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**ROBOTS CAN'T  
REPLACE EDUCATORS**



- More than 16,500 students
- More than 1,300 staff members
- 141 study programmes and further training programmes
- Member of Ghent University Association
- 13 campuses in the centre of Ghent

 **artevelde**  
university of applied sciences

[www.arteveldehogeschool.be/en](http://www.arteveldehogeschool.be/en)

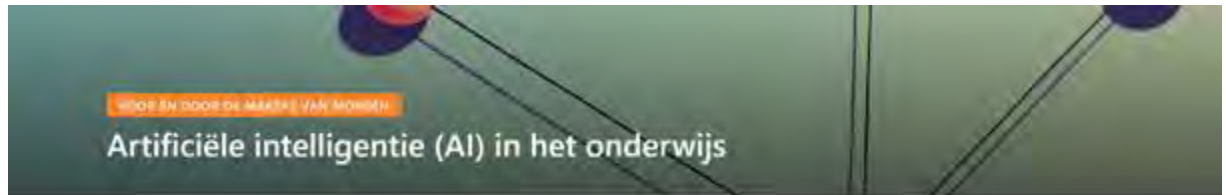
# Artificiële Intelligentie (AI) in Odisee

Sinds de lancering van ChatGPT in het najaar van 2022 is "Artificiële Intelligentie" een hot item. Ondertussen zijn er een hele reeks die verschillende taken kunnen uitvoeren zoals het schrijven van teksten, het produceren van code en het creëren van beelden. Ook in het onderwijs zullen deze nieuwe technologieën een rol spelen. Op deze pagina vind je de basisprincipes van de positie van Odisee ten opzichte van het gebruik van AI in het onderwijs.

We hebben geprobeerd deze zo toekomstbestendig mogelijk te maken, maar alles evolueert zo snel dat aanpassingen niet uit te sluiten zijn. Die zullen dan ook op deze pagina te vinden zijn.

DE BASICS

## De basispositie van Odisee ten opzichte van



**Artificial Intelligence has found its way to higher education. And it's here to stay.**

Generatieve artificiële intelligentie is één van de meest revolutionaire hedendaagse ontwikkelingen op technologisch vlak. Het is een verzameling voor verschillende toepassingen die als antwoord op een vraag (prompt) autonoom nieuwe inhoud zoals een geschreven tekst, beelden, audio, video, programmeercode of een combinatie van dit alles kunnen genereren, vergelijkbaar met wat je als individu kunt maken. Enkele bekende voorbeelden zijn ChatGPT, Dall-E of Midjourney.

Artificiële intelligentie is alomtegenwoordig en zal ook niet meer verdwijnen. De verschillende toepassingen vinden snel hun weg naar het werk en ons dagelijkse leven. De technologie biedt heel wat opportuniteiten maar tegelijkertijd is het belangrijk om alert te zijn voor de uitdagingen gelinkt zijn aan deze technologische ontwikkelingen, onder andere op duurzaamheid en ethisch vlak.

✖ **Arteveldehogeschool: een visie op de integratie van generatieve AI in onderwijs**

**Kennis van AI-concepten**  
Begrip van de fundamentele concepten zoals machine learning, deep learning, neurale netten, natuurlijke taalverwerking, etc.

**6 ELEMENTEN VAN AI-GELETERDHEID**

**Kritisch denkvermogen**  
Effectief beoordelen hoe betrouwbaar en betrouwbaar de output van AI-systemen is op je eigen handelen en de samenleving. Hiervoor zijn kritisch denken en voldoende vakkenas raadzaam.

**Creatieve toepassing**  
AI inzetten om problemen op te lossen.

**Technische vaardigheid**  
Een aantal concrete vaardigheden zoals: algoritmen, web-ontwikkeling, gebouwen, efficiënt en verantwoordelijk programmeren en hoe eigen handelen erin wordt gebruikt.

**Ethisch begrip en handelen**  
De ethische implicaties van AI handelen, zoals privacy, bias, discriminatie, arbeidsomstandigheden, en het verantwoordelijk gebruik van data.

**Digitale verantwoordelijkheid**  
Bevragen van de rol van technologie in de samenleving en hoe deze kan worden gebruikt om de wereld te verbeteren.

