximum creativity in a group discussion it is important to effectively manage or facilitate the group discussion.

Here are some tips to follow:

1. Assign a comfortable room, and provide necessary materials
2. Set clear constraints on the discussed problems or topics
3. Choose one of the five creative thinking tools collectively
4. List the components and attributes of the topic under discussion and number them.
5. Divide the team into groups and assign different components to each team and tell them to apply the selected creative thinking tool or technique on that component within a certain time limit.
6. Identify the ideas generated by numbering and address the ideas.
7. Think ways to keep the session interactive and engaging.

How to Select the Best Ideas

How you will select the best idea:

1. Set a maximum of 5 criterias against which to measure the ideas
2. Set the ideas in a standard format that includes:
    a. names of the ideas
    b. short description
    c. benefits
    d. target audience
    e. challenges of the idea
3. Share the standard format and let them vote based on the set criteria

Final Thoughts

What you learned in this course:

1. Barriers to creativity
2. Systematic inventive thinking (SIT)
3. Five creative thinking tools or techniques
4. How to brainstorm creative sessions in a group
5. How to facilitate such creative sessions
6. How to select the best creative idea

These tips will help you to think creatively in your personal and professional life and enrich the quality of your life.