



DISK

Digital Skills for an Ageing Europe

**How to improve your deductive reasoning skills and
ways to boost your decision-making skills**

ITSFA



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Summary

- **Description and objectives**
- **Section 1. Deductive reasoning skills**
 - 1.1 What is deductive reasoning?. What does deductive reasoning look like?**
 - 1.2 What Is the difference between inductive and deductive reasoning?**
 - 1.3 Tips for improving deductive reasoning skills**
- **Section 2. Decision making skills**
 - 2.1 What is decision-making skills?**
 - 2.2 How to improve decision-making skills?. Let see 9 tips to boost your decision-making skills!**
 - 2.3 7 Extraordinary ways to improve your decision-making skills**
- **Glossary**





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Description and objectives

This course will introduce the concept of deductive reasoning skills, and some useful actions to boost them.

Besides, it will help beneficiaries to set the basis and improve their skills in decision making through practical approaches in an easy way.



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Description and objectives

At the end of this module, you will be able to:

- Incorporate the concept of **deductive reasoning**
- Visualise some **practical examples of deductive reasoning**
- Differentiate **between inductive and deductive reasoning**
- Know some **tips on how to improve deductive reasoning**
- Incorporate the concept of **decision-making skills**
- Learn some **ways to improve decision-making skills**
- Know some tips to **improve and enhance your decision-making skills**



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Unit 1: Deductive reasoning skills

1.1 What is deductive reasoning?

- It is an important skill used to **draw conclusions about the world around us and to improve our performance in life.**
- Its learning and development, through **logical thinking**, can help us to make meaningful and quicker decisions, predict behaviours, find solutions for unfamiliar situations, solve conflicts, and increase our perception of our surroundings, increasing self-confidence.
- This useful skill, also known as **top-down reasoning**. It is used in the scientific method, and can also be used in **our everyday life.**





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Unit 1: Deductive reasoning skills

1.1 What is deductive reasoning?

- This method starts out with a **general statement, or hypothesis, and follows some steps to reach a specific logical conclusion.**
- For deductive reasoning to work, there must be **first, a true premise or statement, followed for a second one and finally an inference or a logical conclusion based on those statements.**
- Deductions or statements are inferences that **must be true**. So, if you assume that the general statement, the hypothesis, must be true, the second statement must also be true.
- This is called a **deductive conclusion.**





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Unit 1: Deductive reasoning skills

What does deductive reasoning look like?

Seeing **examples of deductive reasoning** can help give you a better understanding of how the process works, and to better understand this reasoning in a practise way. Here we go:

- ➔ **“If ducks are birds, and all birds have wings, one can conclude that ducks have wings”.**
- ➔ **“Numbers that end in 0 or 5 can be divided by 5. The number 30 ends with a 0, so it is therefore divisible by 5.”**
- ➔ **“Redwood trees are plants, and all plants perform photosynthesis. So, we can conclude that redwood trees also perform photosynthesis.”**
- ➔ **“Noble gases are stable. Since helium is a noble gas, we know that helium is stable.”**



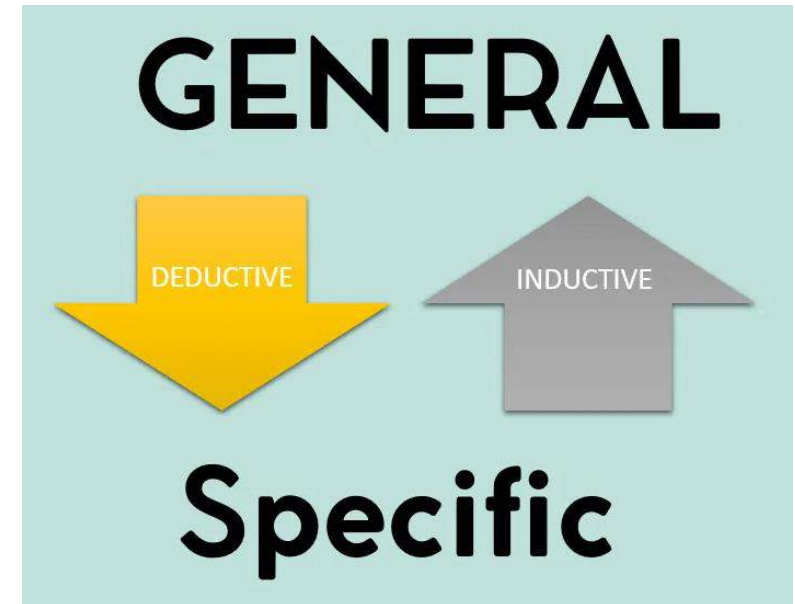


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Unit 1: Deductive reasoning skills

1.2 What is the difference between inductive and deductive reasoning?

- The main difference between them, is that deductive reasoning is a **top-down** form of thinking, and inductive reasoning is a **bottom-up** type of thinking.
- This means that with Inductive thinking, you'll first form a conclusion, or hypothesis, then seek the evidence to support your conclusion. In contrast, deductive reasoning analyses two true statements before forming a conclusion.