# Orakel van de Wijzen

Het AI Onderwijsorakel toont je de weg.

Hoe kan ik AI zelf inzetten om mijn werk te verbeteren?

Wat is de toekomst van AI?



De nieuwste trends in het onderwijs omvatten een aantal boeiende ontwikkelingen. Ten eerste zien we de opkomst van gepersonaliseerd leren, vaak aangedreven door AI, dat studenten helpt in hun eigen tempo en op basis van hun specifieke behoeften te leren. Ten tweede nemen hybride lesmethoden toe, waarbij traditionele lessen gecombineerd worden met online learning platforms zoals Canvas LMS. Verder is er een groeiende aandacht voor bekwaamheidsgericht onderwijs, waarbij studenten geacht worden specifieke vaardigheden te beheersen in plaats van enkel theoretische kennis te vergaren. Tot slot is er een toenemende focus op datagestuurde onderwijsmethoden, waarbij het analyseren van leerdata helpt om lesmethoden te verbeteren en leeruitkomsten te vergroten. Oh ja, en uiteraard kan een beetje humor ook nooit kwaad; zelfs in een digitale leeromgeving!

AI-orakel helpt ook fouten maken. Verifieer zelf belangrijke zaken.



# Authors

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# Goal

## E-course, MOOC

- For new and current students
- Accessible to prospective students and secondary education teachers
- Aim: Enhance AI literacy + focus on effective use in highered
- Easily accessible
- Limited time commitment
- NL + ENG

## Professional Field Survey

## 117 education professionals (highered, upper secondary)

■ completely disagree   ■ rather disagree   ■ neutral   ■ rather agree   ■ completely agree

Generative AI will eventually replace the teacher.

Generative AI offers added value for education.

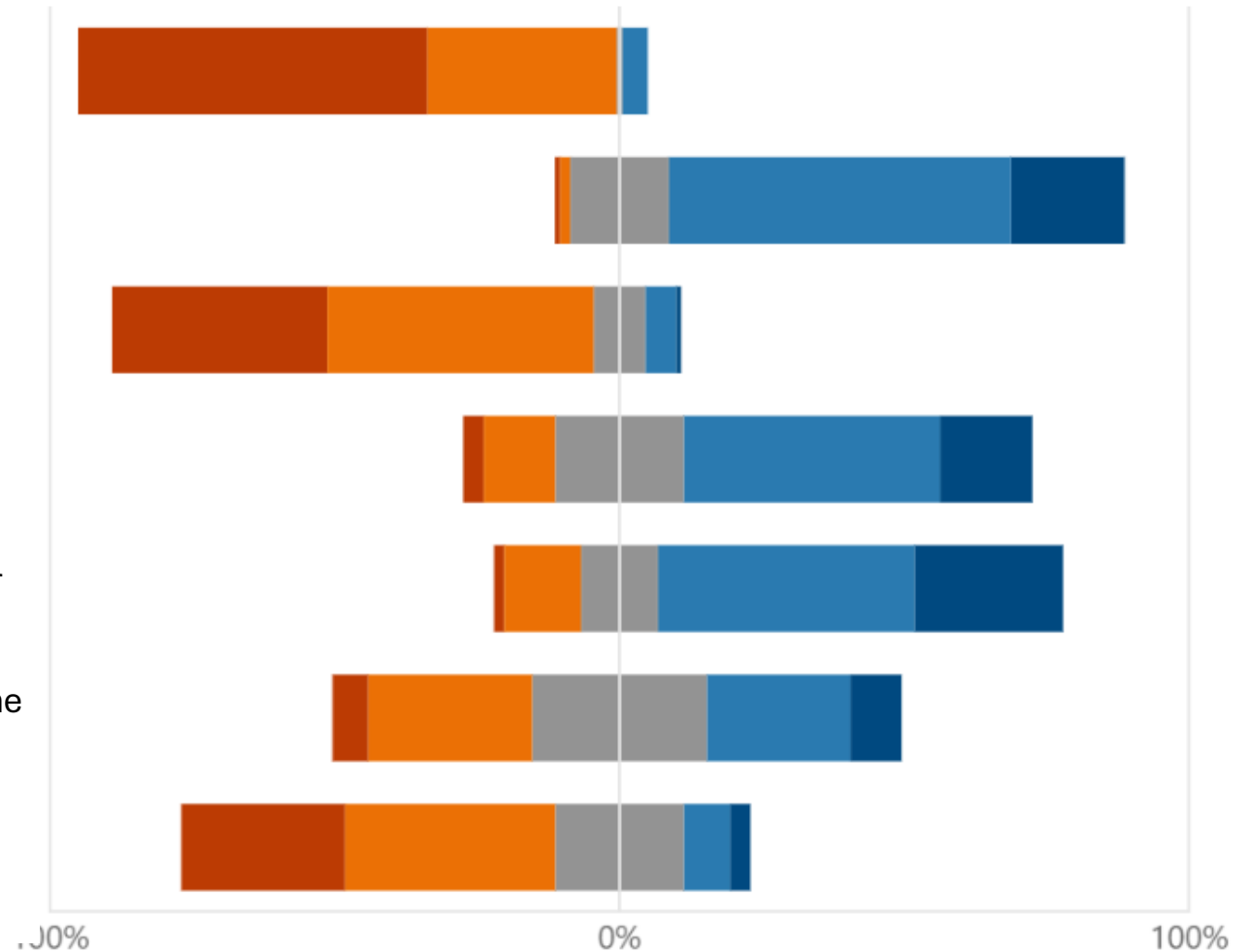
The knowledge and skills we are teaching students now will be obsolete in the future due to the...

