

Top Ten 2020 Skills Project

SKILL 3 – CREATIVITY

Divergent and Convergent Thinking



3. Creativity

“The ultimate solutions to problems are rational; the process of finding them is not.”

J. P. Guilford

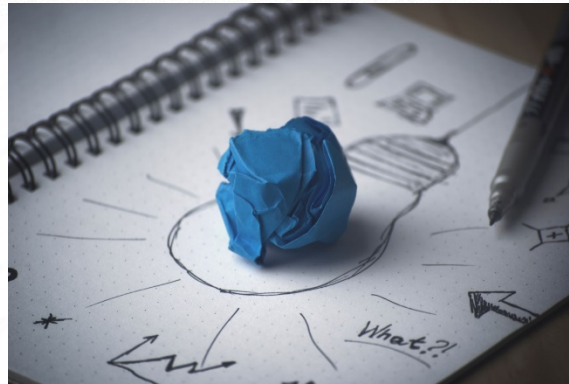


SKILL 3 – Creativity

Divergent and Convergent Thinking

Overall objective

- Understand how the Divergent and Convergent Thinking Processes influence the Creative Thinking.



Specific objectives

- Define and understand the Divergent Thinking
- Define and understand the Convergent Thinking
- Acquire techniques to develop the Divergent Thinking



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Divergent and Convergent Thinking

Learning method

- You have to read all the slides carefully to understand the concepts addressed in the training pill.
- In the end, you have to complete an exercise in order to test your knowledge.



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Divergent and Convergent Thinking

Contents

- Divergent Thinking
 - Convergent Thinking
 - Suggestions to promote the Divergent Thinking
- Techniques to develop the Divergent Thinking
 - Brainstorming
 - Meditation
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 - Keeping a Journal
 - Creation of Artwork

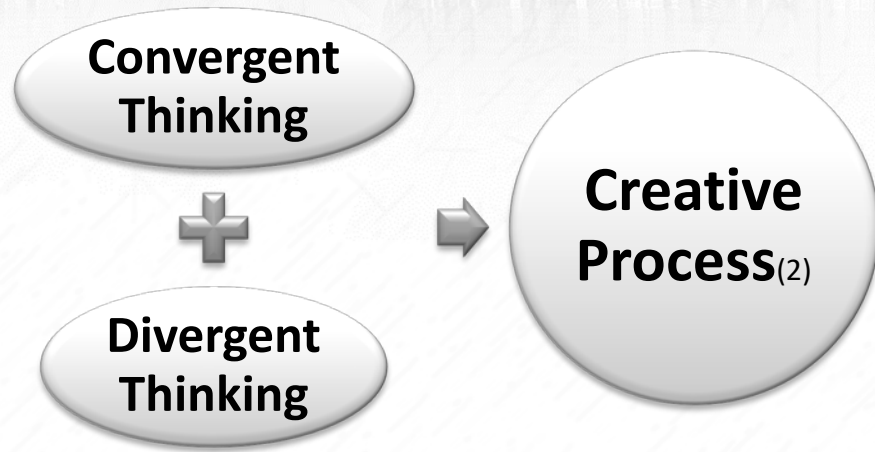


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Divergent and Convergent Thinking



The Divergent and Convergent Thinking are **two unique dimensions of thinking**⁽¹⁾.



Both thinking processes are **necessary to explore creativity and find solutions to different problems**⁽¹⁾.



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Divergent and Convergent Thinking

Divergent Thinking⁽²⁾

Open and explore new directions

Create options

Produce a large amount and diversity of ideas



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The Divergent Thinking reflects a complex, creative and intuitive mind⁽²⁾.



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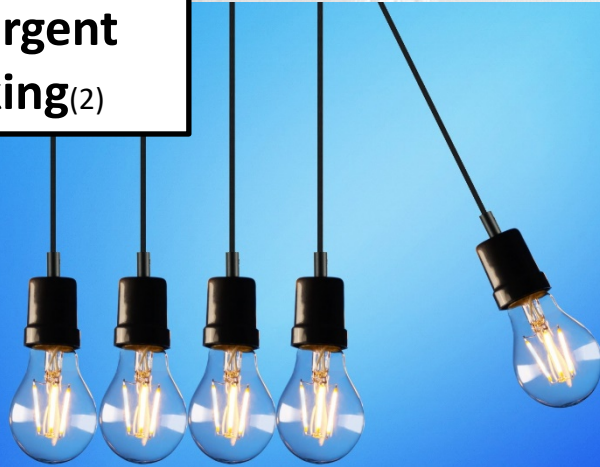


Divergent and Convergent Thinking

Convergent Thinking⁽²⁾

Assess ideas and select the most viable ones.

The Convergent Thinking relates with the intellect, rationality and clarity⁽²⁾.