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Unit 1: Deductive reasoning skills

1.2 What is the difference between inductive and deductive reasoning?

| | | |
|---|-----------|--|
| INDUCTIVE reasoning | VS | DEDUCTIVE reasoning |
| <p>No matter how unrealistic that sounds, in many fields, such as science and law, "proof" simply doesn't exist; there can only be facts and evidence that lead you to certain conclusions.</p> | | |
| INDUCTIVE REASONING <ul style="list-style-type: none">Someone who uses INDUCTIVE reasoning makes specific observations and then draws a general conclusion. | | DEDUCTIVE REASONING <ul style="list-style-type: none">DEDUCTIVE reasoning is a specific conclusion follows a general theory. |





Unit 1: Deductive reasoning skills

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1.3 Tips for improving deductive reasoning skills

At this point, let's go further, and let see some basic tips that could help to improve our deductive reasoning skills, their development, and assimilation.

- **Be curious**

Curiosity is an important factor that will make us be attentive to our surroundings and investigate the premises from which we will start and which will lead us to the final conclusion.

- **Be observational**

Curiosity leads us to observation. Carefully observe everything, ask questions, gather information, always take the time to look at things a second time, and if you're getting stuck try looking at things from a different angle.





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Unit 1: Deductive reasoning skills

1.3 Tips for improving deductive reasoning skills

- **Increase your knowledge**

The more knowledge you acquire, whether by reading books, listening to podcasts, or doing the activity that interests you, the more prepared you will be to make connections between the information you have analysed, and possible conclusions. In this way, you will be naturally “trained” and prepared for deductive thinking.

- **Break problems into smaller pieces**

If the task seems complicated at first, a good way is to break down the information you have into small pieces and then see if you can form any premises from those pieces, until we can determine what the problem really is. Sometimes the easiest answer is the right one.





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Unit 1: Deductive reasoning skills

1.3 Tips for improving deductive reasoning skills

- **Question what you hear**

Don't take literally all that you hear, and be critical. Deductive reasoning is about controlling your emotions and listening to reason, and if you don't understand something, ask questions. Don't let your emotions guide your conclusions, and always look for facts.

- **Trust your instincts**

Your body is sometimes "smarter than your mind". When you have these powerful feelings, trust them. Often there are subtle signals that we may pick up unconsciously and not realize until later. With practice, we can develop and pay attention to these signals and use them to our advantage in deductive reasoning.



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Unit 1: Deductive reasoning skills

1.3 Tips for improving deductive reasoning skills

- **Work alongside a friend**

Talking about things goes a long way towards dissecting and understanding them better. When sometimes we don't have the answer or don't see it clearly, it is important to trust a friend who gives us another point of view that we hadn't considered before. It opens up a new way of thinking, which can help us to reach our goal.





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Unit 2: Decision-making skills

2.1 What is decision-making skills?

- Decision-making skills are valuable because they show your **leadership capacity, develop it, and portray your ability to think objectively, and to relate concepts to achieve your goals**. Your ability to make good decisions quickly can be helpful in many situations in life, beyond the workplace, as **we all face small and big decisions in our daily lives**.
- A simple definition of this concept could be **the ability to select between two or more options or alternatives and achieve the best outcome in the shortest possible time**.
- Decision-making takes place once **you have collected and analysed the information available** for each specific situation. For the development of this skill, it is important to **identify the process involved**, and to make the most of it so that it leads to making the best decision. So, let's learn a bit more about it!





Unit 2: Decision-making skills

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2.2 How to improve decision-making skills?

People spend a lot of time making all kinds of decisions, but even if we try, they will not always be the right ones. What we can do, however, is to look at ways to improve this skill and develop it, to get closer to our goal.





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Unit 2: Decision-making skills

2.2 How to improve decision-making skills?

Let see 9 tips to boost your decision-making skills!