The role of the teacher will change in the coming years due to the arrival of generative AI.

The way we evaluate must change due to the arrival of generative AI.

The use of generative AI has a negative impact on the knowledge and skills of my students...

The current educational attainment levels/learning outcomes sufficiently take into account the impact of GenAI.



3.881 students

To what extent does your study program focus on developing the knowledge and skills to work effectively with Artificial Intelligence (AI)?

**Institution-wide**

● te weinig ● voldoende ● te veel

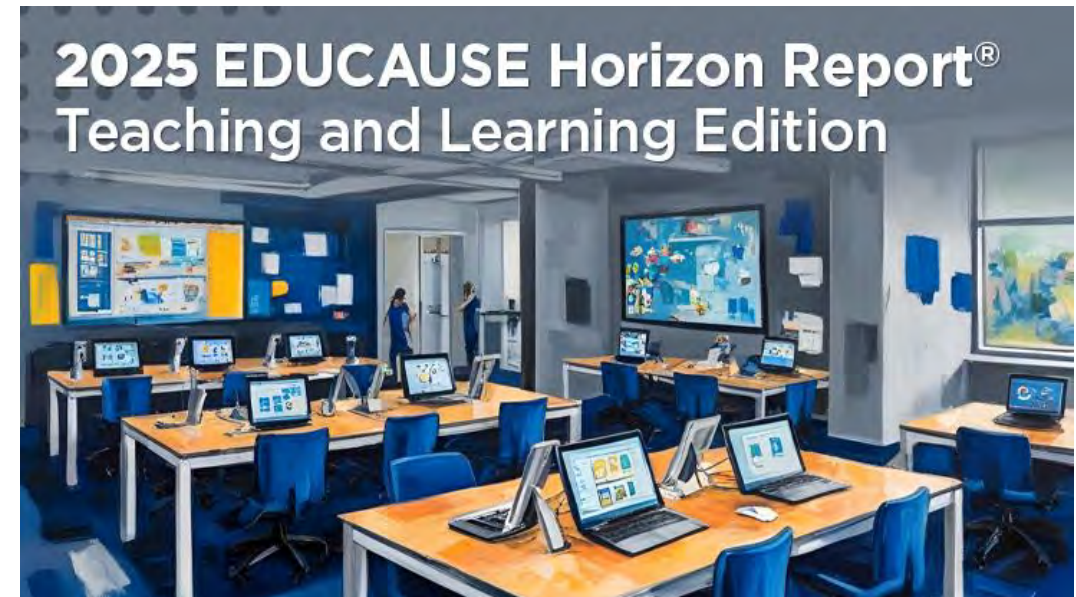
too little

sufficient

too much



# MOOC aiforstudents.be



CRITICAL DIGITAL LITERACY EXEMPLAR

# As open and transferable as possible

- Core principles for long-term relevance
- Challenge: different learning management systems or lack thereof, different tech. skillset
- No account, no login
- Creative commons: edit, share, reuse



