

# **Business Logic**

**Lecture 12: Critical Thinking and Decision Making**

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## **Lecture Learning Objectives:**

At the end of the lecture, you will be able to:

1. Show how critical thinking leads to better decisions.
2. Distinguish the different decision-making techniques.
3. Examine the crucial role of decision makers in an organization.
4. Show the mutual relation between decision making and critical thinking.

### **Critical Thinking as a Qualified Decision-Making Tool**

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**Critical thinking** is an important requirement for individuals to make better decisions, while various decision-making techniques also contribute positively to the quality of critical thinking of individuals. It is very important for individuals who want to make more successful decisions both in their personal and professional lives, in order to improve their critical thinking capacities and to benefit from decision techniques in making high importance decisions. For today's and tomorrow's executives who influence the lives of countless people with their decisions, developing critical thinking skills will be an approach that requires determination and commitment as an indication of their respect for their profession

Every business and management invests in human resources to improve the decision quality of senior executives, especially those who make strategic decisions. Undoubtedly, one of the most prominent investments in business resources is the investments made in the training and development of managers. Every effort to improve the decision quality of the managers will increase the quality of the decision in parallel with the increase of the qualifications of the managers.

Management scientist Daft described the decision as a choice among the existing alternatives. Decision-making is the process of identifying problems and opportunities and then providing solutions to them (Daft R. L., 2008, p. 272).

There are many techniques that can be used at various stages of the decision process and make it easier to make more accurate decisions. Some of the most used ones are the following:

1. Decision Trees:
2. Six Thinking Hats
3. Fishbone
4. Brainstorming

5. Nominal Group Technique

6. Delphi Technique

### **Relationship between Decision-Making and Critical Thinking**

Usually, a threat or an opportunity arises when managers need to make a decision (Daft & Marcic, 2009, p. 207). In such cases, managers should first become aware of the threat or opportunity. The main thing that is necessary to recognize a threat or opportunity situation is knowledge. Information needed by managers can be obtained from printed sources such as financial reports, performance reports or reports on activities carried out within the enterprise, or informally through communication with other managers, employees or internal and external stakeholders of the entity (Daft & Marcic, 2009, p. 208).

In the process of defining the problem, which is another stage in the decision-making process, a critical thinking manager needs to analyze or examine the situation or opportunity he/she encounters. The best way to do this is to ask questions that will clarify the situation and clarify the definition of threats or opportunities. Kepner and Tregoe stated that it is necessary to ask a series of questions to better define the problem and to reveal the underlying causes of the problem: i) What is the situation affecting us, ii) When, iii) Where did it happen, iv) How did it happen, v) Urgency of the situation vi) whether the situation is related to other situations or events (Kepner & Tregoe, 1965, p. 41-42).

At the stage of developing alternatives, alternative methods that can be used to solve the problem should be found. At this stage, it was stated that limiting the alternative search had a negative effect on the success of the decision (Nutt, 2004, p. 27). A critical thinker should be able to present possible alternative solutions by evaluating the problem situation from different perspectives. In addition, managers who are based on a critical approach should be aware of the need to apply innovative thinking methods for alternative solutions.

Another step in the decision-making process is the selection of one of the alternatives. Decision selection is the selection of the most promising alternative action. The best alternative is generally the solution that best fits the overall goals and values of the enterprise and provides the desired results using the least resources (Daft & Marcic, 2009, p. 210). In addition, moral and ethical consequences of the decision should be taken into consideration when making decisions (Fisher, 2011, p. 175).

In the implementation of the decision, it is necessary to use the managerial, administrative and persuasive skills of the managers to ensure that the selected alternative is fulfilled.

Implementation of the decision may require negotiation with people affected by the decision. Communication, motivation and leadership skills should be used to see the decision being implemented. Employees are committed to more positive actions when they see that managers follow the decisions made by following the success of the implementation (Daft & Marcic, 2009, p. 211).