- **Learn from experience**

Don't forget your valid experience. Good advice that bests decision-makers follows is to analyse their decisions and the way they took them to improve the process. Take the time to reflect on your recent decisions and learn from them, giving the same attention to those which turned out well, and those that did not. So, don't forget to learn from the past to gain wisdom.

- **Entertain doubt**

Let's assume that there will always be doubts, and we may not find the certainty we want. Assuming this, we can focus on action, and test the decision in different scenarios, asking ourselves what would happen if it went wrong, and so continue the search for the best possible option.





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Unit 2: Decision-making skills

2.2 How to improve decision-making skills?

Let see 9 tips to boost your decision-making skills!

- **Give yourself options**

Having options always brings peace of mind to our lives. In the case of decision-making, the more options the better. But be careful not to go beyond the recommended limit of 3 or 4 options, otherwise, it will make the task more difficult. Three options to choose from will help you in your process.

- **Argue it out**

In order to improve decision-making, argumentation is fundamental. Whenever possible, encourage debate and argumentation to meet different points of view, understand them, and learn from them. Also rely on someone who can question your own arguments, challenge them and break down your own schemas.





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Unit 2: Decision-making skills

2.2 How to improve decision-making skills?

Let see 9 tips to boost your decision-making skills!

- **Understand the context of your decision**

Collect and study all the background information you can get on the subject, this will help make your decision more reliable. You can do this by talking with people, reading reports, making visits and observing.

- **Try carrying out experiments**

A good experiment is the best way to put our theories into practice, in a safe, win-win environment, because if it goes wrong, we learn from it, and if it goes right, we gain enthusiasm and confidence in our decision.





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Unit 2: Decision-making skills

2.2 How to improve decision-making skills?

Let see 9 tips to boost your decision-making skills!

- **Shatter your theory**

This is as simple as, instead of trying to confirm that our possible decision is correct by looking for evidence that confirms it, look for evidence and theories that confirm that it is not, if you don't find any, you are on the right track.

- **Assume your decision is a failure**

Put yourself in the situation that the decision you have made has gone wrong. Now start asking yourself questions about the reason that caused this failure. Examine now the answers and try to find out how this can help you find a better decision.





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Unit 2: Decision-making skills

2.2 How to improve decision-making skills?

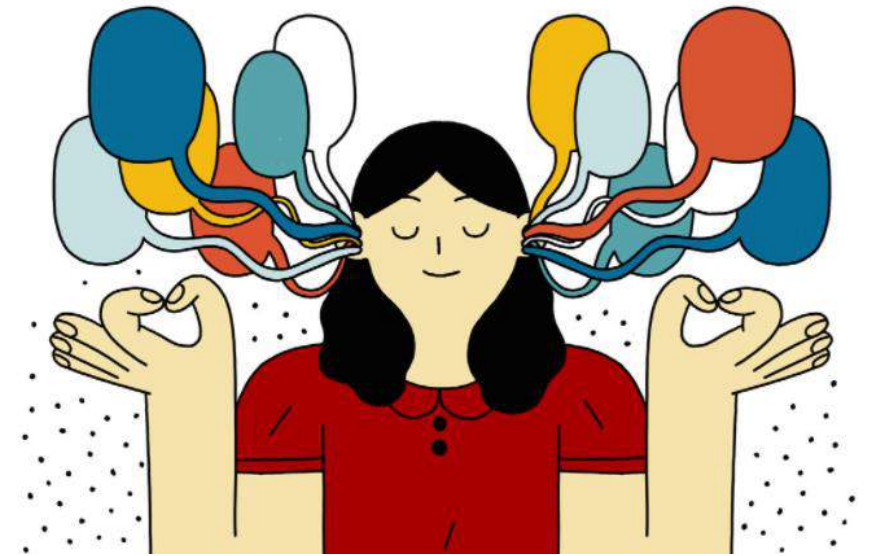
Let see 9 tips to boost your decision-making skills!

- **Bring in outsiders**

Bringing outsiders into the decision-making process can improve it, as by not being involved, they leave out egos and emotions, and bring in fresh and perhaps creative air from which we can benefit.

- **Listening is better for decision-making than talking**

If you are in the middle of an argument, avoid contributing to it. The best option is to listen carefully before giving your opinion. Forget about right and wrong. By listening openly, you will be enriched by different facts, opinions and perceptions, and you will be able to create your own with all this new information.