CC BY-NC-SA 4.0



## Key Components of AI Literacy – A Starting Point

This list represents a selection of important components of AI literacy, derived from research and literature (A Framework for AI Literacy, n.d.; Ng et al., 2021; Vuorikari et al., 2022). This is not an exhaustive list.

### 1. Knowledge of AI Concepts:

- Understanding fundamental concepts:
  - Machine Learning
  - Neural Networks
  - Natural Language Processing (NLP)
  - *And others...*

### 2. Critical Thinking Skills:

- Effectively assessing the reliability and influence of AI outputs on your actions and society.
- Requires critical thinking *and* sufficient knowledge of relevant disciplines.

### 3. Ethical Understanding and Action:

- Recognizing ethical implications:
  - Privacy Issues, Bias, Underrepresentation
- Taking action against discrimination and for sustainable development.

### 4. Technical Proficiency:

- Communicating and collaborating with AI systems.
- Using AI effectively.
- Implementing AI ethically and responsibly.
- Combining and adapting AI to your own needs.

### 5. Creative Application:

- Applying AI innovatively to solve real-world problems.

### 6. Digital Responsibility:

- Understanding the role in protecting data and ensuring fair access to AI technologies.

# MOOC Outline

From more “general” AI-literacy to highered specific application

## Artificial intelligence

- Introduction
  - Test your AI knowledge
  - Definition
  - Terminology
  - Evolution
- Types of AI
  - Overview
  - Train your own AI model
  - Areas of application

## Generative AI

- Definition
  - Quiz
  - Definition
- Popular tools
  - ChatGPT
  - Copilot
  - Gemini
  - Claude
- Pitfalls
  - Hallucinate
  - Bias
  - Training data
  - Sustainability
  - Emotion and dependency
  - Digital divide
- AI rules
  - Privacy
  - Fact-checking
  - Final review
  - Transparency

## Prompting

- Definition
- Texts
  - Framework
  - Time to practise
  - Advanced strategies
- Multimedia
  - Overview
  - Images
  - Video
  - Audio

# MOOC Outline

## Applications

- Brainstorming
- Writing
  - Generate
  - Improve texts
  - Writing style
  - Translate
- Visualising
- Study buddy
  - SMART goals
  - Planning
  - Summarise
  - Test questions
  - Challenging topics
  - Study method
- Feedback
- Research
  - Research process
  - Literature review

## In conclusion

- Self-test

Highlights

AI for students

Artificial intelligence

- Introduction
- 4 Topics
- Types of AI
- 3 Topics

Generative AI

- Definition
- 2 Topics
- Quiz
- Definition

Popular tools

- 4 Topics

ChatGPT

With **generative artificial intelligence (GenAI)**, you can have the computer create content for you. Think primarily of texts, but also images, videos, and audio. It is even possible to create PowerPoint presentations or generate voices.

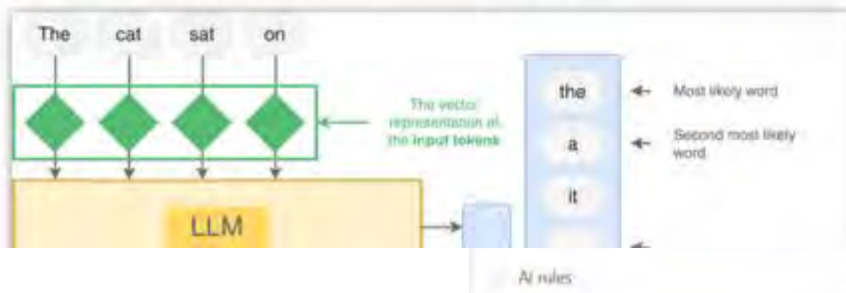
Fill in the blanks with the first word that comes to mind.

