

Critical Thinking: Logical Reasoning & Cognitive Biases

Learn to apply logical reasoning, evaluate arguments and mitigate cognitive biases to improve decisions and problem solving.

8

MODULES

27

TOPICS

1

HANDS-ON EXERCISE

COURSE OVERVIEW

Critical thinking is a foundational skill for decision making and problem solving. Becoming a skilled critical thinker requires knowledge and skills in a variety of subjects and this is not taught as part of our education curriculum.

WHO THIS COURSE IS FOR

Managers

Decision Makers

Analysts

Team Leaders

Consultants

Researchers

LEARNING OBJECTIVES

The expected learning outcomes from this critical thinking workshops in brief are:

- Participants learn about the two systems of thinking, and understand why our problem solving and decision making is often flawed because the solutions often spring from System 1 thinking when what is required is system 2 thinking
- Participants will learn how to Look at problems and decisions from multiple perspectives and considering all relevant dimensions of the decision or issue. They will also learn how to reason from evidence, consider implications, articulate implications, and look at other stakeholder before finalizing a solution, decision, plan or strategy
- They learn about the different types of reasoning we use in our decision making and problem solving. They learn to apply this knowledge to evaluate all the different types of reasoning used by others in their arguments in support of a decision, solution, plan or strategy.
- Participants learn how to develop logically persuasive reasoning and how to present it using the Pyramid principle for maximum logical force
- Participants learn to recognize fallacies and provide mitigation processes to avoid poor judgements arising from cognitive biases

8 Modules, 27 Topics

01

Introduction

We use two different systems of thinking to arrive at conclusions and in decision making. This module Provides a short introduction to the two systems of thinking.

TWO SYSTEMS OF THINKING

- System 1 and System 2
- Definition of critical thinking
- The relevance and importance of critical thinking

02

Two Different Elements to Critical Thinking

The relationship between the two is the same as between the sciences and engineering. Engineering is an applied science. Similarly applying critical thinking to decision making and problem solving requires skill and expertise in thinking critically. This module outlines what goes into both elements

TWO ELEMENTS OF CRITICAL THINKING

- How to think critically about an issue
- Elements of How to think critically

HOW TO THINK CRITICALLY ABOUT AN ISSUE

- Introducing the critical thinking framework
- Illustration of the framework using a case study

EXERCISE

- Case study analysis applying the Critical thinking framework

03

Types of Reasoning

At work and in life we many different types of reasoning to arrive at what to believe and what to do. For evaluating reasoning presented to us, and to also build logically persuasive reasoning, we need to understand all the different types of reasoning used.

INTRODUCTION TO LOGICAL REASONING

Vocabulary of logical reasoning · Types of arguments · Convergent arguments · General to specific · Specific to general · Arguments by analogy · Causal reasoning

Mapping arguments

EVALUATING ARGUMENTS

Using the ARG principle to evaluate arguments

04

Linguistic Pitfalls

There are several all-pervasive linguistic pitfalls that derail sound reasoning and critical thinking. It is useful to understand what some of these are and how to avoid them.

CLEAR THINKING AND COMMUNICATION

Ambiguity · Relative and vague terms · Misleading comparisons and misleading graphs

05

Fallacies

There are many all-pervasive errors in reasoning that masquerade as good reasoning. These are called fallacies. We will discuss some of these fallacies

TOPICS

Top fallacies

06

Cognitive Biases

Our judgements are flawed in certain situations every time. This is due to errors of cognition and these errors in judgements are called cognitive biases. These cognitive biases lead to poor judgements and as a consequence we end up making poor decisions.

TOPICS

Top Cognitive biases

07

Logically Persuasive Communication

In business, research and academics we are often required to analyze and present our analysis or findings in the form of written reports or presentations. Unless these reports are organized in a logical fashion, it is difficult for the reader to quickly grasp the conclusions and the reasoning behind it. This module discusses how to develop logically persuasive communication

LOGICALLY PERSUASIVE COMMUNICATION

- Structure of logically persuasive communications
- The Pyramid Principle
- Structure of communications using the Pyramid principle

08

Applying Critical Thinking

The last module discusses how we can go about applying critical thinking to decision making and problem solving. It is essentially a recap of all the concepts discussed in previous modules. This module also gives some suggestions on how to develop a culture of critical thinking in the organization

APPLYING CRITICAL THINKING

- Using the critical thinking framework
- Getting reportees to adopt elements of the critical thinking framework in analytical tasks, decision making and problem solving
- Avoiding language traps and building strong arguments

NOTES

- Global confectionery case study is circulated prior to the workshop and participants expected to read the case study. This case study is used to illustrate the application of the critical thinking framework to problems
- Watson Glaser Critical thinking assessment: This assessment is available at costs to participants if they (organization) should want to assess their critical thinking
- In a two day workshop, organizations can select a case study relevant to the group and industry. The participants are organized into groups, and they analyze the case study applying the critical thinking framework and present the analysis using the Pyramid structure
- Two day workshops will also feature more interactivity and some exercises after each module.

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

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