Managers should observe the implementation of the decision and examine the positive and negative impacts they believe will be achieved and whether the results they have achieved during the decision-making process are achieved. As a result of these observations, they should make an effort to improve their own thinking processes by reviewing the stages of thinking applied in the decision-making process in the light of the information they have acquired.

Since programmable decisions are often for repetitive situations and the steps to be taken are often specific, there is limited space for critical thinking for such decisions. In any case, from a critical point of view, such decisions can be evaluated to determine the reasons for their emergence and to find out if there is a solution that can eliminate the problem situation.

**Unprogrammable decisions** are made in unique, ambiguous cases. Usually, such decisions have important consequences for the business. Many unprogrammable decisions require strategic planning because uncertainty is high and decisions are complex (Daft, 2008, p. 272). **Critical thinking skills** are the most needed decisions. In such a decision-making process, as much information as possible should be obtained and important criteria should be determined for an effective decision. Critical thinking is based on rational thought, and rational thinking will be more reliable than decisions based on emotion, intuition or belief (Tittle, 2011, p. 11). The techniques used in the decision-making process offer various benefits to decision-makers and help them to make more dominant decisions. The goals of critical thinking include thinking and making decisions with as many and necessary information as possible (Ennis, 2015, p. 32). **Decision-making techniques** aim to help decision-makers in decision-making by providing them with different perspectives and reviewing information in a specific order.

It is often difficult to decide on a complex issue involving many options and outcomes that interact in all ways. In such cases, decision trees are a useful tool to see the whole problem (Lau, 2011, p. 211). Taking the whole situation into consideration is among the tendencies of a critical thinker (Ennis, 2011, p. 6). Decision trees present the entire problem to the decision-maker's assessment, but a critical perspective is also needed during the formation of the decision tree in order to undertake an ideal decision process. The tendency to approach different views in an open-minded manner and to be aware of and evaluate the alternatives (Facione, 1990, p. 28) should be implemented in the decision-making process and ensure that all available data is contained in the

decision-tree. Only after such a decision tree forming process can a knowledgeable and logical decision-making process be completed, which is a requirement of critical thinking. Another feature of decision trees is that they reveal the situations that will arise after the decision. According to Paul, a thinker should take into consideration the reflections that will occur after making a decision and should what consequences will arise when he transforms his thoughts into reality (Gambrill & Gibbs, 2009, p.5).

**Six thinking hats**, which is another method to support the decision-making process, becomes more valuable when critical thinking is considered. According to De Bono, the biggest enemy of thinking is complexity, because complexity leads to confusion. When thinking is clear and simple, it becomes more enjoyable and more effective. De Bono stated that thinking with six hats had **two purposes**. **The first** is to simplify thinking by allowing the thinker to deal with one thing each time. Instead of dealing with different perspectives such as emotions, logic, knowledge, hope and creativity at the same time, the thinker can think about them separately.

The **second objective** is to provide a transition in thinking. Focusing only on emotions or information only leads to the same type of information (Bono, 2000, p. 133). Different hats enable us to come up with different kinds of perspectives and protect us from one-sided perspectives. In addition, addressing a subject from one perspective at a time is an effective way to avoid overlooking different perspectives in the decision-making process.

Lack of knowledge, prejudices, emotions or other factors that limit one's objectivity or rationality are factors that hinder critical thinking. Individual's self-monitoring and evaluation, which is an important critical thinking skill, including the consideration of the extent to which an individual's ideas are influenced by these factors and refine themselves from it (Facione, 1990, p. 93).

De Bono's six-hats thinking metaphor represents six different cognitive approaches to critical thinking and analysis in understanding a situation or problem and trying to find a suitable solution. The white hat focuses on the data, information and questions that need to be asked. Lack of information is also identified at this stage. The red hat provides a clear expression of emotions and feelings. Black hats are important for a careful critical approach. Interrogation, revealing negative approaches and revealing weaknesses in propositions are among the features of this perspective. The yellow hat has an optimistic perspective and reveals the strengths in assessing the situation at hand. The green hat combines critical and creative thinking and focuses on finding new ways to solve problems. The blue hat, on the other hand, requires analysis of the situation and awareness of the ideas and situations uncovered. An important benefit of the six-hat thinking technique is that it shows that there is no single method for problem-solving or decision-making (Kivunja, 2015).