Outside, the  is shining.

The colour of grass is .

🔄 Refresh 📄 Rights of use ↩️ Error

Everything that generative AI produces is **original and unique**. For example, if it writes a story, it is not a copy-paste job from what is available online. Instead, the software comes up with something entirely new. That is why we call it intelligent. It almost seems as if the computer can reason and be creative. In reality, such a language model simply predicts the next word that is likely to fit in a sequence.



## Training data

AI for students - Pitfalls - Training data

How does AI get so smart? The secret lies in the training data. AI learns by analyzing massive amounts of data that we constantly generate, like what you watch, listen to, or search for. In other words, training data is the fuel that AI needs to understand how the world works. It is no wonder it is often called **'the new gold'**. But there are also interesting challenges and surprising facts behind that data, like issues with **copyright**. Do AI models even have the proper permissions to use protected online content? And what if you then use that information yourself? Are you committing plagiarism? It raises a number of ethical questions and could even have legal consequences.

But copyright is just a small part of a much bigger picture. Curious about what else AI can learn from you or how it handles data? Check out the flashcards below to discover some **surprising facts** that might change or refine your perspective on AI and training data.

### DID YOU KNOW:



## Emotion and dependency

- AI as addictive and influential algorithm
- Overreliance



## Privacy

AI for students - AI rules - Privacy

When using generative AI technology, you often unknowingly expose your data. Many people are quick to agree to the terms and conditions without checking how their data is being processed. Companies behind this technology can collect your input, including personal information such as phone numbers, email addresses, and names. It is important to be aware of privacy risks.



Until recently, there were no specific regulations regarding the use of AI. However, as of 1 August 2024, the EU AI Act has come into effect. Many AI companies still need to adjust their practices to comply with this new European legislation.

Sharing information in generative AI tools, such as prompts or documents, carries certain risks. It is often unclear what these tools do with the data you input. Therefore, it is essential to be mindful of the information you enter into any given tool.

**Avoid entering confidential, personal, or sensitive information** into a generative AI tool. This includes things like names, addresses, research data, research results, biometric data, medical information, or personal identification details.

# AI PROMPTING FRAMEWORK

[www.aivoorstudenten.be](http://www.aivoorstudenten.be)



## #Rol

Als een ervaren hogeroponderwijsdocent in communicatie,

Vertel het model welke rol het moet aannemen. Door het een duidelijke rol te geven, zoals expert, leraar, adviseur of copywriter, geef je richting aan de toon, de stijl en de inhoud van de antwoorden.



## #Doel

is je doel om de voorkennis van studenten over communicatietheorieën op te roepen,

Geef GenAI duidelijke en specifieke aanwijzingen over wat je wil. Hoe preciezer je bent, hoe nauwkeuriger het resultaat.



## #Context

Voor een inleidende les over interpersoonlijke communicatie

Geef genoeg achtergrondinformatie zodat GenAI precies begrijpt waar het om gaat. Zo blijft de output relevant en doelgericht, zoals informatie over jezelf, het project of de kenmerken van je doelpubliek.



## #Output

beschrijf je drie creatieve prompts of visuele hulpmiddelen die studenten kunnen helpen hun eerdere ervaringen en kennis te delen. Schrijf dit in beknopte punten met korte, samenhangende zinnen. Zet kernwoorden in het vet.

Vertel het model hoe je het antwoord wil ontvangen of geef een voorbeeld.

See the example of a prompt below, formulated according to the four prompt principles. Hover over the different parts of the prompt or click on them.

Take on the role of an experienced advisor in sustainable entrepreneurship. Help me draft a marketing strategy for a new line of eco-friendly products. The target audience consists of environmentally conscious consumers aged 25 to 40 years. Provide the strategy in a structured report of up to 800 words, with clear recommendations and examples of successful campaigns in the sector.

Role

Goal

Context

Output

< Previous Lesson

Next Topic >

See the example of a prompt below, formulated according to the four prompt principles. Hover over the different parts of the prompt or click on them.

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Role

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Context

Output

< Previous Lesson

Next Topic >



**Evaluate** the five prompts below using the four elements from the framework. Adjust the sliders to the left if an element is lacking, or to the right if it is well-executed. Afterwards, click 'Check' to receive expert feedback.