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Unit 2: Decision-making skills

2.3 7 Extraordinary ways to improve your decision-making skills

Now that we know more about decision-making skills, let's check out some creative and healthy ways to improve them. By incorporating these tips into our regular routine, such as exercising or learning something new, we will not only improve the quality of our lives, but also improve our decision-making skills.





Unit 2: Decision-making skills

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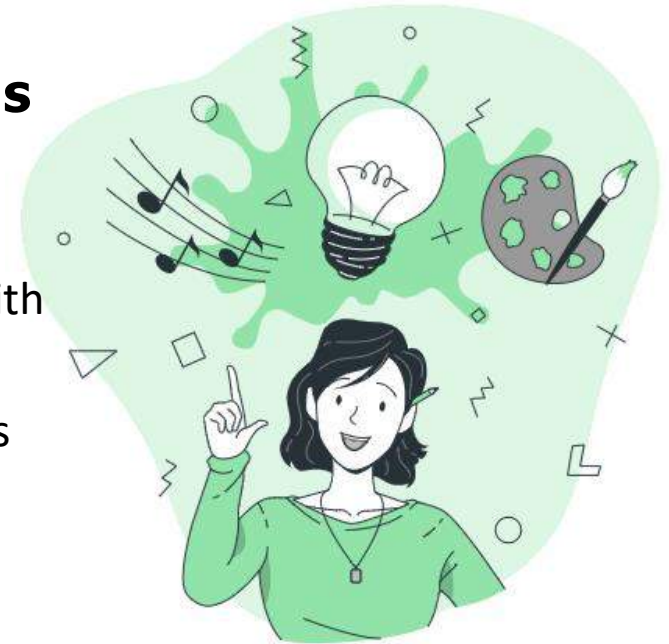
2.3 7 Extraordinary ways to improve your decision-making skills

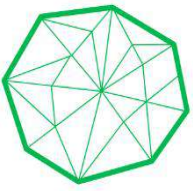
1. Get some arts and culture in your life

It can be anything from taking dance classes, learning to play an instrument, painting with watercolours, going to the theatre, cinema, or opera. You will feel more inspired and creative, focused, your abilities will be stimulated, and it will help you to make decisions without realizing it.

2. Develop your programming or language skills

Train your brain by learning something more technical. You can learn a new language, train your writing skills, or improve your computer skills.





Unit 2: Decision-making skills

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2.3 7 Extraordinary ways to improve your decision making skills

3. Hang out with people of all ages

Try to surround yourself with people of all ages, and not eliminate any age group. By getting to know different realities, you will practice active listening and, at the same time, feel more flexible and open.

4. Do some exercise

As long as it is safe for you, you can choose the one you like best. Besides stimulate your brain and work your body, you will boost your energy levels, and your decision making skills will be sharpened.





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Unit 2: Decision-making skills

2.3 7 Extraordinary ways to improve your decision-making skills

5. Get experimental with your cooking

If you don't do it regularly, don't hesitate to start, and if you do, try new culinary horizons. You will see that while your hands are busy making a dish, you will be, without even realizing it, elaborating the process of the decision you are having so much trouble making.

6. Just practice

By training your brain to make small daily decisions, you will gain practise and speed in this exercise. Once you feel more confident with small decisions, you will feel more confident when it comes to the bigger ones.





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Unit 2: Decision-making skills

2.3 7 Extraordinary ways to improve your decision-making skills

7. Write down the pros and cons

Return to the familiar and effective pros and cons list technique. Use a large piece of paper, and write down all the positive and negative aspects of the dilemma. You can ask for advice from people you trust or who have experience in the field if you feel you need it, but remember to finally make the decision yourself.





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Glossary

| Word | Definition |
|----------------------------|--|
| Deductive reasoning | Deductive reasoning is a type of reasoning, also known as top-down reasoning. It is used in the scientific method, and can also be used in everyday life. This method starts out with a general statement, or hypothesis, and follows some steps to reach a specific logical conclusion. |
| Inductive reasoning | Inductive reasoning is a bottom-up type of thinking. With Inductive thinking, you'll first form a conclusion, or hypothesis, then seek the evidence to support your conclusion |
| Decision making | Is the ability to select between two or more options or alternatives and achieve the best outcome in the shortest possible time. Decision-making takes place once you have collected and analysed the information available for each specific situation. |





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You've reached the end of this course, congrats!

Let's keep in touch!



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