In order to find a solution to a problem, it is necessary to first identify and understand the causes of the problem. According to Okes, businesses and managers often feel that they do not have time to carry out the deep analysis needed to solve the problems and turn to solutions that temporarily eliminate the problem at hand. However, this problem then repeats itself, leading to a recurring cycle. Recurring problems can lead to the interpretation that managers are not doing their job well enough or diligently. According to the author, root cause analysis is necessary to overcome such situations, but this is not widely known by most managers (Okes, 2009, p. 14-16). Tools that help groups and individuals to identify root causes of problems are known as root cause analysis tools. Root cause analysis or fishbone diagram is the process of identifying problem-causing factors using a structured approach with techniques designed to focus on identifying and solving problems (Istikomah, et al., 2017, p. 84).

The most important aspect of the fishbone technique, which is developed by Japanese quality expert Dr. Kaoru Ishikawa and is one of the basic techniques used in root cause analysis, is to visually reveal the causes of the problem and to facilitate the solution. It is clear that the fishbone technique will be very useful in asking questions that lead to reasons and explanations in the first stage of the critical thinking process (Cottrell, 2005, p. 2; Tittle, 2011, p. 17; Ennis, 1996, p. 2). In addition, with the fish bone technique revealing the root causes of the problem visually and clearly, situations that can be quite complicated when not handled carefully will be easily clarified. This situation is in line with 'orderliness in working with complexity and diligence in seeking relevant information' approaches of critical thinking (Facione, 1990, p. 25), suggesting that this technique will be useful. On the other hand, in a study conducted in 2017, it was revealed that the development of critical thinking skills was positively affected when a problem-based teaching technique, which aims to develop students' critical thinking skills, is supported by fishbone technique (Istikomah, et al., 2017, p. 89).

The **brainstorming technique**, first described by Alex Osborn, is a useful method designed to be used in problem solving as a group, but it's also useful for individuals (Halpern, 2014, p. 492). Osborn described brainstorming as an organized way of letting the mind produce ideas without trying to judge the value of ideas (Ghabanchi & Behrooznia, 2014, p. 514).

## **READINGS AND VIDEOS (Please see the digital copies of the materials.)**

**Reading 1** Turan, U., Fidan, Y., & Yıldıran, C. (2019). Critical Thinking as a Qualified Decision-Making Tool in *Journal of History Culture and Art Research*, 8(4), 1-18.  
doi:<http://dx.doi.org/10.7596/taksad.v8i4.2316>

**Reading 2** Noel, L. Pierre, S. & Watson, J. (2017) Critical Thinking, Decision Making and Mindfulness in Fischler College of Education: Student Articles. 16. Retrieved from [https://nsuworks.nova.edu/fse\\_stuarticles/16](https://nsuworks.nova.edu/fse_stuarticles/16)

**Video 1** Webinar: The Case of Critical Thinking in Business in <https://www.youtube.com/watch?v=zoAarF7t5jQ>

**Video 2** The Importance of Critical Thinking in <https://www.youtube.com/watch?v=1wOQDBZZZWQ>

**Video 3** Critical Thinking Skills in <https://www.youtube.com/watch?v=9PsLktb7HTA>

### **ACTIVITY AND ASSESMENT**

Exercise 1 Write a reflection paper (150-200 words) on the impact and importance of critical thinking in the different decision-making techniques.

### **REFERENCES:**

**Critical Thinking as a Qualified Decision-Making Tool in Journal of History Culture and Art Research**

Turan, Fidan and Yildiran

**Critical Thinking, Decision Making and Mindfulness in Fischler College of Education: Student Articles**

Pierre and Watson

**Logic for Filipinos 3<sup>rd</sup> Edition**

Prisciliano Bauzon, National Bookstore 2013