### Prompt 1 of 5

*Write an essay on climate change.*

Role (1-10): 7

Purpose-Task (1-10): 3

Context (1-10): 7

Output (1-10): 9

Check

Previous

Next

Prompt: Write an essay on climate change.



### Score Comparison

Role:	Purpose:	Context:	Output:
Your score: 7	Your score: 3	Your score: 7	Your score: 9
Expert score: 1	Expert score: 1	Expert score: 1	Expert score: 1

There is a significant difference between your assessment and the expert evaluation. Try analyzing the prompt again.

This prompt is too general and offers little direction. A specific role is missing—are you a student, policymaker, journalist? The purpose of the essay is undefined; should it inform, persuade, or analyze? The context surrounding climate change is too broad to effectively zoom in on specific issues. The desired output format is also completely absent, such as the required length, structure, or sources. A clearer, more defined question will help in providing more targeted information and will improve the final product.

### Improved Prompt

Write a scientific essay of 1000 words on the impact of climate change on coastal areas . Focus on three main effects : sea level rise, extreme weather events, and biodiversity loss. Use at least five recent academic sources and conclude with possible solutions for coastal protection.

## Prompt 2 of 5

*Write a reflection on my first day of internship as a nursing student.*

Role (1-10): 2



Purpose-Task (1-10): 4



Context (1-10): 4



Output (1-10): 1



Check

Previous

Next

The output format lacks details about the structure of the reflection and lacks guidelines for length or depth. Concrete parameters would help in creating a richer reflection.

**Important:** While AI can help you structure or organize reflection, it is essential to remember that real reflection comes from your own personal experiences and insights. Reflecting on your internship is an opportunity to develop your critical thinking skills and learn from your experiences. AI can only support by giving suggestions or organizing your thoughts—but the deep analysis, self-reflection, and conclusions must come from you.

### Improved Prompt

Help me structure my personal thoughts and experiences from my first day of internship as a nursing student into a 500-word reflection. Do this according to my notes that I will provide.

Use the following reflection cycle:

1. Description of the situation
2. My feelings and thoughts
3. Evaluation of what went well and what did not
4. Analysis of what I have learned
5. Conclusion on what I would do differently and why
6. Action plan for my next internship day

Ask me for specific details for each part to deepen my personal reflection. End with a brief summary of my key learning points.

### Prompting

- Definitie
- Teksten
  - 3 Topics
- Framework
- Even oefenen
- Geavanceerde strategieën

### Multimedia

- 4 Topics
- Overzicht
- Afbeeldingen
- Video
- Audio

#### — Toegankelijkheid

Upload een afbeelding met tekst en vraag: 'Vertel wat op de foto staat en wat kan je lezen?' Ook ALT-teksten kan je op deze manier vlot genereren.

**U**

Vertel wat op de foto staat en wat je kan lezen.Σ

**Copilot**

✓ De afbeelding analyseren: gezichten kunnen wazig zijn om privacy te beschermen

De foto toont de titelpagina van Hoofdstuk 4 uit een boek. Het hoofdstuk heet "De Vier Pijlers van een Professionele Leergemeenschap: Gedeelde Missie, Visie, Waarden en Doelen." Onder de titel staat een citaat van Thomas Lickona en Matthew Davidson:

*"Great schools 'row as one'; they are quite clearly in the same boat, pulling in the same direction in unison... tightly aligned communities marked by a palpable sense of common purpose and shared identity among staff - a clear sense of 'we.'"*

Is er iets specifiek dat je wilt weten over dit hoofdstuk of het citaat?

Meer informatie | [gettingsmart.com](https://gettingsmart.com)

1 van 30 waarden - Klik de geselecteerde waarde te wijzigen of reset

**V** Vraag me alles wat u wilt...

## Study Buddy

Take a look at the example below where this prompt was used: 'Explain the concept of 'bias in AI'...'

— to a 12-year-old kid.

'Bias in AI is like having an unfair preference. Imagine you only play with boys and then think that girls are not good at football, even though that is not true. AI can make the same mistake if it learns from information that is not complete or fair.'

