Go Higher Module 1- Decision Making

The Rational Decision-Making Process

Decisions are made to solve problems. Decision-making is the process of making a choice between two or more alternatives. Awareness of this process can enable us to make better decisions.

Step 1: Identification of a Problem

"Before we do anything toward a cure, we've got to find out what the disease is in the first place. The first step in cooking rabbit stew is catching the rabbit." –Isaac Asimov, *'I, Robot'*

Every decision starts with a problem. A problem is a discrepancy between an existing and a desired condition. In other words, the initial stage of a decision is when you notice a difference between where you are and where you want to be.

Have you made any decision to buy an electronic item recently?

For instance, let us say your mobile phone stops working and it cannot be repaired.

Existing condition: A dysfunctional mobile.

Desired condition: An operational mobile with good features.

Decision: To choose which mobile to buy.

Step 2: Identification of Decision Criteria

Decision criteria are the factors that define what is important or relevant to solve the problem. They guide your move.

S.No.	Decision Criteria for Mobile
1.	Price
2.	Fast charging
3.	5G access
4.	Camera quality
5.	Processor

The simpler the decision-making criteria, the faster the decision-making process.

Step 3: Allocation of Weights to Decision Criteria

At times, the decision criteria will not be equally important. Then, you, the decision-maker, must weigh the items in order to give them the correct priority in the decision. A simple way to do this is to give the most important criterion a weight of 10 and then assign weights to the rest using that standard.

S.No.	**Decision Criteria**	**Weightage**
1.	Price	10
2.	Fast charging	8
3.	5G access	6
4.	Camera quality	4
5.	Processor	3

Step 4: Development of Alternatives

List the viable options that could solve the problem. Be open-minded when doing so by seeing the choices that loosely fit your criteria. Do not evaluate or compare the alternatives between themselves at this point.

S.No.	**Alternative**
1.	iPhone
2.	One Plus
3.	Moto G
4.	Xiaomi pro
5.	Redmi Note

Step 5: Analysis of Alternatives

1. Now, we start comparing the options to one another. Evaluate the alternatives based on the criteria identified in Step 2. Assign a score out of 10 to the alternative for each criterion, based on your assessment of it.

S.No.	Alternative	Price	Fast Charging	5G	Camera Quality	Processor
1.	iPhone	10	9	6	7	5
2.	One Plus	8	7	9	9	10
3.	Moto G	8	5	5	5	6
4.	Xiaomi Pro	7	6	7	6	6
5.	Redmi Note	9	8	8	7	5

2. Multiply the score with the weight of the criterion to get the weighted score of the alternative for each criterion.

S.No.	Alternative	Price	Fast Charging	5G	Camera Quality	Processor
1.	iPhone	100	72	36	28	15
2.	One Plus	80	56	54	36	30
3.	Moto G	80	40	30	20	18
4.	Xiaomi Pro	70	48	42	24	18
5.	Redmi Note	90	64	48	28	15

3. Add up the weighted scores on the criteria to get the total score of an alternative.

S.No.	**Alternative**	**Total Score**
1.	iPhone	251
2.	One Plus	256
3.	Moto G	188
4.	Xiaomi Pro	202
5.	Redmi Note	245

Step 6: Selection of an Alternative

Choose the alternative with the highest total score.

S.No.	Alternative	Total Score
1.	IPhone	251
2.	One Plus	256
3.	Moto G	188
4.	Xiomi Pro	202
5.	Redmi Note	245

Step 7: Implementation of the Decision

a. Convey the decision to stakeholders. These are the people affected by the decision. Get their commitment to it.

b. After that, put the decision into action.

c. For long-term decisions, reassess the environment for any changes that can affect your criteria or alternatives and factor them in.

Step 8: Evaluation of Decision Effectiveness

a. Evaluate the result to see if the problem was resolved.

b. Identify what worked and what did not.

c. If the problem still exists, identify at which step there was a problem and take corrective action.

The Rules of 'Go'[1]

"While the Baroque rules of Chess could only have been created by humans, the rules of Go are so elegant, organic and rigorously logical that if intelligent life forms exist elsewhere in the universe they almost certainly play go."

- Edward Lasker, International Chess Master

1. The objective is to score more points than the other player. Points are scored in two ways-

a. by capturing the other player's pieces, and

b. by occupying territory on the **'Go' board (*goban)***.

2. Every piece captured or point of territory taken is worth 1 point.

3. Pieces are called **'stones'** and are placed on points created by intersecting lines. Once placed, stones cannot be moved unless they are captured and removed from the goban.

4. Players play alternately. The player playing with Black stones plays first.

5. A point that is located directly above or sideways from a stone (i.e. orthogonally adjacent to it) is called its **'liberty'**.

[1] The 30-second clip from 7:45-8:12 of 'AlphaGo- The Movie' is an attractive demonstration of the main rules of Go. The documentary is on YouTube. You can visit the website - https://way-to-go.gitlab.io/#/en/intro. It is designed to teach Go. There are simple, interactive exercises to practice the rules.

6. A stone is alive because it has liberties. Stones need space to breathe to stay alive. As soon as opposing stones occupy a stone's liberties, it is captured and taken off the goban.

7. You cannot place a stone where it will have no liberty, unless it is done to capture a prisoner.

8. Two stones that are connected share liberties. There is strength in connections.

9. A point at which your opponent cannot place a stone, since it will have no liberty, is called an **'eye'**.

10. When your group encloses two eyes, it will live forever. The space within a living group counts as a player's territory.

11. In a formation that can lead to an infinite loop, the no-repetition rule states that the side that loses a stone in ko must first make a move elsewhere on the *goban* before they can go back and re-capture. The move that is played elsewhere is called a ko threat.

12. The game ends when:

a) both players pass on their turns (this happens when they do not have any legal or logical moves remaining), or

b) a player resigns, or

c) a player has no time remaining.