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HOW TO COMMUNICATE CRITICALITY

PROBLEM-SOLVING TRAINING MODULE



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Table of Contents

01

Introduction

02

Problem-solving in the professional environment

03

Impacts recognized through gender stereotypes

04

Good practices and tips

05

Conclusions

1.Introduction



It is difficult, not to say impossible, to solve complex problems without considering many factors and the **relationships between their causes and effects**. Defining and showing these relationships graphically helps a great deal, especially if we need an advanced problem-solving technique to use in a team, at work.

The first diagram that successfully showed the relationships between causes and effects was **Kaoru Ishikawa's** diagram or **cause-effect diagram**.

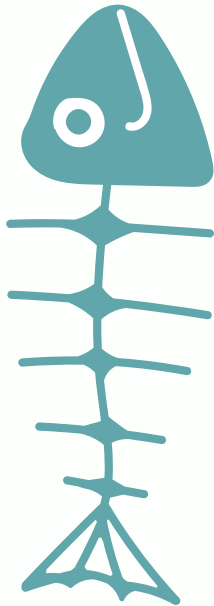
The preparation of a **fishbone** diagram, summarising the main concepts, is based on a series of logical reasonings that lead to the definition of the problem up to the identification of the causes, and that unfolds through the following steps:

- problem definition,
- identification of the **expectations**,
- list of known and unknown **factors influencing** the problem,
- involvement of the **entire team** in solving the problem,
- **validation** of data, information, methods and tools,
- new knowledge, new decisions, and new **ideas**.

There are many advantages to using the cause-effect diagram:

- it relates **effects** to causes,
- it represents **all possible causes** while helping to search for the most important ones,
- it is a **living tool** that is constantly fed and updated by brainstorming, team feedback and possible solution hypotheses,
- its structure helps to build a **systemic thinking**.

2. Problem Solving in the professional environment



The Fishbone

The proposed module is inspired by a widespread management technique developed in Japan since 1943 by **Kaoru Ishikawa**, a guru of Total Quality.

The methodology is based on a visual representation of all possible causes related to a problem, analysed from its effects.

The diagram is based on the principle that **identifying symptoms** is the first step in solving a problem. It can therefore be defined as a form of logical and structured representation of the links between an effect and its causes.

The graphical representation takes the form of a cause-effect diagram, also called a **fish-bone diagram**, that allows to **visualise** the correlations -sometimes very complex- between the measured effects of a phenomenon (the problem of an organisation) and the complex of causes that contribute to determining it.

Causes are described by separating those attributable to **human factors** (behaviour, emotions, etc.) from those attributable to **technical elements** (e.g. resources, machinery, maintenance, etc.).

The technique popularized by Ishikawa can be **simplified** in order to be easily learnt and immediately applied to any professional context.

The Fishbone diagram allows a visual representation of the cause-effect relationship between a problem and its many causal factors.

The diagram is useful:

- In the Diagnosis phase, to identify the possible causes of a failure.
- In the Decision phase, to organise possible actions and predict their effects.
- In the Improvement Plan phase, to identify the causes of potential problems and solutions.

3. Impacts recognized through gender stereotypes



As per 2021, only 35.3% of the manager positions in the EU are held by women. Too often, women are not chosen to hold a manager position, if the latter is debated with a man.

This is not only due to the fact that women are often seen as "**more emotional**" and less rational than men are, but also because the traditional aspects recognised as **Leadership** characteristics are viewed as masculine. Traits such as Decisiveness, Resilience, Empowerment, are all usually associated with a male figure. And, to no one's surprise, when asking people, or even Artificial Intelligence softwares to imagine a "manager", in the majority of cases the response is: a white, possibly middle-aged man.

But the truth is, **Problem solving is a managerial competence**. It entails a strong instinct for Decision Making, which is indeed something that affects the interpersonal aspects in the work environment; Continuous improvement; Risk Management; Allocation of Resources (both tangible and intangible).

The aim of this module is to help women at work, especially if in managerial positions, to consolidate those skills, perpetuating the idea that **Problem Solving** is, as a matter of fact, a managerial skill and **can help women to assert their Leadership through structured yet empathetic tools**.

In this Module, we proposed the FISHBONE Method for Problem Solving, useful as it focuses on problem-solving efforts by providing a comprehensive view of potential causes; it also helps in avoiding narrow or biased thinking and ensures that all relevant factors are considered.

In the next section, we will give some more good practices and useful tips for Problem Solving.

4. Good practices and tips



Here are some problem-solving tips to help you grow in your profession and Leadership.

1. The Fishbone Diagram can be a very useful tool to increase your Leadership competence, as it is designed to be used in a team, where the leader can show a full range of power skills like Active Listening, Effective Communication, Critical Thinking, Assertiveness and Problem Solving.

2. Utilize data-driven decision-making: Gather and analyze relevant data to inform your problem-solving strategies. Make decisions based on evidence and insights rather than relying solely on intuition. Data-driven decision-making can increase the effectiveness and efficiency of your problem-solving efforts.

3. Emphasize adaptability and agility: In our fast-paced world, adaptability and agility are key. Be open to change, willing to pivot when necessary, and flexible in adjusting your problem-solving approaches based on new information and feedback. Embrace the dynamic nature of entrepreneurship with confidence.

4. Seek mentors and role models: Find mentors and role models who can provide guidance, support, and inspiration specifically tailored to women in entrepreneurship. Learn from their experiences, seek their advice, and leverage their networks to navigate challenges and enhance your problem-solving skills.

5. Celebrate successes and learn from failures: Recognize and celebrate your problem-solving successes, no matter how small. Equally important, learn from your failures and setbacks. Reflect on both successful and unsuccessful problem-solving attempts to extract valuable lessons and insights for future endeavors.



5. Conclusions



In conclusion, problem solving is a valuable skill for addressing challenges in the workplace, also related to the relevance of **communication**.

The cause-effect diagram, in fact, shows the importance of communication in describing the problem, to the extent that communication of the problem itself sometimes becomes one of its **most critical components**, as anyone working in a team knows.

When considering the specific issues faced by women, the **FISHBONE** method provides a structured approach to identify and tackle the underlying causes of gender disparities. By utilizing this method, women can drive positive change, promote gender equality, and create more inclusive work environments for themselves and future generations.

By applying the FISHBONE method, women can gain insights into the complex causes of gender disparities and develop targeted strategies to address them. This may involve advocating for policy changes, fostering a more inclusive culture, promoting diversity in decision-making positions, and implementing initiatives that support women's career development.



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