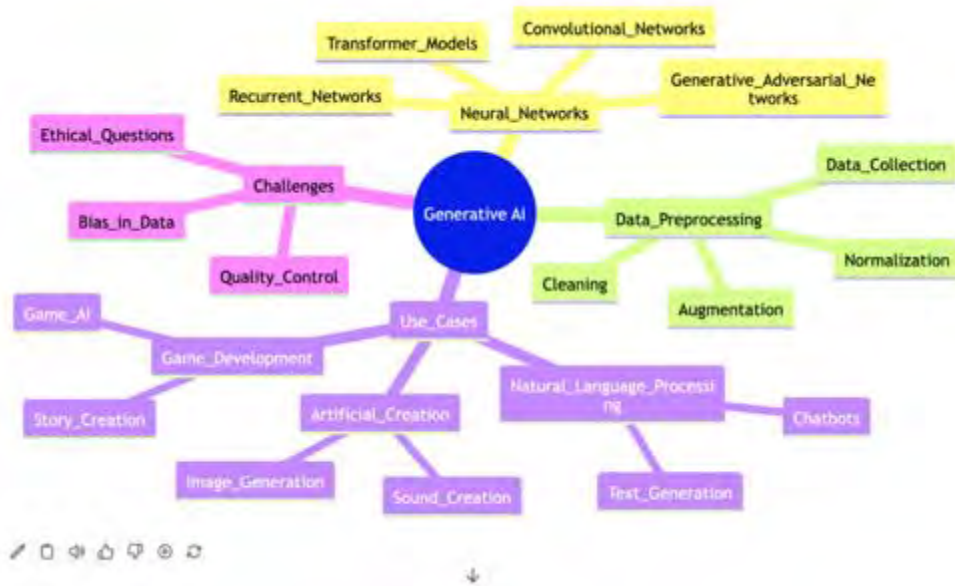


Copy one of the prompts below using the copy button in the top right corner and try it out in a language model of your choice.

Take on the role of an education expert with extensive experience in explaining difficult concepts. First, ask what topic I want more clarification on or if I would like to share a text for additional explanation. Then, ask what exactly is unclear and how simply I want the concept explained (very simple – moderate – normal). It's important that you ask these follow-up questions before providing any explanation. After that, give your explanation with plenty of examples. Finally, ask if everything is clear or if I want to discuss anything specific.

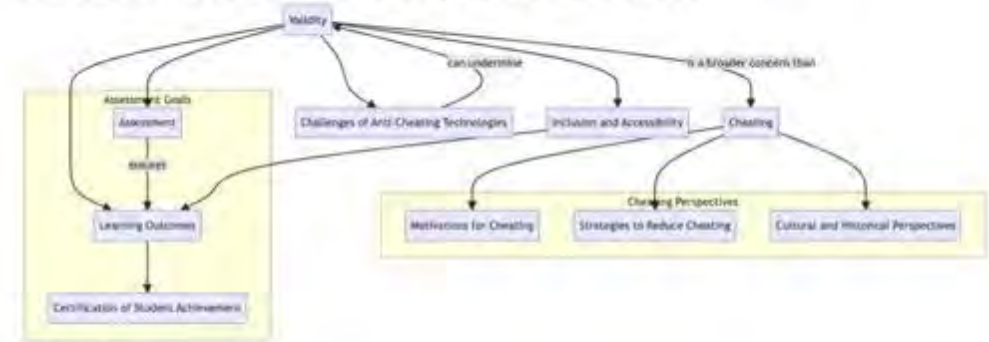


# Visualising



Based on my notes about the article, create a Mermaid code visual to represent different themes addressed: ...

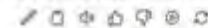
- O1 gpt-4o-mini-2024-07-18 1:10 PM  
 To create a Mermaid code visual based on the themes addressed in the article "Validity matters more than cheating," we will outline the key themes and their relationships. Below is a suggested Mermaid code representation:



## Explanation:

- Validity is at the center as the primary theme, emphasizing its importance over cheating.
- Cheating is linked to various perspectives, including motivations, strategies for prevention, and cultural contexts.
- Assessment connects to Learning Outcomes and emphasizes the goal of certifying student achievements.
- Additional considerations such as Inclusion and Accessibility, and the Challenges of Anti-Cheating Technologies demonstrate the complexities of maintaining validity without compromising accessibility or increasing issues.