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Divergent and Convergent Thinking

Both processes usually work better when they are applied **simultaneously**⁽¹⁾.

The **Divergent Thinking** develops in a spontaneous and smooth way, allowing the **creation of diverse possible resolutions to a problem**⁽¹⁾.



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Divergent and Convergent Thinking

The **Convergent Thinking**, when applied after, allows the **selection of the best solution from the numerous options** obtained because of the Divergent Thinking⁽¹⁾.

The Divergent and Convergent Thinking are **connected**⁽¹⁾.



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Divergent and Convergent Thinking



**Suggestions to promote
the Divergent
Thinking⁽²⁾**

**Present the problem in a
challenging way, allowing the
person or group to think
“outside the box”.**

**Postpone judgement,
not allowing
criticisms or
compliments.**

**Write all the ideas
presented, encouraging the
volume and diversity.**



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**Suggestions to promote
the Divergent Thinking⁽²⁾**

**Support the unexpected,
working for the odd and
unusual and **encouraging
different perspectives.****

**Search for combinations of ideas
that could work together.**

**Build new ideas from ideas
already presented (without
judgement).**



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Techniques to develop the Divergent Thinking



Brainstorming^(3,4)

Group method that involves spontaneous contribution of creative solutions.

Process where creative ideas are created by an intensive and freewheeling discussion.



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Brainstorming

Every participant is encouraged to suggest as many ideas as possible, based on their diverse knowledge^(3,4,11).

Judgement is not allowed⁽¹¹⁾:

- No criticism;
- No comments.



In order to reduce fear.



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Techniques to develop the Divergent Thinking

Meditation^(5,6)



Opens your mind to new ideas.

Improves attention and makes it easier to register the novelty and usefulness of ideas.

Promotes determination and resilience when facing failure and setbacks, which are closely related with any innovation process.



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Techniques to develop the Divergent Thinking

Mind Mapping⁽⁷⁾

Increases your creativity because it allows you to create new ideas and identify relationships among the different data and information, and effectively improves your memory and retention.

Mind mapping is a tool that **allows you to review, organize, categorize and make connections between your thoughts and ideas**, even if they seem to be unrelated.



Divergent and Convergent Thinking



Techniques to develop the
Divergent Thinking

Keeping a Journal^(8,9)

Creativity benefits from regular practice to be stimulated, and keeping a journal is a great tool to maintain that practice.

Writing about your experiences supports its processing and **allows you to see new ideas that may not have been seen at first sight.**

Helps you explore
your creativity.



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Divergent and Convergent Thinking

Techniques to develop the Divergent Thinking

Creation of Artwork⁽¹⁰⁾



Developing art stimulates the creative thinking and improves the problem-solving skills, because it uses both sides of the brain.

The creation of artwork acts as a brain exercise, stimulating the communication among several parts of the brain and creating new connections between brain cells.



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Divergent and Convergent Thinking

Exercises

Choose the most suitable answer:

1. In Divergent Thinking:

- a. the ideas are assessed and the most viable ones are selected;
- b. new and diverse ideas are produced and explored;
- c. there is no creation or assessment of ideas.

2. In Convergent Thinking:

- a. the ideas are assessed and the most viable ones are selected;
- b. new and diverse ideas are produced and explored;
- c. there is no creation or assessment of ideas.



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Exercises

Choose the most suitable answer:

3. The Divergent and Convergent Thinking:

- a. should be applied simultaneously;
- b. are disconnected;
- c. disrupt the creative process and the creation of resolutions to a problem.

4. In the Creative Process:

- a. it is only necessary the Divergent Thinking to find new solutions;
- b. it is only necessary the Convergent Thinking to find new solutions;
- c. both processes are necessary to find new solutions.



Exercises

Choose the most suitable answer:

5. In order to develop the Divergent Thinking, you should:

- a. allow criticisms or compliments;
- b. not encourage different perspectives;
- c. present the problem in a challenging way.

6. In the Brainstorming process:

- a. the spontaneous contribution of creative solutions is discouraged;
- b. creative ideas are created by an intensive and freewheeling debate;
- c. the participants are encouraged to suggest only the ideas they are 100% sure of.



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Exercises

Choose the most suitable answer:

7. Meditation allows you to:

- a. improve your attention;
- b. concentrate on old ideas;
- c. be less decisive and resilient when facing setbacks.

8. Mind mapping:

- a. decreases your creativity;
- b. allows you to make connections between ideas;
- c. does not allow you to organise your options.



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Exercises

Choose the most suitable answer:

9. Writing about your experiences:

- a. does not contribute to explore your creativity;
- b. allows you to see new ideas that may not have been seen at first sight;
- c. is a waste of time in the creative process.

10. The creation of art:

- a. stimulates several parts of the brain;
- b. only improves creativity in the artists/art creators;
- c. is only a leisure activity.



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