This visual representation encapsulates the core themes and discussions from the article, allowing readers to grasp the relationships between validity, cheating, assessment, and the broader implications for educational integrity.



## Applications

 Brainstorming Writing 4 Topics Visualising Study buddy 6 Topics Feedback Research 2 Topics Research process Literature review

## In conclusion

 Self-test

# Research process

[AI for students](#) > [Research](#) > [Research process](#)

Whether you choose an academic or professional path, **research skills** will always come in handy. From crafting engaging research questions to smoothly finishing papers: how can GenAI help you take these skills to the next level?



This page offers inspiration on how to use generative AI during your research. Keep this in mind: research is a complex process. What you read here is just a starting point. That said, AI allows you to tackle different aspects of your research more effectively and efficiently.

## + Formulating research questions

## + Identifying research methods

## + Planning and organising research

## — Paraphrasing and rewriting

Every language model excels at paraphrasing, but you cannot simply outsource this skill—it is a crucial part of your learning process. When you express information in your own words, you understand the concepts better. It creates a strong foundation that can be enhanced with generative AI. Here is how to approach it:



y of AI

18:00 3 2 / 17 6 / 44

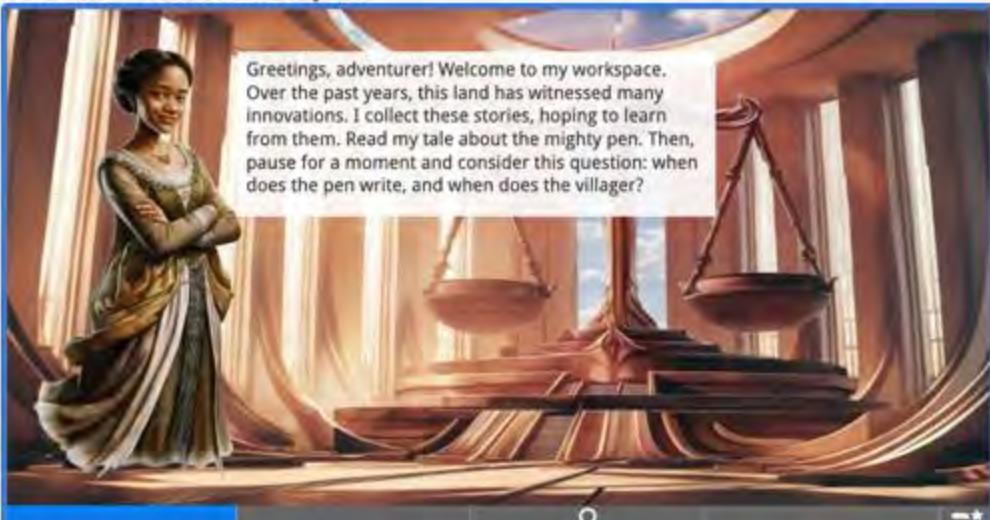


## At the gate of the Academy of Knowledge

What are the possible negative consequences for society if AI becomes the primary source of knowledge?

- AI can create the illusion of vast knowledge, while true understanding may actually decline due to a lack of deeper processing.
- AI always provides accurate conclusions and reliable information, which may not suit everyone.
- Overreliance on AI can lead to a decline in skills and reduced critical thinking.
- The risk of information overload increases due to an abundance of data and advice.

## The tale of the silver pen



## Use of data

Right or wrong use of data and AI? Place each scroll in the correct arm to find your way out of the caves.

Someone put an AI-generated face on a video of a real-life influencer.

A chatbot assures you that your data will not be used for training.

Facial recognition only works correctly on people with lighter skin tones.

Producing fake news on a large scale.

Good usage



Wrong usage



✓ Check

## Result

Presented on multiple teacher training initiatives, congresses  
Shared in forums on educational technology, such as Educause

Used actively in:

- Approx. 20 Dutch speaking Belgian secondary schools
- All Dutch speaking Belgian higher education institutions

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